

Photoinographed at the Office of the Trigonometrical Branch, Survey of India, Dehra Dun, January 1908.

SYNOPSIS OF THE RESULTS OF THE OPERATIONS OF
THE GREAT TRIGONOMETRICAL SURVEY OF INDIA

VOLUME XXXI.

DESCRIPTIONS AND CO-ORDINATES

OF THE

PRINCIPAL AND SECONDARY STATIONS AND OTHER FIXED POINTS OF

THE KHANPISURA MERIDIONAL SERIES

OR SERIES G

OF THE

SOUTH-WEST QUADRILATERAL.

PREPARED IN THE OFFICE OF THE TRIGONOMETRICAL BRANCH, SURVEY OF INDIA,
COLONEL G. STRAHAN, R.E., DEPUTY SURVEYOR GENERAL, IN CHARGE.

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COLONEL H. R. THUILLIER, R.E., SURVEYOR GENERAL OF INDIA.



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ERRATA ET ADDENDA.



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February, 1893.

J. ECCLES,
In charge of Computing Office.

REFERENCES.

The abbreviations employed in the text are as follows:—

h.s. denotes hill station (secondary),
s. „ station „

These abbreviations are only placed after stations where a theodolite has been set up and observations taken to surrounding points.

The latitudes and longitudes of all points shown on the Chart at the end of the volume will be found in the text. The latter exhibits numerical values of triangles only to points of a superior class, to which alone, if exhibited on the Chart, lines are drawn: the lines are either continuous throughout, or dotted for half the length and continuous for the other half: the dots indicate that the bearing was not observed. For other points difficult to identify or of comparatively less accuracy, numerical values of triangles and azimuths are not given.

February, 1893.

J. ECCLES,
In charge of Computing Office.

P R E F A C E .

The Khánpisura Meridional Series, the details of which are given in this volume, forms one of the internal chains of the South-West Quadrilateral, or that section of the triangulation of India which lies between parallels of 18° and 25° and between the meridian of 78° and the Arabian Sea. The general principles of the simultaneous reduction, and the procedure followed in carrying it out, are explained in Volume II of the *Account of the Operations, &c.*; and full details of the whole of the principal triangulation appertaining to the Quadrilateral will be found in Volume XIV of the *Account of the Operations, &c.*

As however the entire contents of the volumes of the principal triangulation are not needed by geographers and surveyors, and moreover as these volumes give no details of the secondary triangulation—which is of considerable value for local requirements—it is obviously desirable that synopses of the final results of the whole of the operations, including the secondary as well as the principal triangulation, should be published for general use in such a form as to be most suitable for convenience of reference. This has already been done as follows:—

For the several Series forming the North-West Quadrilateral,

- I. Great Indus Series.
- II. Great Arc, Section 24° to 30° .
- III. Karáchi Longitudinal Series.
- IV. Gurhágárh Meridional Series.
- V. Rahún Meridional Series.
- VI. Jogí-Tíla and Sutelj Series.
- VII. North-West Himalaya Series.
- VII A. Jodhpore and Eastern Sind Meridional Series.

For those forming the South-East Quadrilateral,

- VIII. Great Arc, Section 18° to 24° .
- IX. Jabalpur Meridional Series.
- X. Bider Longitudinal Series.
- XI. Biláspur Meridional Series.
- XII. Calcutta Longitudinal Series.
- XIII. East Coast Series.
- XIII A. South Párasnáth and South Malúncha Series.

} Already published.

For those forming the North-East Quadrilateral,

- XIV. Budhon Meridional Series.
- XV. Rangir Meridional Series.
- XVI. Amua and Karára Meridional Series.
- XVII. Gurwáni and Gora Meridional Series.
- XVIII. Huriláong and Chendwár Meridional Series.
- XIX. North Párasnát and North Malúncha Meridional Series.
- XX. Calcutta and Brahmaputra Meridional Series.
- XXI. East Calcutta Longitudinal and Eastern Frontier Series, Section 23° to 26°.
- XXII. *Assam Valley Triangulation, E. of Meridian 92°.

} Already published.

For the following Series of the Southern Trigon, *viz.*,

- XXIII. South Konkan Coast Series.
- XXIV. Mangalore Meridional Series.
- XXV. South-East Coast Series.
- XXVI. Bombay Longitudinal Series.
- XXVII. Madras Longitudinal Series.
- XXVIII. Madras Meridional and Coast Series.
- XXIX. Great Arc, Section 8° to 18°. (*In press*).

And for the following Series of the South-West Quadrilateral:—

- XXX. Abu Meridional and Gujarát Longitudinal Series. Already published.

The present is the 32nd Synoptical Volume in order of publication, and the second of those appertaining to the South-West Quadrilateral; it gives the results both of the principal triangulation executed exclusively with theodolites having azimuthal circles of 15 and 24 inches in diameter, read by three and five micrometer microscopes respectively, and of the secondary triangulation in which other instruments besides the 15-inch theodolite were used.

By the process of reduction which has been followed, the principal triangulation has been rendered perfectly consistent both internally and externally; internally, so that if in any one of the several polygonal figures of which the chains may be composed, calculations are carried from one station to another in every possible direction, the same results will be inevitably deduced; and externally, so that the values of the co-ordinates of any station, when computed from the given co-ordinates of any other station, with the final linear and angular data, will be the same, whether the calculation is carried directly through the Series, or circuitously through any of the other chains of triangles comprising the South-West Quadrilateral. All secondary triangulation emanating from one side of the principal Series and closing on another side thereof, or on a contiguous Series, have also been made consistent throughout.

As regards the general arrangement of this volume, it may be pointed out that the Introduction to the Series was originally prepared for Volume XIV of the *Account of the Operations, &c.*, and when a sufficient number of copies had been printed for that work, additional copies were struck off for this volume. The Introduction gives a historical and descriptive sketch of the progress of the whole operations in the field—both principal and secondary—from year to year, mentions the Officers by whom they were conducted, the theodolites with which principal angles were measured, and indicates the work done by each of the Assistants. The adjustment of the secondary triangulation was taken in hand in the year 1892, and completed in the same year when the printing of the volume was resumed.

The data given in this volume are the following:—

First (page 1—*g.*), an alphabetical list of the names of the principal stations, showing the numbers assigned to them.

Second (page 2—*g.*), a numerical list giving the names corresponding to the numbers.

Third (page 3—*g.*), descriptions of the structure and positions of the principal stations.

Fourth (page 12—*g.*), the angles and sides of the principal triangles.

* This is an offshoot of the Assam Longitudinal Series, and falls entirely outside of the limits of the North-East Quadrilateral. The volume is issued in a preliminary form, and therefore only a limited number of copies are available to meet any immediate demand for data: the final publication will be hereafter made on the completion of the triangulation in Burma, into the general reduction of which this Series will enter.

Fifth (page 16—*a*), the angles and sides of certain secondary triangles. The numbering is here made consecutive to that of the principal triangles, in order to facilitate references which are made in other sections to the place where the length of a side is to be found.

Sixth (page 30—*a*), the azimuths of surrounding stations and points at principal, principal-auxiliary and secondary stations, the latter arranged in alphabetical order.

Seventh (page 41—*a*), the co-ordinates and descriptions of all stations and points arranged in alphabetical order.

It has not been considered necessary to publish the whole of the details of the secondary triangulation; the sides and angles of 304 triangles, which were selected as most likely to be of future use, and the azimuths of all these sides, have been given; but for a number of other points the co-ordinates only have been given. With the aid of Tables Nos. XXVI, XXVII, XXVIII, XXIX and XXX of the *Auxiliary Tables to facilitate the calculations of the Survey of India*, Dehra Dún, 1887, surveyors, working on a system of rectangular co-ordinates, can readily transform the spheroidal co-ordinates here given to suit their requirements.

The heights above mean sea level of the stations depend on the final trigonometrically determined values of Búda and Bálágara stations of the Karáchi Longitudinal Series of the North-West Quadrilateral and on the spirit-levelled value of Ágargaon station of the Bombay Longitudinal Series of the Southern Trigon, and are further controlled by lines of spirit-levelling crossing the Series. All particulars regarding the heights will be found detailed on page 41—*a*, as well as in the footnotes to the subsequent pages.

The longitudes depend on an astronomically determined value of the longitude of the Madras Observatory, deduced about the year 1815. The longitude of the Madras Observatory has however been re-determined by the Electro-Telegraphic method, from observations made at Greenwich, Mokattam (in Egypt), Suez, Aden, Bombay and at certain stations of the triangulation in India.

This value of the longitude of the Madras Observatory is equivalent to $80^{\circ} 14' 51''$ E.; and as the originally adopted value, on which the longitudes of the whole of the stations of this Survey are based, is $80^{\circ} 17' 21''$ E.—see page 135 of Volume II of the *Account of the Operations, &c.*—the following precept may be accepted with considerable confidence:—

**All the values of longitude in this volume require a constant correction,
probably of $-2' 30''$.**

The orthography of Indian names in the present volume is in accordance with the provincial lists of spellings constructed under the immediate orders of the Government of India. The newly authorised spellings were adopted for all names and other words contained in these lists; but for words for which there was no specific authority, the spellings have been framed in accordance with the methods followed in the preparation of the published lists, reference being made in the present instance more particularly to the Gazetted Lists for the Bombay Presidency, Nizam's Territory and Central India Agency. As a general rule the pronunciations of the vowels are as follows:—*a* has a variable sound as in woman, rural, paltry; *á* as in tartan; *i* as in bit; *í* as in ravine; *u* as in bull; *ú* as in rural; *o* as in note; *e* as *a* in say; *au* as *ou* in cloud; *ai* as *i* in ride. Final vowels and those in well-known terminals are unaccented. When the popular spelling of a name has been accepted by Government, its correct orthography is generally given in parenthesis where the name occurs for the first time.

The chart accompanying this volume shows all the principal stations and triangulation, the positions of all secondary points, and those portions of the secondary triangulations of which full details of the angles, sides and azimuths are given. With the aid of the chart it is hoped that little difficulty will be met with in finding out any of the data which may be required. The descriptions of the secondary stations and points are in some cases not as full and clear as might be desired: this arises from the inadequacy of the information entered on the spot by the surveyors in their field books; every effort has been made to supplement the field books, whenever it was found practicable to do so, in order to facilitate the future identification of the stations, and all the information which is forthcoming has now been given.

PREFACE.

The general arrangement of the volume is in accordance with that adopted in previous Synoptical Volumes. The data which it contains have been prepared chiefly under the superintendence of Mr. J. Eccles, M.A., Deputy Superintendent, the Officer in charge of the Computing Office. The Introduction to the Series was written by Captain S. G. Burrard, Deputy Superintendent. The volume like its predecessors has been printed at the Trigonometrical Branch Office at Dehra; Mr. Peychers has rendered valuable service in the examination of the press proofs generally, and more particularly in regard to the preparation and final revision of the letter press and numerical details which require the utmost care, and in this respect from his natural aptitude and experience his assistance has been most valuable.

DEHRA DUN, }
February, 1893. }

G. STRAHAN, COLONEL, R.E.,
Dy. Surveyor General,
In charge Trigonometrical Surveys.

KHANPISURA MERIDIONAL SERIES.

KHANPISURA MERIDIONAL SERIES.

INTRODUCTION.

The Khánpisura Meridional Series of the South-West Quadrilateral is the great chain of principal triangles that follows the meridian of $75\frac{1}{2}^{\circ}$ from the parallel of 19° to that of $24\frac{1}{4}^{\circ}$. Its southern extremity is in the dominions of the Nizam, and it passes through Khándesh and Central India. It consists of one compound figure, two double and two single polygons, and four quadrilaterals, and extends over a meridional distance of 360 miles. Its name is derived from the station of Khánpisura of the Bombay Longitudinal Series.

The series lies between the side Búda (xxi)—Bálágara (xxiv) of the Karáchi Longitudinal Series and the side Chincholi (xxiii)—Ágargaon (xxiv) of the Bombay Longitudinal Series. In the simultaneous reduction of the South-West Quadrilateral, it had therefore to be fitted in between a finally fixed side of the North-West Quadrilateral and another of the Southern Trigon: on the completion of this reduction it was found that the errors which had actually been dispersed between the two fixed terminals were as follows:—

In Latitude of Ágargaon (xxiv)	...	...	...	— 0"635
„ Longitude of „ „	...	...	...	— 0.566
„ Azimuth of Ágargaon (xxiv)—Chincholi (xxiii)	...	...	...	— 7.808
In side {	Logarithm of feet	+ 0.000,0190,3
	giving a ratio of about 2.78 inches per mile.				

Observations for the direct determination of azimuth have been taken at two stations of the Khánpisura Meridional Series, *viz.*, Valvádi and Indrawán.

In 1845 when the North Konkan or Singi Series had been carried as far north as the parallel of $21^{\circ} 45'$, it was found necessary to temporarily abandon it, as the health of the party had suffered so terribly in its execution. Lieutenant Harry Rivers of the Bombay Engineers, the Officer in charge, was accordingly directed in October, 1845, to start a new

series of triangulation from a side of the Bombay Longitudinal Series and carry it due north along the meridian of 75° .

The sides of the old Bombay Longitudinal Series that Rivers adopted as bases for

Season 1845-46.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.
Mr. J. Fraser, Sub-Assistant 1st Class.
" T. Sanger, "
" J. DaCosta, " 2nd Class.

the new chain were Párner-Khánpisura and Khánpisura-Sautára*, and the first stations he selected were those of Ágargaon and Chincholi. By the end of December 1845 he had completed the triangulation up to the side Dhaigaon-Mathuri, and by the middle of January he had by means of two new single triangles reached Yerúl-

Jámkhed. On this latter side he constructed a pentagon round Pophla as a centre which advanced the triangulation as far north as Sátmála-Sirsála. He then proceeded to Surat to take some observations at stations of the Singi Meridional Series, which he had had to relinquish the previous year, and he was occupied with these till the close of the field season.

In the Introduction to the Singi Meridional Series an account is given of the great difficulties that Lieutenant Rivers encountered in the execution of that Series, and of his repeated failures to extend it through the Dáng jungles; he had in fact been unable to carry it north of the parallel $21^{\circ} 45'$, and at this point it was now standing in abeyance.

In the summer of 1846 Rivers proposed to Sir Andrew Waugh to connect the Singi and Khánpisura Series in latitude $20^{\circ} 30'$ by means of three single triangles, one on the side of the Khánpisura Series, Sirsála-Sátmála, one on the side of the Singi Series, Ankai-Sáler, and one between, and to convert the two present Meridional Series from this point northwards into one on the meridian of $74^{\circ} 45'$: this new series he explained would run through Khándesh and Malwa (Málwa), where there were a succession of hills, which they had not the benefit of in the plains of Gujarát, and which moreover did not extend sufficiently to the east to allow of being utilised for the Khánpisura Series: the atmosphere too would be more favorable for trigonometrical work, being higher and further from the haze of the coast. Sir Andrew Waugh, who still believed in the feasibility of extending the Singi Series, refused to sanction Rivers' proposal on the grounds that it was not in keeping with the system of the Indian triangulation, and directed that both Meridional Series should be kept distinct and unconnected. The party passed the recess season of 1846 at Poona.

On October 9th, 1846, Rivers began observing an astronomical azimuth at Khánpi-

Season 1846-47.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.
Mr. J. Fraser, Sub-Assistant 1st Class.
" T. Sanger, "
" J. DaCosta, " 2nd Class.

sura, which was not completed till October 21st, owing to cloudy and boisterous weather. He then re-observed the angle at Párner between Khánpisura and Ágargaon and also that at Khánpisura between Párner and Ágargaon, as they had been taken before on but three pairs of zeros†. The next stations he visited were Sirsála and Sátmála,

* The three northern triangles of the Khánpisura Heptagon appertained originally to the Khánpisura Meridional Series: the whole Heptagon is now included in the Bombay Longitudinal Series, and consequently belongs to the Southern Trigon.

† These measures were not utilized in the calculation.

which are situated on the northern edge of the Ajanta range of gháts and from which a clear view to the north can be obtained all the way to the Sápuda range. From these stations, at each of which two angles remained to be observed, a further extension of the Khánpisura Series was commenced. After leaving Valvádi, where he had observed an astronomical azimuth, the country became very desolate; there were no villages and no roads, and dense jungle lay in every direction.

At Thíkri a letter arrived from Mr. Sanger, who was in charge of the approximate work, reporting that he had great difficulty in selecting a strong and suitable figure immediately to the north of the parallel of 22° , owing to the country in the Malwa Districts being a perfect plain. Leaving the theodolite and the greater part of his camp at Thíkri, Rivers pushed on in advance to help his assistant; after three weeks hard work he succeeded in laying down an excellent figure, the Mograba Hexagon, and returned to Thíkri to resume the observations of the principal angles. By the middle of April, 1847, he had carried the Khánpisura Series as far north as the side Harnása-Indrawán, and at the latter station had observed an astronomical azimuth. He arrived at Mhow (Mau) shortly before May 1st, where he established his recess quarters.

As Rivers' series was now approaching the parallel of Kaliánpur and Sironj the

Season 1847-48.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
 Assistant G. T. Survey.
 Mr. J. Fraser, Sub-Assistant 1st Class.
 " T. Sanger, " " "
 " J. DaCosta, " 2nd Class.

selection of his stations became a matter of more than ordinary difficulty: preparations were already being made for extending the Great Longitudinal Series along this parallel westwards to Karáchi, but the exact latitude in which it would strike the Khánpisura Meridian could not be foreseen. Rivers was told to so select his figures, between the parallels of 24° and 25° , that any one of them if necessary should admit of being adopted in the new Longitudinal Series. On taking the field in October, 1847, Rivers himself commenced the approximate work, which he found a most difficult task: all his triangles had to admit of satisfactory extensions not only to the north, but also to the east and west, and as there were no commanding hills it was often necessary to make a minor triangulation simply to obtain the direction of the points already determined. Under these circumstances Rivers thought it his best plan to undertake himself the approximate work of the new Longitudinal Series and carry it on simultaneously with that of his own chain. He therefore decided to select the stations on the Khánpisura Meridian as far north as the parallel of 24° and to then work along that parallel to Sironj. He had just completed the selection of the stations for the Aramlia Polygon, and was about to proceed to Sironj, when he received orders to carry the Khánpisura Series due north to Ajmere (Ajmer) and to leave the longitudinal connection with Sironj to be taken up by another officer. He carried the approximate work up to the parallel of 25° and then commenced the final observations working southwards from the northernmost stations. The Great Longitudinal Series eventually struck the Series under review in the latitude of Aramlia, but Rivers' polygon around that station proved unsuitable and another had to be selected. The former, however, together with Rivers' work to the north of it, was included in the Aramlia (now the Gurhagarh) Meridional Series, whilst the

side connecting the stations of Bálágara and Búda, which was common to both was made the northern boundary of the Khánpisura Meridional Series. By the end of March, 1848, Rivers had carried the principal work southwards as far as the stations of Dhamnár and Sítamau, and in April he completed the observations at Lohári and Dudhála: at Nigrun, however, though he halted a week, he could not see the Deo Dongri signal, which had been easily visible in November. At Deo Dongri too he was unable to observe Nigrun. At Gurla he met with no better success, though, owing to the shortness of the rays, all the surrounding heliotropes were visible, and at Karsod the Indrawán station could not be made out though large fires were lighted at night, and though the signal had been seen by Mr. Sanger in October. Finding it thus impossible to complete the connection with the side Harnása-Indrawán of his former season's work, he closed the field season at Karsod on May 5th. He had dismantled and packed the instrument, and it was ready to be moved, when during the night one of the boxes was broken open and the telescope and vertical circle were carried off by thieves. They were found next morning in a ditch 300 yards from camp; they were both uninjured but the eye-piece was missing. Rivers arrived at Mhow where he had established his recess quarters on May 15th.

Rivers re-commenced operations the following winter: the first station visited was

Season 1848-49.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.
Mr. J. Fraser, Sub-Assistant 1st Class.
" T. Sanger, " " 2nd Class.
" J. DaCosta " " 2nd Class.

Indrawán which he reached on November 17th, and from thence he went to Karsod. By the end of the year 1848 he had completed the connection between the northern and southern sections, and the Principal Triangulation of the Khánpisura Meridional Series was finished. Rivers then proceeded towards Neemuch (Nimach) and took up

the work of the Gurhágárh Series. The instrument employed by Lieutenant Rivers on the Khánpisura Series was the same 15-inch Theodolite by Dollond that was used on the southern section of the Singi Series.

The Khánpisura Series as left by Rivers, though otherwise double throughout, was

Season 1862-63.

PERSONNEL.

Captain C. T. Haig, R.E., 1st Assistant.
Mr. DaCosta, Assistant.
" J. McGill, Civil 2nd Assistant.
" G. Anding, Sub-Assistant.
" J. E. Donohoe, 3rd Class Sub-Assistant.

weakened near its southern extremity by the existence of two single triangles, *viz.*, Mathuri, Dhaigaon, Jámkhed and Yerúl, Dhaigaon, Jámkhed. In November 1862, Captain Haig, R.E., who was in charge of the Bombay Party and who was about to undertake the Triangulation of the Mangalore Meridional Series, set out from Poona (Puna)

with the object of strengthening the single portion of the Khánpisura Series. This object he obtained by the adoption of but one new station that of Áhirmal, which with Mathuri Jámkhed and Rájur gave two new triangles and thus completed a double polygon round Jámkhed and Pophla. Mathuri, the first station visited was reached on November 10th, 1862 and all the observations necessary at the four stations were completed on December 7th. The instrument he used was that known in the Survey Department as Barrow's 24-inch Theodolite No. 2.

In consequence of the great deficiency of observations on certain rays and of the weak character of the heights in general, the re-measurement of all the vertical angles of Rivers' section of the Khánpisura Series was found necessary. In 1882-83, Mr. A. Christie, Surveyor 4th grade, began this revision from the side Bálágara-Búda of the Karáchi Longitudinal Series, and worked southwards as far as Jalálabad and Bábákuvar. In November 1883, Mr. H. E. T. Keelan, Surveyor 3rd grade, was directed to commence at the southern extremity of the Series, Ágargaon and Chincholi, and to work northwards so as to close on Mr. Christie's work of the previous year. Unfortunately at Ágargaon Mr. Keelan was attacked with severe inflammation of the right eye, which obliged him to return to Ahmednagar (Ahmadnagar) for medical aid; he was compelled to take privilege leave till January 15th, and consequently lost two months in the best part of the season. This interruption made it impossible to complete the revision of the heights in the field season of 1883-84, and Mr. Keelan had to resume work on it the following year, when the remeasurement of all the vertical angles was finished.

In 1868-69, Lieutenant W. J. Heaviside, R.E., visited the stations of Deo Dongri and Harnása, and in the following year those of Valvádi and Dhaigaon, and at each of the four observed an astronomical latitude.

Secondary Triangulation.

On the southern part of the Khánpisura Meridional Series, as far north as the River Tápti, an unusually large number of secondary points were fixed by Rivers: the majority of these were intersected pagodas, forts and trees, but there were several secondary stations too, that were visited and observed at: the positions of the towns of Ahmednagar, Dhulia (Dhula) and Aurungabad were determined. The principal station of Ankai of the Singi Series was observed both from Sátmála and Yerúl.

Between the Tápti and Narbada there were no prominent pagodas to observe and no important towns to be fixed and consequently the secondary work was very scanty, consisting of only some ten intersected points in all.

Between the Narbada and the northern terminus of the Series the country was a desolate desert, and but few opportunities offered of executing secondary work: the town of Dhár was the only place of importance that the Series passed over. From the side Harnása-Singárchori a small secondary series was run to the eastwards, which fixed numerous points in the cities of Indore (Indor) and Mhow and which ended at the town of Dewás.

S. G. BURRARD.

April, 1889.

K H A N P I S U R A M E R I D I O N A L S E R I E S .

P R I N C I P A L T R I A N G U L A T I O N . A L P H A B E T I C A L L I S T O F S T A T I O N S .

Ágargaon	XXIV. (Of the Bombay Longitudinal Series).	Indráwan	XIII.
Áhirmal	XXXII.	Jalálabad	XIX.
Ajnád	XXII.	Jalálkheri	X.
Anakvádi	XXV.	Jámkhed	XXXI.
Árgaon	XXI.	Karsod	IX.
Bábákuvar	XX.	Kaula-ka-Máta	XI.
Bálágara	XXIV. (Of the Karáchi Longitudinal Series).	Lohári	VI.
Báwangaz	XVIII.	Mathuri	XXXIII.
Búda	XXI. (Of the Karáchi Longitudinal Series).	Mograba	XIV.
Chincholi	XXIII. (Of the Bombay Longitudinal Series).	Nigrun	III.
Deo Dongri	V.	Pophla	XXVIII.
Dhaigaon	XXXIV.	Rájur	XXIX.
Dhamnár	II.	Sátmála	XXVII.
Dhanora	VII.	Singáchori	XV.
Dhanvár	XXIV.	Sirsála	XXVI.
Dudhála	IV.	Sítamau	I.
Gumánpur	XVI.	Thíkri	XVII.
Gurla	VIII.	Valvádi	XXIII.
Harnása	XII.	Yerúl	XXX.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. NUMERICAL LIST OF STATIONS.

XXI (Of the Karáchi Longitudinal Series).	Búda.	XVIII	Báwangaz.
XXIV (Of the Karáchi Longitudinal Series).	Bálágara.	XIX	Jalálabad.
I	Sítamau.	XX	Bábákuvar.
II	Dhamnár.	XXI	Árgaon.
III	Nigrun.	XXII	Ajnád.
IV	Dudhála.	XXIII	Valvádi.
V	Deo Dongri.	XXIV	Dhanvár.
VI	Lohári.	XXV	Anakvádi.
VII	Dhanora.	XXVI	Sirsála.
VIII	Gurla.	XXVII	Sátmála.
IX	Karsod.	XXVIII	Pophla.
X	Jalálkheri.	XXIX	Rájur.
XI	Kaula-ka-Máta.	XXX	Yerúl.
XII	Harnása.	XXXI	Jámkhed.
XIII	Indráwan.	XXXII	Áhirmal.
XIV	Mograba.	XXXIII	Mathuri.
XV	Singárchori.	XXXIV	Dhaigaon.
XVI	Gumánpur.	XXIII (Of the Bombay Longitudinal Series).	Chincholi.
XVII	Thíkri.	XXIV (Of the Bombay Longitudinal Series).	Ágargaon.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. DESCRIPTION OF STATIONS.



The Principal Stations of this Series are all situated either on hills or rising ground, and those constructed under the direction of Lieutenant Rivers consisted in general of solid masonry pillars, with one or more marks, sunk in the ground and having their upper surfaces flush with the ground level. Above these pillars, solid structures of loose stone masonry, varying in height from 1 to 14 feet, were erected, with another mark laid loosely at the surface. The stations were all visited again during the field Seasons of 1882-85 for the purpose of revising the observations for height, which were originally very defective. In the course of this revision, which was made under the superintendence of the Officer in charge of the Tidal and Levelling Party, the stations were repaired, some reconstructed, and all protected by mounds of earth and boulders. In the years 1868 to 1870, solid, rectangular masonry pillars, bearing sufficiently accurate marks for Topographical and Revenue Survey purposes—as shewn at page 74 of Volume II of the *Account of the Operations, &c.*,—were built for the protection of the upper mark-stones at stations numbered XIV, XVII, XXIII and XXXIV.

The following descriptions have been compiled from those given by the Officers who executed the Series; by Lieutenant Heavyside, who visited several of the stations during Seasons 1868-69 and 1869-70; and by the Officer in charge of the Tidal and Levelling Operations, under whose superintendence the vertical angles of the whole Series were revised; supplemented as regards adjacent villages from the Topographical Survey Maps of the country traversed, and corrected, so far as the local sub-divisions in which the several stations are situated, from the latest Annual Reports furnished by the District Officers to whose charge the stations were committed.

XXI.—(Of the *Karachi Longitudinal Series*). Búda Station, lat. $24^{\circ} 14'$, long. $75^{\circ} 11'$ —observed at in 1848 and 1850—is situated on a swell of ground about 50 yards W. of the cart road from Badpura to Búda, and about $7\frac{1}{2}$ miles N.W. of the town of Náhargarh. The station is in the lands of the village of Búda, pargana Náráyargarh, Holkar's territory.

The station as originally built in 1848 consisted of a square platform of loose stones, enclosing a central, solid pillar of masonry having a mark at the top and another 4.15 feet below engraved on the rock *in situ*. When visited in 1850, in the course of the *Karachi Longitudinal Series* operations, the old pillar was removed and a new solid pillar of masonry was constructed, 5.2 feet in height, in which three mark-stones were placed in the normal of and at distances of 1.23, 2.75, and 5.2 feet respectively above the original mark on the rock. When again visited in 1882, the upper mark-stone was wanting which necessitated reference to the central mark of 1850. The pillar was then rebuilt, 3.3 feet in diameter, and another mark-stone placed in its upper surface at 2.58 feet above the central mark or 5.33 feet above the mark on the rock. The height of the pillar above the ground level is 4 feet. A stone and earth platform 16 feet square surrounds the pillar. The directions and distances of the circumjacent villages are:—Limbawás W.N.W., miles $1\frac{1}{2}$; Báuskheri W. by S., miles $1\frac{1}{2}$; Dhorwára S. by W., miles $1\frac{1}{2}$; and Taláo Pipla S.E., miles $1\frac{1}{2}$.

XXIV.—(Of the *Karachi Longitudinal Series*). Bálágará (*Bálagarra*) Hill Station, lat. $24^{\circ} 10'$, long. $75^{\circ} 0'$ —observed at in 1848 and 1850—is situated on the north-eastern of a group of small, isolated hills, about a mile N.E. of the village of Bálágará, and 3 miles W. of the high road from Neemuch to Indore. The hill, on which the station is, rises about 120 feet above the general level of the country, and is a mile in circumference at base. The station is in the lands of the village of Bálágará, pargana Mandsaur, Gwalior territory.

The station as originally built in 1848 consisted of a platform of loose stone masonry, having a mark-stone at the top and another 3.19 feet below engraved on the rock *in situ*. When visited in 1850 in the course of the *Karachi Longitudinal Series* operations, it does not appear that any alteration in the construction of the station was made. In 1868-69, the mark on the rock was found and the platform, 3 feet in height, consisted of loose stone masonry. In the visit of 1882, the station was found unaltered and in good preservation; the surrounding platform being of stones and earth 18 feet square. The directions and distances of the circumjacent villages are:—Bái E., miles $1\frac{1}{2}$; Dungaloda S. by E., miles $1\frac{1}{2}$; Narona N. by E., miles 2; Khera N.E., mile 1; and Kánkri N.W., miles $1\frac{1}{2}$.

I. Sítamau Hill Station, lat. $24^{\circ} 2'$, long. $75^{\circ} 22'$ —observed at in 1848—is situated $1\frac{1}{2}$ miles N.W. of the town of Sítamau, near the centre of a small, flat-topped hill rising some 50 feet above the level of the country, and somewhat conspicuous as being the only wooded hill in the neighbourhood; it is about 20 feet higher than the ridges and spurs with which it is connected. The station is in the lands of the village of Murkhera, Sítamau State, Western Malwa Agency.

The station consisted of a platform of loose stone masonry and contained three marks, the upper two being 5.35 and 8.89 feet respectively above one engraved on the rock at the ground level. It was visited by Lieutenant Heaviside in 1868-69, who stated that "The pillar had apparently not been disturbed." When again visited in 1882, the station was found to consist of an isolated pillar of stone and earth 12.84 feet high, without a mark on its summit, surrounded by a platform of loose stones 18 feet square. A mark-stone was inserted and both the pillar and platform raised by 2.58 feet, making the entire height of the pillar 15.42 feet. The directions and estimated distances of the circumjacent villages are:—Suriakheri N., mile 1; Murkhera W. by S., mile $\frac{3}{4}$; Chikla E.N.E., miles $3\frac{1}{4}$; and Sítamau (town) S.E., miles $1\frac{1}{4}$.

II. Dhamnár Hill Station, lat. $23^{\circ} 53'$, long. $75^{\circ} 12'$ —observed at in 1848—is situated on the highest part of a low, flat-topped, isolated hill rising some 40 feet above the level of the surrounding country. The station is 616 feet N.E. of a high solitary tree, and 5 miles S.E. of the Railway Station of Dalauda: pargana Mandsaur, Gwalior territory.

The station consisted of a solid pillar of masonry which carried a mark at its surface level with the ground and another, fixed in the rock with mortar, 2 feet below. It was visited in season 1868-69 by Mr. J. Wood, who remarks "There is no platform built here, and the lower mark is $2\frac{1}{4}$ feet below the surface of the ground." When again visited in 1882, the station was found to consist of a platform of earth and stones 1 foot high with a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Jámúnia E., miles $1\frac{1}{2}$; Atunia E.N.E., miles $1\frac{1}{2}$; and Yusufkhera W., mile $\frac{3}{4}$.

III. Nigrun Station, lat. $23^{\circ} 46'$, long. $75^{\circ} 27'$ —observed at in 1848—is situated on the rising ground about $1\frac{1}{2}$ miles S.E. of the village from which it is named, and $3\frac{1}{2}$ miles N. of the town and post office of Tál: The station is in the lands of the village of Nigrun, pargana Tál, Jaora State, Western Malwa Agency.

The station consists of a solid pillar of masonry, about 5 feet in height, having marks at top and bottom 5.15 feet apart. The platform is built of loose stone masonry and carried to a height of 5.27 feet above the top of the solid pillar, the whole structure being 10.27 feet high. When visited in 1882, the platform and a mark-stone in its upper surface were found in good preservation. The directions and distances of the circumjacent villages are:—Pipalia N.E., miles 4; Naráni E.N.E., miles $5\frac{1}{2}$; Bagunia E. by S., miles $3\frac{1}{2}$; and Kachalia S.E., miles 4.

IV. Dudhála Hill Station, lat. $23^{\circ} 51'$, long. $75^{\circ} 49'$ —observed at in 1848—is situated about 30 feet from the southern extremity of a laterite hill rising 100 feet above the level of the country. The top of the hill is flat, running off into wide spurs to N.W. and N.E. of the station, the southern face being rather precipitous. The town of Baraud lies $4\frac{1}{2}$ miles to S. by E. of the station. The station is in the lands of the village of Dudhála, pargana Jhálra Pátan, Jhallawar State.

The station consists of a platform of loose stone masonry containing two marks, one at the surface 5.23 feet above the other. It was visited by Lieutenant Heaviside in season 1868-69, who remarks "The pillar had apparently not been disturbed." When again visited in 1882, the station and its upper mark-stone were found in good preservation. The directions and distances of the circumjacent villages are:—Atipura N.E. by E., miles $1\frac{1}{2}$; Kasankot E.S.E., miles $1\frac{1}{2}$; Khandwás S., mile 1; and Ratanpur W.S.W., mile $\frac{3}{4}$.

V. Deo Dongri Hill Station, lat. $23^{\circ} 27'$, long. $75^{\circ} 35'$ —observed at in 1848—is at the junction of three walls on the southern side of the roof ($11\frac{3}{4}$ feet above ground) of the large temple on a low hill at the northern extremity of the village of Deo Dongri. The village is near the centre of a small, isolated hill, about

800 feet in length at top, and rising about 70 feet above the general level of the surrounding country: pargana Unel, Gwalior territory.

The station consists of a solid pillar of masonry, about 2 feet high, containing a mark in the surface 2.92 feet above one imbedded in the masonry of the wall. The mark is 1.33 feet from the E. side and 1.25 feet from the S. side of the pillar. In March 1869 a protecting pillar of stone masonry, 2 feet square, was built over the mark-stone. When again visited in 1882, the station was found marked by a square pillar of stone masonry rising 2.7 feet above the stone roof of the temple. The azimuths and perambulated distances of the circumjacent villages are:—Mattra 326°, miles 1.2; Mo 356°, miles 1.6; Rattrra 48°, mile 0.8; Medpur (the largest and most conspicuous temple) 250°, miles 7½ by estimation.

VI. Lohári Hill Station, lat. 23° 35', long. 75° 8'—observed at in 1848—is situated on a low, flat-topped hill rising about 70 feet above the plain, appertaining to the villages of Lohári, Nagdi and Wairala. It lies about a mile E. of the railway line, and of the high road from Jaora to Rutlam. The station is in the lands of the village of Lohári, Jaora State, Western Malwa Agency.

The station consisted of a platform of loose stones, about 6 feet in height, enclosing a central, solid pillar of masonry which had a mark in its surface and another 5.21 feet below. It was visited in 1869 by Lieutenant Heaviside, when no mark-stones were found and a heap of loose stones alone denoted the site of the station. When again visited in 1883, the station was found to consist of a platform of earth and stones 5½ feet high with a mark-stone in its upper surface, but as this proved too low for observations to Deo Dongri Station, the platform was raised with an isolated pillar of earth and stones in the centre to a height of 13.4 feet above the ground level. The estimated directions and distances of the following villages are:—Lohári N., miles 1½; Waraila S., mile 1; Sadakheri E.S.E., miles 2; and Nagdi E.N.E., miles 1½.

VII. Dhanora Hill Station, lat. 23° 17', long. 75° 18'—observed at in 1848—is situated on a table-land rising about 80 to 100 feet above the surrounding country, 1 mile N. of Láptia village, and 6 miles E. of the Railway Station of Naugauvan. It is in the lands of the village of Dhanora, Sailána State, Western Malwa Agency.

The station consisted of a platform of loose stone masonry, 12 feet in height, which had a mark-stone at top and another at the ground level. When visited in 1883, no mark-stones were found, on removing the central portion of the heap of stones an excavation, a few inches deep, like the foundation of a pillar, was met with at the ground level: in this a mark-stone was fixed and the platform rebuilt to a height of 9.3 feet, and over which an isolated pillar of earth and stones 1.4 feet high was built, carrying a mark-stone in its upper surface; but this height proving insufficient the pillar was raised by 7.3 feet during the same season. The estimated directions and distances of the following villages are:—Sandla S.W. by W., mile 1; Bamori N. by W., miles 2; and Kamer E., miles 2.

VIII. Gurla Hill Station, lat. 23° 18', long. 75° 36'—observed at in 1848—is situated on a northern spur of a low, flat-topped range of hills, which stretches in a S.S.E. direction from the station for some 4 or 5 miles, and is about 60 feet above the level of the country to the west. The station is in the lands of the village of Gurla, pargana Unel, Gwalior territory.

The station consists of a platform of loose stone masonry containing two marks, the upper 7.23 feet above the lower. It was visited by Lieutenant Heaviside in season 1868-69, who stated that "The mark-stone was not uncovered, but the pillar was apparently undisturbed". When again visited in 1883, the station was found to consist of a platform of earth and stones 6.7 feet above the ground level having a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Unel N. by E., miles 3; Gurla W., mile 1; Nawáda N.W., miles 3½; and Norela S.S.E., miles 4.

IX. Karsod Hill Station, lat. 23° 7', long. 75° 28'—observed at in 1848 and 1862—is situated on a small hill about 5½ miles N.E. of the town and railway station of Barnagar. It is towards the S. extremity of the hill, and 119 (ft.?) 8 (in.?) S. of the southern wall of a temple. It is in the lands of the village of Chota Karsod, pargana Barnagar, Gwalior territory.

The station consists of a platform (most probably constructed in a manner similar to those at the adjacent stations) and contains two marks, the upper 4.27 feet above the lower. When visited in 1862, in the course of the Guzerat Longitudinal Series operations, the station was found to be about 5 feet in height. When again visited in 1883, the station was found in good order and to consist of a platform of earth and stones enclosing a perforated pillar of masonry 5 feet high with two mark-stones, one in its upper surface and the other below; an aperture on the S. side gives access to the lower mark-stone. The estimated directions and distances of the circumjacent villages are:—Rasulabad S., mile ½; Chota Karsod N.E. by N., miles 1½; and Palwás N., miles 2½.

X. Jalálkheri Hill Station, lat. 23° 11', long. 75° 45'—observed at in 1848—is situated on a detached hill about a mile S. of a table-land. The station is on the northern of two eminences rising 20 feet above the hill top, and some 100 feet above the level of the country and lies 8½ miles west of the railway station near the town of Ujjain: pargana and district Ujjain, Gwalior territory.

The station consists of a platform of loose stones about 10 feet square and 6 feet high, the central portion from 2 to 3 feet square is of solid masonry in which three mark-stones are inserted, the two upper being 2.75 and 6.08 feet respectively above

one imbedded in the foundation, the second mark-stone is about the ground level. In 1869 Lieutenant Heaviside found the upper mark-stone in position. When visited in 1883, the station was found to consist of a platform of earth and stones 16 feet square and 3·8 feet high with a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Jalálkheri W.N.W., mile 1; Mendpura E.N.E., miles 1½; and Chaudukheri S.W. by S., miles 1½.

XI. Kaula-ka-Máta Hill Station, lat. 23° 8', long. 75° 13'—observed at in 1848—is on an isolated and symmetrically shaped hill rising about 500 feet above the plain. The station is at the N.E. corner of the flat roof of the porch and E. of the spire of the large temple of Kaula-ka-Máta from which the hill derives its name. The station is in the lands of the village of Barmaval, Sailána State, Western Malwa Agency.

The station is denoted by two marks, the upper 0·75 of a foot above the lower. It was visited in 1869, when "the mark was found in good preservation". When again visited in 1883, the station was found to consist of a square pillar of masonry 6 inches high with a mark-stone in its upper surface, the height of which above the top of the hill is 18½ feet. The directions and estimated distances of the circumjacent villages are:—Amleti N.E., mile 1; Barmaval W., miles 3; and Lochitara (on the high road to Mbow) E., miles 2.

Another principal station, about 20 yards S. of the temple, was established in 1862 in the course of the operations of the Guzerat Longitudinal Series, in which Series its full description will be found under the name of Station "I. Kaula-ka-Máta".

XII. Harnása Tower Station, lat. 22° 47', long. 75° 36'—observed at in 1847 and 1848—is situated on the highest part of the country, the watershed of the Gambhír and Chambal rivers, and 4 miles S. by E. of the town of Depálpur on the road from Neemuch to Indore: pargana Depálpur, Holkar's territory.

The station as originally built in 1846 consisted of a solid pillar of masonry sunk to a depth of about 9 feet, having its upper surface flush with the ground level. It contained two marks, one at the surface about 9 feet above the other. Over the pillar a loose stone platform was constructed with a mark in its upper surface. The height of the platform above the top of the pillar appears to have been originally 7·35 feet; but this not proving sufficient it was increased to 10·31 feet in April 1847. The station was revisited in 1869 by Mr. J. Wood, Assistant Surveyor, who removed the pile of stones and found a mark-stone about 3 feet below the ground level. He built up the pillar to the ground level and placed a mark-stone there. At this level astronomical observations for latitude were taken in 1869-70. Immediately afterwards a perforated masonry pillar was built over the mark-stone at the ground level and carried up to a height of 10·31 feet, the height of the station as given in the original description. The pillar is surrounded by a platform, and an arched passage runs nearly north and south through the platform and pillar giving access to the mark-stone. When again visited in 1883, the upper 4 feet of the pillar was found pulled down, it was rebuilt to a height of 10·2 feet above the ground level mark. The directions and distances of the circumjacent villages are:—Jaloda N.E. by N., miles 1½; Harnása S. by E., mile ¾; Suklundi S. by W., miles 1½; Básoda W. by N., mile ¾; and Girora N. by W., miles 2.

XIII. Indráwan Tower Station, lat. 22° 49', long. 75° 13'—observed at in 1847, 1848 and 1862—is situated on rising ground, about 1 mile N.W. of the village from which the station obtains its name, and 8 miles N.N.E. of Desi. The station is in the lands of the village of Barawál, pargana Badnáwar, Dhár State, Bhopáwar Agency.

The station as originally built in April 1847 consisted of a solid pillar of masonry sunk to a depth of 6·3 feet, containing two marks, the upper in the surface of the pillar being at the ground level; over this a platform of loose stones, 7·46 feet in height, with a mark at the top was constructed. In November 1848 an addition of 2·17 feet was made to the height of the platform. It was again visited in February 1862 in the course of the operations of the Guzerat Longitudinal Series: in the records of that Series it is simply stated that it is built 4·75 feet high. In 1869 the loose stone platform was removed, and over the original mark at the ground level, a perforated and isolated pillar of masonry 7·46 feet in height and 3½ feet in diameter was built with a mark-stone in its upper surface, and surrounded by a platform of earth and stones of the same height as the pillar. An arched passage from E. to W. gives access to the ground level mark. It thus appears that the station as last constructed is 2·17 feet lower than that of November 1848. When again visited in 1883, the pillar and its upper mark-stone were found in good order. The directions and distances of the circumjacent villages are:—Borjhiri W., mile 1; Burwai E., miles 2½; and Gundikheri S.E., miles 1½.

XIV. Mograba Hill Station, lat. 22° 23', long. 75° 22'—observed at in 1847—is situated on the summit of the highest, flat-topped hill 5½ miles to N.W. of the old, ruined city of Mándo or Mándogarh: the small Bheel village of Mograba lies to the N.E. at about ¾ of a mile in direct distance from the station: pargana Nálchha, Dhár State, Bhopáwar Agency.

The station consists of a platform having its upper surface flush with the ground, which contains two marks, the lower, on a large stone set in the muram (a kind of gravel), is 0·40 of a foot below the one in the surface of the platform. It was visited in 1869, when the upper mark-stone was found firmly imbedded. When again visited in 1883, the station was found in good order and covered over by a protecting masonry pillar 3 feet, 8 inches high, but as the upper diameter was too small to admit of the theodolite, the upper 6 inches of the pillar were removed. The directions and estimated distances of the circumjacent villages are:—Talwára N. by E., miles 8; Múrkhál S., miles 2½; and Mandauda S.S.W., miles 3.

XV. Singáchori Hill Station, lat. 22° 25', long. 75° 43'—observed at in 1847—is situated on the highest part of a range of hills so called, lying about 3½ miles E.S.E. of the village of Mánpur on the high road from

Bombay to Agra, and $11\frac{1}{2}$ miles S.S.W. of the cantonment of Mhow. The hill is about 1000 feet in height: Mánpur State, Bhopáwar Agency.

The station was denoted by two marks, the upper 1·79 feet above the lower. When visited in 1883, a masonry pillar 2 feet in diameter and 3 feet above ground level surrounded by earthwork about 2 feet high was found; there being no mark-stone on the pillar its upper portion was removed and a mark-stone embedded in its centre 1·75 feet above the ground level. The directions and estimated distances of the following villages are:—Bargaon N.W. by N., miles $1\frac{1}{2}$; Mograpura E.S.E., miles $1\frac{1}{2}$; and Nayapura E. by N., miles $1\frac{1}{2}$.

XVI. Gumánpur Tower Station, lat. $22^{\circ} 35'$, long. $74^{\circ} 55'$ —observed at in 1847—is situated on rising ground about $\frac{3}{4}$ of a mile S. of the village of that name and about 200 yards N. of the edge of the Ghát, and $5\frac{1}{2}$ miles N. by E. of the large village of Tanda. It is in the lands of the village of Gumánpur, Amjhera State, Bhopáwar Agency.

The station of 1847 consisted of a loose stone platform with a mark-stone at top 7·48 feet above one let into masonry at the ground level. In 1869 the platform was removed and a perforated and isolated pillar of masonry, 7·48 feet in height, built above the original mark at the ground level, and surrounded by a platform of stones: a passage from N. to S. gives access to the ground level mark. When again visited in 1883, the station was found to consist of a pillar of masonry 5·3 feet high and 3 feet in diameter with a mark-stone in its upper surface, and surrounded by a platform of loose stones. The directions and distances of the circumjacent villages are:—Ratanpura N.E. by N., miles 2; Ringnod E.N.E., miles 4; Nawapura E. by S., miles $1\frac{1}{2}$; and Urai W.N.W., mile $\frac{1}{2}$.

XVII. Thíkri Hill Station, lat. $22^{\circ} 1'$, long. $75^{\circ} 27'$ —observed at in 1847—is situated on a knoll, 40 yards long, 20 yards wide, and 20 feet high, at the S. extremity of a table-land which rises about 300 feet above the general level of the surrounding country. It is about $3\frac{1}{2}$ miles S. by E. of the Police Station of Thíkri on the high road from Bombay to Agra: pargana Dharampuri, Dhár State, Bhopáwar Agency.

The station consists of a platform of loose stones enclosing a solid circular pillar of masonry which contains two marks, one at the surface 1·25 feet above the other which is engraved on the rock. When visited in 1869, the upper mark-stone was found firmly fixed; it was again visited in 1883, when the station was found protected by a rectangular capping pillar $3\frac{1}{2}$ feet high built over the circular pillar level with the surface of the knoll. The directions and distances of the circumjacent villages are:—Rarkot S. by E., mile 1; Rupkhera S.W. by W., miles $1\frac{1}{2}$; Khurampur (on the high road) W., miles $4\frac{1}{2}$; and Nader N.N.E., miles 2.

XVIII. Báwangaz Hill Station, lat. $21^{\circ} 59'$, long. $74^{\circ} 54'$ —observed at in 1847—is on the terraced roof of a temple which is built of fine slabs of granite, on the highest part—a peak—of a remarkable hill called Báwangaz, about 5 miles S. of the Nerbudda river. The temple is dedicated to a god whose colossal figure is cut on the rock in bold relief, about 600 feet below, on the southern face or scarp of the hill. The station is almost in the centre of the flat portion of the roof E. of the dome, 13·42 feet from the nearest part of the circumference of the dome, 11·42 feet from the outside of the N. wall, and 12·75 feet from the outside of the S. wall; the roof of the temple is 10 feet above the ground. The station is in the lands of the village of Barwáni, Barwáni State, Bhopáwar Agency.

The station consists of a solid circular pillar of masonry which contains two marks, the upper 0·44 of a foot above the one engraved on a slab of granite of the roof. When visited in 1869 and 1883 the station and its upper mark-stone were found in good preservation. The directions and distances of the circumjacent places are:—Barwáni town N.E., miles $4\frac{1}{2}$; Chilkalda town N. by E., miles 7; Bhomia village N., miles $2\frac{1}{2}$; Mangarpati and Kachkor (on the Goi stream) W.N.W., miles $3\frac{1}{2}$; and Wadgaon E.N.E., miles 4.

XIX. Jalálabad Hill Station, lat. $21^{\circ} 41'$, long. $75^{\circ} 27'$ —observed at in 1847—is situated on the highest peak of the same range of hills as that on which the old, ruined fort of Bijagarh stands and from which it lies $3\frac{1}{2}$ miles in a direction E. by S. The station is in the lands of the village of Náráyangarh, pargana Khargon, Holkar's territory.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0·44 of a foot below. It was visited by Lieutenant Heaviside in 1869, when the upper mark-stone was found in position, and about $2\frac{1}{2}$ feet above the ground level. In 1883 and 1884, the station was found in good preservation and the upper mark-stone in position. The directions and distances of the circumjacent villages are:—Sángvi N.N.W., miles 4; Bhadwalí N., miles $4\frac{1}{2}$; Sirwil Chauki (police station) and temple S.E. by S., miles $4\frac{1}{2}$; and Dhaura S.W. by S., miles $2\frac{1}{2}$.

XX. Bábákuvar (*Bábákuwar*) Hill Station, lat. $21^{\circ} 36'$, long. $74^{\circ} 57'$ —observed at in 1847—is situated on the main ridge of the Sátapura hills, about $9\frac{1}{2}$ miles N.W. by W. of the Dák Bungalow at Palásner on the high road from Bombay to Agra, and 550 feet E. of an idol at the W. extremity of the hill. The station is in the lands of the village of Boradi, taluka Shirpur, district Khándesh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 1·67 feet

below. When visited in 1883 and 1884, the station was found in good preservation and the upper mark-stone in position. The height of the platform is about 1 foot from the ground level. The directions and distances of the circumjacent villages are:—Chaparkhera N.E., miles $4\frac{1}{2}$; Rájmalí E., miles $4\frac{1}{2}$; Vakvar S.E. by E., miles 5; and Khera S.E. by S., miles $6\frac{1}{2}$.

XXI. Árgaon Hill Station, lat. $21^{\circ} 18'$, long. $75^{\circ} 34'$ —observed at in 1847—is situated on a high peak of the Sátputa range, rising some 2500 feet above the plains of Khándesh. The peak which is known by the name of Mondhiámál, is about $1\frac{3}{4}$ miles W. of the ruins of Gauligarh, and $5\frac{1}{2}$ miles N.N.W. of Árgaon village. A small conical peak is 50 yards to S.E. The station is in the lands of the village of Bhadgaon, taluka Chopda, district Khándesh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0·81 of a foot below engraved on the rock. In 1869 Lieutenant Heaviside found the upper mark-stone in position and nearly on the same level as the highest part of the peak. When again visited in 1884, the upper mark-stone and platform were found in good preservation. The azimuths and estimated distances of the circumjacent villages are:—Dhánora 4° , miles $6\frac{1}{2}$; Ádávad 42° , miles 8; Birgaon 6° , miles 6; and Mahorad 356° , miles $4\frac{1}{2}$.

XXII. Ajnád Hill Station, lat. $21^{\circ} 19'$ long. $75^{\circ} 5'$ —observed at in 1847—is situated on a long, high ridge running nearly in a direction W.N.W. and E.S.E. and parallel to road to south from Shirpur to Tanda on the Aner river, about 2 miles N. of Ajnád village. The station is in the lands of the village of Ajnád, taluka Shirpur, district Khándesh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0·67 of a foot below engraved on the rock. When visited in 1884, the upper mark-stone and platform were found in good preservation. The azimuths and distances of the circumjacent villages are:—Bábla 340° , miles $2\frac{1}{2}$; Tárli 321° , miles $3\frac{1}{2}$; and Bhátpur 28° , miles 3.

XXIII. Valvádi (*Walwári*) Hill Station, lat. $20^{\circ} 44'$, long. $75^{\circ} 14'$ —observed at in 1846—is situated near the N.W. extremity of a group or range of low hills about 90 feet in height. The station is about 20 yards from the W. edge of a flat, rocky hill, whose summit is 150 yards long and 30 yards wide. The station is in the lands of the village of Valvádi, taluka Páchora, district Khándesh.

The station consisted of a platform of loose stone masonry having a mark at its surface and another 2·00 feet below it engraved on the rock *in situ*. A heap of stones, apparently the station platform of some former survey, was found here: the centre of this heap was made the site. It was visited in 1870 by Lieutenant Heaviside, when the upper mark-stone was not found, the platform was partly dug up and a solid circular pillar of masonry was built up from the level of the lower mark to a height of 2 feet and a mark-stone inserted in its upper surface. When again visited in 1884, the station was found protected by a rectangular pillar 2·8 feet high built over the circular masonry pillar. The directions and estimated distances of the circumjacent villages are:—Mándla S.W. by S., miles 4; Títi W. by N., miles $2\frac{1}{2}$; Chorvár N., miles 2; and Valvádi S.E. by S., miles $1\frac{1}{2}$.

XXIV. Dhanvár (*Dhanwár*) Hill Station, lat. $20^{\circ} 53'$, long. $75^{\circ} 38'$ —observed at in 1846—is on the southern of a group of low, flat-topped hills which rises some 70 feet above the low range from which it springs, and is some 200 feet above the level of the country. The top of the hill is pear shaped, the station being about 20 yards from the narrow end and 60 yards from the broader. The station is in the lands of the village of Dhanvár, taluka Jalgaon, district Khándesh.

The station consists of a platform having the usual mark at its surface and another 0·98 of a foot below. In 1869 the upper mark-stone was in position and about 2 feet above the hill top. When visited in 1884, the upper mark-stone was found in the centre and upper surface of a platform 2 feet high. The azimuths and estimated distances of the circumjacent villages are:—Dhánora 186° , miles 2; Karmar 300° , miles 2; Dehori 240° miles $1\frac{1}{2}$; and Paláskhera 350° , miles 4.

XXV. Anakvádi (*Anakwári*) Hill Station (locally known as Silla Dongar) lat. $20^{\circ} 47'$, long. $74^{\circ} 44'$ —observed at in 1846 and 1847—is on the summit of a conical hill about 1000 feet above the plain and some 700 feet above the lower range from which it rises with precipitous sides. The station mark is 20 feet S.E. of a small heap of stones forming a shrine: it is in the lands of Anakvádi village, taluka Dhulia, district Khándesh.

The station consists of a platform having two marks, one in its upper surface and the other 2·5 feet below it. It was visited by Lieutenant Heaviside in season 1868-69, who stated that "A mark-stone is in position and on a level with the surface of the ground." When again visited in 1884, the upper mark-stone was found protruding 6 inches above the surface of the three large stones on which the theodolite stand rested; this upper mark is 3·2 feet above and in the normal of the lower one engraved on the rock *in situ*. The directions and estimated distances of the circumjacent villages are:—Anakvádi S. by W., miles $1\frac{1}{2}$; Sargaon N.W. by W., miles 3; Dhulia N.E. by N., miles 10; Laling (fort) E.N.E., miles 4; and Arvi (Dák Bungalow) S.S.E., miles $2\frac{1}{2}$.

XXVI. Sirsála Hill Station, also called Shekh Máru Pír, lat. $20^{\circ} 30'$, long. $75^{\circ} 34'$ —observed at in 1846—is on a hill about 200 feet high close to the N. edge of the table-land which rises gradually from the Godávári

river and here terminates in a northerly direction by a descent of some 1200 feet into the plains of Khándesh. About $1\frac{1}{2}$ miles W. of the station and built in a gorge above a precipice of the table-land, is an uninhabited fort which contains a temple dedicated to Mahádev. The station is in the lands of the village of Sirsála, taluka Nánded, district Aurangabad.

The station consists of a platform of stones having a mark at its surface and another 0·83 of a foot below engraved on the rock *in situ*. In 1869 Lieutenant Heavyside found the upper mark-stone in position and about 2 feet above the hill top. When again visited in 1884, the platform and lower mark were found in good preservation, the upper mark-stone was replaced (having been picked up from the hill side) at 0·83 of a foot above and in the normal of the lower mark. The azimuths and estimated distances of the circumjacent villages are:—Kelgaon 37° , miles $2\frac{1}{4}$; Borkhera 173° , miles 3; Sirsála 313° , miles $1\frac{1}{4}$; Shekhpur 345° , miles 3; and Pipalgaon 354° , miles 3.

XXVII. Sátmála Hill Station, lat. $20^\circ 20'$, long. $75^\circ 10'$ —observed at in 1846—is on a hill so called, about 2 miles W. of a chauki (police station) on the Ganthála Ghát, and 5 miles N. of the taluk town of Kanad. The line of Gháts extends about 15 miles further west, and its descent to the plains to north is considerable. The station is in the lands of the village of Ganthála, taluka Kanad, district Aurangabad.

The station originally consisted of a platform about 5 feet high, having a mark-stone at its surface and another 5·00 feet below. In season 1846-47, the platform was raised 4·04 feet. When visited in 1884, the platform was found 9 feet high, built of loose boulders, having a mark-stone on its summit not firmly fixed, as the structure was too shaky for observation the upper portion was removed till the mark-stone said to be 5 feet above the ground level was disclosed wedged in between three large stones used for the theodolite stand to rest on. As this part was firm and adapted for observations, the platform was built up to the level of this mark. No masonry pillar appears to have been built here, nor could one be erected now as both water and labour were difficult to obtain. The azimuths and estimated distances of the following places are:—Bámni 345° , miles $5\frac{1}{4}$; and Hevadgaon 350° , miles $4\frac{1}{4}$.

XXVIII. Pophla Hill Station, lat. $20^\circ 2'$, long. $75^\circ 31'$ —observed at in 1846—is on the highest part of a hill, $1\frac{1}{2}$ miles N. E. of that village, a vádi (garden) of which is close below the station. It is 7·25 feet (20° N. of W.) from the centre of a tomb. The station is in the lands of the village of Pophla, taluka Phúlamri, district Aurangabad.

The station consisted of a platform having a mark-stone at its surface and another 1·08 feet below. When visited in 1884, no mark-stones were found, the platform, with an excavation in the centre, remained to mark the site of the station. A mark-stone was built into the centre of the platform—7·25 feet from, 20° N. of W. of the centre of the tomb (above mentioned), and on a level with the upper surface of the platform which is 1·25 feet above the surface of the hill. The azimuths and estimated distances of the following villages are:—Kámkhera 3° , miles 3; Modhai 56° , miles 2; Chincholi 91° , miles $1\frac{1}{4}$; Bámangaon 212° , miles 2; and Vághul 266° , miles 2.

XXIX. Rájur Hill Station, lat. $20^\circ 4'$, long. $75^\circ 54'$ —observed at in 1846 and 1862—is on a small conical hill about 200 yards W. of the village, and N. W. of a large temple, about 50 feet high, built of most elaborately carved stone, having two tiers of pillars above its base which is $13\frac{1}{2}$ feet high. The horizontal distance of the station to the N. W. pillar of the first tier is 68·8 feet, and that to the N. W. corner of the base, 66 feet. The station is in the lands of the village of Rájur, taluka Jaffrabad, district Aurangabad.

The station first consisted of a platform 14 feet high with two mark-stones, a large one, about 3 feet square and 2 feet thick, at the top and another 13·75 feet below about the ground level. It was visited in 1862 and then rebuilt to a height of about 20 feet. When again visited in 1884, the surrounding platform was found to have fallen away leaving the upper 12 feet of the circular masonry pillar exposed, this was rebuilt with stones. The upper mark-stone was in position, 20·25 feet above and in the normal of the mark at the ground level. The azimuths and estimated distances of the following villages are:—Chanaigaon 32° , miles 2; Táplichandui 112° , miles $1\frac{1}{4}$; Kámkhera 212° , miles $1\frac{1}{4}$; Lon 283° , miles 2; and Tápon 327° , miles $1\frac{1}{4}$.

XXX. Yerúl Hill Station, lat. $19^\circ 59'$, long. $75^\circ 12'$ —observed at in 1846—is on the high table-land, about $2\frac{1}{2}$ miles S. of the celebrated cave temples. The station is 418 feet W. of a conspicuous Bar tree, 1949 feet E.N.E. of an old station of the Bombay Trigonometrical Survey, and 60 feet from the southern and 525 feet from the northern edge of the hill. It is in the lands of the village of Súribhanjan, taluka Rōza, district Aurangabad.

The station consisted of a platform with two mark-stones, one at the ground level and the other 2·13 feet below. In 1870 the upper mark-stone was not found, but the lower one was probably in position. A pile of stones about 3 feet in height was then erected over the platform. When again visited in 1884, no mark-stones were found and only a heap of boulders marking the site of the platform. The platform was rebuilt to a height of 1 foot, taking the centre of the heap of boulders as a guide and a mark was placed in the centre and on a level with its upper surface. The position of this mark was tested by observing the horizontal angles between the four adjacent stations with a 14-inch theodolite which showed no appreciable difference with the angles measured in 1846. The estimated directions and distances of the following places are:—Daulatabad (minaret) S.E., miles $4\frac{1}{4}$; Chumar Tekri (centre of hill fort) S.E. by S., miles 8 or 9; and Daulatabad (Rōza, mausoleum) N.E., miles $3\frac{1}{4}$.

XXXI. Jámkhed Hill Station, lat. $19^{\circ} 41'$, long. $75^{\circ} 42'$ —observed at in 1845, 1846 and 1862—is situated on a square, flat-topped knoll rising about 20 feet above the surface of the irregular plateau like range trending east and west and terminating about 150 feet to the east of the station in an abrupt fall to the plain below, and lies about 2 miles N. of the town of Jámkhed. The station is in the lands of the village of Rhailgarh, taluka Ambad, district Aurangabad.

The station of 1846 consisted of a platform containing two mark-stones, the lower 1.63 feet below the one at the surface of the ground. When visited in 1862, the mark at the ground level of the old station was found and over this a circular perforated and isolated pillar of masonry $3\frac{1}{2}$ feet in diameter was built, carrying a mark in its upper surface 3.00 feet above the one at the ground level, access to which was obtained by a passage constructed for the purpose. When again visited in 1884, the circular masonry pillar and the rectangular aperture for plumbing over the mark at the ground level were found in good preservation, but no upper mark. The height of the upper surface of the pillar above the one at the ground level is 3 feet. The azimuths and estimated distances of the following villages are:—Jámkhed 4° , miles $2\frac{1}{2}$; Rhailgarh 180° , miles 2; Kingaon 271° , miles 2; and Vitalvádi 336° , miles $1\frac{1}{2}$.

XXXII. Áhirmal Hill Station, lat. $19^{\circ} 33'$, long. $76^{\circ} 7'$ —observed at in 1862—is situated on an isolated hill of that name, about $1\frac{1}{2}$ miles N.E. by N. of the village of Dhákephal. The platform of the station is built contiguous to a Muhammadan mosque. It is in the lands of the village of Dhákephal, taluka Ambad, district Aurangabad.

The station consists of a platform of loose rubble, enclosing a central, isolated and perforated pillar of masonry 5 feet in height. Access to the lower mark is obtained through a passage specially constructed for the purpose. When visited in 1884, the circular masonry pillar and the mark in its upper surface were found in good preservation. The azimuths and estimated distances of the circumjacent villages are:—Dhárgaon 5° , miles $3\frac{1}{2}$; Hadgaon 115° , miles $1\frac{1}{2}$; Jaula 169° , mile 1; and Jhirgaon 260° , miles $2\frac{1}{2}$.

XXXIII. Mathuri Hill Station, lat. $19^{\circ} 11'$, long. $75^{\circ} 32'$ —observed at in 1845 and 1862—is on the N.W. corner of the temple built on the conical hill $1\frac{1}{2}$ miles E. of Mathuri village, over the junction of the walls of the smaller shrine: it is in the lands of the village of Mathuri, taluka Bíd, Nizam's territory.

The station of 1845 contained two marks, the one imbedded in the stone masonry of the wall 1.38 feet below the upper which was fixed at the level of the roof which is 10 feet above the ground. When visited in 1862, the mark on a level with roof of the temple was found in position, over which a solid, circular pillar of masonry was built carrying a mark in its upper surface 1.17 feet above the one level with the roof. When again visited in 1884, the upper portion of the circular masonry pillar was found broken and the upper mark-stone removed; but the mark of 1845 on a level with the roof of the temple was found in position. The pillar was rebuilt to a height of 1.17 feet above the roof of the temple, carrying a mark in its upper surface. The directions and distances of the circumjacent villages are:—Bhorgaon S. by W., miles $2\frac{1}{2}$; Hukarda S.W., miles $4\frac{1}{2}$; Mirsángvi W.S.W., miles $4\frac{1}{2}$; Titurvani E. by S., miles $1\frac{1}{2}$; and Malegaon W. by N., miles $3\frac{1}{2}$.

XXXIV. Dhaigaon Station, lat. $19^{\circ} 31'$, long. $75^{\circ} 15'$ —observed at in 1845—is situated on the high ground, about $1\frac{1}{2}$ miles S. of the Vagji stream which joins the Godávári river at $2\frac{1}{2}$ miles to N.E. of the station. It is in the lands of the village of Dhaigaon, taluka Nevása, district Ahmednagar.

“The soil was excavated to a depth of about 4.75 feet and $2\frac{1}{2}$ feet below the muram (a kind of gravel), a large stone, about 4 feet long and 1 foot square, with the usual mark on its upper surface, was imbedded in the muram. From the surface of the muram a pillar of stone masonry about 4 feet in diameter has been built up and raised about 2 feet above the ground. A platform of loose stones has been built around the pillar and a stone with the usual mark placed at its surface at the height of $20\frac{1}{2}$ (?) above the mark on the large stone”. When visited in 1884, the pillar and the mark were found in good preservation. The azimuths and perambulated distances of the following are:—Dhaigaon (large pipal tree S. of village) 76° , miles 1.95; Gheori (temple) 306° , miles 2.06; and Devlána (temple on right bank of the Godávári) 219° miles 2.29.

XXIII. (*Of the Bombay Longitudinal Series*). Chincholi Hill Station, lat. $18^{\circ} 55'$, long. $75^{\circ} 19'$ —observed at in 1845—is situated on a short narrow ridge about 300 feet long trending east and west nearly, and 30 feet higher than the level of the surrounding plateau. The station is on the western end of the ridge while a large bar tree marks the eastern extremity. The large village of Ashti on the high road from Ahmednagar to Jámkhed lies about 10 miles to S.W. by S. and that of Ámalner 4 miles to E. by N. of the station. It is in the lands of the village of Chincholi, taluka Ashti, Nizam's territory.

The station consists of a solid platform and contains two marks, the one at its surface is 0.83 of a foot above one fixed in 1834. When visited in 1884, the station was found to consist of a circular masonry pillar 2.8 feet in diameter at top with a mark-stone embedded flush with its upper surface: the pillar is surrounded by a large irregular shaped platform of loose boulders from which it is not isolated. Judging from the appearance the pillar does not appear to be very ancient. The height of the upper mark above the ground level is 10.6 feet. The azimuths and distances of the circumjacent villages are:—Chikhli 13° , miles 2; Chincholi 34° , mile $\frac{1}{2}$; and Gangarvádi 67° , miles $2\frac{1}{2}$.

XXIV. (*Of the Bombay Longitudinal Series*). Ágargaon Hill Station, lat. $19^{\circ} 11'$, long. $74^{\circ} 55'$ —observed at in 1845—is situated on a low part of an extensive and irregularly shaped table-land, about 1 mile N. of that village, and $6\frac{1}{2}$ miles E. by N. of Shendi which is $\frac{1}{2}$ a mile E. of the high road from Ahmednagar to Aurangabad. It is in the lands of the village of Ágargaon, taluka Nagar, district Ahmednagar.

The station as originally built consisted of a platform of loose stone masonry and contained three mark-stones, one at the ground level and the other two 7·13 and 13·54 feet respectively above it. When visited in 1882, the station was found to consist of a mound of loose boulders about 10 feet high and 30 feet in diameter, having a post—erected by a Survey Party about 2 or 3 years ago—rising $3\frac{1}{2}$ feet above it, the mound was raised 16·43 feet above a bench-mark on the ground level and a mark-stone inserted at that height. When again visited in 1883, the upper mark-stone was found in position and protected by the usual rectangular pillar of masonry. The directions and distances of the following places are:—Ahmednagar S.W., miles 9; Ranjani S.E. by E., miles $2\frac{1}{2}$; Kalhar N.E. by N., miles $2\frac{1}{2}$; Pimpalgaon Uzáni W. by S., miles $3\frac{1}{2}$; and Deogaon S.W., miles 8.

NOTE.—In some instances the names of Principal Stations, occurring in the foregoing descriptions, are given by two methods of spelling distinguished from each other by the use of Roman and Italic type, as Station XXV Anakvadi (*Anakvadi*): the latter spelling is in keeping with that adopted in the pages containing the observed angles printed in March 1879, which was based on a list of names of places for the Bombay Presidency published under the orders of the Government in September 1875; the spelling in Roman type is in accordance with that in a revised edition of the same published in 1880, and with the list of names for the Dominions of His Highness the Nizam, published in February 1883. It will be seen that the two methods differ but slightly, notwithstanding where differences occur, both renderings are given so as to remove all possible doubt as to the identity of a station. The method of spelling in Roman type is hereafter exclusively adopted in the publication of this Series.

February, 1888.

M. W. ROGERS,
In charge of Computing Office.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
			o	'	"	Log. feet	Feet	Miles
1	Bálágara, XXIV	.59	80	17	42.41	5.1011137	126215.8	23.905
	Búda, XXI	.59	70	28	25.72	5.0816499	120684.1	22.857
	Dhamnár, II	.58	29	13	51.87	4.7960898	62530.2	11.843
2	Búda, XXI	.61	39	23	51.52	4.9036849	80109.7	15.172
	Dhamnár, II	.62	50	50	6.06	4.9906042	97859.8	18.534
	Sítamau, I	.62	89	46	2.42	5.1011137	126215.8	23.905
3	Búda, XXI	.46	109	52	17.98	5.1233300	132840.4	25.159
	Bálágara, XXIV	.45	43	51	10.02	4.9906042	97859.8	18.534
	Sítamau, I	.45	26	16	32.00	4.7960898	62530.2	11.843
4	Sítamau, I	.58	64	39	56.81	4.9949085	98834.5	18.719
	Dhamnár, II	.58	68	13	48.51	5.0066897	101552.3	19.233
	Nigrun, III	.58	47	6	14.68	4.9036849	80109.7	15.172
5	Sítamau, I	1.01	49	49	10.28	5.1007639	126114.2	23.885
	Nigrun, III	1.01	92	12	46.09	5.2173375	164944.4	31.239
	Dudhála, IV	1.01	37	58	3.63	5.0066897	101552.3	19.233

NOTES.—1. The values of the side are given in the same line with the opposite angle.

2. Stations Bálágara, XXIV and Búda, XXI appertain to the Karachi Longitudinal Series of the North-West Quadrilateral.

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
						Log. feet	Feet	Miles
6	Dudhála, IV	1' 22	47	4	33' 98	5' 0905100	123171' 4	23' 328
	Nigrun, III	1' 22	84	21	17' 45	5' 2237339	167391' 7	31' 703
	Deo Dongri, V	1' 22	48	34	8' 57	5' 1007639	126114' 2	23' 885
7	Dhamnár, II	.84	72	37	29' 94	5' 1002476	125964' 3	23' 857
	Nigrun, III	.84	58	53	12' 01	5' 0530789	113000' 1	21' 402
	Lohári, VI	.84	48	29	18' 05	4' 9949085	98834' 5	18' 719
8	Nigrun, III	1' 20	77	26	24' 92	5' 1927175	155853' 8	29' 518
	Lohári, VI	1' 19	50	28	43' 55	5' 0905100	123171' 4	23' 328
	Deo Dongri, V	1' 19	52	4	51' 53	5' 1002476	125964' 3	23' 857
9	Lohári, VI	1' 10	46	17	18' 39	5' 0560419	113773' 7	21' 548
	Deo Dongri, V	1' 10	51	45	4' 49	5' 0920595	123611' 7	23' 411
	Dhanora, VII	1' 10	81	57	37' 12	5' 1927175	155853' 8	29' 518
10	Deo Dongri, V	.44	61	51	12' 38	5' 0014904	100343' 8	19' 005
	Dhanora, VII	.44	29	24	46' 44	4' 7473178	55887' 9	10' 585
	Gurla, VIII	.45	88	44	1' 18	5' 0560419	113773' 7	21' 548
11	Dhanora, VII	.49	48	53	16' 85	4' 8895432	77543' 1	14' 686
	Gurla, VIII	.50	53	57	37' 26	4' 9202418	83222' 7	15' 762
	Karsod, IX	.50	77	9	5' 89	5' 0014904	100343' 8	19' 005
12	Lohári, VI	.47	16	59	22' 02	4' 7786086	60063' 2	11' 376
	Dhanora, VII	.48	126	2	39' 02	5' 2206490	166206' 9	31' 479
	Kaula-ka-Máta, XI	.47	36	57	58' 96	5' 0920595	123611' 7	23' 411
13	Dhanora, VII	.38	73	41	37' 68	4' 9439963	87901' 5	16' 648
	Karsod, IX	.38	40	58	53' 45	4' 7786086	60063' 2	11' 376
	Kaula-ka-Máta, XI	.38	65	19	28' 87	4' 9202418	83222' 7	15' 762
14	Gurla, VIII	.40	82	4	29' 27	4' 9755439	94524' 4	17' 902
	Karsod, IX	.40	43	34	58' 10	4' 8181844	65793' 7	12' 461
	Jalálkheri, X	.40	54	20	32' 63	4' 8895432	77543' 1	14' 686
15	Jalálkheri, X	.92	56	8	23' 26	5' 0930463	123892' 9	23' 465
	Karsod, IX	.92	84	32	50' 20	5' 1717896	148521' 6	28' 129
	Harnása, XII	.92	39	18	46' 54	4' 9755439	94524' 4	17' 902
16	Kaula-ka-Máta, XI	.80	83	38	7' 10	5' 1363075	136869' 7	25' 922
	Karsod, IX	.79	56	42	6' 59	5' 0611079	115108' 6	21' 801
	Indráwan, XIII	.79	39	39	46' 31	4' 9439963	87901' 5	16' 648
17	Karsod, IX	1' 12	57	2	1' 66	5' 0969581	125013' 8	23' 677
	Harnása, XII	1' 13	66	42	58' 71	5' 1363075	136869' 7	25' 922
	Indráwan, XIII	1' 12	56	14	59' 63	5' 0930463	123892' 9	23' 465
18	Harnása, XII	1' 53	66	0	2' 97	5' 2162374	164527' 1	31' 160
	Indráwan, XIII	1' 53	70	2	22' 61	5' 2285994	169277' 6	32' 060
	Mograba, XIV	1' 52	43	57	34' 42	5' 0969581	125013' 8	23' 677
19	Harnása, XII	1' 34	44	16	33' 03	5' 0806120	120396' 0	22' 802
	Mograba, XIV	1' 34	56	44	48' 04	5' 1590244	144219' 6	27' 314
	Singárchori, XV	1' 35	78	58	38' 93	5' 2285994	169277' 6	32' 060
20	Singárchori, XV	1' 27	52	47	43' 93	5' 1307296	135123' 1	25' 591
	Mograba, XIV	1' 27	81	59	45' 88	5' 2253018	167997' 1	31' 818
	Thikri, XVII	1' 27	45	12	30' 19	5' 0806120	120396' 0	22' 802

KHANPISURA MERIDIONAL SERIES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
						Log. feet	Feet	Miles
21	Indráwan, XIII	1'60	67	9	37'79	5'2224298	166889'8	31'608
	Mograba, XIV	1'59	47	32	2'24	5'1257558	133584'4	25'300
	Gumánpur, XVI	1'60	65	18	19'97	5'2162374	164527'1	31'160
22	Gumánpur, XVI	2'58	65	59	27'74	5'3256814	211680'8	40'091
	Mograba, XIV	2'59	67	56	19'04	5'3319590	214762'8	40'675
	Báwangaz, XVIII	2'58	46	4	13'22	5'2224298	166889'8	31'608
23	Mograba, XIV	1'99	61	49	20'08	5'2784758	189878'5	35'962
	Báwangaz, XVIII	1'99	38	51	2'15	5'1307296	135123'1	25'591
	Thíkri, XVII	1'99	79	19	37'77	5'3256814	211680'8	40'091
24	Thíkri, XVII	1'85	85	13	40'81	5'3383251	217934'1	41'275
	Báwangaz, XVIII	1'85	34	30	59'66	5'0931439	123920'7	23'470
	Jalálabad, XIX	1'85	60	15	19'53	5'2784758	189878'5	35'962
25	Báwangaz, XVIII	1'93	50	26	42'92	5'2257597	168174'4	31'851
	Jalálabad, XIX	1'93	41	55	22'11	5'1635562	145732'4	27'601
	Bábákuvar, XX	1'93	87	37	54'97	5'3383251	217934'1	41'275
26	Báwangaz, XVIII	2'18	84	57	44'18	5'3597984	228980'4	43'368
	Thíkri, XVII	2'17	39	20	40'30	5'1635562	145732'4	27'601
	Bábákuvar, XX	2'17	55	41	35'52	5'2784758	189878'5	35'962
27	Bábákuvar, XX	1'43	77	18	58'03	5'2545349	179694'5	34'033
	Jalálabad, XIX	1'42	36	45	12'37	5'0422364	110213'9	20'874
	Ajnád, XXII	1'43	65	55	49'60	5'2257597	168174'4	31'851
28	Jalálabad, XIX	1'73	60	31	43'41	5'2172132	164897'2	31'231
	Ajnád, XXII	1'73	47	53	53'52	5'1477707	140530'6	26'616
	Árgaon, XXI	1'74	71	34	23'07	5'2545349	179694'5	34'033
29	Bábákuvar, XX	1'85	36	51	4'70	5'1477707	140530'6	26'616
	Jalálabad, XIX	1'85	97	16	57'08	5'3662899	232428'8	44'021
	Árgaon, XXI	1'85	45	51	58'22	5'2257597	168174'4	31'851
30	Ajnád, XXII	2'70	76	8	33'07	5'3738995	236537'2	44'799
	Árgaon, XXI	2'70	61	15	37'11	5'3296346	213616'4	40'458
	Valvádi, XXIII	2'70	42	35	49'82	5'2172132	164897'2	31'231
31	Árgaon, XXI	1'82	38	51	17'77	5'1792053	151079'4	28'614
	Valvádi, XXIII	1'82	40	19	17'93	5'1926514	155830'1	29'513
	Dhanvár, XXIV	1'83	100	49	24'30	5'3738995	236537'2	44'799
32	Ajnád, XXII	1'99	38	35	9'34	5'1926514	155830'1	29'513
	Árgaon, XXI	2'00	100	6	57'40	5'3908799	245968'7	46'585
	Dhanvár, XXIV	2'00	41	17	53'26	5'2172132	164897'2	31'231
33	Dhanvár, XXIV	1'45	58	39	52'48	5'1586444	144093'5	27'290
	Valvádi, XXIII	1'45	57	45	23'61	5'1543786	142685'1	27'024
	Sirsála, XXVI	1'46	63	34	43'91	5'1792053	151079'4	28'614
34	Ajnád, XXII	2'68	44	52	42'53	5'2257841	168183'8	31'853
	Valvádi, XXIII	2'69	71	27	23'56	5'3540683	225979'1	42'799
	Anakvádi, XXV	2'69	63	39	53'91	5'3296346	213616'4	40'458
35	Anakvádi, XXV	1'96	42	38	37'84	5'1708844	148212'4	28'071
	Valvádi, XXIII	1'97	87	7	0'47	5'3394641	218506'4	41'384
	Sátmála, XXVII	1'96	50	14	21'69	5'2257841	168183'8	31'853

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
						Log. feet	Feet	Miles
36	Valvádi, XXIII	1' 47	60	44	52' 51	5' 1698059	147844' 7	28' 001
	Sirsála, XXVI	1' 47	61	0	11' 87	5' 1708844	148212' 4	28' 071
	Sátmála, XXVII	1' 47	58	14	55' 62	5' 1586444	144093' 5	27' 290
37	Sirsála, XXVI	1' 71	60	41	43' 38	5' 2054011	160472' 7	30' 393
	Sátmála, XXVII	1' 71	65	50	52' 17	5' 2250845	167913' 1	31' 802
	Pophla, XXVIII	1' 71	53	27	24' 45	5' 1698059	147844' 7	28' 001
38	Sirsála, XXVI	1' 72	41	43	26' 80	5' 1203540	131933' 2	24' 987
	Pophla, XXVIII	1' 73	80	23	2' 18	5' 2910314	195448' 1	37' 017
	Rájur, XXIX	1' 72	57	53	31' 02	5' 2250845	167913' 1	31' 802
39	Pophla, XXVIII	1' 42	67	22	46' 14	5' 1911635	155297' 1	29' 412
	Rájur, XXIX	1' 41	60	58	25' 86	5' 1676370	147108' 2	27' 861
	Jámkhed, XXXI	1' 41	51	38	48' 00	5' 1203540	131933' 2	24' 987
40	Sátmála, XXVII	1' 14	43	16	33' 97	5' 0450926	110941' 1	21' 012
	Pophla, XXVIII	1' 14	54	10	0' 68	5' 1179495	131204' 8	24' 849
	Yerúl, XXX	1' 14	82	33	25' 35	5' 2054011	160472' 7	30' 393
41	Pophla, XXVIII	1' 25	104	36	39' 30	5' 3125663	205383' 9	38' 898
	Yerúl, XXX	1' 25	43	52	32' 79	5' 1676370	147108' 2	27' 861
	Jámkhed, XXXI	1' 24	31	30	47' 91	5' 0450926	110941' 1	21' 012
42	Rájur, XXIX	1' 80	47	39	8' 77	5' 1718949	148557' 6	28' 136
	Jámkhed, XXXI	1' 81	81	45	34' 19	5' 2987007	198930' 2	37' 676
	Áhirmal, XXXII	1' 80	50	35	17' 04	5' 1911635	155297' 1	29' 412
43	Áhirmal, XXXII	2' 23	51	39	22' 61	5' 2799183	190510' 2	36' 081
	Jámkhed, XXXI	2' 24	90	38	20' 90	5' 3854073	242888' 7	46' 002
	Mathuri, XXXIII	2' 23	37	42	16' 49	5' 1718949	148557' 6	28' 136
44	Yerúl, XXX	2' 15	50	56	31' 86	5' 2169643	164802' 7	31' 213
	Jámkhed, XXXI	2' 15	53	39	19' 99	5' 2328657	170948' 7	32' 377
	Dhaigaon, XXXIV	2' 16	75	24	8' 15	5' 3125663	205383' 9	38' 898
45	Jámkhed, XXXI	1' 92	50	46	58' 24	5' 1878535	154118' 0	29' 189
	Dhaigaon, XXXIV	1' 92	73	16	31' 92	5' 2799183	190510' 2	36' 081
	Mathuri, XXXIII	1' 92	55	56	29' 84	5' 2169643	164802' 7	31' 213
46	Dhaigaon, XXXIV	2' 04	82	51	24' 07	5' 3306386	214110' 8	40' 551
	Mathuri, XXXIII	2' 04	51	33	51' 00	5' 2279535	169026' 0	32' 013
	Ágargaon, XXIV	2' 04	45	34	44' 93	5' 1878535	154118' 0	29' 189
47	Mathuri, XXXIII	1' 56	50	49	39' 38	5' 2222227	166810' 2	31' 593
	Ágargaon, XXIV	1' 55	33	29	7' 07	5' 0745027	118714' 2	22' 484
	Chincholi, XXIII	1' 56	95	41	13' 55	5' 3306386	214110' 8	40' 551
48	Dhaigaon, XXXIV	1' 41	32	50	48' 17	5' 0745027	118714' 2	22' 484
	Mathuri, XXXIII	1' 41	102	23	32' 57	5' 3299499	213771' 5	40' 187
	Chincholi, XXIII	1' 41	44	45	39' 26	5' 1878535	154118' 0	29' 189

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

November, 1892.

J. ECCLES,
In charge of Computing Office.

KHANPISURA MERIDIONAL SERIES.

SECONDARY TRIANGULATION. TRIANGLES.

PRINCIPAL-AUXILIARY AND SECONDARY STATIONS, AND INTERSECTED POINTS.

Differences between the common sides of two triangles are shown by the small figures in the 5th and 12th columns between the data of the triangles, the first in order having supplied the greater value.

Triangle No.	Station	Corrected Plane Angle	Distance			Station	Corrected Plane Angle	Distance			Theodolite used	
			Log. feet	Feet	Miles			Log. feet	Feet	Miles		
49	Bálágara, XXIV	35 45 33	5 048285	111760	21 167	Sítamau, I Nigrun, III Párlia	45 8 10	4 863445	73021	13 830	Inch 15	
	Dhamnár, II	3 22 5	4 050596	11236	2 128			54 33 15	4 923909	83928		15 896
	Barkhera Hill Bush		5 081650	120684	22 857			h.s.	5 006690	101552		19 233
50	Sítamau, I	51 49 46	4 799976	63092	11 949	Dudhála, IV Nigrun, III Gualad Hill Tree	70 42 44	5 076495	119260	22 587	"	
	Dhamnár, II	41 35 8	4 726453	53266	10 088			22 48 11	4 689926	48970		9 275
	Digau	86 35 6	4 903685	80110	15 172			h.s.	5 100764	126114		23 885
51	Bálágara, XXIV	28 50 24	4 799976	63092	11 949	Sítamau, I Nigrun, III Gualad Hill Tree	61 54 0	5 076495	119260	22 587	"	
	Dhamnár, II	38 28 51	4 910567	81389	15 415			69 24 36	5 102296	126560		23 970
	Digau	112 40 45	5 081050	120684	22 857			h.s.	5 006690	101552		19 233
52	Sítamau, I	65 17 9	4 880760	75991	14 392	Dudhála, IV Nigrun, III Tarauli	30 53 4	4 879770	75818	14 359	14	
	Dhamnár, II	7 58 44	4 064895	11612	2 199			27 44 47	4 837367	68765		13 024
	Sítamau Hill Tree		4 903685	80110	15 172			h.s.	5 100764	126114		23 885
53	Dudhála, IV	33 8 58	4 863445	73021	13 830	Sítamau, I Nigrun, III Párlia	44 48 30	4 879770	75818	14 359	"	
	Nigrun, III	37 39 32	4 911009	81585	15 452			64 28 0	4 987111	97076		18 386
	Párlia		5 100764	126114	23 885			h.s.	5 006690	101552		19 233

Notes.—1. Names followed by Roman numerals are those of Principal Stations.
2. The value of the side is given in the same line with the opposite angle.

Station Bálágara XXIV appertains to the Karachi Longitudinal Series of the North-West Quadrilateral.

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle			Distance			No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles			°	'	"	Log. feet	Feet	Miles	
59	Nigrun, III Deo Dongri, V Dharakpur Hill Tree	83	13	34	5.209251	161902	30.663	15	Lohári, VI Nigrun, III Parnakheri	52	37	39	5.002692	100622	19.057	Inch
		47	42	27	5.081360	120604	22.842	"		31	33	39	4.821322	66271	12.551	"
					5.090510	123171	23.328	"		95	48	42	5.100248	125964	23.857	"
60	Deo Dongri, V Nigrun, III Pátan	21	9	33	4.679433	47801	9.053	14	Deo Dongri, V Lohári, VI Parnaji Pagoda No. 1	4	11	56	4.831606	67859	12.852	15
		47	17	37	4.988166	97312	18.430	"		5	28	56	4.947155	88543	16.770	"
		111	32	50	5.090510	123171	23.328	"		4	15	53	5.192718	155854	29.518	"
61	Tarauli Nigrun, III Pátan	37	56	44	4.679433	47801	9.053	"	Deo Dongri, V Lohári, VI Parnaji Pagoda No. 2	5	36	6	4.948333	88784	16.815	"
		64	48	29	4.847214	70342	13.322	"		83	27	59	4.830197	67639	12.810	"
		77	14	47	4.879770	75818	14.359	"		5	36	6	5.192718	155854	29.518	"
62	Nigrun, III Deo Dongri, V Kanthári Hill Tree	33	18	37	4.926797	84488	16.002	15	Deo Dongri, V Gurba, VIII Karai	8	27	59	4.790357	61710	11.688	"
		19	52	42	4.718597	52312	9.908	"		32	24	21	4.522281	33287	6.304	"
					5.090510	123171	23.328	"		22	33	39	4.240304	17390	3.294	"
63	Dhamnár, II Lohári, VI Kachner Hill Tree	42	33	6	4.990489	97834	18.529	"	Deo Dongri, V Karai Mehidpur	110	11	0	4.628831	42543	8.057	7
		8	48	31	4.345452	22154	4.196	"		26	50	59	4.522281	33287	6.304	"
					5.053079	113000	21.402	"		103	57	10	4.630197	42677	8.083	15
64	Dhamnár, II Nigrun, III Pingrála Hill Pagoda	99	0	27	5.061146	115119	21.803	"	Deo Dongri, V Karai Mehidpur Flag-staff	26	50	59	4.298008	19861	3.762	7
		23	0	9	4.658458	45547	8.626	"		19	6	57	4.209399	16196	3.067	15
					4.994909	98834	18.719	"		118	34	45	4.522281	33287	6.304	7
65	Nigrun, III Lohári, VI Bhátkehi Hill Pagoda	17	8	42	4.571296	37265	7.058	"	Deo Dongri, V Karai Mehidpur Tomb	19	6	57	4.209399	16196	3.067	15
		77	40	7	5.091645	123494	23.389	"		118	34	45	4.637788	43430	8.225	7
					5.100248	125964	23.857	"		20	48	13	4.073235	11837	2.242	15
66	Lohári, VI Nigrun, III Bhátkehi Hill Tree	79	4	49	5.094160	124211	23.525	"	Deo Dongri, V Karai Dulet Temple	72	0	32	4.501032	31698	6.003	7
		16	12	5	4.547722	35296	6.685	"		42	8	29	4.073235	11837	2.242	"
					5.100248	125964	23.857	"		38	10	28	4.037567	10904	2.065	"
67	Dhamnár, II Nigrun, III Bhátkehi Hill Tree	84	53	28	5.094160	124211	23.525	"	Mehidpur Karai Dulet Temple	42	8	29	4.073235	11837	2.242	"
		42	41	8	4.927102	84548	16.013	"		16	45	47	4.117113	13095	2.480	15
					4.994909	98834	18.719	"		52	47	20	4.558234	36160	6.849	7
68	Dhamnár, II Nigrun, III Bargar	81	2	23	5.116640	130810	24.775	"	Deo Dongri, V Mehidpur Karai Pagoda	16	45	47	4.117113	13095	2.480	15
		50	41	10	5.010538	102456	19.405	"		33	20	44	5.086200	121955	23.098	15
					4.994909	98834	18.719	"		15	10	14	4.763877	58060	10.996	"
69	Lohári, VI Nigrun, III Bargar	100	38	50	5.116640	130810	24.775	"	Lohári, VI Kaula-ka-Máta, XI Pancher Hill Pagoda	33	20	44	5.086200	121955	23.098	15
		8	12	3	4.278434	18986	3.596	"		45	16	34	5.075093	118876	22.514	"
					5.100248	125964	23.857	"		38	8	15	5.014198	103323	19.569	"
70	Deo Dongri, V Nigrun, III Parnakheri	53	40	8	5.002692	100622	19.057	14	Lohári, VI Kaula-ka-Máta, XI Budapura	45	16	34	5.075093	118876	22.514	"
		45	52	47	4.952621	89665	16.982	"		38	8	15	5.014198	103323	19.569	"
					5.090510	123171	23.328	"		5	22	06	49	166207	31.479	"

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
83	Deo Dongri, V Dhanora, VII Jhar Hill Tree	5 23 14 124 22 38	4'142898 5'086928 5'056042	13896 122100 113774	2'632 23'136 21'548	95	Baloda Semlia Nagora	41 45 48 105 11 48 33 2 24	4'654461 4'815493 4'567526	45130 65387 36942	8'547 12'384 6'997	Inch 14 "
84	Kaula-ka-Máta, XI Dhanora, VII Jhar Hill Tree	13 16 42 83 37 40	4'142898 4'779080 4'778609	13896 60128 60063	2'632 11'388 11'376	96	Indráwan, XIII Gumánpur, XVI Kapátal	22 14 10 19 18 55 138 26 55	4'882030 4'823572 5'125756	76213 66615 133584	14'434 12'016 25'300	"
85	Gurla, VIII Karsod, IX Bercha Hill Tree	47 2 56 88 38 4	4'909773 5'045177 4'889543	81241 110963 77543	15'387 21'016 14'686	97	Indráwan, XIII Kapátal Shergarh	110 11 59 15 37 36 54 10 25	4'887093 4'345008 4'823572	77107 22131 66615	14'604 4'192 12'616	"
86	Kaula-ka-Máta, XI Karsod, IX Bercha Hill Tree	66 44 35 29 29 56	4'909773 4'638903 4'943996	81241 43541 87902	15'387 8'246 16'648	98	Kaula-ka-Máta, XI Baloda Jalodia	43 10 40 81 48 14 55 1 6	4'713987 4'874305 4'792225	51759 74869 61976	9'803 14'180 11'738	"
87	Gurla, VIII Jalákhari, X Dhalmu	23 0 0 28 3 29	4'519204 4'599702 4'818184	33952 39789 65794	6'260 7'536 12'461	99	Indráwan, XIII Shergarh Jalodia	25 53 14 130 24 35 23 42 11	4'380870 4'622414 4'345008	24036 41919 22131	4'552 7'939 4'192	"
88	Gurla, VIII Jalákhari, X Lupára	44 15 5 25 30 51	4'689585 4'480059 4'818184	48931 30204 65794	9'267 5'720 12'461	100	Harnása, XII Singárechori, XV Reuti	76 38 36 37 49 53 65 31 31	5'188005 4'987615 5'159024	154172 97189 144220	29'199 18'407 27'314	15 7
89	Harnása, XII Karsod, IX Kwála	25 9 35 27 58 42	4'818446 4'861211 5'093046	65833 72646 123893	12'468 13'759 23'465	101	Harnása, XII Reuti Nenod Hill Tree	15 57 10 41 30 50 4'987615	4'500835 4'883131 4'987615	31684 76407 97189	6'001 14'471 18'407	15 7
90	Kaula-ka-Máta, XI Karsod, IX Kwála	38 20 0 85 45 28	4'818446 5'024607 4'943996	65833 105852 87902	12'468 20'048 16'648	102	Singárechori, XV Harnása, XII Deogurária	59 17 42 54 21 27 5'159024	5'131533 5'107045 5'159024	135373 127951 144220	25'639 24'233 27'314	15 "
91	Kaula-ka-Máta, XI Karsod, IX Baloda	47 42 48 44 46 51	4'813515 4'792225 4'943996	65990 61976 87902	12'328 11'738 16'648	103	Reuti Harnása, XII Deogurária	118 40 16 22 17 9 4'987615	5'131533 4'767241 4'987615	135373 58511 97189	25'639 11'082 18'407	7 15
92	Kwála Karsod, IX Baloda	68 38 28 40 58 37	4'813515 4'661159 4'818446	65990 45831 65833	12'328 8'680 12'468	104	Reuti Deogurária Dewás Hill Temple	97 11 10 53 10 45 4'987615	5'060677 4'976471 4'767241	117402 94726 58511	22'235 17'941 11'082	7 "
93	Kaula-ka-Máta, XI Baloda Semlia	22 11 5 118 30 32	4'567526 4'934363 4'792225	36042 85973 61976	6'997 16'283 11'738	105	Reuti Deogurária Nagda Hill	84 19 0 55 48 35 4'767241	4'958177 4'877915 4'767241	90819 75495 58511	17'201 14'298 11'082	" "
94	Indráwan, XIII Semlia Nagora	54 53 56 82 6 17	4'654461 4'737498 4'575388	45130 54638 37617	8'547 10'348 7'124	106	Reuti Deogurária Gurária Hill Peak	10 30 15 116 6 50 4'767241	4'123529 4'815964 4'767241	13200 65458 58511	2'517 12'397 11'082	" "

* Deduced base.

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle used	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
107	Reuti Deogurárá Indore Pagoda	23 15 15 24 19 21	4'495467 4'513840 4'767241	31294 32647 58511	5'927 6'183 11'082	7 "	Singárchori, XV Mograbá, XIV Vatli	12 26 47 153 18 29	5'023039 5'341972 5'080612	105448 219772 120396	19'971 41'623 22'802	Inch 15 "
108	Harnása, XII Singárchori, XV Rála Mandil Hill Peak	50 27 4 61 1 17	5'077365 5'132174 5'159024	119499 135573 144220	22'632 25'677 27'314	15 "	Báwangaz, XVIII Mograbá, XIV Vatli	62 52 22 87 17 12	5'023039 5'275557 5'325681	105448 188607 211681	19'971 35'721 40'091	" 7
109	Singárchori, XV Harnása, XII Machla Hill Peak	52 54 50 40 43 34	5'061757 4'974445 5'159024	115281 94285 144220	21'833 17'857 27'314	" "	Gumánpur, XVI Mograbá, XIV Lálgarh Hill Pagoda	2 21 0 1 32 16	5'004007 4'819903 5'222430	100927 66055 166890	19'115 12'510 31'608	15 "
110	Mograbá, XIV Harnása, XII Machla Hill Peak	35 47 59 85 0 8	5'061757 5'292981 5'228599	115281 196327 169278	21'833 37'183 32'060	" "	Singárchori, XV Mograbá, XIV Lálgarh Hill Pagoda	15 8 29 146 42 13	5'004007 5'325579 5'080612	100927 212119 120396	19'115 40'174 22'802	" "
111	Harnása, XII Singárchori, XV Machla Hill Temple	38 53 30 57 45 26	4'959811 5'089220 5'159024	91161 122806 144220	17'265 23'259 27'314	7 15	Mograbá, XIV Gumánpur, XVI Dhutni Peak	66 8 2 4 33 21	5'208757 4'147564 5'222430	161718 14046 166890	30'628 2'660 31'608	" "
112	Harnása, XII Singárchori, XV Ambáh	33 7 21 65 3 11	4'900996 5'120924 5'159024	79615 132106 144220	15'079 25'020 27'314	" "	Mograbá, XIV Singárchori, XV Nálchha Hill Dargah	15 15 8 5 26 44	4'952367 4'509564 5'080612	89612 32327 120396	16'972 6'123 22'802	" "
113	Ambáh Singárchori, XV Mhow Church	20 8 39 115 48 4	4'788804 4'483046 4'900996	61490 30454 79615	11'646 5'768 15'079	" 7	Harnása, XII Singárchori, XV Nálchha Hill Dargah	35 52 37 73 31 56	4'952367 5'160244 5'159024	80612 146637 144220	16'972 27'772 27'314	" "
114	Machla Hill Peak Singárchori, XV Mhow Church	8 0 18 157 36 47	4'788804 4'537504 4'974445	61490 34475 94285	11'646 6'529 17'857	15 7	Báwangaz, XVIII Thikri, XVII Songarh Peak	31 58 38 86 11 9	5'057134 5'332237 5'278476	114060 214900 189879	21'602 40'701 35'962	" "
115	Singárchori, XV Mhow Church Dhajára Hill Peak	52 54 43 49 32 20	4'700985 4'680437 4'788804	50233 47911 61490	9'514 9'074 11'646	15 7	Singárchori, XV Thikri, XVII Songarh Peak	42 1 7 38 21 2	5'057134 5'024188 5'225302	114060 105727 167997	21'602 20'024 31'818	" "
116	Mograbá, XIV Singárchori, XV Jánápáv Hill Pagoda	7 37 33 110 19 0	4'257327 5'106550 5'080612	18085 127806 120396	3'425 24'206 22'802	15 "	Thikri, XVII Mograbá, XIV Jánmnia Hill Peak	16 14 4 45 29 1	4'632426 5'039058 5'130730	42897 109410 135123	8'124 20'722 25'591	" "
117	Mograbá, XIV Singárchori, XV Asakheri Hill Tree	29 38 57 74 48 48	4'788928 5'079159 5'080612	61508 119994 120396	11'649 22'726 22'802	" "	Singárchori, XV Mograbá, XIV Jánmnia Hill Peak	16 32 42 36 30 46	4'632426 4'952452 5'080612	42897 80630 120396	8'124 16'975 22'802	" "
118	Harnása, XII Singárchori, XV Dhár Hill Pagoda No. 1	68 47 40 46 15 18	5'171474 5'060716 5'159024	148414 115005 144220	28'109 21'781 27'314	" "	Singárchori, XV Thikri, XVII Gosainbaira	12 48 38 164 56 1	4'405504 5'150253 5'225302	25439 143302 167997	4'818 27'141 31'818	14 "

KHANPISURA MERIDIONAL SERIES.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
131	Báwangaz, XVIII Songarh Peak Chakeri	20 46 56 s. 147 30 0	5.152025 4.909712 5.332237	141914 81229 214900	26.878 15.384 40.701	Inch 15 7	Jalálabad, XIX Ajná, XXII Tasdin Hill Temple No. 2	39 28 47 14 45 4	5.148635 4.751205 5.254535	140811 56390 179695	26.669 10.680 34.033	Inch 15 "	
132	Báwangaz, XVIII Chakeri Abapuri Hill Pagoda	45 39 21 65 19 50	4.793920 4.907956 4.909712	62219 79060 81229	11.784 14.973 15.384	15 7	Árgaon, XXI Ajná, XXII Tasdin Hill Temple No. 2	58 35 53 33 8 51	5.148635 4.955240 5.217213	140811 90207 164897	26.669 17.085 31.231	" " "	
133	Chakeri Abapuri Hill Pagoda Anjar	65 28 30 104 46 30	4.767459 4.037307 4.793920	58541 10897 62219	11.087 2.064 11.784	" "	Jalálabad, XIX Árgaon, XXI Sátputa Hill Peak	13 43 41 101 45 42	4.567568 5.183030 5.147771	36946 152416 140531	6.997 28.867 26.616	" " "	
134	Báwangaz, XVIII Mograbá, XIV Ambáhpáni Hill Temple	93 14 45 2 38 22	5.327279 3.991213 5.325681	212461 9800 211681	40.239 1.856 40.091	15 "	Dhanvár, XXIV Árgaon, XXI Sátputa Hill Peak	13 30 2 86 32 54	4.567568 5.198577 5.192651	36946 157971 155830	6.997 29.919 29.513	" " "	
135	Gumánpur, XVI Mograbá, XIV Ambáhpáni Hill Temple	64 20 37 70 34 44	5.327279 5.346916 5.222430	212461 222288 166890	40.239 42.100 31.608	" "	Dhanvár, XXIV Sirsála, XXVI Páldhi	118 10 25 45 28 40	5.246535 4.750751 5.154379	176415 56331 142685	33.412 10.669 27.024	" 7 15	
136	Báwangaz, XVIII Bábákuvar, XX Bori Hill Peak	12 27 23 11 33 42	4.887779 4.855882 5.163556	77229 71760 145732	14.627 13.591 27.601	" "	Dhanvár, XXIV Páldhi Manvel	52 5 18 35 6 20	4.888074 4.990498 4.750751	77281 97836 56331	14.637 18.530 10.669	15 7 7	
137	Báwangaz, XVIII Bábákuvar, XX Naktimáta Peak	4 44 30 5 25 7	4.834364 4.892170 5.103556	68291 78013 145732	12.934 14.775 27.601	" "	Dhanvár, XXIV Sirsála, XXVI Padmála	74 12 58 77 15 0	5.148530 4.844357 5.154379	140776 69881 142685	26.662 13.235 27.024	15 7 7	
138	Thíkri, XVII Jalálabad, XIX Bijegarh Hill Fort	6 57 18 81 54 50	4.176336 5.088889 5.093144	15008 122713 123921	2.842 23.241 23.470	" "	Valvádi, XXIII Dhanvár, XXIV Jalka Peak	2 21 50 11 55 54	4.402024 5.102077 5.179205	25236 126496 151079	4.780 23.958 28.614	15 " "	
139	Bábákuvar, XX Ajná, XXII Varjári Hill	25 58 18 24 47 41	4.794575 4.775770 5.042236	62312 59672 110214	11.802 11.301 20.874	" "	Dhanvár, XXIV Sirsála, XXVI Dohori	90 30 58 70 12 45	5.180792 4.699381 5.154379	151633 50047 142685	28.718 9.479 27.024	" 7 7	
140	Bábákuvar, XX Árgaon, XXI Khandra Hill	20 39 27 17 50 27	5.119661 5.058408 5.366290	131723 114395 232429	24.948 21.666 44.021	" "	Dhanvár, XXIV Sirsála, XXVI Kekatinimbhora	67 15 24 16 53 23 95 51 13	5.121496 4.619841 5.154379	132281 41672 142685	25.053 7.892 27.024	15 7 7	
141	Bábákuvar, XX Ajná, XXII Tasdin Hill Temple No. 1	57 50 54 80 40 5	5.148812 5.215326 5.042236	140868 164182 110214	26.680 31.095 20.874	" "	Dhanvár, XXIV Kekatinimbhora Jámner Hill Peak	7 30 51 162 9 5	4.482546 4.852469 4.619841	30377 71198 41672	5.753 13.485 7.892	15 7 7	
142	Árgaon, XXI Ajná, XXII Tasdin Hill Temple No. 1	58 38 2 33 9 41	5.148812 4.955413 5.217213	140868 90243 164897	26.680 17.091 31.231	" "	Dhanvár, XXIV Sirsála, XXVI Sámner	46 52 39 18 52 38	5.057741 4.704411 5.154379	114219 50630 142685	21.633 9.589 27.024	15 " "	

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
155	Dhanvár, XXIV Valvádi, XXIII Bámbrud Hill Pagoda	24 24 35 11 36 30	5.026020 4.713470 5.179205	106175 51698 151079	20.109 9.791 28.614	15 "	167	Laling Hill Temple Valvádi, XXIII Bahádurpur	36 56 47 113 9 7	4.922241 5.003488 5.188100	83607 100806 154206	15.835 10.092 29.206	15 7
156	Sirsála, XXVI Valvádi, XXIII Bámbrud Hill Pagoda	47 20 50 46 8 55	5.026020 5.017472 5.158644	106175 104105 144094	20.109 19.717 27.290	"	168	Anakvádi, XXV Valvádi, XXIII Bahádurpur	41 7 48 111 16 25	4.922241 5.074508 5.225784	83607 118716 168184	15.835 22.484 31.853	15 7
157	Dhanvár, XXIV Valvádi, XXIII Mohári	33 7 20 21 54 37	5.003201 4.837557 5.179205	100740 68795 151079	19.079 13.029 28.614	"	169	Valvádi, XXIII Sátmála, XXVII Junvána Hill Peak	86 25 26 43 40 52	5.286453 5.126554 5.170884	193398 133830 148212	36.628 25.347 28.071	15 "
158	Sirsála, XXVI Valvádi, XXIII Mohári	43 22 38 35 50 48	5.003201 4.933986 5.158644	100740 85899 144094	19.079 16.269 27.290	"	170	Anakvádi, XXV Sátmála, XXVII Junvána Hill Peak	39 56 59 6 33 32	5.286453 4.536599 5.339464	193398 34403 218506	36.628 6.516 41.384	"
159	Valvádi, XXIII Dhanvár, XXIV Mohári Hill Peak	20 6 58 29 30 40	4.833800 4.989826 5.179205	68202 97684 151079	12.917 18.501 28.614	"	171	Sátmála, XXVII Valvádi, XXIII Arvi Peak	48 21 55 85 21 6	5.185439 5.310458 5.170884	153264 204389 148212	29.027 38.710 28.071	"
160	Anakvádi, XXV Valvádi, XXIII Laling Hill Temple	38 1 9 4 11 1	5.188100 4.261615 5.225784	154206 18265 168184	29.206 3.459 31.853	"	172	Anakvádi, XXV Valvádi, XXIII Arvi Peak	17 28 55 1 45 56	5.185439 4.196422 5.225784	153264 15719 168184	29.027 2.977 31.853	"
161	Ajnád, XXII Valvádi, XXIII Laling Hill Temple	42 43 3 67 16 25	5.188100 5.321525 5.329635	154206 209665 213616	29.206 39.709 40.458	"	178	Sátmála, XXVII Sirsála, XXVI Páchora	36 44 23 71 27 41 71 47 56	4.968930 5.168956 5.169806	93096 147556 147845	17.632 27.946 28.001	"
162	Laling Hill Temple Valvádi, XXIII Kankrásj	51 14 58 99 10 4	4.887130 5.085710 5.188100	77113 121818 154206	14.605 23.072 29.206	"	174	Dhanvár, XXIV Sirsála, XXVI Páchora	40 37 19 53 7 18	4.968930 5.058348 5.154379	93096 114379 142685	17.632 21.663 27.024	15 "
163	Anakvádi, XXV Valvádi, XXIII Kankrásj	55 25 59 97 31 51	4.887130 5.145191 5.225784	77113 139608 108184	14.605 26.458 31.853	7	175	Páchora Sirsála, XXVI Varod	146 6 11 23 50 30	5.108724 4.604363 4.968930	128447 40213 93096	24.327 7.616 17.632	7 "
164	Laling Hill Temple Kankrásj Dhár	95 45 3 60 13 26	4.756947 5.145013 5.085710	57141 139641 121818	10.822 26.447 23.072	"	176	Mohári Sirsála, XXVI Varod	95 16 20 41 45 10	5.108724 4.944145 4.933986	128447 87932 85899	24.327 16.654 16.269	"
165	Anakvádi, XXV Kankrásj Dhár	97 23 16 61 32 14	4.756947 5.197519 5.145191	57141 157586 139608	10.822 29.846 26.458	"	177	Páchora Varod Bámbrud	41 17 40 115 10 10 23 32 10	4.822531 4.959709 4.604363	66456 91140 40213	12.586 17.261 7.616	"
166	Anakvádi, XXV Laling Hill Temple Songir	41 12 35 7 6 30	4.987849 5.042317 4.261615	97241 110234 18265	18.417 20.878 3.459	"	178	Sátmála, XXVII Valvádi, XXIII Antúr Hill Fort	41 5 13 16 56 34	5.060023 4.706837 5.170884	114821 50914 148212	21.746 9.643 28.071	15 "

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No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
179	Sirsála, XXVI Valvádi, XXIII Antúr Hill Fort	52 23 29 43 48 20	5°06'00.23 5°00'14.29 5°15'86.44	114821 100329 144094	21.746 19.002 27.290	15 "	191	Valvádi, XXIII Sátmsála, XXVII Koralla Hill	56 32 47 54 19 41	5°12'17.08 5°11'01.22 5°17'08.84	132345 128861 148212	25.065 24.406 28.071	Inch 15 "
180	Antúr Hill Fort Sirsála, XXVI Savangi	101 31 51 45 34 8	4°88'26.17 5°13'88.20 5°00'14.29	76316 137664 100329	14.454 26.073 19.002	7	192	Sirsála, XXVI Rájur, XXIX Undangaon	32 50 27 9 33 22	5°19'06.44 4°68'23.45 5°29'10.31	157198 48122 195448	29.772 9.114 37.017	" " "
181	Páchora Sirsála, XXVI Savangi	54 54 3 38 40 54	4°88'26.17 4°76'56.55 4°98'93.0	76316 58298 93096	14.454 11.041 17.632	15	198	Sirsála, XXVI Undangaon Vási Hill Peak	20 41 30 104 58 40	4°32'07.70 4°75'57.67 4°68'23.45	20930 57223 48122	3.964 10.838 9.114	7 " "
182	Antúr Hill Fort Sirsála, XXVI Kulah	127 10 3 34 5 3	4°75'99.85 5°15'43.12 5°00'14.29	57542 142663 100329	10.898 27.020 19.002	7	194	Valvádi, XXIII Dhanvár, XXIV Varad	79 30 23 39 0 35	5°22'80.48 5°03'43.36 5°17'92.05	169063 108227 151079	32.019 20.498 28.614	15 " "
183	Savangi Sirsála, XXVI Kulah	25 38 12 108 49 56	4°75'99.85 4°54'26.61 4°88'26.17	57542 34887 76316	10.898 6.607 14.454	15 7	195	Pophla, XXVIII Rájur, XXIX Jalki Hill Pagoda	77 18 51 52 58 0	5°22'71.62 5°14'00.53 5°12'03.54	168718 138055 131933	31.954 26.147 24.987	7 " "
184	Rájur, XXIX Pophla, XXVIII Ghátumbri	63 49 1 42 27 23	5°24'40.12 5°27'32.74 5°12'03.54	175393 187618 131933	33.218 35.534 24.987	15 7	196	Sirsála, XXVI Rájur, XXIX Jalki Hill Pagoda	27 54 26 4 55 33	5°22'71.62 4°49'06.99 5°29'10.31	168718 30953 195448	31.954 5.862 37.017	15 7 "
185	Sirsála, XXVI Pophla, XXVIII Ghátumbri	107 12 22 66 8 10	5°24'40.12 4°32'81.25 5°25'08.5	175393 21288 167913	33.218 4.032 31.802	15 7	197	Sirsála, XXVI Rájur, XXIX Palsi	27 22 14 17 44 53	5°10'31.65 4°92'47.10 5°29'10.31	126813 84083 195448	24.018 15.925 37.017	15 " "
186	Sirsála, XXVI Ghátumbri Ausa Hill Fort	37 19 45 103 16 45	4°30'83.67 4°51'38.43 4°32'81.25	20341 32647 21288	3.853 6.183 4.032	15 7	198	Sirsála, XXVI Rájur, XXIX Sarola	23 46 20 15 6 50	5°09'86.42 4°90'43.3 5°29'10.31	125500 81177 195448	23.769 15.374 37.017	" " "
187	Dhanvár, XXIV Sirsála, XXVI Jarandi Hill Pagoda	3 7 12 13 6 39	4°44'38.02 5°06'36.96 5°15'43.79	27784 115796 142685	5.262 21.931 27.024	15 "	199	Palsi Rájur, XXIX Sarola	72 33 27 32 51 43 74 34 50	5°09'86.42 4°85'35.79 5°10'31.65	125500 71380 126813	23.769 13.519 24.018	7 15 7
188	Savangi Sirsála, XXVI Jarandi Hill Pagoda	13 57 50 27 33 3	4°44'38.02 4°72'63.72 4°88'26.17	27784 53256 76316	5.262 10.086 14.454	7 15	200	Sarola Sirsála, XXVI Moda	59 56 17 92 23 36	4°84'70.71 4°57'66.64 4°90'43.3	70319 37728 81177	13.318 7.145 15.374	" " "
189	Sirsála, XXVI Ghátumbri Baitalvádi Fort	17 26 17 144 16 25	4°30'81.24 4°57'82.24 4°32'81.25	20329 39612 21288	3.850 7.502 4.032	7	201	Palsi Sirsála, XXVI Moda	55 2 23 23 28 27 101 29 10	4°84'70.71 4°53'37.45 4°92'47.10	70319 34178 84083	13.318 6.473 15.925	" " "
190	Dhanvár, XXIV Sirsála, XXVI Jaola Hill Peak	48 56 59 71 31 57	5°06'42.27 5°19'01.18 5°15'43.79	124861 157043 142685	23.648 29.743 27.024	15 "	202	Sarola Rájur, XXIX Sillód	47 49 13 11 35 1 120 35 46	5°03'35.95 4°46'55.11 5°09'86.42	108043 29270 125500	20.463 5.545 23.769	" 15 7

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
203	Sirsála, XXVI	4 20 33	5 033595	108043	20.463	Inch	Kanad	7 52 0	4 255944	18028	3.414	Inch	
	Rájur, XXIX	3 31 49	4 943805	87863	16.641	15	Sátmála, XXVII	7 39 35	4 244437	17556	3.325	7	
	Sillód	5 291031	195448	37.017	"	15	Andaner Peak	7 39 35	4 547260	35258	6.678	15	
204	Palsi	83 57 0	4 841234	69380	13.140	7	Jamdi	24 9 38	4 255944	18028	3.414	7	
	Sillód	53 33 55	4 749204	56131	10.631	"	Sátmála, XXVII	46 8 40	4 501897	31761	6.015	15	
205	Sindphal Hill Pagoda	4 673216	47121	8.924	"	7	Andaner Peak	4 617729	41470	7.854	"	7	
	Sillód	96 8 16	4 864594	73214	13.866	"	Jamdi	33 23 0	4 155274	14298	2.708	7	
206	Palsi	44 4 35	4 700461	51223	9.701	"	Kanad	53 59 40	4 322651	21021	3.981	"	
	Undangaon Hill Tree	4 673216	47121	8.924	"	7	Andaner Maajid	4 41269	25958	4.916	"		
207	Sarola	79 0 51	4 864594	73214	13.866	"	Jamdi	115 36 35	4 542624	34884	6.607	"	
	Palsi	27 49 54	4 541828	34820	6.595	"	Kanad	22 14 40	4 165667	14044	2.774	"	
208	Undangaon Hill Tree	4 853579	71380	13.519	"	7	Mundvádi Peak	4 41269	25958	4.916	"		
	Sarola	46 27 25	4 552817	35712	6.764	"	Jamdi	72 51 9	4 941945	87487	16.570	15	
209	Sillód	97 5 10	4 689235	48892	9.260	"	Sátmála, XXVII	80 12 55	4 955328	90225	17.088	7	
	Nirud Tower	4 466511	29276	5.545	"	7	Jamdi	125 12 2	5 226456	168444	31.902	15	
210	Palsi	61 21 20	4 618166	41511	7.862	"	Pophla, XXVIII	15 0 22	4 727329	53374	10.109	"	
	Sillód	33 37 55	4 418261	26198	4.962	"	Rájur, XXIX	82 24 29	4 429265	26870	5.089	"	
211	Nirud Tower	4 673216	47121	8.924	"	7	Dongargaon Hill Pagoda No. 1	11 43 13	4 429265	26870	5.089	"	
	Palsi	78 43 5	4 579595	37204	7.046	"	Jamdi	72 51 9	4 941945	87487	16.570	15	
212	Moda	37 0 20	4 358588	22834	4.325	"	Pophla, XXVIII	34 12 50	4 920881	83345	15.785	"	
	Upil Pagoda	4 533745	34178	6.473	"	7	Yerúl, XXX	14 14 35	4 561924	30469	6.907	"	
213	Yerúl, XXX	94 39 11	5 188382	154306	29.225	15	Waragaon Hill Tomb	21 57 28	4 836882	68688	13.009	"	
	Pophla, XXVIII	39 34 21	4 993992	98626	18.679	"	Yerúl, XXX	15 11 41	4 682567	48147	9.119	"	
214	Rail	74 0 16	5 188382	154306	29.225	"	Dongargaon Hill Pagoda No. 2	82 24 29	4 429265	26870	5.089	"	
	Sátmála, XXVII	14 35 41	4 600897	40448	7.661	"	Pophla, XXVIII	34 12 50	4 920881	83345	15.785	"	
215	Pophla, XXVIII	5 205401	160473	30.393	"	7	Yerúl, XXX	14 14 35	4 561924	30469	6.907	"	
	Rail	74 0 16	5 188382	154306	29.225	"	Bondagaon Hill Tree	21 57 28	4 836882	68688	13.009	"	
216	Sátmála, XXVII	41 58 55	5 017619	104140	19.724	"	Pophla, XXVIII	18 41 34	4 860892	72593	13.749	"	
	Yerúl, XXX	15 26 52	4 617729	41470	7.854	"	Yerúl, XXX	10 38 5	4 621180	41800	7.917	"	
217	Jamdi	5 117950	131205	24.849	"	7	Ganori Peak	5 045093	110941	21.012	"		
	Sátmála, XXVII	76 35 12	5 134112	136180	25.792	"	Pophla, XXVIII	6 0 54	4 702465	50404	9.546	"	
218	Yerúl, XXX	33 49 44	4 891756	77939	14.761	"	Yerúl, XXX	7 19 12	4 787357	61285	11.607	"	
	Deher Hill Temple	5 117950	131205	24.849	"	7	Golgaon	5 045093	110941	21.012	"		
219	Sátmála, XXVII	38 29 5	4 414269	25958	4.916	"	Yerúl, XXX	21 30 35	4 271138	18670	3.536	15	
	Jamdi	57 42 3	4 547260	35258	6.678	"	Golgaon	60 20 20	4 645879	44246	8.380	7	
220	Kanad	4 617729	41470	7.854	"	7	Guddana Hill Pagoda	21 30 35	4 271138	18670	3.536	15	
	Sátmála, XXVII	38 29 5	4 414269	25958	4.916	"	Yerúl, XXX	60 20 20	4 645879	44246	8.380	7	

* Deduced base.

KHANPISURA MERIDIONAL SERIES.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
227	Yerul, XXX Jámkhed, XXXI Godagaon Hill Peak	44 33 25 10 10 8	5'246765 4'647533 5'312566	176508 44415 205384	33.430 8.412 38.898	239	Pophla, XXVIII Rájur, XXIX Muramba	41 40 56 24 31 54 113 47 10	4'981727 4'777159 5'120354	95880 59863 131933	18.159 11.338 24.987	Inch 15 " 7
228	Yerul, XXX Jámkhed, XXXI Jatoda	40 33 36 12 34 16 127 22 8	5'220948 4'750100 5'312566	166321 56247 205384	31.500 10.653 38.898	240	Pophla, XXVIII Muramba Kankura Hill Tree	70 42 35 26 18 50	4'755336 4'427117 4'777159	56929 26737 59863	10.782 5.064 11.338	" "
229	Yerul, XXX Jámkhed, XXXI Jatoda Hill Tree	39 54 23 12 25 57	5'221260 4'747062 5'312566	166441 55855 205384	31.523 10.579 38.898	241	Muramba Rájur, XXIX Nandkhed Hill Tomb	56 52 59 23 19 8	4'911123 4'585637 4'981727	81493 38516 95880	15.434 7.295 18.159	" 15
230	Pophla, XXVIII Jámkhed, XXXI Jatoda Hill Tree	100 36 19 19 4 52	5'221260 4'743166 5'107637	166441 55356 147108	31.523 10.484 27.861	242	Jámkhed, XXXI Rájur, XXIX Nandkhed Hill Tomb	31 38 29 59 45 41	4'911123 5'127775 5'191164	81493 134207 155297	15.434 25.418 29.412	" "
231	Jámkhed, XXXI Pophla, XXVIII Rasulpur	97 48 55 55 27 44	4'904734 5'247788 5'167637	80303 176924 147108	15.209 33.508 27.861	243	Pophla, XXVIII Rájur, XXIX Pallaskhed Hill Tree	4 37 15 159 3 9	4'577599 5'224764 5'120354	37809 107789 131933	7.161 31.778 24.987	" "
232	Yerul, XXX Pophla, XXVIII Rasulpur	16 56 19 6 47 46	4'904734 4'513443 5'045093	80303 32617 110941	15.209 6.177 21.012	244	Muramba Rájur, XXIX Málagaon	105 1 44 55 49 56	4'579700 5'048898 4'981727	37993 111917 95880	7.196 21.196 18.159	" 7
233	Golagaon Yerul, XXX Röza	12 44 43 29 23 0	4'219513 4'566646 4'702465	16577 36868 50404	3.140 6.983 9.546	245	Jámkhed, XXXI Rájur, XXIX Málagaon	14 2 29 68 35 11	4'579700 5'163704 5'191164	37993 145782 155297	7.196 27.610 29.412	15 "
234	Rasulpur Yerul, XXX Röza	30 21 43 53 38 31 95 59 46	4'219513 4'421798 4'513443	16577 26412 32617	3.140 5.002 6.177	246	Rájur, XXIX Málagaon Málagaon	123 33 2 53 30 0	3'385947 4'595374 4'579700	2432 39389 37993	0.461 7.460 7.196	7 "
235	Jámkhed, XXXI Dhaigaon, XXXIV Yerul Hill Tree	53 41 36 75 15 55	5'232467 5'311685 5'216964	170792 204968 164803	32.347 38.820 31.213	247	Rájur, XXIX Málagaon Wadona Peak	44 20 18 87 12 30	4'565643 4'720716 4'595374	36783 52567 39389	6.966 9.956 7.460	15 7
236	Yerul, XXX Dhaigaon, XXXIV Mítmita Peak	55 42 13 13 52 36	5'178102 4'640960 5'232866	150696 43748 170949	28.541 8.286 32.377	248	Rájur, XXIX Málagaon Dongson Hill Dipmal	22 41 43 53 6 20	4'195245 4'511800 4'595374	15676 32494 39389	2.969 6.154 7.460	15 7
237	Pophla, XXVIII Yerul, XXX Maholi Peak	74 20 14 19 28 31	5'029621 4'59021	107059 37070	20.276 7.021	249	Pophla, XXVIII Muramba Rájur Hill Temple	41 39 5 113 49 50	4'981690 5'120432 4'777159	95872 131956 59863	18.157 24.992 11.338	" "
238	Jámkhed, XXXI Rájur, XXIX Muramba	36 4 41 36 26 33 107 28 46	4'981727 4'985493 5'191164	95880 96715 155297	18.159 18.317 29.412	250	Rájur, XXIX Málagaon Damaugaon	67 30 50 72 1 40	4'567084 4'413600 4'579700	36905 25918 37993	6.990 4.909 7.196	" "

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
251	Rájur, XXIX Ahirmal, XXXII Choradongar	42 44 28 11 18 27 125 57 5	5.222145 4.632897 5.298701	166780 48183 198930	31.587 9.126 37.676	263	Kasner Jámkhed, XXXI Pipalgaon Hill Tree	95 20 49 36 16 56	4.911117 4.685159 4.786599	81492 48435 61179	15.434 9.173 11.587	Inch 7 15
252	Jámkhed, XXXI Ahirmal, XXXII Choradongar	79 33 26 39 16 52 61 9 42	5.222145 5.030889 5.171895	166780 107371 148558	31.587 20.335 28.136	264	Yerúl, XXX Dhaigaon, XXXIV Satára, No. 1	34 27 33 23 31 43	5.057180 4.905701 5.232866	114072 80482 170949	21.605 15.243 32.377	"
253	Rájur, XXIX Jámkhed, XXXI Pan Chandra Hill Dipmal	46 15 14 22 45 37	5.079755 4.808543 5.191164	120159 64349 155297	22.757 12.187 29.412	265	Yerúl, XXX Dhaigaon, XXXIV Satára, No. 2	35 6 53 22 36 25 122 16 42	5.065601 4.890562 5.232866	116306 77725 170949	22.028 14.721 32.377	"
254	Rájur, XXIX Jámkhed, XXXI Kadgaon Hill Pagoda	16 20 47 9 58 5	4.993860 4.782763 5.191164	98596 60641 155297	18.673 11.485 29.412	266	Yerúl, XXX Satára Toka	85 5 8 34 54 50	5.070438 5.131305 4.890562	117608 135302 77725	22.274 25.625 14.721	"
255	Jámkhed, XXXI Muramba Somtána Hill Dipmal	18 57 21 57 50 55	4.508782 4.924815 4.985493	32269 84104 96715	6.112 15.929 18.317	267	Satára Toka Shernapur	16 36 10 80 41 23	5.072669 4.532160 5.070438	118214 34053 117608	22.389 6.450 22.274	"
256	Muramba Jámkhed, XXXI Kasner	34 19 32 82 37 12	4.786599 5.031789 4.985493	61179 107594 96715	11.587 20.378 18.317	268	Yerúl, XXX Toka Shernapur	58 8 55 18 18 40 103 32 25	5.072669 4.640721 5.131305	118214 43724 135302	22.389 8.281 25.625	15 7 "
257	Dhaigaon, XXXIV Jámkhed, XXXI Kasner	10 6 51 18 7 8 151 46 1	4.786599 5.034795 5.216964	61179 108342 164803	11.587 20.519 31.213	269	Dhaigaon, XXXIV Yerúl, XXX Daulatabad Fort Flag-staff	7 5 53 51 31 6	4.393466 5.195215 5.232866	24744 156753 170949	4.686 29.688 32.377	15 "
258	Kasner Jámkhed, XXXI Jadgaon	55 19 45 49 10 22	4.893622 4.822785 4.786599	78275 66494 61179	14.825 12.504 11.587	270	Satára Yerúl, XXX Daulatabad Fort Flag-staff	7 22 29 16 24 13	4.393466 4.735910 4.890562	24744 54439 77725	4.686 10.310 14.721	7 15
259	Muramba Jámkhed, XXXI Jadgaon	52 53 25 27 17 27	4.893622 4.653248 4.985493	78275 45004 96715	14.825 8.523 18.317	271	Yerúl, XXX Shernapur Daulatabad Minaret	21 51 5 25 52 35	4.342291 4.411430 4.640721	21993 25789 43724	4.165 4.884 8.281	" 7
260	Jámkhed, XXXI Muramba Jaipur Hill Tree	18 28 45 67 32 48	4.487543 4.952300 4.985493	30729 89598 96715	5.820 16.969 18.317	272	Satára Shernapur Aurangabad Tomb	55 54 5 56 29 20	4.484270 4.487252 4.532160	30498 30708 34053	5.776 5.816 6.450	" "
261	Jámkhed, XXXI Jadgaon Yekierwar Hill Dipmal	5 7 33 18 54 40	4.234743 4.794361 4.893622	17169 62282 78275	3.252 11.796 14.825	273	Yerúl, XXX Shernapur Gandali Hill Pagoda No. 1	16 23 38 151 39 40	4.775425 5.001214 4.640721	59625 100280 43724	11.293 18.992 8.281	15 7
262	Jatoda Jámkhed, XXXI Pipalgaon Hill Tree	10 55 15 11 49 34	4.911117 4.945248 5.220948	81492 88155 166321	15.434 16.696 31.500	274	Dhaigaon, XXXIV Kasner Varundi	82 46 45 83 29 35	4.412916 5.034144 5.034795	25877 108179 108342	4.901 20.489 20.519	" "

KHANPISURA MERIDIONAL SERIES.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
275	Kasner Varundi Walauj Pagoda	22 5 10 150 35 25	4.882684 4.998624 4.412916	76328 99684 25877	14.456 18.880 4.901	Inch 7 "	Bori Jámkhed, XXXI Jálna Pagoda	84 51 7 57 57 28	5.031434 4.961410 4.814560	107506 91498 65247	20.361 17.329 12.357	Inch 7 15	
276	Kasner Varundi Dhánura Pagoda	40 24 30 127 13 40	4.893989 4.983302 4.412916	78341 96228 25877	14.837 18.225 4.901	" " "	Ambad Jámkhed, XXXI Jálna Pagoda	76 59 32 75 37 16	5.031434 5.028901 4.705475	107506 106881 50755	20.361 20.243 9.613	7 15	
277	Kasner Varundi Parola Idgah	35 42 0 124 45 10	4.654483 4.803082 4.412916	45132 63545 25877	8.548 12.035 4.901	" " "	Bori Jámkhed, XXXI Jálna Hill Pagoda	90 37 24 55 43 55	5.070992 4.988214 4.814560	117758 97323 65247	22.303 18.432 12.357	7 15	
278	Kasner Varundi Bhir Kingsoan Pagoda	38 56 45 119 49 25	4.652426 4.792301 4.412916	44919 61996 25877	8.507 11.742 4.901	" " "	Ambad Jámkhed, XXXI Jálna Hill Pagoda	81 22 55 73 23 43	5.070992 5.057424 4.705475	117758 114136 50755	22.303 21.617 9.613	7 15	
279	Kasner Varundi Gedaida Dipmal	44 33 30 114 57 45	4.715125 4.826422 4.412916	51895 67054 25877	9.829 12.700 4.901	" " "	Bori Jámkhed, XXXI Raugaon Hill Pagoda	94 26 11 42 55 47	4.982469 4.816983 4.814560	96044 65612 65247	18.190 12.427 12.357	7 15	
280	Dhaignon, XXXIV Jámkhed, XXXI Parundi Hill Pagoda	10 47 57 23 24 24	4.739792 5.066168 5.216904	54928 116458 164803	10.403 22.056 31.213	15 " "	Ambad Jámkhed, XXXI Raugaon Hill Pagoda	87 32 20 60 35 35	4.982469 4.922965 4.705475	96044 83746 50755	18.190 15.861 9.613	7 15	
281	Muramba Jámkhed, XXXI Parundi Hill Pagoda	32 19 53 77 19 56	4.739792 5.000885 4.985493	54928 100204 96715	10.403 18.978 18.317	7 15	Ambad Jámkhed, XXXI Vádagaon Hill Pagoda	92 55 56 56 29 41	4.998498 4.920147 4.705475	99655 83205 50755	18.874 15.759 9.613	7 15	
282	Jámkhed, XXXI Kasner Rohillagad Hill Peak	113 13 32 6 39 55	4.811888 3.913308 4.786599	64847 8190 61179	12.282 1.551 11.587	" 7	Muramba Jámkhed, XXXI Vádagaon Hill Pagoda	49 36 58 82 42 59	4.998498 5.113183 4.985493	99655 129773 96715	18.874 24.578 18.317	7 15	
288	Jámkhed, XXXI Mathuri, XXXIII Bori	86 55 48 73 51 45	5.296753 4.814560 5.279918	198040 65247 190510	37.508 12.357 36.081	15 7	Bori Ambad Gola Pagoda	113 11 55 44 3 20	4.735021 4.613844 4.358948	54328 41100 22853	10.289 7.784 4.328	7 "	
284	Bori Jámkhed, XXXI Ambad	42 21 59 17 30 48 119 58 13	4.705475 4.358948 4.814560	50755 22853 65247	9.613 4.328 12.357	" 15 7	Bori Ambad Shivga Tower	112 36 25 35 19 40	4.599227 4.396066 4.358948	39740 24892 22853	7.527 4.714 4.328	" "	
285	Mathuri, XXXIII Jámkhed, XXXI Ambad	69 16 0 95 21 5	4.705475 5.252738 5.279918	50755 178952 190510	9.613 33.893 36.081	15 7	Ambad Jámkhed, XXXI Pokri Tower	50 54 52 40 16 35	4.595545 4.516120 4.705475	39404 32819 50755	7.463 6.216 9.613	" 15	
286	Bori Ambad Kálagaon Pagoda	151 56 40 18 29 25	4.810793 4.639649 4.358948	64683 43616 22853	12.251 8.261 4.328	" "	Bori Jámkhed, XXXI Pokri Tower	27 41 22 22 36 47	4.595545 4.513295 4.814560	39404 32606 65247	7.463 6.175 12.357	7 15	

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
299	Bori	h.s.	4.499476	31585	5.982	811	Sindkhed	h.s.	4.376984	23822	4.512	Inch
	Jámkhed, XXXI	15 53 11	4.564723	36705	6.952		Rakshabáhan	s.	4.695774	49633	9.400	"
	Sirádhón Tower	18 32 54	4.814560	65247	12.357		Sawargaon Pagoda		4.752136	56511	10.703	"
300	Ambad	h.s.	4.499476	31585	5.982	312	Jámkhed, XXXI	h.s.	4.767396	58532	11.086	15
	Jámkhed, XXXI	36 26 28	4.497110	31413	5.949		Sindkhed		5.040565	109791	20.794	7
	Sirádhón Tower	36 12 42	4.705475	50755	9.613		Appargaon Pagoda		5.218292	165307	31.308	
301	Pophla, XXVIII	7 1 40	4.417855	26173	4.957	313	Rakshabáhan	s.	4.767396	58532	11.086	"
	Jámkhed, XXXI	129 31 31	5.217497	165005	31.251		Sindkhed	h.s.	3.672753	4707	0.891	"
	Nandi Hill Peak	5.167637	147108	27.861	Appargaon Pagoda			4.752136	56511	10.703		
302	Muramba	h.s.	4.417855	26173	4.957	314	Agargaon, XXIV	h.s.	4.942247	87548	16.581	15
	Jámkhed, XXXI	12 33 42	5.041293	109975	20.829		Chincholi, XXIII		4.947547	88623	16.785	7
	Nandi Hill Peak	113 57 23	4.985493	96715	18.317		Netjai	h.s.	5.222223	166810	31.593	
303	Jámkhed, XXXI	6 58 6	4.114732	13024	2.467	315	Dhaigaon, XXXIV	h.s.	4.942247	87548	16.581	15
	Bori	30 27 45	4.735783	54423	10.307		Chincholi, XXIII		5.167586	147091	27.858	"
	Ambad Hill Pagoda	4.814560	65247	12.357	Netjai		h.s.	5.329950	213772	40.487		
304	Bori	h.s.	4.338270	21791	4.127	316	Netjai	h.s.	4.735148	54344	10.292	7
	Ambad	59 50 0	4.315417	20674	3.915		Dhaigaon, XXXIV		5.154380	142685	27.024	"
	Párner Tower	55 6 35	4.358948	22853	4.328		Chincholi	"	5.167586	147091	27.858	
305	Bori	h.s.	4.647113	44372	8.404	317	Agargaon, XXIV	h.s.	4.735148	54344	10.292	15
	Ambad	77 58 30	4.634404	43093	8.162		Dhaigaon, XXXIV		5.128838	134536	25.480	7
	Rui Pagoda	71 46 40	4.358948	22853	4.328		Chincholi	h.s.	5.227954	169026	32.013	
306	Jámkhed, XXXI	h.s.	4.674207	47229	8.945	318	Chincholi, XXIII	h.s.	4.713276	51675	9.787	15
	Ambad	50 37 43	4.767043	58485	11.077		Mathuri, XXXIII		5.084788	121559	23.023	"
	Dundgaon Mosque	73 11 40	4.705475	50755	9.613		Tandoli	h.s.	5.074503	118714	22.484	
307	Jámkhed, XXXI	44 15 47	5.126174	133713	25.324	319	Dhaigaon, XXXIV	h.s.	4.713276	51675	9.787	"
	Mathuri, XXXIII	51 47 27	5.177636	150534	28.510		Mathuri, XXXIII		5.032690	107818	20.420	"
	Talváda Hill Pagoda	5.279918	190510	36.081	Tandoli		h.s.	5.187854	154118	29.189		
308	Jámkhed, XXXI	19 24 16	4.812294	64907	12.293	320	Tandoli	h.s.	4.408908	25639	4.856	7
	Mathuri, XXXIII	57 47 40	5.218292	165307	31.308		Dhaigaon, XXXIV		5.065772	116352	22.036	"
	Sindkhed	5.279918	190510	36.081	Pimpri		s.	5.032690	107818	20.420		
309	Jámkhed, XXXI	24 8 36	4.895449	78605	14.887	321	Chincholi	h.s.	4.408908	25639	4.856	15
	Mathuri, XXXIII	58 18 10	5.213550	163512	30.968		Dhaigaon, XXXIV		4.474884	29846	5.653	"
	Gevrá Hill Pagoda	5.279918	190510	36.081	Pimpri		s.	4.735148	54344	10.292		
310	Mathuri, XXXIII	h.s.	4.752136	56511	10.703	322	Dhaigaon, XXXIV	h.s.	5.126743	133888	25.358	"
	Sindkhed	92 6 34	4.942582	87616	16.594		Agargaon, XXIV		4.745075	55600	10.530	"
	Rakshabáhan	47 45 30	4.812294	64907	12.293		Chincholi Hill Dipmal		5.227954	169026	32.013	

NOTE.—Stations Chincholi XXIII and Agargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

KHANPISURA MERIDIONAL SERIES.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
323	Chincholi Pimpri Ghiregaon Tower	h.s. 62 53 45 39 12 12	4' 434'118 4' 285'408 4' 474'884	27172 19293 29846	5' 146 3' 654 5' 653	Inch 7 "	Tandoli Ránigaon Chánigaon Tower	h.s. 53 55 45 95 23 15	4' 385'019 4' 475'529 4' 185'272	24267 29890 15320	4' 596 5' 661 2' 902	Inch 7 "	
324	Dhaigaon, XXXIV Pimpri Siragaon Tower	s. 38 4 56 98 37 10	4' 362'850 4' 567'779 4' 408'908	23060 36964 25639	4' 367 7' 001 4' 856	15 7	Dhaigaon, XXXIV Agargaon, XXIV Adhori Hill Pagoda No. 1	82 42 47 35 27 39	5' 279'200 5' 046'260 5' 227'954	190195 111240 169026	36' 022 21' 068 32' 013	15 "	
325	Dhaigaon, XXXIV Pimpri Káregaon Tower	s. 91 53 56 36 21 20	4' 513'651 4' 280'793 4' 408'908	32633 19355 25639	6' 180 3' 666 4' 856	15 7	Mathuri, XXXIII Agargaon, XXIV Adhori Hill Pagoda No. 1	51 11 34 10 7 8	5' 279'200 4' 632'268 5' 330'639	190195 42881 214111	36' 022 8' 121 40' 551	" "	
326	Dhaigaon, XXXIV Chincholi Sevátia Tower Tree	h.s. 141 52 4 7 44 50	4' 821'784 4' 160'862 4' 735'148	66341 14483 54344	12' 565 2' 743 10' 292	15 7	Mathuri, XXXIII Agargaon, XXIV Adhori Hill Pagoda No. 2	51 16 10 10 6 41	5' 279'380 4' 631'663 5' 330'639	190274 42822 214111	36' 037 8' 110 40' 551	" "	
327	Dhaigaon, XXXIV Pimpri Nimbgaon Tower	s. 44 10 37 45 26 15	4' 252'073 4' 261'693 4' 408'908	17868 18268 25639	3' 384 3' 460 4' 856	15 7	Dhaigaon, XXXIV Agargaon, XXIV Adhori Hill Pagoda No. 2	82 44 34 35 28 6	5' 279'380 5' 046'491 5' 227'954	190274 111299 169026	36' 037 21' 079 32' 013	" "	
328	Dhaigaon, XXXIV Pimpri Joharapur Tower	s. 61 41 49 86 23 10	4' 630'413 4' 684'842 4' 408'908	42699 48400 25639	8' 087 9' 167 4' 856	15 7	Mathuri, XXXIII Sinkhed Pipla Hill Pagoda	13 17 0 11 37 10	4' 549'216 4' 492'011 4' 812'294	35417 31046 64907	6' 708 5' 880 12' 293	" 7	
329	Dhaigaon, XXXIV Mathuri, XXXIII Ránigaon	h.s. 3 0 43 8 30 40	4' 607'864 5' 057'605 5' 187'854	40538 114184 154118	7' 678 21' 626 29' 189	15 "	Mathuri, XXXIII Sinkhed Kolegaon Hill Tree	20 53 54 24 4 25	4' 515'338 4' 573'586 4' 812'294	32760 37462 64907	6' 205 7' 095 12' 293	15 7	
330	Chincholi, XXIII Mathuri, XXXIII Ránigaon	h.s. 18 25 3 93 52 54	4' 607'864 5' 107'263 5' 074'503	40538 128015 118714	7' 678 24' 245 22' 484	" "	Sinkhed Mathuri, XXXIII Khámked Hill Pagoda	88 43 29 38 16 44	4' 909'858 4' 702'000 4' 812'294	81256 50350 64907	15' 380 9' 536 12' 293	" 15	
331	Tandoli Ránigaon Nimbgaon Pagoda	h.s. 113 0 45 48 43 45	4' 653'294 4' 565'295 4' 185'272	45008 36753 15320	8' 524 6' 961 2' 902	7 "	Chincholi, XXIII Mathuri, XXXIII Khámked Hill Pagoda	29 6 39 105 35 30	4' 909'858 5' 206'492 5' 074'503	81256 160876 118714	15' 380 30' 469 22' 484	7 15	
332	Netjai Tandoli Somtána	h.s. 22 45 30 35 39 0 121 35 30	4' 642'337 4' 820'344 4' 985'140	43887 66122 96636	8' 312 12' 523 18' 302	" "	Mathuri, XXXIII Sinkhed Sherapur Hill Pagoda	74 56 55 39 39 0	4' 838'451 4' 658'498 4' 812'294	68937 45551 64907	13' 056 8' 627 12' 293	" 7	
333	Tandoli Ránigaon Antarvali Pagoda	h.s. 35 38 30 60 48 0	3' 953'478 4' 128'998 4' 185'272	8984 13459 15320	1' 701 2' 549 2' 902	" "	Ránigaon Mathuri, XXXIII Bháligaon Hill Pagoda	30 52 7 110 24 4	4' 521'706 4' 783'396 4' 607'864	33243 60729 40538	6' 296 11' 502 7' 678	" 15	
334	Tandoli Ránigaon Hatgaon Tower	h.s. 42 1 30 124 31 30	4' 644'389 4' 734'531 4' 185'272	44095 54266 15320	8' 351 10' 278 2' 902	" "	Chincholi, XXIII Mathuri, XXXIII Bháligaon Hill Pagoda	6 12 43 16 31 10	4' 521'706 4' 941'292 5' 074'503	33243 87356 118714	6' 296 16' 545 22' 484	" "	

NOTE.—Stations Chincholi XXXIII and Agargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon. * Deduced base.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	K. o. r. Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
347	Mathuri, XXXIII	20 0 32	4.395619	20212	3.828	Inch 15	350	Chincholi, XXIII	55 1 59	4.988050	97286	18.425	Inch 14
	Ránigaon	23 19 30	4.399018	23389	4.430	7		Mathuri, XXXIII	35 17 38	4.836265	68591	12.991	" "
	Párgaon Tower		4.607864	40538	7.678			Tarkha	89 40 23	5.074503	118714	22.484	" "
348	Mathuri, XXXIII	64 6 35	5.033191	107942	20.444	15	351	Dhaigaon, XXXIV	37 37 35	4.988050	97286	18.425	" "
	Chincholi, XXIII	17 32 40	4.558335	36169	6.850	"		Mathuri, XXXIII	67 5 56	5.166701	146791	27.801	" "
	Khavándi Hill Peak		5.074503	118714	22.484			Tarkha	75 16 29	5.187854	154118	29.189	" "
349	Mathuri, XXXIII	88 49 27	4.663813	46112	8.733	" 7	352	Chincholi, XXIII	18 18 56	4.945994	88307	16.725	16
	Ránigaon	29 39 40	4.358395	22824	4.323			Árgargaon, XXIV	18 5 54	4.940988	87295	16.533	" "
	Hukarda Pagoda		4.607864	40538	7.678			Netjai Hill		5.222223	166810	31.593	" "

NOTE.—Stations Chincholi XXIII and Árgargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

J. ECCLES,
In charge of Computing Office.

December, 1892.

KHANPISURA MERIDIONAL SERIES.

AZIMUTHS OF SURROUNDING STATIONS AND POINTS AT PRINCIPAL,
PRINCIPAL-AUXILIARY AND SECONDARY STATIONS.

The following table contains, in the first column, the name of each Principal, Principal-Auxiliary, or Secondary Station, at which azimuths of surrounding Points have been measured; immediately followed by those azimuths. The second column contains the number of the triangle which gives the distance between the Station and the Point.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Ágargaon, XXIV		Ambad h.s.	
Chincholi Hill Dipmal	° ' "	Mathuri, XXXIII	33 14 26
Chincholi	h.s. 208 0 19	Dundgaon Mosque	55 23 51
Dhaigaon, XXXIV	224 28 23·77	Jámkhed, XXXI	128 35 31
Adhori Hill Pagoda No. 1	259 56 3	Sirádhön Tower	165 1 59
Adhori Hill Pagoda No. 2	259 56 30	Pokri Tower	179 30 23
Mathuri, XXXIII	270 3 10·74	Párner Tower	193 27 9
Netjai	" 284 53 43	Gola Pagoda	204 30 24
Netjai Hill	285 26 25	Jálna Pagoda	205 35 3
Chincholi, XXIII	303 32 19·36	Jálna Hill Pagoda	209 58 26
		Shivga Tower	213 14 4
		Raugon Hill Pagoda	216 7 51
		Vádagaon Hill Pagoda	221 31 27
		Kálágaon Pagoda	230 4 19
Áhirmal, XXXII		Bori	h.s. 248 33 44
Mathuri, XXXIII	55 39 41·98	Rui Pagoda	320 20 24
Jámkhed, XXXI	107 19 6·82		
Chaoradongar	h.s. 146 35 59	Ambáh h.s.	
Bájur, XXIX	157 54 25·66	Singáchori, XV	48 36 3
		Mhow Church	s. 92 39 20
		Harnása, XII	130 25 31
Ajnád, XXII			
Laling Hill Temple	29 32 0	Anakvádi, XXV	
Anakvádi, XXV	31 41 42·21	Songir	h.s. 196 0 25
Varjári Hill	132 2 54	Ajnád, XXII	211 34 12·76
Bábákuvar, XX	156 50 34·95	Dhár	" 227 7 29
Jalálabad, XIX	222 46 25·98	Laling Hill Temple	" 237 13 0
Tasdin Hill Temple No. 1	237 30 40	Bahádurpur	" 247 38 22
Tasdin Hill Temple No. 2	237 31 30	Kankráj	" 248 11 59
Árgaon, XXI	270 40 21·23	Valvádi, XXIII	275 14 9·36
Dhanvár, XXIV	309 15 32·56	Junvána Hill Peak	277 55 50
Valvádi, XXIII	346 48 57·00		

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Anakvádi, XXV—(Contd.)		Bargar h.s.	
Arvi Peak	172	Dhamnár, II	68
Sátmála, XXVII	85	Nigrun, III	68
		Lohári, VI	69
Anjar h.s.		Báwangaz, XVIII	
Abapuri Hill Pagoda	133	Bori Hill Peak	136
Chakeri	133	Gumánpur, XVI	22
		Vatli	120
Árgaon, XXI		Mograba, XIV	22
Valvádi, XXIII	30	Songarh Peak	126
Ajnád, XXII	28	Chakeri	131
Khandra Hill	140	Thíkri, XVII	23
Bábákuvar, XX	29	Abapuri Hill Pagoda	132
Tasdin Hill Temple No. 2	144	Jalálabad, XIX	24
Tasdin Hill Temple No. 1	142	Ambáhpáni Hill Temple	134
Jalálabad, XIX	28	Bábákuvar, XX	25
Sátpuda Hill Peak	145	Naktimáta Peak	137
Dhanvár, XXIV	31		
Bábákuvar, XX		Bori h.s.	
Varjári Hill	139	Mathuri, XXXIII	283
Bori Hill Peak	136	Ambad	284
Naktimáta Peak	137	Ambad Hill Pagoda	303
Báwangaz, XVIII	25	Jámkhed, XXXI	283
Thíkri, XVII	26	Sirádhôn Tower	299
Jalálabad, XIX	25	Párner Tower	804
Tasdin Hill Temple No. 1	141	Pokri Tower	298
Árgaon, XXI	29	Shivga Tower	296
Khandra Hill	140	Gola Pagoda	295
Ajnád, XXII	27	Jálna Pagoda	287
		Jálna Hill Pagoda	289
Bahádurpur h.s.		Raugaon Hill Pagoda	291
Anakvádi, XXV	168	Kálágaon Pagoda	286
Laling Hill Temple	167	Kui Pagoda	305
Valvádi, XXIII	167		
Bálágara, XXIV		Búda, XXI	
Barkhera Hill Bush	49	Bálágara, XXIV	1
Búda, XXI	1	Sítamau, I	2
Sítamau, I	3	Dhamnár, II	1
Digau	51		
Dhamnár, II	1	Budapura h.s.	
		Lohári, VI	82
Baloda s.		Kaula-ka-Máta, XI	82
Semlia	93		
Jalodia	98	Chakeri s.	
Kaula-ka-Máta, XI	91	Abapuri Hill Pagoda	132
Karsod, IX	91	Báwangaz, XVIII	131
Kwála	92	Anjar	133
Nagora	95	Songarh Peak	131
Bámbrud h.s.		Chaoradongar h.s.	
Varod	177	Jámkhed, XXXI	252
Páchora	177	Rájur, XXIX	251
		Áhirmal, XXXII	251

NOTE.—Stations Búda XXI and Bálágara XXIV appertain to the Karachi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Chincholi, XXIII		Dhaigaon, XXXIV—(Contd.)	
Ágargaon, XXIV	123 40 12'16"	Ágargaon, XXIV	44 35 13'84"
Netjai Hill	141 59 8	Pimpri	s. 75 4 12
Netjai	h.s. 142 33 4	Chincholi Hill Dipmal	87 38 15
Tarkha	" 164 19 28	Chincholi	h.s. 87 38 40
Dhaigaon, XXXIV	" 174 35 46'60"	Sirasgaon Tower	113 9 8
Tandoli	" 194 33 19	Káregaaon Tower	166 58 8
Ránigaon	" 200 56 24	Yerúl, XXX	173 3 3'58"
Kharvándi Hill Peak	" 201 48 47	Yerúl Hill Tree	173 11 19
Mathuri, XXXIII	219 21 27'27"	Daulatabad Fort Flag-staff	180 8 57
Bhálgaaon Hill Pagoda	225 34 10	Mitmita Peak	186 55 40
Khámkhed Hill Pagoda	248 28 6	Satára	No. 2 " 195 39 29
		Satára	No. 1 " 196 34 47
		Varundi	" 224 36 43
		Sevátta Tower Tree	" 229 30 44
Chincholi h.s.		Parundi Hill Pagoda	237 39 17
Ágargaon, XXIV	28 31 34	Kasner	" 238 20 23
Ghiregaon Tower	215 28 30	Jámkhed, XXXI	248 27 13'89"
Sevátta Tower Tree	259 50 40	Mathuri, XXXIII	321 43 47'73"
Dhaigaon, XXXIV	267 35 30	Adhori Hill Pagoda No. 2	321 50 40
Pimpri	s. 278 22 15	Adhori Hill Pagoda No. 1	321 52 27
Netjai	h.s. 351 23 6	Ránigaon	" 324 44 31
		Tandoli	" 331 56 33
		Chincholi, XXIII	" 354 34 37'31"
		Tarkha	" 359 21 23
Damangaon s.			
Rájur, XXIX	No. 1 h.s. 204 24 10		
Málágaon	276 25 50		
		Dhalmu h.s.	
		Gurla, VIII	107 16 2
		Jalálkheri, X	338 19 31
Deo Dongri, V		Dhamnár, II	
Dhanora, VII	56 50 22'80"	Lohári, VI	h.s. 9 28 11'57"
Jhar Hill Tree	62 13 37	Bargar	17 53 4
Parnaji Pagoda No. 2	104 19 35	Bhátkheri Hill Tree	21 44 9
Parnaji Pagoda No. 1	104 23 32	Pingrála Hill Pagoda	35 51 8
Parnakheri	h.s. 107 0 13	Kachner Hill Tree	52 1 18
Lohári, VI	" 108 35 28'39"	Barkhera Hill Bush	145 10 48
Nigrun, III	160 40 21'11"	Bálágara, XXIV	148 32 52'57"
Kanthária Hill Tree	180 33 3	Búda, XXI	177 46 45'02"
Pátan	" 181 49 54	Digau	" 187 1 44
Dharakpur Hill Tree	" 208 22 48	Sítamau, I	228 36 51'70"
Dudhála, IV	209 14 30'90"	Sítamau Hill Tree	236 35 36
Mehidpur Flag-staff	244 40 12	Nigrun, III	296 50 40'79"
Mehidpur	s. 248 57 32		
Dulet Temple	250 42 58	Dhanora, VII	
Mehidpur Tomb	252 24 14	Kaula-ka-Máta, XI	28 43 19'99"
Karai Pagoda	265 43 19	Jhar Hill Tree	112 21 0
Karai	h.s. 271 31 11	Lohári, VI	154 45 59'49"
Gurla, VIII	354 59 9'98"	Deo Dongri, V	236 43 37'71"
		Gurla, VIII	266 8 24'59"
		Karsod, IX	315 1 41'93"
Deogurária h.s.		Dhanvár, XXIV	
Singárchori, XV	42 52 31	Jarandi Hill Pagoda	8 8 59
Harnása, XII	109 13 22	Sirsála, XXVI	h.s. 11 16 10'85"
Indore Pagoda	123 56 36	Varad	30 55 30
Reuti	h.s. 148 15 57	Mohári	" 36 48 45
Dewás Hill Temple	201 26 42	Mohári Hill Peak	40 25 25
Nagda Hill	204 4 32	Bámbrud Hill Pagoda	45 31 30
Gurária Hill Peak	264 22 47		
Dhaigaon, XXXIV			
Netjai	h.s. 12 59 11		
Joharapur Tower	13 22 23		
Nimbgaon Tower	30 53 35		

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series.
Stations Búda XXI and Bálágara XXIV appertain to the Karáchi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Dhanvár, XXIV—(Contd.)		Gumánpur, XVI	
Páchora h.s. 51 53 30	174	Ambáhpáni Hill Temple 0 17 59	185
Sámner " 58 8 50	154	Báwangaz, XVIII 1 56 52 19	22
Valvádi, XXIII 69 56 4 78	81	Indráwan, XIII 230 39 0 30	21
Jalka Peak 81 51 59	150	Kapátal h.s. 249 57 55	96
Padmála " 85 29 9	149	Dhutni Peak 291 24 1	123
Páldhi " 129 26 36	147	Lálgarh Hill Pagoda 293 36 22	121
Ajnád, XXII 129 27 35 65	82	Mograba, XIV 295 57 21 87	21
Árgaon, XXI 170 45 30 91	81		
Manvel s. 181 31 54	148	Gurla, VIII	
Sátputa Hill Peak 184 15 33	146	Karsod, IX 32 17 51 38	11
Dohori h.s. 280 45 13	151	Bercha Hill Tree 79 20 47	85
Jámner Hill Peak 296 29 56	158	Dhanora, VII 86 15 29 14	10
Kekatnimbhora " 304 0 47	152	Deo Dongri, V 174 59 30 77	10
Jaola Hill Peak 322 19 12	190	Karai h.s. 207 23 52	74
		Dhalmu " 287 13 22	87
Dhár h.s.		Jalálkheri, X 310 13 21 71	14
Laling Hill Temple 45 55 53	164	Lupára " 354 28 27	88
Anakvádi, XXV 47 14 41	165		
Kankráj h.s. 345 42 27	164	Harnása, XII	
		Nálchha Hill Dargah 19 18 38	125
Digau h.s.		Mograba, XIV 27 42 35 17	18
Dhamnár, II 7 2 18	50	Dhár Hill Pagoda No. 1 52 13 41	118
Bálágara, XXIV 119 43 3	51	Indráwan, XIII 93 42 39 67	17
Sítamau, I 280 27 12	50	Kwála s. 135 16 5	89
		Karsod, IX 160 25 39 51	15
Dohori h.s.		Jalálkheri, X 199 44 26 97	15
Sirsála, XXVI 30 35 33	151	Reuti h.s. 266 47 25	100
Dhanvár, XXIV 100 48 18	151	Nenod Hill Tree 282 44 35	101
		Deogurária " 289 4 34	102
Dudhála, IV		Rála Mandíl Hill Peak 292 58 57	108
Deo Dongri, V 29 20 24 24	6	Machla Hill Peak 302 42 27	109
Nigrun, III h.s. 76 24 59 44	5	Machla Hill Temple 304 32 31	111
Tarauli 107 18 3	57	Ambáh " 310 18 40	112
Párlia " 109 33 57	53	Singárchori, XV 343 26 0 80	19
Sítamau, I 114 23 4 08	5		
Gualed Hill Tree 147 7 43	55	Indráwan, XIII	
		Kapátal h.s. 28 31 56	96
Ghátumbri h.s.		Gumánpur, XVI 50 46 6 38	21
Pophla, XXVIII 12 38 28	184	Shergarh s. 138 43 55	97
Sirsála, XXVI 78 46 38	185	Jalodia h.s. 164 37 9	99
Ausa Hill Fort 182 3 23	186	Kaula-ka-Máta, XI 177 39 15 00	16
Baitalvádi Fort 223 3 3	189	Semlia s. 210 31 28	94
Rájur, XXIX 330 11 5	184	Karsod, IX 217 19 2 10	16
		Nagora " 265 25 24	94
Golagaon, h.s.		Harnása, XII 273 34 2 85	17
Yerúl, XXX 70 56 21	225	Mograba, XIV 343 36 26 99	18
Róza h.s. 83 41 4	233		
Guddana Hill Pagoda 131 16 41	226	Jadgaon h.s.	
Pophla, XXVIII 264 16 27	225	Kasaner h.s. 11 10 36	258
		Muramba " 222 11 6	259
Gosainbaira h.s.		Yeklerwar Hill Dipmal 303 5 34	261
Thíkri, XVII 44 26 18	180	Jámkhed, XXXI 322 0 14	258
Singárchori, XV 209 22 19	180		
		Jalálabad, XIX	
		Tasdin Hill Temple No. 2 3 25 33	143
		Ajnád, XXII 42 54 20 12	27
		Bábákuvar, XX 79 39 33 91	25

NOTE.—Station Bálágara XXIV appertains to the Karáchi Longitudinal Series.

Name of Station with Asimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Asimuths of surrounding Points	No. of Triangle giving Distance
Jalálabad, XIX—(Contd.) ° ' "		Jámkhed, XXXI—(Contd.) ° ' "	
Bijagarh Hill Fort 99 55 29	188	Raugaon Hill Pagoda 247 57 37	291
Bawangaz, XVIII 121 34 57·95	24	Vádagaon Hill Pagoda 252 3 31	298
Thíkri, XVII 181 50 19·33	24	Pokri Tower 268 16 37	297
Sátpuda Hill Peak 328 38 54	145	Sirádhön Tower 272 20 30	299
Árgaon, XXI 342 22 34·98	28	Nandi Hill Peak 283 17 54	801
		Áhirmal, XXXII 287 10 48·55	42
		Bori h.s. 290 53 24	283
Jalálkheri, X		Ambad Hill Pagoda 297 51 30	803
Harnása, XII 19 47 56·92	15	Ambad " 308 33 12	284
Karsod, IX 75 56 21·10	14	Talváda Hill Pagoda 333 33 25	807
Lupára h.s. 104 46 3	88	Gevrái Hill Pagoda 353 40 36	809
Gurla, VIII 130 16 54·13	14	Sindkhed " 358 24 56	308
Dhalmu " 158 20 23	87	Dundgaon Mosque 359 10 55	306
Jalodia h.s.		Jatoda h.s.	
Shergarh s. 8 18 34	99	Yerúl, XXX 82 5 0	228
Kaula-ka-Máta, XI 184 53 50	98	Jámkhed, XXXI 314 42 52	228
Baloda " 239 54 56	98	Pipalgaon Hill Tree 325 38 7	262
Indráwan, XIII 344 36 23	99		
		Kanad h.s.	
Jamdi h.s.		Jamdi h.s. 95 19 40	214
Mundvádi Peak 159 41 31	218	Mundvádi Peak 117 34 20	218
Sátmála, XXVII 217 36 3	212	Andaner Masjid 149 19 20	217
Andaner Peak 241 45 41	216	Andaner Peak 171 16 32	215
Andaner Masjid 241 55 6	217	Sátmála, XXVII 179 8 32	214
Kanad h.s. 275 18 6	214		
Damangaon Hill Pagoda 297 48 58	219	Kankráj h.s.	
Yerúl, XXX 340 10 16	212	Anakvádi, XXV 68 20 4	163
		Laling Hill Temple 69 58 17	162
Jámkhed, XXXI		Dhár h.s. 165 43 20	164
Appagaon Pagoda 6 18 33	312	Valvádi, XXIII 330 48 13	162
Mathuri, XXXIII 17 49 11·69	43		
Dhaigaon, XXXIV 68 36 11·85	44	Kapátal h.s.	
Kasaner h.s. 86 43 20	256	Gumánpur, XVI 70 2 50	96
Parundi Hill Pagoda 92 0 36	280	Shergarh s. 192 52 9	97
Yerúl, XXX 122 15 33·99	41	Indráwan, XIII 208 29 45	96
Yerúl Hill Tree 122 17 48	235		
Pipalgaon Hill Tree 123 0 16	262	Karai h.s.	
Rasulpur " 127 3 2	231	Gurla, VIII 27 25 53	74
Godagaon Hill Peak 132 25 42	227	Deo Dongri, V 91 33 33	74
Jatoda Hill Tree 134 41 31	229	Dulet Temple 163 34 5	78
Jatoda " 134 49 50	228	Mehidpur Flag-staff 195 30 43	76
Jadgaon " 142 3 5	258	Mehidpur s. 201 44 33	75
Yeklerwar Hill Dipmal 147 10 38	261	Mehidpur Tomb 210 8 18	77
Jaipur Hill Tree 150 51 47	260		
Pophla, XXVIII 153 46 23·14	39	Karsod, IX	
Muramba " 169 20 32	238	Kwála s. 8 21 28	89
Nandkhed Hill Tomb 173 46 44	242	Indráwan, XIII 37 24 48·90	16
Somtána Hill Dipmal 188 17 53	255	Baloda " 49 20 5	91
Rohillagad Hill Peak 199 56 52	282	Kaula-ka-Máta, XI 94 6 56·28	13
Rájur, XXIX 205 25 12·55	39	Bercha Hill Tree 123 36 52	85
Chaoradongar " 207 37 23	252	Dhanora, VII 135 5 50·11	11
Kadgaon Hill Pagoda 215 23 18	254	Gurla, VIII 212 14 56·50	11
Málágaon No. 1 " 219 27 42	245	Jalálkheri, X 255 49 55·00	14
Pan Chandra Hill Dipmal 228 10 50	253	Harnása, XII 340 22 46·12	15
Jálna Pagoda 232 55 56	287		
Jálna Hill Pagoda 235 9 29	289		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Kasner h.s.	o ' "	Lohári, VI—(Contd.)	o ' "
Dhaigaon, XXXIV	58 25 46	Parnaji Pagoda No. 1	293 53 51
Gedaida Dipmal	96 39 1	Parnaji Pagoda No. 2	294 1 1
Dhánura Pagoda	100 48 1	Dhanora, VII	334 42 14.23
Bhir Kingaon Pagoda	102 15 46	Kaula-ka-Máta, XI	351 41 36.72
Parola Idgah	105 30 31		
Walauj Pagoda	119 7 21		
Varundi	h.s. 141 12 31		
Pipalgaon Hill Tree	171 18 56	Lupára h.s.	
Jadgaon	" 191 9 52	Gurla, VIII	174 28 39
Muramba	" 203 36 29	Jalálkheri, X	284 42 43
Rohillagad Hill Peak	259 59 50		
Jámkhed, XXXI	266 39 45		
		Málágaon No. 1 h.s.	
Kaula-ka-Máta, XI		Jámkhed, XXXI	h.s. 39 33 12
Jalodia	h.s. 4 54 15	Muramba	h.s. 81 5 36
Budapura	" 133 35 4	Damangaon	s. 96 28 2
Pancher Hill Pagoda	" 156 33 5	Rájur, XXIX	136 55 32
Lohári, VI	171 43 18.72	Málágaon No. 2	h.s. 260 28 34
Jhar Hill Tree	195 24 36		
Bercha Hill Tree	207 16 12	Málágaon No. 2 h.s.	
Dhanora, VII	208 41 18.15	Málágaon No. 1	h.s. 80 28 43
Karsod, IX	274 0 47.40	Rájur, XXIX	133 58 43
Kwála	s. 312 20 47	Dongaon Hill Dipmal	187 5 3
Baloda	" 321 43 35	Wadona Peak	221 11 13
Semlia	" 343 54 40		
Indráwan, XIII	357 38 55.30		
		Manvel s.	
Kekatnimbhora h.s.		Dhanvár, XXIV	h.s. 1 32 5
Sirsála, XXVI	28 11 44	Páldhi	h.s. 36 38 25
Dhanvár, XXIV	124 2 57		
Jámner Hill Peak	286 12 2	Mathuri, XXXIII	
		Bháлгаon Hill Pagoda	22 54 34
Kulah h.s.		Chincholi, XXIII	39 25 43.64
Sirsála, XXVI	22 27 36	Hukarda Pagoda	44 29 11
Antúr Hill Fort	56 32 39	Tarkha	h.s. 74 43 22
Savangi	h.s. 131 17 32	Ágargaon, XXIV	90 15 24.58
		Kharvándi Hill Peak	103 32 19
Kwála s.		Párgaon Tower	113 18 6
Baloda	s. 119 42 20	Tandoli	" 120 6 37
Kaula-ka-Máta, XI	132 26 16	Ránigaon	" 133 18 38
Karsod, IX	188 20 48	Adhori Hill Pagoda No. 1	141 26 59
Harnása, XII	315 12 31	Adhori Hill Pagoda No. 2	141 31 35
		Dhaigaon, XXXIV	141 49 17.62
Lohári, VI		Jámkhed, XXXI	197 45 49.38
Pancher Hill Pagoda	25 2 21	Ambad	" 213 8 44
Budapura	h.s. 36 58 11	Rakshasbáhan	s. 215 25 33
Bargar	" 137 17 20	Bori	h.s. 216 58 16
Bhátkheri Hill Tree	158 51 21	Áhirmal, XXXII	235 28 8.10
Bhátkheri Hill Pagoda	160 16 3	Talváda Hill Pagoda	249 33 16
Kachner Hill Tree	180 38 20	Sindkhed	" 255 33 29
Dhamnár, II	189 26 51.11	Gevrái Hill Pagoda	256 3 59
Nigrun, III	237 56 10.00	Pipla Hill Pagoda	268 50 29
Deo Dongri, V	288 24 54.74	Kolegaon Hill Tree	276 27 23
Parnakheri	" 290 33 49	Khámkhed Hill Pagoda	293 50 13
		Sherapur Hill Pagoda	330 30 24

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Mehidpur s.		Nagora s.	
Karai Pagoda	o ' "	Indráwan, XIII	85 29 12
Karai	h.s. 16 13 2	Semlia	s. 128 28 59
Dulet Temple	63 53 30	Baloda	" 161 31 23
Deo Dongri, V	69 0 22		
Mhow Church s.		Netjai h.s.	
Singáchori, XV	28 25 20	Ágargaon, XXIV	h.s. 104 58 36
Machla Hill Peak	230 48 33	Chincholi	h.s. 171 24 25
Ambáh	h.s. 272 37 16	Dhaigaon, XXXIV	192 57 20
Dhajára Hill Peak	338 53 0	Somtána	s. 217 18 14
		Tandoli	h.s. 240 3 44
		Chincholi, XXIII	322 30 3
Moda h.s.		Nigrun, III	
Palsi	h.s. 46 41 8	Parnakheri	h.s. 26 30 12
Upli Pagoda	83 41 28	Lohári, VI	58 3 51.48
Sirsála, XXVI	148 10 18	Bargar	" 66 15 54
Sarola	" 240 33 54	Bhátkheri Hill Tree	" 74 15 56
		Bhátkheri Hill Pagoda	75 12 33
		Pingrála Hill Pagoda	93 56 55
		Dhamnár, II	116 57 4.33
		Sítamau, I	164 3 19.59
		Párlia	" 218 36 35
		Tarauli	" 228 31 20
		Gualed Hill Tree	233 27 56
		Dudhála, IV	256 16 6.69
		Dharakpur Hill Tree	257 23 51
		Pátan	" 293 19 49
		Kanthária Hill Tree	307 18 48
		Deo Dongri, V	340 37 25.36
Mograba, XIV		Páchora h.s.	
Ambáhpani Hill Temple	45 32 49	Sátmála, XXVII	h.s. 29 51 15
Báwangaz, XVIII	48 11 11.63	Bámbrud	h.s. 62 51 50
Vatli	h.s. 111 3 34	Varod	" 104 9 30
Gumánpur, XVI	116 7 33.26	Dhanvár, XXIV	231 47 56
Lálgarh Hill Pagoda	117 39 49	Savangi	" 263 9 16
Indráwan, XIII	163 39 37.09	Sirsála, XXVI	318 3 19
Dhutni Peak	182 15 35		
Harnása, XII	207 37 13.03		
Asakheri Hill Tree	234 43 5		
Machla Hill Peak	243 25 12		
Nálchha Hill Dargah	249 6 54		
Jánapáv Hill Pagoda	256 44 29		
Singáchori, XV	264 22 2.41		
Jámnia Hill Peak	300 52 48		
Thíkri, XVII	346 21 49.56		
Mohári h.s.		Padmála h.s.	
Varod	h.s. 86 17 53	Dhanvár, XXIV	265 24 47
Valvádi, XXIII	91 48 7	Sirsála, XXVI	342 39 47
Dhanvár, XXIV	216 46 10		
Sirsála, XXVI	351 1 33		
Muramba h.s.		Páldhi h.s.	
Parundi Hill Pagoda	h.s. 21 39 19	Manvel	s. 216 35 30
Kasaner	23 38 58	Dhanvár, XXIV	309 23 52
Jadgaon	" 42 12 51	Sirsála, XXVI	354 52 32
Jaipur Hill Tree	56 52 14		
Kankura Hill Tree	101 44 40		
Pophla, XXVIII	128 3 30		
Nandkhed Hill Tomb	184 57 41		
Rájur, XXIX	241 50 40		
Rájur Hill Temple	241 53 20		
Málágaon	No. 1 " 260 59 0		
Somtána Hill Dipmal	291 28 31		
Vádagaon Hill Pagoda	299 42 28		
Nandi Hill Peak	336 45 44		
Jámkhed, XXXI	349 19 26		
		Palsi h.s.	
		Upli Pagoda	147 56 32
		Sindphal Hill Pagoda	166 14 21
		Sirsála, XXVI	171 37 14
		Undangaon Hill Tree	206 6 46
		Moda	h.s. 226 39 37
		Sarola	" 233 56 40

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Palsi h.s.—(Contd.)		Rail h.s.	
Sillöd s. 250 11 21	204	Sátmála, XXVII 206 21 17	211
Rájur, XXIX 306 30 7	197	Pophla, XXVIII 297 45 20	210
Nirud Tower 311 32 41	208	Yerúl, XXX 343 31 48	210
Párlia h.s.		Rájur, XXIX	
Nigrun, III 38 39 54	53	Kadgaon Hill Pagoda 9 8 23	254
Sítamau, I 118 58 29	54	Chaoradongar h.s. 20 34 28	251
Dudhála, IV 289 28 24	53	Damangaon s. 24 24 49	250
Parnakheri h.s.		Jámkhed, XXXI 25 29 10.23	39
Lohári, VI 110 38 16	71	Muramba h.s. 61 55 43	238
Nigrun, III 206 26 58	70	Nandkhed Hill Tomb 85 14 51	241
Deo Dongri, V 286 54 3	70	Pophla, XXVIII 86 27 37.50	38
Pátan h.s.		Dongargaon Hill Pagoda No. 2 98 10 51	221
Deo Dongri, V 1 50 9	60	Dongargaon Hill Pagoda No. 1 101 28 0	220
Nigrun, III 113 22 59	60	Palsi h.s. 126 36 17	197
Tarauli h.s. 190 37 46	61	Jalki Hill Pagoda 139 25 37	195
Pimpri s.		Sirsála, XXVI 144 21 10.24	38
Chincholi h.s. 98 23 59	321	Sillöd s. 147 52 59	202
Ghiregaon Tower 137 36 11	323	Ghátumbri h.s. 150 16 39	184
Sirasgaon Tower 156 25 36	324	Undangaon " 153 54 32	192
Káregaaon Tower 218 41 26	325	Sarola " 159 28 0	198
Dhaigaon, XXXIV 255 2 46	320	Pallaskhed Hill Tree 245 30 47	243
Nimbgaon Tower 300 29 1	327	Wadona Peak 269 36 43	247
Tandoli " 319 31 35	320	Dongaon Hill Dipmal 291 15 18	248
Joharapur Tower 341 25 56	328	Málágaon No. 2 " 313 57 1	246
Pophla, XXVIII		Málágaon No. 1 " 316 53 59	244
Maholi Peak 3 58 58	237	Áhirmal, XXXII 337 49 59.66	42
Kankura Hill Tree 18 43 15	240	Pan Chandra Hill Dipmal 339 13 56	253
Rasulpur h.s. 71 31 26	281	Rakshasbáhan s.	
Jatoda Hill Tree 74 18 51	230	Mathuri, XXXIII 35 28 28	810
Yerúl, XXX 78 19 12.05	40	Appagaon Pagoda 101 0 17	813
Golagaon " 84 20 6	225	Sawargaon Pagoda 286 31 38	811
Ganori Peak 97 0 46	224	Sindkhed h.s. 347 42 58	810
Bondagaon Hill Tree 100 16 40	223	Ránigaon h.s.	
Waragaon Hill Tomb 112 32 2	222	Chincholi, XXIII 20 59 0	830
Rail " 117 53 33	210	Tandoli h.s. 82 54 31	831
Sátmála, XXVII 132 29 13.87	37	Nimbgaon Pagoda 131 38 16	831
Dongargaon Hill Pagoda No. 1 141 7 42	220	Antarvali Pagoda 143 42 31	833
Dongargaon Hill Pagoda No. 2 183 55 15	221	Dhaigaon, XXXIV 144 48 20	829
Sirsála, XXVI 185 56 40.03	37	Chándgaon Tower 178 17 46	835
Jalki Hill Pagoda 189 0 53	195	Hatgaon Tower 207 26 1	834
Ghátumbri " 192 36 8	184	Mathuri, XXXIII 313 16 57	829
Pallaskhed Hill Tree 261 42 29	243	Párgaon Tower 336 36 27	847
Rájur, XXIX 266 19 43.94	38	Hukarda Pagoda 342 56 37	849
Rájur Hill Temple 266 21 35	249	Bhálgaaon Hill Pagoda 344 9 4	845
Muramba " 308 0 40	239	Rasulpur h.s.	
Nandi Hill Peak 326 40 52	801	Yerúl, XXX 95 10 58	232
Jámkhed, XXXI 333 42 31.50	89	Róza h.s. 125 32 41	234
		Pophla, XXVIII 251 26 53	231
		Jámkhed, XXXI 306 54 37	231

NOTE.—Station Chincholi XXIII appertains to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Reuti h.s.		Savangi h.s.	
Singárchori, XV	21 22 36	Antúr Hill Fort	42 21 55
Nenod Hill Tree	45 23 17	Páchora	h.s. 83 12 50
Harnása, XII	86 54 7	Kulah	" 311 15 55
Dewás Hill Temple	231 2 41	Jarandi Hill Pagoda	" 342 49 57
Nagda Hill	243 54 51	Sirsála, XXVI	356 47 47
Gurária Hill Peak	317 43 36		
Deogurária	h.s. 328 13 51	Semia s.	
Indore Pagoda	351 29 6	Indráwan, XIII	30 32 49
		Kaula-ka-Máta, XI	163 56 21
Rōza h.s.		Baloda	s. 203 14 44
Yerúl, XXX	41 31 9	Nagora	" 308 26 32
Golagaon	h.s. 263 38 52		
Rasulpur	" 305 31 23	Shergarh s.	
		Kapátal	h.s. 12 53 19
Sámner h.s.		Jalodia	" 188 18 19
Dhanvár, XXIV	238 6 9	Indráwan, XIII	318 42 54
Sirsála, XXVI	352 20 52		
		Shernapur h.s.	
Sarola h.s.		Toka	h.s. 36 15 21
Sillöd	s. 27 14 33	Yerúl, XXX	139 47 46
Palsi	h.s. 54 0 10	Daulatabad Minaret	165 40 21
Moda	" 60 35 53	Aurangabad Tomb	259 4 38
Sirsála, XXVI	120 32 10	Gandali Hill Pagoda No. 1	291 27 26
Undangaon Hill Tree	133 1 1	Satára	No. 2 " 315 33 58
Rájur, XXIX	339 25 20		
Bhokardhan Tower	340 47 8	Sillöd s.	
		Nirud Tower	h.s. 36 36 8
Satára No. 1 h.s.		Palsi	70 14 3
Dhaigaon, XXXIV	16 36 43	Sindphal Hill Pagoda	123 47 58
Yerúl, XXX	138 37 27	Sirsála, XXVI	139 57 9
		Undangaon Hill Tree	166 22 19
Satára No. 2 h.s.		Sarola	" 207 13 45
Dhaigaon, XXXIV	15 41 21	Bhokardhan Tower	304 18 55
Toka	h.s. 52 52 55	Rájur, XXIX	327 49 31
Shernapur	" 135 35 22		
Yerúl, XXX	137 58 3	Sindkhed h.s.	
Daulatabad Fort Flag-staff	145 20 32	Sherapur Hill Pagoda	35 58 5
Aurangabad Tomb	191 29 27	Kolegaon Hill Tree	51 32 40
		Pipla Hill Pagoda	63 59 55
Sátmála, XXVII		Mathuri, XXXIII	75 37 5
Rail	h.s. 26 22 21	Appagaon Pagoda	163 29 29
Jamdi	" 37 37 35	Rakshasbáhan	s. 167 43 39
Deher Hill Temple	72 13 52	Jámkhed, XXXI	178 25 9
Anakvádi, XXV	138 1 50'05	Sawargaon Pagoda	192 35 49
Arvi Peak	139 54 19	Khámkhed Hill Pagoda	346 53 36
Junvána Hill Peak	144 35 22		
Valvádi, XXIII	188 16 13'70	Singárchori, XV	
Páchora	" 209 46 48	Gosainbaira	h.s. 29 27 3
Antúr Hill Fort	229 21 27	Thíkri, XVII	31 42 23'76
Koralla Hill	242 35 55	Jámnia Hill Peak	67 57 27
Sirsála, XXVI	246 31 10'79	Songarh Peak	73 43 31
Pophla, XXVIII	312 22 4'67	Mograba, XIV	84 30 8'96
Damangaon Hill Pagoda	324 46 26	Nálchha Hill Dargah	89 56 53
Andaner Peak	351 28 55	Vatli	" 96 56 56
Yerúl, XXX	355 38 39'78	Lálgarh Hill Pagoda	99 38 38
Kanad	" 359 8 30	Dhár Hill Pagoda No. 1	117 13 31

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Singáchori, XV—(Contd.)		Songír h.s.	
Ásakheri Hill Tree	159 18 57	Laling Hill Temple	8 55 49
Harnása, XII	163 28 49.24	Anakvádi, XXV	16 2 19
Jánapáv Hill Pagoda	194 49 9		
Reuti	h.s. 201 18 42	Tandoli h.s.	
Mhow Church	s. 208 23 21	Chincholi, XXIII	14 35 2
Machla Hill Peak	216 23 39	Netjai	h.s. 60 8 27
Machla Hill Temple	221 14 15	Somtána	s. 95 47 27
Deogurária	h.s. 222 46 31	Pimpri	" 139 35 57
Rála Mandúl Hill Peak	224 30 6	Nimbgaoon Pagoda	149 52 53
Ambáh	" 228 32 0	Dhaigaoon, XXXIV	151 59 29
Dhajára Hill Peak	261 18 4	Chándgaoon Tower	208 57 53
		Hatgaoon Tower	220 52 8
		Antarvali Pagoda	227 15 8
		Ránigaoon	h.s. 262 53 38
		Mathuri, XXXIII	300 4 3
Sirsála, XXVI		Tarauli h.s.	
Pophla, XXVIII	5 57 43.40	Pátan	h.s. 10 38 43
Sátinála, XXVII	66 39 28.49	Nigrun, III	48 35 27
Antúr Hill Fort	75 16 13	Sitamau, I	119 18 57
Valvádi, XXIII	127 39 41.83	Dudhála, IV	287 13 18
Varod	h.s. 128 3 50		
Páchora	" 138 7 9	Tarkha h.s.	
Padmála	" 162 42 25	Dhaigaoon, XXXIV	179 21 32
Mohári	" 171 2 20	Mathuri, XXXIII	254 38 1
Sámner	" 172 21 49	Chincholi, XXIII	344 18 24
Páldhi	" 174 53 32		
Bámbrud Hill Pagoda	175 0 32	Thíkri, XVII	
Savangi	" 176 48 3	Jalálábad, XIX	1 50 35.07
Dhanvár, XXIV	191 14 27.20	Bijagarh Hill Fort	8 47 53
Kulah	" 202 26 15	Bábákuvar, XX	47 43 35.26
Jarandi Hill Pagoda	204 21 6	Báwangaz, XVIII	87 4 17.73
Kekatnimbhora	" 208 7 50	Mograba, XIV	166 23 57.49
Dohori	" 210 30 44	Songarh Peak	173 15 27
Ausa Hill Fort	221 25 36	Jámnia Hill Peak	182 38 1
Baitalvádi Fort	241 19 4	Singáchori, XV	211 36 28.95
Ghátumbri	" 258 45 21	Gosainbaira	h.s. 224 25 7
Jaola Hill Peak	262 46 24		
Vási Hill Peak	270 42 18	Toka h.s.	
Undangaon	" 291 23 48	Yerúl, XXX	197 52 34
Sarola	" 300 27 55	Shernapur	h.s. 216 11 14
Sillöd	s. 319 53 42	Satára	No. 2 " 232 47 24
Rájur, XXIX	324 14 14.88		
Móda	h.s. 328 8 2	Undangaon h.s.	
Palsi	" 351 36 29	Sirsála, XXVI	111 26 33
Jalki Hill Pagoda	352 8 41	Vási Hill Peak	216 25 13
		Rájur, XXIX	333 50 22
		Valvádi, XXIII	
		Sátinála, XXVII	8 17 32.52
		Arvi Peak	93 38 39
		Junvána Hill Peak	94 42 59
		Anakvádi, XXV	95 24 34.96
		Laling Hill Temple	99 35 36
Somtána s.			
Netjai	h.s. 37 20 27		
Tandoli	" 275 44 57		

NOTES.—Stations Búda XXI and Bálágara XXIV appertain to the Karáchi Longitudinal Series. Station Chincholi XXIII appertains to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Valvádi, XXIII—(Contd.)			
Bahádurpur h.s. 136 32 23	167	Vatli h.s.	
Kankráj " 150 50 34	162	Báwangaz, XVIII 18 14 6	120
Ajnád, XXII 166 52 1'21	30	Singárchori, XV 276 42 10	119
Árgaon, XXI 209 27 53'73	30	Mograba, XIV 290 56 54	119
Jalka Peak 247 25 23	150		
Dhanvár, XXIV 249 47 13'48	31	Yerúl, XXX	
Bámbrud Hill Pagoda 261 23 44	155	Toka h.s. 17 54 59	266
Mohári Hill Peak 269 54 11	159	Deher Hill Temple 141 49 32	213
Mohári " 271 41 51	157	Jamdi " 160 12 24	212
Sirsála, XXVI 307 32 38'54	33	Rail " 163 33 31	210
Koralla Hill 311 44 46	191	Sátmála, XXVII 175 39 15'79	40
Varad " 329 17 36	194	Röza " 221 30 30	233
Antúr Hill Fort 351 20 59	178	Guddana Hill Pagoda 229 22 55	226
		Bondagaon Hill Tree 243 1 1	223
Varad h.s.		Waragaon Hill Tomb 243 58 7	222
Valvádi, XXIII 149 21 1	194	Ganori Peak 247 34 37	224
Dhanvár, XXIV 210 50 3	194	Golagaon " 250 53 30	225
		Godagaon Hill Peak 257 31 51	227
Varod h.s.		Pophla, XXVIII 258 12 42'28	40
Bámbrud h.s. 39 17 15	177	Jatoda " 262 1 40	228
Mohári " 266 12 25	176	Jatoda Hill Tree 262 10 53	229
Páchora " 284 7 5	175	Rasulpur " 275 9 1	232
Sirsála, XXVI 307 57 35	175	Maholi Peak 277 41 13	237
		Mitmita Peak 297 19 37	236
Varundi h.s.		Daulatabad Minaret 297 54 59	271
Dhaigaon, XXXIV 44 41 9	274	Daulatabad Fort Flag-staff 301 30 44	269
Gedáida Dipmal 76 9 19	279	Jámkhed, XXXI 302 5 16'32	41
Bhir Kingaon Pagoda 81 0 59	278	Gandali Hill Pagoda No. 1 303 22 26	273
Parola Idgah 85 56 44	277	Satára No. 2 " 317 54 57	265
Dhánura Pagoda 88 25 14	276	Satára No. 1 " 318 34 17	264
Walauj Pagoda 111 46 59	275	Shernapur " 319 46 4	268
Kasaner h.s. 321 11 34	274	Dhaigaon, XXXIV 353 1 50'33	44

December, 1892.

J. ECCLES,
In charge of Computing Office.

KHANPISURA MERIDIONAL SERIES.

GO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

The following table gives the co-ordinates of all stations and other fixed points, arranged in alphabetical order, also the descriptions of the secondary and intersected (or unvisited) points, and references to the preceding pages where the descriptions of the principal stations are given.

NOTE.—Principal stations are followed by the Roman numerals I, II, &c., secondary stations by the letters h.s. and s. Wherever the spelling and designation of stations and points have been altered from the old nomenclature, the latter is given in italics where necessary, immediately below the former. The year or season in which a station or point was originally fixed is usually given after its description.

For visited stations and points of superior accuracy, the values of latitude and longitude are given to two places of decimals, for well determined objects to one place, and for the remaining points to the nearest second.

The trigonometrical heights in general refer to the upper surface of the pillar or to the mark engraved on top of pillar, building, &c.; but in exceptional cases, when the information is forthcoming in the field books, the surfaces to which the heights refer are specified in footnotes. The spirit-levelled heights are given to two places of decimals of a foot, and the surfaces to which they refer are also indicated in footnotes. Where trigonometrical heights were not forthcoming, but values were found on the Topographical Survey maps, these values have been reduced to the same terms as the trigonometrical heights and enclosed in brackets, thus [1931]; the surface to which they refer may be assumed to be the ground level. In the column of heights, the upper numeral gives the height of the station above mean sea-level and the lower is that of the structure itself above ground level.

The numerals in the last column indicate the triangles given on pages 12—*a*. to 29—*a*., by which the station or point has been fixed; when these numerals are omitted it is to be understood that no triangles are given.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Abapuri Hill Pagoda <i>Dhanoond H. Pag.</i>	Barwáni State	In the village so called, about 2½ miles W.S.W. of Danúnd, 7 miles S.W. of Rájpur town on the road from Barwáni: pargana Páti. Deputy Bheel (Bhú) Agency. 1847.	21 52 35.5	75 53 9.1	<i>feet</i> [1931]	182
Adhori Hill Pagoda No. 1	Ahmednagar (Ahmadnagar)	Dome of the north-western and larger of the two pagodas about ¼ a mile S.E. of the village of that name, the same distance S.W. of Devti, and 3½ miles S.W. by S. of the large village of Bodhegaon a mile W. of the road from Pátoda to Paithan: sub-division Shevgaon. 1845.	19 16 7.2	75 27 8.0	...	336 337
Adhori Hill Pagoda No. 2	"	Dome of the south-eastern and smaller of the two pagodas, about 27 yards E. of Adhori Hill Pagoda No. 1: sub-division Shevgaon. 1845.	19 16 7.1	75 27 8.8	...	338 339
Agargaon, XXIV*	"	<i>Fide page 11—<i>a</i>.</i>	19 10 40.52	74 54 32.97	† 3153.95 12.0	46
Ahirmal, XXXII ...	Nizam's Territory	<i>Fide page 10—<i>a</i>.</i>	19 33 16.35	76 6 39.51	2024 5.0	42

* This station appertains to the Bombay Longitudinal Series.

† To mark-stone on top of mound, 12.0 feet above bench-mark at foot of station.

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Åhirmal Hill Mosque ...	Nizam's Territory	Large mosque on a conspicuous and isolated hill on which is the principal station of the same name. 1845.	19 33 16.1	76 6 40.4	feet...	...
Ajnád, XXII ...	Khândesh	<i>Vide</i> page 8—G. ...	21 18 49.40	75 5 0.92	$\frac{1641}{0.7}$	27
Ambad Hill Pagoda <i>Ambhar h. pag.</i>	Nizam's Territory	On a conspicuous hill S.E. of the town of that name, about 4 miles S. of Lalvâdi village, and 8 miles N. by W. of Daurgaon. 1845.	19 36 20.7	75 50 18.6	...	808
Ambad h.s. <i>Kasarwari Stn.</i>	"	On a conspicuous and isolated hill about 2 miles S.W. of the town of the same name. 1845.	19 35 19.34	75 48 50.41	...	284 285
Ambâh Hill Pagoda <i>H. Pag. Ambaw</i>	Jaora State	On a small isolated hillock immediately S.W. of the village of that name, about 2 miles S.E. of Harnaoda on the road from Partâbgarh to Malhârgarh, $\frac{1}{2}$ of a mile N.W. by N. of Sâjanpura, and $1\frac{1}{2}$ miles S. of Hemri village: Western Malwa (Mâlwa) Agency. 1848.	24 9 41.7	74 57 31.5	...	...
Ambâh h.s. ...	Indore State	On a small conical hill about $1\frac{1}{2}$ miles N.E. of the village of that name on the high road from Mhow (Mau) to Khandwa, $2\frac{1}{2}$ miles S.W. of Datoda, and the same distance S.E. of Harsola large village: Indore (Indor) Political Agency. 1847.	22 33 22.01	75 53 32.16	[2387]	112
Ambâhpani Hill Temple ...	Barwâni State	On a high conical hill, about $1\frac{1}{2}$ miles N.W. of the village of that name close to the road from Barwâni to Pânsemal, and $2\frac{1}{2}$ miles N. by E. of Kadwalia village on the Goi river: pargana Pâti. Deputy Bheel Agency. 1847.	21 58 7.5	74 54 47.2	...	184 185
Anakvâdi, XXV ...	Khândesh	<i>Vide</i> page 8—G. ...	20 47 2.38	74 44 9.52	$\frac{2243.74}{3.2}$	84
Andaner Masjid ...	Nizam's Territory	Tower. Near the large village of that name, about $2\frac{1}{2}$ miles N.W. of Kanad town. 1846.	20 16 26.4	75 8 38.6	...	217
Andaner Peak <i>Hewarkhair Pk.</i>	"	About 2 miles N.E. of the large village of Andaner on the road from Kanad to Châlisgaon, and the same distance N. of the former town. 1846.	20 17 17	75 10 18	...	215 216
Andri Hill Pagoda ...	"	About $2\frac{1}{2}$ miles S.S.W. of the village so called, and 5 miles N.W. of Noigaon on the road from Aurangabad to Ajanta. 1845.	20 14 16	75 31 13	...	...
Anjar h.s. <i>Anjer H. Pag.</i>	Barwâni State	On a hill pagoda S. of Anjar town: Deputy Bheel Agency. 1847.	22 2 15.6	75 5 46.3	[728]	133
Antarvali Pagoda ...	Ahmednagar	About a mile S.S.W. of the village of that name, 9 miles E. by S. of Varûr on the road to Mânûr, $4\frac{1}{2}$ miles S.W. by W. of the large village of Bodhegaon, and $1\frac{1}{2}$ miles N. of Rânigaon: sub-division Shevgaon. 1845.	19 16 22.2	75 25 43.5	...	888
Antûr Hill Fort ...	Nizam's Territory	White tower at the N. end of the hill fort. 1846.	20 25 42.6	75 16 35.9	...	178 179

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Appagaon Pagoda ...	Nizam's Territory	Spire of the large pagoda at the village of the same name on the left bank of the Godávari river, about 1½ miles W. of Pipalgaon on the road from Gevráí town, and 1 mile S.S.E. of Ballagaon. 1845.	19 22 31'3	75 39 49'2	feet ...	312 313
Árgaon, XXI ...	Khándesh	<i>Vide page 8—G.</i> ...	21 18 27'70	75 34 4'92	$\frac{3129}{0'8}$	28, 29
Arvi Peak ...	"	Of a conspicuous, conical hill about ¼ a mile E. of the high road from Málegaon to Dhulia, and 3¼ miles S. of Laling on the above named road: táluca Dhulia. 1846.	20 46 4	74 46 42	[2108]	171 172
Ásakheri Hill Tree <i>Saugarh H.</i> ...	Amjhera State	Small tree in the centre of the conspicuous and isolated hill, about a mile N.W. of Ásakheri village, the same distance N. of Silote, 2¼ miles S. by E. of Ságar town, and 4 miles S.W. of Akolia close to the high road from Mhow to Rutlam (Ratlám): Bheel Agency. 1847.	22 34 10	75 39 4	[2096]	117
Aurangabad Tomb ...	Nizam's Territory	Large dome of Begam bibi-ka makbara on the right bank of the Dudhna river, and close N.W. of the town of Aurangabad. 1845.	19 54 3'4	75 21 43'9	...	272
Ausa Hill Fort ...	"	Centre of building in the hill fort. 1846. ...	20 33 58'8	75 37 23'6	...	186
Azímpur s. <i>Azimpoora stn.</i> ...	Ujjain State	On some high ground, about ¼ a mile S.E. by S. of the village so called, 3 miles N.W. by W. of the town of Ujjain. The cart road from Ujjain to Unel passes within a mile N.E. of the station: Western Malwa Agency. 1848.	23 13 5	75 46 3	...	...
Bábákuvar, XX ...	Khándesh	<i>Vide page 7—G.</i> ...	21 35 33'54	74 57 21'60	$\frac{2658}{1'0}$	25, 26
Bahádurpur h.s. ...	"	On a hill, about 1½ miles W. of the large village so called on the left bank of the Bori river, and 6¼ miles W.N.W. of the town of Párola on the high road from Dhulia to Erandol: táluca Amalner. 1846.	20 54 28'94	75 3 27'66	[907]	167 168
Baitalvádi Fort ... <i>Wari Fort S. Tower</i>	Nizam's Territory	Southern tower of the fort. 1846. ...	20 33 4'6	75 39 42'0	...	189
Bálágara, XXIV* ...	Mandsaur State	<i>Vide page 4—G.</i> ...	24 10 21'90	75 0 15'84	$\frac{1804}{3}$	1
Baloda s. ...	Dhár State	This station was originally fixed by the secondary triangulation of the Bhopal (Bhopál) and Malwa Topographical Survey, and is about 2 miles N.W. of the village of Baloda, and 2¼ miles N.E. of Gadgára on the high road from Rutlam to Indore: Bheel Agency. When visited in 1883, the station was found to consist of a platform of mud and stones, 2 feet in height, having a mark-stone in its upper surface. 1882-83.	22 59 45'94	75 19 24'22	$\frac{1753}{2}$	91, 92

* This station appertains to the Karáchi Longitudinal Series.

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bámbrud Hill Pagoda <i>Bambrool H. Pag.</i>	... Khándesh	On the southern point of a small, isolated hill about $\frac{1}{2}$ a mile N.E. of the village of this name, and $4\frac{1}{2}$ miles E.N.E. of Máheji Railway Station of the G.I.P. Line: táluks Páchora: 1846.	20 47 4' 2"	75 32 0' 8"	feet [1016]	155 156
Bámbrud h.s.	... "	On a hill, about $2\frac{1}{2}$ miles W.S.W. of the village so called, and close S.E. of Tsikvádi on the road from Chálisgaon Railway Station to Bhadgaon town: sub-division Chálisgaon. 1846.	20 34 30' 32"	75 8 27' 89"	...	177
Bargar h.s. <i>Wurgarh h. trees and stn.</i>	... Jaora State	On some high ground, about a mile S.E. by E. of the village of Bágakheri, and $1\frac{1}{2}$ miles N.N.W. of Bargar village on the road from Píplanda to Jaora, and $4\frac{1}{2}$ miles W.S.W. of the latter: Western Malwa Agency. 1848.	23 37 16' 09"	75 5 57' 53"	...	68, 69
Barkhera Hill Bush <i>Gooraria H. Bush</i>	... "	At the N.W. corner of a small flat-topped hill, about $\frac{1}{2}$ of a mile E. of the village of Barkhera, $\frac{1}{4}$ of a mile S.W. of Dangleoda village, and $1\frac{1}{2}$ miles W. of Gogarpura village: Western Malwa Agency. 1847-48.	24 8 31	75 0 7	...	49
Báwangaz, XVIII	... Barwáni State	<i>Vide page 7—g.</i>	21 59 23' 20"	74 53 41' 99"	$\frac{2112}{*}$	22
Bercha Hill Tree <i>Mahiswara H. Tree</i>	... Dhár State	On the eastern end of a high, isolated hill, about $\frac{1}{2}$ of a mile S.W. by S. of the village of Bercha, 1 mile N. of Dikwa, and $5\frac{1}{2}$ miles N.W. by N. of Runija Station on the Sindhia-Neemuch Section of the B.B. and C.I. Railway: Bheel Agency. 1848.	23 14 12	75 16 7	...	85, 86
Bhálgaon Hill Pagoda	... Ahmednagar	On the eastern extremity of a ridge running E. from a flat-topped hill, about $\frac{1}{2}$ of a mile S. by W. of the village so called, and $2\frac{1}{2}$ miles N.N.E. of the large village of Sirúr on the S. bank of the Sinphana river: táluks Jámkhed. 1845.	19 5 31' 2"	75 29 32' 0"	[1950]	315 346
Bhátkheri Hill Pagoda	... Jaora State	At the N. end of a small, isolated hill on the Mandasaur and Jaora state boundary—about $1\frac{1}{2}$ miles N.N.E. of Bhátkeri village, and 5 miles N.W. by W. of the town of Jaora on the main road from Mhow to Neemuch (Nimach): Western Malwa Agency. 1848.	23 40 45' 4"	75 6 0' 7"	[1804]	65
Bhátkheri Hill Tree	... "	At the S. end of a small, isolated hill on the N. end of which stands a pagoda: Western Malwa Agency. 1848.	23 40 24	75 5 59	...	66, 67
Bhir Kingaon Pagoda	... Nizam's Territory	South of the town of that name at the junction of the roads from Aurangabad, Chendravada, Pipri and Paithan, and about $1\frac{1}{2}$ miles S. of Aurangabad. 1845.	19 42 8' 3"	75 20 41' 9"	...	278
Bhokardhan Tower	... "	Highest and conspicuous tower in the town of that name. 1846.	20 15 30' 2"	75 48 40' 8"	...	207
Bijagarh Hill Fort	... Indore State	Northern tower of the ruined fort of that name at N.E. corner of a flat-topped high hill, about a mile S. of the old ruined fort of Jalálábad on the road to Bhadwáli: pargana Jalálábad: Indore Political Agency. 1847.	21 41 0' 9"	75 23 58' 1"	...	138

* See description of this station.

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bondagaon Hill Tree <i>Maismal</i>	... Nizam's Territory	Conspicuous tree on a hill close to the village so called, about 2 miles N.E. of Pipalgaon, and 7 miles W.S.W. of Pulmari town on the road from Aurangabad to Ajanta. 1846.	20 3 46	75 22 16	feet ...	228
Bori Hill Peak <i>Gowal Pk.</i>	... Barwáni State	About 2 miles S. by E. of the village of that name on the road from Rájpur to Pánsemal, and 3½ miles W. by S. of Naktimáta village: pargana Páti. Deputy Bheel Agency. 1847.	21 47 34	74 52 45	[2331]	186
Bori h.s.	... Nizam's Territory	On an isolated hill, about 1½ miles S.S.W. of the village so called on the road from Ranjani to Ambad town, the same distance E. of the latter, and 2 miles N.N.W. of Balagaon. 1845.	19 36 42·09	75 52 32·95	...	288
Bori Hill Tree	... "	Conspicuous tree close to the preceding station of the same name. 1845-46.	19 36 42	75 52 33	...	...
Búda, XXI*	... Rámpura State	<i>Vide page 3—G.</i>	24 14 11·86	75 10 43·06	$\frac{1526}{4}$	1
Budapura h.s. <i>Gopalpoor H.S. Tree</i>	... Rutlam State	On the highest point of a group of hills, about ¼ a mile S. of the small village of that name, 3½ miles S.W. of Gopalpura, 2 miles N.W. of Palsoria on the road from Shingarh to Rutlam, and 3½ miles E. of Shingarh: Western Malwa Agency. 1848.	23 21 19·54	74 57 9·14	...	82
Chakeri s. <i>Chickara Stn.</i>	... Barwáni State	On low ground, about 1½ miles E. by N. of Anjar town, the same distance W. by N. of Chápri village, and immediately N. of the cart road from Anjar to Mandwára on the Náhal stream: Deputy Bheel Agency. 1847.	22 2 41·89	75 7 38·65	...	181
Chándgaon Tower	... Ahmednagar	About ¼ a mile N.N.W. of the village of that name, 4½ miles N. by E. of Ránigaon, 2 miles E. of the road from Paithan to Mánúr, and 10 miles S. of the former: sub-division Shevgaon. 1845.	19 19 10·9	75 26 31·5	...	335
Chaoradongar h.s.	... Nizam's Territory	On a square, flat-topped hill rising about 75 feet above the surrounding plateau, about 8 miles N.W. of Jálna, 1½ miles N. of Pangri village, 3 miles W. by N. of Mandwa village, and 4½ miles N.N.W. of Nagavádi on the road from Jálna to Aurangabad. The station is denoted by a mark-stone embedded flush with the ground. 1883-84.	19 56 15·87	75 50 37·09	2138	251 252
Chincholi, XXIII†	... "	<i>Vide page 10—G.</i>	18 55 25·27	75 18 41·47	$\frac{2928}{10·6}$	47,48
Chincholi Hill Dipmal	... Ahmednagar	Large dipmal about ¼ of a mile W. by S. of the following station of the same name: táluks Nevása. 1845.	19 30 12·1	75 5 30·2	...	322
Chincholi h.s.	... "	On a low hill, about ¼ a mile S. of the road from Pichadgaon to Gevrai, 2½ miles W. by S. of the latter, 1½ miles S. by W. of Dighi, and 2½ miles S.E. of Bábulkheda: táluks Nevása. 1845.	19 30 12·65	75 5 43·33	...	316 317

* This station appertains to the Karáchi Longitudinal Series.

† This station appertains to the Bombay Longitudinal Series.

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Chinnapur Hill Pagoda ...	Nizam's Territory	About 1½ miles W. by S. of the village of that name, 3½ miles S.S.W. of Antúr fort, and 4 miles E. of Soigaon on the road from Aurangabad to Bhál. 1846.	20 23 22	75 15 49	feet...	...
Damangaon Hill Pagoda <i>Sawang H. Pag.</i> ...	"	On a detached hill, about 1½ miles E. of the village of that name, 2½ miles W. of Saranghi village, and 4 miles N.N.E. of Takli large village. 1846.	20 8 3'2	75 18 55'9	...	219
Damangaon s. ...	"	On a tower close to the village so called, about 8 miles W.S.W. of Dongaon town, and 4 miles W. of Pangri village on the road from Lonegaon to Jálna. 1845.	19 59 49'09	75 51 42'24	...	250
Daulatabad Fort Flag-staff ...	"	On the central and highest tower of the hill fort. 1845.	19 56 28'9	75 15 15'3	...	269 270
Daulatabad Minaret ...	"	In the town of Daulatabad. 1845. ...	19 56 37'4	75 15 33'0	...	271
Deher Hill Temple ...	Khándesh	Mahádev pagoda on the hill fort, about 1½ miles S. of the old revenue town of Deher, 5 miles in the same direction of Pimparkhed Railway Station of the G.I.P. Line. 1846.	20 16 17'7	74 56 50'0	...	213
Deo Dongri, V ...	Gwalior State	<i>Vide page 4—g.</i> ...	23 26 47'79	75 34 44'17	$\frac{1727}{*}$	6, 8
Deogurária h.s. ...	Indore State	On a detached, conical hill, about ¼ a mile S.W. of the village of the same name, 5½ miles S.E. of the Indore city. A tramway line from the Holkar State Railway leads to the hill which is a celebrated place of pilgrimage: Indore Political Agency. 1847.	22 40 9'86	75 58 23'52	...	102 108
Devalgaon Tree ...	Ahmednagar	Conspicuous tree on the table-land near the village of that name, about 2 miles S. by W. of Karanji village on the road from Amrapur to Ahmednagar. 1845-46.	19 6 14	75 1 46	...	...
Dewás Hill Temple ...	Dewás State	On an isolated, conical hill immediately N. of the high road from Bombay to Agra, the town of Dewás being on the opposite side of the road: Indore Political Agency. 1847.	22 58 12'5	76 6 2'9	[2167]	104
Dhabadi Hill Tree <i>Dobari Trees</i> ...	Nizam's Territory	Near the town of that name on the road from Aurangabad. 1846.	20 3 23	75 47 6	...	...
Dhaigaon, XXXIV ...	Ahmednagar	<i>Vide page 10—g.</i> ...	19 30 35'04	75 15 10'99	$\frac{1553}{2'0}$	44
Dhajára Hill Peak <i>Jamb Ghaut Pk.</i> ...	Koselgarh State	The highest peak on the Vindhya range, about 3 miles S.S.W. of Kuselgarh, 2½ miles W. of Beka village, 2 miles N. by E. of Bara Járn village, and 4½ miles S.W. of the Rajputana-Malwa Railway Line: Indore Political Agency. 1847.	22 25 52	75 51 20	[2747]	115
Dhalmu h.s. ...	Ujjain State	On a flat-topped hill on a plateau, about a mile S.E. of the village of that name, ¼ of a mile W. by S. of Kherla village, and 1½ miles S.S.E. of the village of Rui on the cart road from Unel to Ujjain: Western Malwa Agency. 1848.	23 15 39'26	75 42 24'17	[1773]	87

* See description of this station.

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

47—G.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dhamnár, II	Mandsaur State	<i>Vide</i> page 4—G.	23 53 22' 29"	75 11 35' 91"	$\frac{\text{feet}}{1678}$ 1	1
Dhanora, VII	Sailána State	<i>Vide</i> page 5—G.	23 16 30' 23"	75 17 42' 57"	$\frac{1883}{18' 0}$	9
Dhánura Pagoda <i>Dhorkhara pag.</i>	Nizam's Territory	Near the village of that name on the left bank of a tributary of the Gánda river and on the road from Gándápur town, about 4 miles E. by S. of Dhaigaon on the road from Aurangabad to Ahmednagar. 1845.	19 42 56' 0"	75 14 46' 6"	...	276
Dhanvár, XXIV	Khándesh	<i>Vide</i> page 8—G.	20 53 3' 31"	75 38 29' 61"	$\frac{1164' 81}{2' 0}$	31, 32
Dharakpur Hill Tree	Ágar State	On an isolated hill on which stands the village of Dharakpur, about 1½ miles S.E. of Bápsia on the road from Barandia to Gangrár, and ¼ of a mile S.W. by S. of Ratanpur: Western Malwa Agency. 1848.	23 50 19	75 48 33	[1650]	59
Dhár Hill Pagoda No. 1	Dhár State	White temple with a lofty spire known as Kálka Mátá on the small hill close W. of a large tank, about a mile W. of the town of Dhár, and close N. of the high road from Dhár to Amjhara: Bheel Agency. 1847.	22 35 51' 0"	75 19 27' 1"	[1938]	118
Dhár Hill Pagoda No. 2	"	On an isolated, conical hill, about 1½ miles S.E. of the town of Dhár, 1 mile S. of the high road to Bombay, and 2 miles N. of Párlia village on the road from Dhár to Dilaura: Bheel Agency. 1847.	22 34 36	75 21 30	[1967]	...
Dhár h.s. <i>Amulnair Stn.</i>	Khándesh	On a detached hill about a mile S.S.W. of the village of this name, ¼ a mile S.S.E. of another detached hill crowned with two temples, and 3¼ miles N.W. by N. of the town of Amalner on the left bank of the Bori river, a tributary of the Tápti (Tápi): táluka Amalner. 1846.	21 4 43' 93"	75 4 29' 12"	[739]	164 165
Dhutni Peak <i>Doodnia Pk.</i>	Dhár State	Of a conical, rocky hill on the Vindhya range, close to the little village so called, about 5 miles W. of Nálchha town, and 1½ miles in the same direction of Amkho village: táluka Nálchha. Bheel Agency. 1847.	22 25 3	75 21 44	[2403]	123
Digau h.s.	Mandsaur State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on some high ground, about ¼ a mile W. of Chhota Digau, close to the cart road to Semli, 1½ miles S. by E. of Mália village, and 2 miles N.E. of Bara Digau close to the cart road to Mandsaur: Western Malwa Agency. The station was found to consist of a pillar of stones and mud cement, 18 inches high, and 3¼ feet in diameter, with a circular stone platform of the same height and 11 feet in diameter. 1882-83.	24 3 42' 70"	75 12 59' 22"	$\frac{1548}{1' 5}$	50, 51
Dohori h.s.	Khándesh	About the centre of a detached hill, about 1½ miles S. by W. of the village of this name, the same distance N.N.E. of Hivarkheda, and 4 miles N.W. by N. of the town of Jámner: táluka Jámner. 1846.	20 51 30' 54"	75 47 8' 10"	[1085]	151

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure <i>feet</i>	No. of Triangle
Dongaon Hill Dipmal <i>Dongaon dip.</i> ...	Nizam's Territory	Near the town of that name, about 7 miles W. of Deulgaon Rája, 3 miles S.W. of Pokri village on the road from Jafferabad to Jálna. 1845.	20 1 46' 2"	75 58 52' 2"	...	248
Dongargaon Hill Pagoda No. 1 ...	"	Conspicuous temple on the southern end of a range of hills near Dongargaon village, about 2 miles E. of Sabalgaon, and 5 miles N.W. of Pulmari on the road from Aurangabad to Ajanta. 1846.	20 9 12' 6"	75 24 41' 7"	...	220
Dongargaon Hill Pagoda No. 2 ... <i>Patri H. Pag.</i>	"	Dome of the pagoda near the village of that name, about 4 miles E.N.E. of Pulmari on the road from Aurangabad to Ajanta, and 3 miles S.S.W. of Patri village on the same road. 1846.	20 6 46' 5"	75 30 52' 6"	...	221
Dudhála, IV ...	Jhallawar State	<i>Vide page 4—G.</i> ...	23 50 54' 31"	75 49 25' 06"	$\frac{1675}{5}$	5
Dulet Temple ...	Indore State	Close to the village of that name on the right bank of the Sipra river, about $\frac{1}{2}$ a mile W. of the cantonment boundary of Mehidpur: Indore Political Agency. 1848.	23 28 31' 4"	75 40 5' 6"	...	78, 79
Dundgaon Mosque ...	Nizam's Territory	Close S. of the village so called on the road from Ambad to Paithan, and about 5 miles S.W. of the former. 1845.	19 30 53' 3"	75 42 4' 0"	...	306
Gandali Hill Pagoda No. 1 ...	"	On a detached hill close to the road from Aurangabad to Pátoda, close E. of the village so called, and about 5 miles S.E. of Aurangabad. 1845.	19 49 29' 7"	75 26 11' 4"	...	273
Gandali Hill Pagoda No. 2 ...	"	On a conical hill close S.W. of the village so called, about 4 miles E.S.E. of Satára town, 2 miles S. of the road from Aurangabad to Pátoda, and 5 miles S.S.E. of Aurangabad. 1845.	19 49 4"	75 25 19"	...	...
Ganori Peak ...	"	Of a conical hill near the village of that name, about 6 miles S.W. of Pulmari town on the road from Aurangabad to Ajanta. 1846.	20 3 11"	75 23 18"	...	224
Gednida Dipmal ... <i>Birkingaon Dip.</i>	"	Close to the village of that name, about 2 miles S.W. of Bhir Kingaon town, the same distance N.N.W. of Suppura village on the road from Bhir Kingaon to Tandoli. 1845.	19 41 14' 7"	75 19 39' 0"	...	279
Gevrái Hill Pagoda <i>Geurai H. Pag.</i> ...	"	Large spire of the pagoda about $3\frac{1}{2}$ miles S.W. of Gevráí town, $2\frac{1}{2}$ miles W. by N. of Doka Vádagaon on the road from Gevráí. 1845.	19 13 41' 9"	75 45 3' 2"	...	809
Ghátumbri h.s. ...	"	On a peak on the verge of the ghát, about 2 miles W. by S. of the village so called, close N.E. of the small village of Nánágaon, 7 miles W.N.W. of the large village of Undangaon, and $4\frac{1}{2}$ miles S. by W. of Baitalvádi town. 1846.	20 30 37' 34"	75 37 15' 93"	...	184 185

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Ghiregaon Tower ... <i>Girgaon</i>	Ahmednagar	In the centre of the small village of that name, about 2½ miles E. of the large village of Salábatpur, 2½ miles N. of Gevráí, and 1½ miles W. by S. of Siraagaon: táluca Nevása. 1845.	19 32 48·4	75 7 40·4	feet ...	323
Godagaon Hill Peak <i>Gorehgaon Pk.</i>	Nizam's Territory	Of a conical hill, about 1½ miles E. of the village of that name, 6 miles N.E. of Daulatabad, and the same distance E. of Róza town on the road to Daulatabad. 1845-46.	20 0 12	75 19 9	...	227
Golagaon Dome ...	"	Close to the village so called, about 4 miles E. by N. of Róza town, 6 miles N. by E. of Daulatabad, and 1 mile N. of Godagaon. 1845.	20 1 15·2	75 18 45·0	...	...
Golagaon h.s. ... <i>Golehgaon Pk. Stn.</i>	"	On the centre of a conical hill, about 1½ miles E. of the village of that name, 7 miles N.N.E. of Daulatabad, and the same distance E. of Ellora. 1846.	20 1 20·51	75 19 53·66	...	225
Gola Pagoda ... <i>Golar pag.</i>	"	Near the village of that name, about a mile S. by W. of Pangri, 9 miles in the same direction of Jálna, and 1 mile E.S.E. of Nagjári village on the road from Jálna to Ambad. 1845.	19 43 29·3	75 52 46·3	...	295
Gosainbaira h.s. ...	Dhár State	This station was originally fixed by the secondary triangulation of the Khándesh Topographical Survey, and is on a low hill of that name lying 2 miles S. of Kharakwani village, and 1 mile W. of the road from Sonkheri to Dolani: Bheel Agency. The station was found to consist of a mark-stone buried flush with the ground and protected by a large heap of stones. 1882-83.	22 4 2·81	75 30 26·47	972	130
Gualed Hill Tree ...	Jhallawar State	On a small hill about ¼ of a mile N. by W. of the village so called, and 1 mile N.E. of Rojána on the cart road from Dag to Gangrára: Harowtee (Haráoti) Agency. 1847-48.	23 57 42	75 44 38	[1628]	55, 56
Guddana Hill Pagoda <i>Maismal H. Pag.</i>	Nizam's Territory	About a mile N.E. of the village so called, 2 miles S. by E. of Takli large place, and 4½ miles N.E. of Róza town. 1845.	20 3 22·6	75 17 26·5	...	226
Gumánpur, XVI ...	Amjhara State	<i>Vide page 7—G.</i>	22 34 50·27	74 54 59·56	$\frac{1825}{5·3}$	21
Gurária Hill Peak <i>Bariah Pk.</i>	Indore State	The highest and conspicuous summit of a hill, about a mile W.N.W. of the village of that name, 3 miles W. of Baroda village, and 2 miles S. of Asrawad village on the road from Indore to Rághogarah: Indore Political Agency. 1847.	22 40 23	76 0 45	[2295]	106
Gurla, VIII ...	Gwalior State	<i>Vide page 5—G.</i>	23 17 36·14	75 35 36·57	$\frac{1716}{6·7}$	10
Harnása, XII ...	Depálpur State	<i>Vide page 6—G.</i>	22 47 29·91	75 35 37·33	$\frac{1818}{10·2}$	15
Hatgaon Tower ... <i>Hadgaon S.W. Ft.</i>	Ahmednagar	S.W. tower in the village so called on the road from Mungi, about 3½ miles S. by E. from the latter, and 2 miles E.S.E. from Pingvádi village: táluca Nevása. 1845.	19 21 38·3	75 30 11·2	...	334

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Hukarda Pagoda	Nizam's Territory	Immediately above the S. bank of a stream, about $\frac{1}{2}$ of a mile W. of the village so called, $2\frac{1}{2}$ miles N. by W. of Bhálgaoon, and the same distance S.S.E. of Mirsángvi. 1845.	19 7 53' 3"	75 29 0' 1"	feet ...	849
Indore Pagoda	Indore State	Mahadev pagoda close W. of the palace in the city: Indore Political Agency. 1847.	22 43 3' 0"	75 53 46' 2"	[1791]	107
Indore Palace	"	In the town. 1847.	22 43 6	75 53 49	...	...
Indráwan, XIII	Dhár State	<i>Vide</i> page 6—G.	22 48 48' 54"	75 13 23' 78"	$\frac{1834}{7'5}$	16, 17
Jadgaon h.s. <i>Jurgaon Stn.</i>	Nizam's Territory	On a hill, about a mile N. of the village so called, the same distance E. of Tongaon, and $1\frac{1}{2}$ miles S.S.E. of Ladgaon on the road from Aurangabad to Jálina. 1845.	19 50 44' 72"	75 33 30' 94"	...	258 259
Jaipur Hill Tree <i>Jowpoor Tree</i>	"	About $\frac{1}{2}$ a mile S. of the village of this name, $2\frac{1}{2}$ miles N.W. of Satana village on the road from Aurangabad to Jálina, and the same distance S. by W. of Bangaon on the road from Aurangabad to Ladsángvi. 1845.	19 53 29	75 34 18	...	260
Jalálabad, XIX	Khargon State	<i>Vide</i> page 7—G.	21 40 35' 29"	75 26 34' 90"	$\frac{2613}{2'5}$	24
Jalálkheri, X	Ujjain State	<i>Vide</i> page 5—G.	23 10 34' 89"	75 44 35' 01"	$\frac{1749}{3'8}$	14
Jalka Peak <i>Itnar Pk.</i>	Khándesh	Towards the N.W. end of a small detached hill, about $1\frac{1}{2}$ miles N. by W. of the village so called on the metallated road from Mhasávd to Jámner, and $4\frac{1}{2}$ miles S.S.E. of Shirsoli Station on the G.I.P. Railway: sub-division Nasirabad. 1846.	20 52 28	75 34 6	...	150
Jalki Hill Pagoda <i>Dhamni H. Pag.</i>	Nizam's Territory	Spire. About $1\frac{1}{2}$ miles S.S.W. of the village so called, the same distance N.N.E. of Tulni village, and $2\frac{1}{2}$ miles N.N.W. of Kharsod. 1845-46.	20 24 52' 3"	75 34 20' 8"	...	195 196
Jalki Hill Peak	"	About 3 miles W.N.W. of the village so called, 2 miles W. by N. of Jambai village, $2\frac{1}{2}$ miles N.N.E. of Sindphal, and $11\frac{1}{2}$ miles W. by N. of Undangaon. 1846.	20 27 8	75 32 14	...	...
Jálina Hill Pagoda	"	White pagoda E. of the town on the road to Sindkhed, and near the village of Murthi on the same road. 1845.	19 51 39' 2"	75 58 47' 9"	...	289 290
Jálina Pagoda	"	Large white Ganpati pagoda E. of the town and W. of the Infantry and Cavalry Lines. 1845.	19 51 14' 8"	75 56 54' 0"	...	287 288

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

51—G.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jalodia h.s.	Dhár State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on a slight rise near the western edge of a plateau, about 2½ miles W. by N. of the village of Jalodia, 3½ miles N.W. by N. of Kod town, and the same distance W.S.W. of Píplia. It is close to the road from Kod town to Delchi: Bheel Agency. When visited in 1883, the station was found to consist of a mud and stone platform 1 foot in height, having a mark-stone in its upper surface flush with the ground, the platform was raised to 8·8 feet above the ground level. 1882-83.	0 1 " 22 55 29·04	0 1 " 75 11 24·83	<i>feet</i> 1825 8·8	98, 99
Jambai Peak	Nizam's Territory	About 4 miles W.N.W. of the village so called, and 8 miles N. by W. of Sindphal. 1846.	20 28 5	75 30 45	...	...
Jamdi h.s. <i>Jambti</i>	"	On a peaked hill, about 2 miles S. of the village of that name, the same distance N.W. of Sirjapur, and 6 miles W. by S. of Kanad town on the road from Aurangabad. 1846.	20 14 48·35	75 5 23·73	...	212
Jámkhed, XXXI	"	<i>Vide page 10—G.</i>	19 40 33·04	75 41 55·24	$\frac{2174}{3·0}$	89, 41
Jámner Hill Peak	Khándesh	The lowest and westernmost of the three small isolated hills about ½ a mile apart and lying in a line from E. to W. About ¾ of a mile S. of the town of Jámner, the road from Jámner to the village of Kodli passes by the western foot of the hill: táluks Jámner. 1846.	20 47 48	75 49 41	[984]	153
Jámnia Hill Peak <i>Mándogarh Pk.</i>	Dhár State	Of a conical hill at the S. edge of a plateau, about 2 miles E.S.E. of Mándogarh hill fort: Bheel Agency. 1847.	22 19 6	75 28 11	[2270]	128 129
Jánapáv Hill Pagoda <i>Hasarpoor H. Pag.</i>	Hásilpur State	A pagoda so called, surrounded by trees, on the highest point of a range of hills running N. and S., about 2½ miles E. of Jesarnagar on the high road from Bombay to Agra, and 4 miles S.E. of Hásilpur town: Holkar Territory. 1847.	22 27 33·2	75 43 45·0	[2803]	116
Jaola Hill Peak	Nizam's Territory	About 4½ miles S. of the village so called 1½ miles S.W. of the Megaon Chauki on the road from Dhaora to Sávida town, and 3 miles N.N.W. of the former. 1846.	20 32 31	75 55 20	...	190
Jaora Palace	Jaora State	In the centre of the town on the Rajputana-Malwa State Railway: Western Malwa Agency. 1848.	23 38 16	75 10 4	...	...
Jarandi Hill Pagoda	Nizam's Territory	On a hill close to the small village of that name, about 5 miles W. by N. of the town of Baitalvádi. 1846.	20 34 7·1	75 35 36·8	...	137 188
Jatoda h.s. <i>Jatora Stn.</i>	"	On a hill, about 3½ miles E.N.E. of the village so called, 7 miles N.E. of Daula'abad, and 4 miles N.W. of Mangsángvi village on the road from Arrangabad to Pulmari town. 1845.	19 59 54·21	75 21 18·28	...	228

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jatoda Hill Tree ...	Nizam's Territory	Large tree about 200 yards S.W. of the secondary station of the same name. 1845-46.	19 59 52	75 21 14	feet ...	229 230
Jhar Hill Tree ... <i>Jarandla H. tree</i>	Rutlam State	Large tree at the N. end of a plateau, about 1½ miles N.W. by N. of the village of Jhar, 1 mile S. of Nunera, and the same distance N.E. of Sarwaria: Western Malwa Agency. 1843.	23 17 23	75 15 25	[1879]	83, 84
Johrapur Tower ...	Ahmednagar	Large tower in the village so called, about 3½ miles W.N.W. of Shevgaon town on the road from Paithan, and 2 miles N.N.E. of Samangaon on the same road: taluka Nevasa. 1845.	19 22 48.3	75 13 14.1	...	328
Junvána Hill Peak <i>Mandrai Pk.</i>	Khándesh	Conspicuous hill peak locally known as Mandrai, about 3 miles N.W. by W. of Junvána village close W. of the high road from Dhulia to Cháliggaon, and 4½ miles S.E. of Laling on the high road from Málegaon to Dhulia: taluka Dhulia. 1846.	20 46 15	74 50 9	[1875]	169 170
Kachner Hill Tree ...	Mandsaur State	Large tree on some high ground, about ¼ of a mile W. of the Hofkar-Neemuch State Railway, 1 mile N.W. of the village of Kachner, 1½ miles S.E. by E. of Sirsoda village on the road from Nagari to Nimod, and the same distance N. by E. of Lasuria: Western Malwa Agency. 1847-48.	23 51 7	75 8 28	[1667]	63
Kadgaon Hill Pagoda ...	Nizam's Territory	Pagoda surrounded with trees on a hill near the village of that name, about 2 miles W. of Nethana village, 1½ miles S.E. of Pangri, and the same distance N.W. of Nagavádi village on the road from Jálna to Aurangabad. 1845-46.	19 53 49.6	75 51 53.6	...	254
Káládeo Palace ...	Ujjain State	On an island in the Sipra river, about ¼ a mile N.W. of Káládeo, 3 miles N. of the town of Ujjain: Western Malwa Agency. 1843.	23 14 44	75 49 0	...	...
Kálágaon Pagoda ...	Nizam's Territory	Near the village so called on the left bank of the Dudhna river, about a mile N. of Daitanna village, and 3 miles W. of Hisvan village on the road from Jálna to Gunsángvi. 1845.	19 42 10.7	75 57 29.6	...	286
Kanad h.s. <i>Palashkheir</i>	"	About 2 miles S.W. of the town of the same name, and the same distance N.E. of Palsakhed village. 1846.	20 14 24.52	75 9 55.20	...	214
Kankráj h.s. ...	Khándesh	On a tomb on a small detached hill having the village so called at its N. foot, about 2½ miles E.N.E. of the large village of Bahádurpur on the left bank of the Bori river, and 4 miles N.W. by N. of the town of Párola on the high road from Dhulia to Erandol: taluka Amalner. 1846.	20 55 35.08	75 6 57.94	[861]	162 163
Kankura Hill Tree ...	Nizam's Territory	About a mile S.E. of the village so called on the road from Aurangabad, 3 miles N.E. of Palsi on the same road, and 8½ miles in the same direction of Aurangabad. 1845.	19 58 10	75 29 3..	...	240

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kanthária Hill Tree <i>Allote H. tree</i>	... Dewás State	Close to the village of that name on some high ground, about a mile E. by S. of Richia, the same distance S. by W. of Diálpura, and 5½ miles W.N.W. of Ghát Piplia on the right bank of the Sipra river: Indore Political Agency. 1848.	23 40 45	75 34 53	<i>feet</i> [1598]	62
Kapátal h.s.	... Amjhera State	This station was originally fixed by the secondary triangulation of Bhopal and Malwa Topographical Survey, and is on a little isolated hill about 60 feet above the ground to the W., ¼ of a mile S.W. of the village of that name, 2 miles S.S.E. of Lergaon, and the same distance S.W. of Baloda on the road from Dasai town to Amjhera: Bheel Agency. The station was found to consist of a mark-stone buried nearly flush with the ground, but in 1882-83 four other stones were buried around it with marks engraved thereon, the intersection of lines joining them coincided with the station mark which is covered over with a cairn of stones. 1882-83.	22 39 8'50	75 7 44'05	1880	96
Karai h.s. <i>Kurrai Hill Stn.</i>	... Indore State	On a small isolated hill, about ¼ of a mile S. by W. of the village of Karai, near the Indore and Gwalior state boundary, and 3 miles S. of the town of Mehidpur: pargana Mehidpur. Indore Political Agency. 1848.	23 26 38'93	75 40 41'54	[1661]	74
Karai Pagoda	... "	Between the village of that name and the tank to the W. of it, about 2 miles S. of Mehidpur town, and 1 mile W.N.W. of Lákakheri village on the road from Ujjain to Mehidpur: pargana Mehidpur. Indore Political Agency. 1848.	23 27 14'4	75 41 11'5	...	80
Káregaon Tower <i>Kaligaon</i>	... Ahmednagar	A few yards N.W. of the village of that name, about ¼ of a mile W. of the right bank of the Godávári river, 3 miles E.N.E. of Khamgaon, and 4¼ miles N. by E. of Dahigaon: táluca Nevása. 1845.	19 33 42'0	75 14 25'4	...	325
Karsod, IX	... Ujjain State	<i>Vide page 5—G.</i>	23 6 46'48	75 28 12'70	$\frac{1781}{5}$	11
Karsod Hill Pagoda	... "	About 1¼ miles W.S.W. of the village of that name, 1 mile N.N.W. of a police chauki on the road from Barnagar town to Karsod, and 5 miles N.E. of the town and Railway Station of Barnagar: Western Malwa Agency. 1848.	23 6 47'6	75 28 11'7	...	...
Kasaner h.s.	... Nizam's Territory	On a conical hill, about 3 miles S.S.E. of the large village so called on the road from Bhir Kingaon to Ambad, 1 mile E. of Darragaon, and 1¼ miles N.N.W. of Parundi village on the road from Chhota Haddul to Tupvádi. 1845.	19 39 58'05	75 31 16'05	...	256 257
Kaula-ka-Máta, XI	... Sailána State	<i>Vide page 6—G.</i>	23 7 48'21	75 12 33'30	$\frac{1948}{0'5}$	12, 13
Kekatnimbhora h.s. <i>Tikutnimbhor Stn.</i>	... Khándesh	On the northern one of a small group of hills, about a mile W. of the village so called on the metalled road from Jámner to Ner: táluca Jámner. 1846.	20 49 12'16	75 44 33'77	[1018]	152
Khámkhed Hill Pagoda	... Nizam's Territory	On the peak of a high hill, about 1¼ miles W. of the village so called on the left bank of the Karpura river, the same distance S. of Chincholi village, and 3 miles W. of Pédgaon on the road from Bíd town. 1845.	19 5 8'8	75 44 42'0	...	842 843

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure <i>feet</i>	No. of Triangle
Khandra Hill ... <i>Lasoor H.</i>	Khândesh	Centre of a large hill in the Sâtpuda range, about $\frac{1}{2}$ a mile N.E. of the small village of Khandra on the left bank of the Aner river, and $5\frac{1}{2}$ miles N. of Ganpur also on the left bank of the same river: táluka Shirpur. 1847.	21 21 44	75 11 7	...	140
Kharvádi Hill Peak	Ahmednagar	About the centre of a large somewhat isolated hill, about $2\frac{3}{4}$ miles N.N.E. of the village so called, the same distance E. of Nandur Nimbdaitya, and $1\frac{1}{2}$ miles S.W. of Nagalvádi: táluka Shevgaon. 1845.	19 11 59	75 25 40	...	348
Kilanki Fort ... <i>Kalanki Fort</i>	Nizam's Territory	Centre of the hill fort, about $1\frac{1}{2}$ miles S.W. of the village of that name, 11 miles W. of Kanad town, and 5 miles S.E. of Deher old revenue station. 1846.	20 14 43	75 0 21	...	...
Kodi h.s. ...	Amjhara State	On a peak of a high range of hills lying E. of the Uri river and running E. and W., about $1\frac{1}{2}$ miles N.W. of the village of Kodi, the same distance S.W. of Dehelgháta, and 4 miles E.S.E. of Tándá town: Bheel Agency. 1847.	22 28 50·7	74 58 20·4	[1778]	...
Kolegaon Hill Tree	Nizam's Territory	About $2\frac{3}{4}$ miles W. of the village so called, the same distance S.W. of Kowdgaon, and S. of Pipla village on the road to Umred. 1845.	19 9 53	75 38 15	...	341
Koralla Hill ...	"	The northern brow of a hill on the edge of the ghát, near the small village of that name, about 10 miles W.S.W. of Baitalvádi, and 12 miles W.N.W. of Undangaon. 1846.	20 30 16	75 30 26	...	191
Kulah h.s. ... <i>Shendoorni Stn.</i>	Khândesh	On a hill dargah close to the village of that name on the road from Shendurni town to Páchora Railway Station, and about 5 miles W.S.W. of the former: táluka Jámner. 1846.	20 38 43·38	75 37 27·52	...	182 183
Kwála s. ...	Ujjain State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on a small tank bank close E. of the small village of Kwála on the road from Barnagar town to Páekunda, $2\frac{1}{2}$ miles W. of Gunáwad, and $3\frac{1}{2}$ miles N. by W. of Pipla: Western Malwa Agency. When re-fixed in 1883 the station was found to consist of a platform of mud and stones, $4\frac{1}{2}$ feet in height, having a mark-stone in its upper surface. 1882-83.	22 56 1·06	75 26 30·32	$\frac{1736}{4·5}$	89, 90
Lálgarh Hill Pagoda	Amjhara State	Large pagoda at the north end of the old fort on a flat-topped range of hills, about 2 miles S. of the edge of the Central India plateau, $1\frac{1}{2}$ miles S.E. of the village of Lálgarh, the same distance S. of Bhatikhodra on the road from Garakui to Mendha, and 5 miles S.W. of Amjhara town: Bheel Agency. 1847.	22 30 27·8	75 5 45·1	[1790]	121 122
Laling Hill Temple	Khândesh	White domed temple in the hill fort, about $\frac{1}{2}$ a mile S.W. by S. of the village so called on the high road from Málegaon to Dhulia, and $6\frac{1}{2}$ miles S.S.W. of the latter town: táluka Dhulia. 1846-47.	20 48 40·4	74 46 51·4	[936]	160 161

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

55—G.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Lasulia Hill Tree ... <i>Loosaria H. Trees</i>	Gwalior State	At N. edge of a plateau, about $\frac{1}{2}$ of a mile S.E. of the village so called, $1\frac{1}{2}$ miles N.E. of Gurla on the road from Unel, and 2 miles S. by E. of the town of Unel: taluka Unel. 1848.	23 18 11	75 36 9	feet...	...
Limngaon Hill Masjid <i>Nimngaon dome</i>	Nizam's Territory	Double domed masjid, about $\frac{1}{2}$ a mile W. of the village so called on the left bank of the Nanni river, and $1\frac{1}{2}$ miles E. by N. of Roisingi village on the road to Yellim. 1845.	19 7 27.4	75 33 7.0	...	...
Lohári, VI	Jaora State	<i>Vide page 5—G.</i>	23 34 57.88	75 8 16.03	$\frac{1736}{13.4}$	7
Lupára h.s.	Ujjain State	Towards the S. end of a flat-topped hill, about $\frac{1}{2}$ a mile N.W. of the village so called, $2\frac{1}{2}$ miles E. of Jahángirpur town, and 13 miles W. of the town of Ujjain: Western Malwa Agency. 1848.	23 12 38.25	75 36 7.75	...	88
Machla Hill Peak ... <i>Row Pk.</i>	Indore State	Of a small conical hill, about a mile W. of Machla village, 2 miles S.E. of the village of Ráo on the high road from Mhow to Indore, and the same distance E. by S. of the Railway Station of that name: Indore Political Agency. 1847-48.	22 37 12	75 52 53	[2279]	109 110
Machla Hill Temple	"	A small ruined temple on the centre of the large isolated hill, about $1\frac{1}{2}$ miles S. of Machla village, 3 miles N.W. by N. of Datoda village, and midway between the high roads from Indore to Mhow and from Indore to Khandwa: Indore Political Agency. 1847.	22 35 58.9	75 53 37.0	[2508]	111
Maholi Peak <i>Chermal</i>	Nizam's Territory	About a mile S.S.W. of the village of that name, 2 miles N.E. of Kátagati village, 3 miles E. of Palsi on the road from Aurangabad, and the same distance N. of Barud village on the high road from Aurangabad to Akola. 1845-46.	19 56 14	75 30 6	...	237
Málágaon No. 1 h.s.	"	On a ruined hill pagoda, about $\frac{1}{2}$ a mile S. of the village of that name, 3 miles S. of Dongaon town, and the same distance W. by N. of Wagrul on the road from Jálma to Deulgaon Rája. 1845-46.	19 59 8.00	75 58 6.79	...	244 245
Málágaon No. 2 h.s.	"	On a hill, about $\frac{1}{2}$ a mile S.E. of the village of that name, 3 miles S. of Dongaon town, and the same distance W. by N. of Wagrul on the road from Jálma to Deulgaon Rája. 1845.	19 59 11.99	75 58 31.94	...	246
Manvel s.	Khándesh	On the top of a large building in the village so called close S. of the Bonak stream, about $1\frac{1}{2}$ miles S.W. of the large village of Sákli, and $3\frac{1}{2}$ miles E.S.E. of that of Dambhorni: taluka Sávda. 1846.	21 9 12.67	75 38 57.24	...	148
Mathuri, XXXIII	Nizam's Territory	<i>Vide page 10—G.</i>	19 10 34.78	75 31 46.95	$\frac{2188}{*}$	43, 45
Mehidpur Bungalow	Indore State	Colonel Sandys' bungalow at the N.W. corner of the town on the bank of the Sipra river: Indore Political Agency. 1848.	23 29 31	75 41 29	...	...

* See description of this station.

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Mehidpur Flag-staff ...	Indore State	At the N.W. corner of the town, and near the E. bank of the Sipra river: Indore Political Agency. 1848.	23 29 48·6	75 41 38·6	... <i>feet</i>	76
Mehidpur Jail ...	"	W. of the town, and about $\frac{1}{4}$ a mile E. of the Sipra river: Indore Political Agency. 1848.	23 29 22	75 41 37	...	...
Mehidpur s. ...	"	On the Kotwál's Chabutra in the town: Indore Political Agency. 1848.	23 29 18·98	75 41 50·75	...	75
Mehidpur Tomb ...	"	Gudar Shah's tomb at the N.W. corner of a small flat-topped hill S.E. of the town: Indore Political Agency. 1848.	23 28 57·7	75 42 8·9	...	77
Mehon Hill Pagoda <i>Mayhoon H. Pag. s.</i>	Nizam's Territory	About a mile S.W. of the village of that name, and 4 miles E.S.E. of Soigaon on the road from Aurangabad to Bhál. 1846.	20 21 39	75 14 53	...	...
Mhow Church s. ...	Indore State	On the steeple of the church in the town, about a mile W. by N. of the Railway Station: Indore Political Agency. 1847.	22 33 35·90	75 48 7·57	[1924]	113 114
Mitmita Peak ...	Nizam's Territory	Southern brow of the table-land from which Daulatabad hill fort is detached, about $1\frac{1}{2}$ miles N. of the village of that name on the road from Aurangabad to Daulatabad, and 3 miles E.S.E. of the latter town. 1845.	19 55 18	75 18 22	...	286
Moda h.s. ...	"	On a hill, about 2 miles E.S.E. of the large village of that name, 3 miles N.W. by N. of Sillöd on the road from Aurangabad to Ajanta, and 15 miles S.S.W. of the latter. 1846.	20 20 4·16	75 40 6·39	...	200 201
Mograba, XIV ...	Dhár State	<i>Vide page 6—<i>a</i>.</i> ...	22 22 44·21	75 21 38·57	2464	18
Mohári Hill Peak <i>Lak pk.</i>	Khándesh	Highest point of a hill close to the village of that name, about $3\frac{1}{4}$ miles N. of the road from Shendurni to Páchora, and $6\frac{1}{4}$ miles E.N.E. of the latter: táluca Páchora. 1846.	20 44 29	75 30 44	...	159
Mohári h.s. <i>Lak Stn.</i>	"	Near the village of that name, $3\frac{1}{4}$ miles N. of the road from Shendurni to Páchora, and $6\frac{1}{4}$ miles E.N.E. of the latter: táluca Páchora. 1846.	20 43 57·24	75 31 15·28	...	157 158
Multánpura Hill Tree ...	Mandsaur State	At the S.E. end of a low flat hill adjoining the hamlet of Bhimlod, about $1\frac{1}{4}$ miles S.S.E. of Multánpura, the same distance W. of the Rajputana-Malwa Railway Line, $3\frac{1}{4}$ miles N.W. of Mandsaur, and $1\frac{1}{4}$ miles N.E. of Bogoli village at the junction of the cart roads from Mandsaur and Botalganj: Western Malwa Agency. 1847-48.	24 5 17	75 4 11	[1538]	...
Mundvádi Peak <i>Moondwari pt.</i>	Nizam's Territory	About 2 miles W. of the village of that name, 7 miles W. by N. of Kanad town, and 10 miles S. of Cháligson. 1846.	20 17 4	75 4 30	...	218

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Muramba h.s. ... <i>Mooramkeir Pk. Stn.</i>	Nizam's Territory	This was originally a station of the Hyderabad Topographical Survey, and is on a conical hill, about 1½ miles S.E. of the village of Muramba on the high road from Aurangabad to Akola, 2½ miles S. by W. of Ladsángvi town, and 2 miles W. of Daragaon. 1845.	19 56 15.18	75 38 47.73	... <i>feet</i>	238 239
Nágápur Hill Mosque	"	About a mile W. of the village of that name, close N. of Ambagaon, 6½ miles E. by S. of Soigaon on the road from Aurangabad to Bhál. 1846.	20 23 28	75 18 16	...	...
Nagda Hill	Dewás State	The point is towards the northern end of a flat-topped hill, about a mile S. of Nagda village, 4½ miles S. by W. of the Dewás town, and 2½ miles S.E. of Rasulpur village on the high road from Bombay to Agra: Indore Political Agency. 1847.	22 53 51	76 5 0	[2216]	105
Nagora s.	Dhár State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is about 1½ miles N.W. of the village of the same name, 1½ miles N.E. of Palwára, and 4½ miles in the same direction of Mákní village on the high road from Rutlam to Indore: Bheel Agency. The station consists of a mud platform 5 feet 9 inches above ground level with a mark-stone in its upper surface. 1882-83.	22 49 31.45	75 23 6.03	$\frac{1784}{5.8}$	94, 95
Naktimáta Peak ... <i>Bomaldeo</i>	Barwáni State	About 2½ miles S.S.W. of the village of that name, 2½ miles S. of Sustikhera, and 3½ miles S. by W. of Menimáta on the road from Rájpur to Pánaemal: pargana Páti. Deputy Bheel Agency. 1847.	21 46 31	74 54 32	[2274]	137
Nálchha Hill Dargah	Dhár State	On a small isolated hill locally known as Telantekri, about ¼ a mile S. of Nálchha town, and immediately E. of the road from Nálchha to Mándogarah: táluka Nálchha. Bheel Agency. 1847.	22 24 38.3	75 27 0.5	[2275]	124 125
Nandi Hill Peak ...	Nizam's Territory	Of an isolated hill, about a mile S. of the village of that name, close to the road from Maldí village to Rohillagad, and 2½ miles N.N.W. of Ambad town. 1845-46.	19 39 33	75 46 22	...	301 302
Nandkhed Hill Tomb	"	About ¼ a mile N.E. of the village so called, 5 miles N. of Ladsángvi on the high road from Aurangabad to Akola, and 7 miles W. of Dhabadi on the same road. 1845-46.	20 2 35.5	75 39 22.7	...	241 242
Nenod Hill Tree ... <i>Nenoond h. trees</i>	Indore State	Clump of trees on the northern and higher of two summits of a hill, about 200 yards W. of the road from Indore to Depápur, about 1½ miles N. of Nenod village, and 5 miles N.W. of Indore city: pargana Sámer. Indore Political Agency. 1847.	22 44 42	75 48 54	[1986]	101
Netjai Hill	Ahmednagar	A conspicuous hill close S.W. of a similar hill on which the following station is situated: táluka Shevgaon. 1845-46.	19 6 47	75 9 21	...	352
Netjai h.s.	"	On a ruined temple about 2½ miles N.W. of Mánekdándí village, 2½ miles E.N.E. of Sávargaon, and 6 miles S.E. by S. of the large village of Tisgaon: táluka Shevgaon. 1845-46.	19 6 54.09	75 9 26.25	...	314 315
Nigrun, III	Jaora State	<i>Vide page 4—G.</i>	23 45 59.27	75 27 25.29	$\frac{1587}{10}$	4

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Nimbgaon Pagoda ...	Ahmednagar	Large double domed pagoda in the village of that name, about 5 miles E. by S. of Shevgaon town on the road from Paithan, and a mile E.N.E. of Málagaon: táluks Shevgaon. 1845.	19 20 6'7	75 20 47'7	... <i>feet</i>	881
Nimbgaon Tower ...	"	In the village of that name on the road to Shaharaldi, and about 1½ miles N.E. of it: táluks Nevása. 1845.	19 27 59'6	75 13 33'0	...	827
Nirud Tower ... <i>Niloor</i>	Nizam's Territory	Northern tower near the village of that name, about 2 miles E. of Boigaon on the road from Aurangabad to Ajanta, and 11 miles W. by S. of Bhokardhan town. 1846.	20 13 19'5	75 39 11'1	...	208
Páchora h.s. ...	Khándesh	On a hill, about 3½ miles W. of the town of that name, and the same distance E. of Bhadgaon: táluks Páchora. 1846.	20 41 22'93	75 22 41'60	...	178 174
Padmála h.s. ... <i>Powar Thalla stn.</i>	"	On a temple on a flat-topped hill, about 5½ miles S.E. of the town of Krandol on the high road from Dhulia to Jalgaon, 3½ miles W. of the large village of Mhasávd on the left bank of the Girna river, and 7 miles N. by W. of Maheji Railway Station of the G.I.P. Line: táluks Erandol. 1846.	20 52 8'36	75 26 14'93	...	149
Paithan Hill Dargah ...	Nizam's Territory	On the right bank of the Godávári river, the town of Paithan being on the opposite bank. 1845.	19 27 58'4	75 26 1'6	...	...
Páldhi h.s. ...	Khándesh	On a hill, about 2 miles S. by E. of the large village of this name on the metalled road from Erandol to Jalgaon Railway Station of the G. I. P. Line, and 4 miles N. W. by N. of Shirsoli Railway Station: táluks Nasirabad. 1846.	20 58 57'86	75 30 50'49	[946]	147
Pallaskhed Hill Tree ...	Nizam's Territory	Largest and most conspicuous of several trees on a hill, about 3 miles E.S.E. of the village of that name at the trijunction of the roads from Jaffrabad, Lonegaon and Babulgaon, 8 miles S.S.W. of Jaffrabad, and 5 miles N. by E. of Dongaon. 1846.	20 6 18	75 59 36	...	248
Palsi h.s. ...	"	On a conical hill, about 1½ miles S. of the village of that name, 4 miles N.N.W. of Boigaon on the road from Aurangabad to Ajanta, and 5½ miles W. of Chintashaida on the same road. 1846.	20 16 11'71	75 35 45'16	...	197
Pan Chandra Hill Dipmal <i>Shendra H. Dip.</i>	"	White dipmal near the village of that name, about 3 miles N. of Jáina, the same distance E. of Rájvádi, and 3½ miles W. by S. of Davalgaon. 1845.	19 53 46'6	75 57 33'7	...	258
Pancher Hill Pagoda ...	Rutlam State	White pagoda on a low isolated hill, about a mile S.E. by S. of the small town of Pancher, and ¼ a mile E. of the cart road from Pancher to Rutlam: Western Malwa Agency. 1848.	23 26 16'6	75 3 52'1	...	81
Párgaon Tower ...	Nizam's Territory	In the village of this name near the head of the Kina stream, about 1½ miles N. by W. of Málagaon, and 1½ miles S.E. of Nagalvádi. 1845.	19 12 6'5	75 28 2'8	...	847

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

59—G.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Párlia h.s.	Jhallawar State	On a low hill, about a mile E. by S. of the village of that name on the cart road from Sítamau to Mehidpur, and the same distance S. by W. of Arniakhera village on the road from Sítamau to Gangrár: Harowtee Agency. 1847-48.	0 1 " 23 55 24' 41	0 1 " 75 35 36' 44	feet [1529]	53, 54
Parnaji Pagoda No. 1	Ujjain State	At the N. end of the village so called, and $\frac{1}{2}$ a mile S.E. by S. of Parnakheri village on the road from the town of Baráoda to that of Kháchraud: Western Malwa Agency. 1848.	23 30 25' 1	75 19 22' 7	...	72
Parnaji Pagoda No. 2	"	About 100 yards W. by S. of the pagoda described above. 1848.	23 30 24' 7	75 19 19' 9	...	73
Parnakheri h.s.	"	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on a small isolated hill, about $\frac{1}{2}$ miles E.N.E. of Parnakheri village, and 3 miles S.S.E. of the town of Baráoda: Western Malwa Agency. The station was found to consist of a platform of earth and stone about 5 feet high with a mark-stone in its upper surface. 1882-83.	23 31 6' 86	75 19 22' 79	$\frac{1678}{5}$	70, 71
Párner Tower	Nizam's Territory	S. of the village so called on the road from Jálna to Ambad, about 2 miles N. of the latter place, and $1\frac{1}{2}$ miles E. of Maldi village on the road from Ambad to Roshangaon. 1845.	19 38 49' 4	75 49 43' 5	...	304
Parola Idgah <i>Morala Idga</i>	"	Near the village so called on the road from Aurangabad to Paithan, about a mile N. of Bhir Kingaon on the same road, and 12 miles S. of Aurangabad. 1845.	19 42 46' 2	75 20 35' 1	...	277
Parundi Hill Pagoda	"	On a conspicuous hill, about 2 miles N. of the village of that name on the road from Chhota Haddul to Tupvádi, the former place being on the road from Ambad to Bhir Kingaon, and 3 miles S.E. of Kasaner large village on the latter road. 1845.	19 40 51' 9	75 32 20' 7	...	280 281
Pátan h.s.	Dewás State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on the highest point of a group of hills lying 5 miles W. of Hathikhera village on the right bank of the Sipra river, and $1\frac{1}{2}$ miles W.N.W. of the village of Pátan: Indore Political Agency. The station consists of a platform of loose stone and earth 6 $\frac{1}{2}$ feet high with a mark-stone in the centre. 1882-83.	23 42 51' 50	75 35 17' 65	$\frac{1606}{6' 5}$	60, 61
Páthardi Hill Tree	Ahmednagar	In the town of this name on the Chandni stream: táluca Shevgaon. 1845.	19 10 17	75 13 7	...	...
Pimpri s.	"	About $1\frac{1}{2}$ miles S. by E. of the village of that name, 1 mile E. of Palharvel village, and $3\frac{1}{2}$ miles W.S.W. of the large village of Dhaigaon: táluca Nevása. 1845.	19 29 29' 51	75 10 52' 01	...	320 321

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pingrála Hill Pagoda <i>Pinglara h. pag.</i>	Mandsaur State	On the southern of the two small isolated hills lying nearly N. and S. and named after the village which lies at the western base of the northern hill, about 2½ miles N.W. of Dhodhar Railway Station on the Rajputana-Malwa Line : Western Malwa Agency. 1848.	23 47 16·4	75 6 48·7	<i>feet</i> [1733]	64
Pipalgaon Hill Tree <i>Chitti Pimpalgaon</i>	Nizam's Territory	Clump of trees on a hill, about 1½ miles N.W. of the village so called, a little to the E. of the road from Aurangabad to Pátoda, and 10 miles S.E. of Aurangabad. 1845.	19 47 53	75 29 59	...	262 263
Pipla Hill Pagoda ...	"	About 2 miles S.S.W. of the village so called on the road to Umred, 1½ miles N.N.E. of Thonthla, and the same distance W. of Gundavádi village. 1845.	19 10 40·9	75 37 10·8	...	340
Pokri Tower ...	"	N. tower close to the village of the same name, about 1½ miles E. of Sirádhön village on the road from Ambad to Budnapur town, 3 miles S.S.E. of Karjil village on the same road, and 4 miles N. of Ambad. 1845.	19 40 44·7	75 48 47·5	...	297 298
Pophla, XXVIII ...	"	<i>Vide page 9—g.</i>	20 2 20·80	75 30 33·31	$\frac{2818}{1·3}$	37
Rail h.s. <i>Rail s.</i>	"	On a temple on an isolated, conical hill, about 2 miles W. by S. of the village of that name, and 4 miles in the same direction of Kanad town. 1846.	20 14 14·74	75 6 40·94	...	210 211
Rájur, XXIX ...	"	<i>Vide page 9—g.</i>	20 3 43·04	75 53 34·58	$\frac{2125}{20·3}$	38
Rájur Hill Temple ...	"	Most elaborately carved stone building about 50 feet in height, having two tiers of pillars above its base which is 13½ feet high, standing about 70 feet S.E. of the principal station of the same name described on page 9— <i>g.</i> 1845.	20 3 42·4	75 53 34·9	...	249
Rakshasbáhan s. ... <i>Rakshasbowan Idga</i>	"	On a pagoda close W. of the village of that name on the right bank of the Godávári river and on the road from Gevrái town, and 4½ miles N.N.W. of Dundri large village on the same road. The station is marked on the Pagoda 40 feet from its centre and 12 feet from its S.W. corner. 1845.	19 22 22·35	75 40 37·47	...	310
Rála Mandíl Hill Peak <i>Moondla H. Pt.</i>	Indore State	Of a large hill, about 1½ miles E. of the village of that name, 6 miles S.S.E. of the Indore city, and 2½ miles E. of the road from Indore to Khandwa : Indore Political Agency. 1847.	22 38 44	75 57 50	[2567]	108
Ránigaon h.s. ...	Ahmednagar	Towards the northern brow of a hill, about 1½ miles E. by S. of the village of that name, the same distance N.N.W. of Golegaon, and 5 miles S.W. by S. of the large village of Bodhegaon about a mile W. of the road from Pátoda to Paithan : taluka Shergaon. The station is denoted by a pillar of stone masonry, 4 feet in diameter, surrounded by a platform of loose stones. 1845.	19 15 10·38	75 26 39·04	...	329 330
Rasulpur h.s. ...	Nizam's Territory	On the table-land, about ¼ a mile W. of the village so called, 2½ miles N.E. of Daulatabad, and the same distance E. of Kahgaswari on the road from Aurangabad to Ellora. 1845-46.	19 58 8·03	75 17 14·74	...	231 232

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Raugaon Hill Pagoda ...	Nizam's Territory	About a mile N.N.E. of the village so called, 5 miles S. by E. of Jálma town, 2 miles N.W. of Vádagaon on the road from Jálma to Gunsángvi, and the same distance S.W. of Sarvádi on the high road from Jálma to Ranjani. 1845.	19 46 29·6	75 57 27·5	<i>feet</i> ...	291 292
Reuti h.s. ... <i>Baroli H. Mut</i>	Indore State	On a Buddhist temple situated on a hill, about $\frac{1}{2}$ mile S.E. of the village of the same name, 6 miles E. by N. of the large village of Hatod on the main road from Neemuch to Indore. The Holkar State Railway is $1\frac{1}{2}$ miles W. of the station: Indore Political Agency. 1847.	22 48 22·90	75 52 54·56	[2082]	100
Rohillagad Hill Peak ...	Nizam's Territory	About $\frac{1}{2}$ a mile S. of the village so called on the road from Ambad to Yekthun, 2 miles N.W. of Kingaon on the same road, and $4\frac{1}{2}$ miles S.E. of Yekthun. 1845.	19 41 49	75 42 24	...	282
Rōza h.s. ...	"	On the S.W. corner of the Masjid on a hill, about $\frac{1}{2}$ a mile N.W. of the town of that name, and $1\frac{1}{2}$ miles S.E. of Ellora on the road to Daulatabad. 1845-46.	20 0 40·20	75 13 29·35	...	233 234
Rui Pagoda ...	"	Close to the village so called on the road from Dadagaon to Chincholi, about $3\frac{1}{2}$ miles from Bachagaon on the same road, and 2 miles N. by W. of Bauldi village. 1845.	19 29 40·6	75 53 46·5	...	305
Sámner h.s. ... <i>Somenair Stn.</i>	Khándesh	On the south-eastern point of a small group of hills, about a mile N.E. of the village of this name, the same distance S.S.E. of Páthri, and $4\frac{1}{2}$ miles in the same direction of Mhasávad Railway Station of the G.I.P. Line: táluks Nasirabad. 1846.	20 48 38·31	75 30 56·25	[1012]	154
Sarola h.s. ...	Nizam's Territory	This was originally a station of the Hyderabad Topographical Survey, about $1\frac{1}{2}$ miles W.S.W. of Sarola village, 4 miles S. of Golagaon Buzurg on the road from Aurangabad to Ajanta, 6 miles S.S.W. of the latter, and 9 miles N.N.W. of Bhokardhan town. 1846.	20 23 7·84	75 45 51·82	...	198 199
Satára No. 1 h.s. ...	"	This was originally a station of the Hyderabad Topographical Survey, and is on the same table-land as the following station. 1845-46.	19 48 38·73	75 20 51·94	...	264
Satára No. 2 h.s. ...	"	On the N.W. brow of the plateau, about 2 miles S.S.W. of Satára town, and 1 mile E. by N. of Nalchelrawari village on the road from Aurangabad to Paithan. 1845.	19 49 5·11	75 20 39·80	...	265
Sátmála, XXVII ...	"	<i>Vide page 9—<i>a</i>.</i> ...	20 20 13·97	75 9 49·65	$\frac{3093}{5·0}$	35, 36
Sátpuda Hill Peak <i>Nimbracun</i>	Khándesh	A prominent point of the Sátpuda range, about 5 miles E. of the ruins of Gauligad: táluks Sávdá. 1846-47.	21 19 5	75 40 34	[3523]	145 146

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Savangi h.s. ... <i>Masasa h. stn.</i>	Khándesh	Close to the village of that name, about 2 miles N. of the road from Páchora to Shendurni, 7½ miles E. by N. of the former, and the same distance W.S.W. of Lohára town: táluca Páchora. 1846.	20 42 31·51	75 32 51·38	... <i>feet</i>	180 181
Sawargaon Pagoda <i>Sowlisar</i>	Nizam's Territory	Close S. of the village so called, about ¼ of a mile E. of Saulesvar village on the right bank of the Godávári river, and 3 miles N.N.E. of Dundri village on the road from Gevrái town. 1845.	19 21 15·1	75 44 36·0	...	311
Semlia s. ...	Dhár State	On a strip of waste-land, about 1½ miles S. of the village of that name, 2½ miles N.W. by N. of Kánwan town, 3½ miles E.N.E. of Kod, and ¼ a mile W. of the high road from Rutlam to Indore: Bheel Agency. The station consists of a platform of earth enclosing a circular, perforated pillar of masonry, 2½ feet in diameter and 5 feet in height, with an aperture on the S. side giving access to the mark-stone at the ground level. 1882-83.	22 54 9·61	75 16 48·15	1774 5	93
Sevátta Tower Tree <i>Sevta burj</i>	Nizam's Territory	Close to the village of that name over-looking the left bank of the Godávári river, about ¼ of a mile E. by N. of Deolána village, 3½ miles S.E. by E. of Káregaon, and 2½ miles N.E. by E. of Dhaigaon Principal Station. 1845.	19 32 8	75 17 6	...	326
Sherapur Hill Pagoda <i>Shorapur h. pag.</i>	"	About 2 miles S. of the village so called, the same distance N. by W. of Kalapuri, and 1 mile E. of Jom village on the road from Mánúr town. 1845.	19 4 1·7	75 35 40·8	...	344
Shergarh s. ...	Dhár State	On a high swell of ground near the western edge of an extensive plateau, about 1½ miles N.W. of the large village of that name, 3½ miles S.W. by W. of Kod town, and the same distance W.N.W. of Bidwál town: Bheel Agency. The station is denoted by a mark-stone embedded flush with the ground, having four other stones around it with marks thereon, the intersection of lines joining them coincides with the station mark. 1882-83.	22 51 33·36	75 10 47·69	1826	97
Shernapur h.s. ... <i>Chambartakri s.</i>	Nizam's Territory	On a hill masjid about a mile S. of the village of that name on the road from Aurangabad to Baizapur, 6 miles W. of Aurangabad, and 1 mile E. of Karadi village. 1845.	19 53 6·20	75 16 30·07	...	267 268
Shivga Tower <i>Seoga s. burj</i>	"	S. of the village of that name, about 2 miles S.E. of Piperi village on the road from Jálna to Ambad, and 2½ miles E.N.E. of Lalvádi village. 1845.	19 40 48·8	75 52 38·4	...	296
Sillöd s. <i>Sheloor</i>	"	About 200 yards S. of a Bar tree, 1½ miles E.N.E. of place so called on the road from Aurangabad to Ajanta, and 7½ miles W.N.W. of the town of Bhokardhan. 1846.	20 18 49·82	75 43 31·00	...	202 203
Sindkhed h.s. ... <i>Gewri pk.</i>	"	On a hill peak about 1½ miles N.W. of the village so called, 3½ miles S. of Gaundgaon, and 6 miles S.W. of the town of Gevrái. 1845.	19 13 14·93	75 42 42·95	...	308

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sindphal Hill Pagoda ...	Nizam's Territory	About 2 miles E. of the large village of that name, and 10 miles W.S.W. of Undangaon. 1846.	20 25 12.1	75 33 24.8	feet ...	204
Singáchori, XV ...	Mánpur State	<i>Vide</i> page 6—G. ... Note.—When visited by the Levelling Party in 1883-84, the station was found in good order.	22 24 39.91	75 42 55.62	$\frac{2891.10}{1.8}$	19
Sirádhön Tower ...	Nizam's Territory	S. of the village so called on the road from Ambad to Roshangaon, about 4 miles N.N.W. of the former, and 2 miles N. by W. of Maldi village at the junction of the roads from Yekthun and Roshangaon to Ambad. 1845.	19 40 20.2	75 47 25.5	...	299 300
Sirasgaon Tower ...	Ahmednagar	Close E. of the village of that name, about 3 miles W. of Khamgaon, 1½ miles E. by N. of Ghiregaon, 3½ miles N.E. by N. of Gevrái, and 3½ miles N. by W. of Pipri Saháli: táluks Nevása. 1845.	19 32 59.0	75 9 15.6	...	324
Sirjapur Peak <i>Bottaik pt.</i> ...	Nizam's Territory	About 1½ miles W. by N. of the village so called, 2 miles S.E. of Kolevádi village, and 6 miles W. by S. of Kanad town. 1846.	20 14 0	75 5 43	...	...
Sirsála, XXVI ...	"	<i>Vide</i> page 8—G. ...	20 29 56.24	75 33 36.25	$\frac{2790}{0.8}$	33
Sítamau, I ...	Sítamau State	<i>Vide</i> page 4—G. ...	24 2 6.65	75 22 24.33	$\frac{1616}{15.4}$	2,3
Sítamau Hill Tree ...	"	On a small hill about a mile S.W. of the town of Sítamau, ¼ of a mile N. of the Ladúnía lake, and 1 mile N. of Dámákheri village close W. of the above lake: Western Malwa Agency. 1847-48.	24 0 16	75 23 0	...	52
Sítamau Palace ...	"	In the southern quarter of the town, and on the road to the Ladúnía lake: Western Malwa Agency. 1847-48.	24 0 48	75 23 45	...	...
Somtána Hill Dipmal ...	Nizam's Territory	About a mile S.S.W. of the village so called, 3½ miles N.N.W. of Badnapur on the high road to Aurangabad, and 2 miles W.N.W. of Nikalak on the road from Badnapur to Kandari Buzurg. 1845.	19 54 18.0	75 44 2.5	...	255
Somtána s. ...	Ahmednagar	On a pagoda about 3 miles W.S.W. of the village of that name on the road from Mánur to Shevgaon, 4 miles S. by E. of Varúr, and the same distance S.E. by E. of the large village of Amrapur on the high road from Ahmednagar to Shevgaon: táluks Shevgaon. 1845.	19 15 35.35	75 16 24.54	...	832
Songarh Peak ...	Dhár State	The highest point of a conical hill at the W. end of the plateau on which is situated the old fortified town of Mándogarh. The road down the ghát to Amlikondal passes ¼ of a mile S.E. of the point: Bheel Agency. 1847.	22 19 45	75 24 55	[2304]	126 127

* To mark-stone in upper surface of circular pillar.

KHANPISURA MERIDIONAL SERIES.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Songir h.s. ... <i>Songeer stn.</i>	Khándesh	On a detached hill immediately S. of the town of this name on the high road from Bombay to Agra: taluka Dhulia. 1846.	21 4 32'54"	74 49 30'53"	feet [1009]	166
Talváda Hill Pagoda <i>Tharwar H. Pag.</i>	Nizam's Territory	On an isolated, conspicuous hill, about a mile S.W. of the large village so called, 1½ miles N. of Rokada village, and 7¼ miles N.E. of the town of Gevrái. 1845.	19 18 16'5"	75 53 35'2"	...	307
Tandoli h.s. ...	Ahmednagar	On a hill, about 1¼ miles E. of the village so called, 2¼ miles N. of Kanosi, and 4¼ miles E. by N. of the large village of Koradgaon on the left bank of the Nani stream: taluka Shevgaon. The station is denoted by a mark-stone surrounded by a platform. 1845.	19 14 51'61"	75 24 0'34"	[2143]	318 319
Tarauli h.s. ...	Jhallawar State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on one of a group of flat-topped hills lying midway between the Káli Sindh and the Sipra rivers, about 1¼ miles W. by N. of the village of Tarauli, and 1¼ miles N. by E. of Kitia village on the cart road from Sítamau to Mehidpur: Harowtee Agency. The station was found to consist of a very solid stone platform, 3¼ feet high and 13 feet in diameter, with a mark-stone in its centre: three other stones were embedded around the mark-stone for the theodolite stand to rest on. 1882-83.	23 54 16'48"	75 37 37'48"	$\frac{1546}{3'3}$	57, 58
Tarkha h.s. ...	Nizam's Territory	At the northern extremity of the flat portion of a high flat-topped hill, about 1¼ miles N.N.E. of Mahinda village from which there is a good road to the station, 2 miles S.E. by E. of Mohori, and 5 miles S.S.E. of Páthardi town. The station is denoted by a circle and dot engraved on the rock <i>in situ</i> . 1883-84.	19 6 19'93"	75 15 28'18"	2516	350 351
Tarla h.s. ... <i>Kutban Stn.</i>	Dhár State	On an isolated, conical hill, about 1¼ miles E.S.E. of the village so called on the high road from Dhár to Amjhera, and 2½ miles S.W. by W. of the town of Dhár: Bheel Agency. 1847.	22 34 31'1"	75 17 55'2"	[2022]	...
Tasdin Hill Temple No. 1	Holkar's Territory	Large temple on a very high flat-topped hill so called in the Sápuda hills. The road from Chopá to Dhúlkot passes 1 mile E. of the hill: pargana Silu. 1847.	21 31 18'0"	75 25 59'5"	[3390]	141 142
Tasdin Hill Temple No. 2	"	Small temple about 70 feet S.W. by S. of the preceding temple. 1847.	21 31 17'4"	75 25 59'2"	...	143 144
Thíkri, XVII	Dhár State	<i>Vide page 7—G.</i> ... Note.—When visited by the Levelling Party in 1883-84, the station was found in good order.	22 1 2'77"	75 27 17'16"	854'65	28
Thíkri Hill Pagoda	"	A temple on a small isolated hill, about ¼ mile N. of the Bombay-Agra road, ¼ a mile N.W. by N. of the village of Thíkri, 2 miles S.E. of Gordhanpur village, and 2½ miles N.E. of Sinkál Chauki on the high road: Bheel Agency. 1847.	22 4 15'3"	75 26 14'3"	[708]	...

* To top of rectangular protecting pillar 3'5 feet high, built over circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Titteroni h.s. ... <i>Tittarwani stn.</i>	Nizam's Territory	On a hill, about 1½ miles N.E. of the village so called, 1½ miles S. of Tarradgaon, and 4 miles E.N.E. of Mathpuri village on the road from Ambáh to Borgaon. 1845.	19 11 16	75 34 22	<i>feet</i>...	...
Toka h.s. ...	Ahmednagar	On a hill pagoda in ruins overlooking the right bank of the Godávári river, about ¼ of a mile E. of the road to Aurangabad, and 1 mile in the same direction of Toka village at the confluence of the Pravara and the Godávári: táluca Nevása. 1845.	19 37 20.82	75 4 18.65	...	266
Tulvádi h.s. ... <i>Karjai Stn.</i>	Khándesh	On a hill, about 2½ miles S. by W. of the village of that name, and 4½ miles N.N.E. of Cháligæon. 1846.	20 30 12	75 5 8	...	...
Undangaon h.s. ...	Nizam's Territory	On the highest point of a hill, about 2 miles W.S.W. of the large village so called, and 8 miles S. of Baitalvádi town. 1846.	20 27 2.05	75 41 27.48	...	192
Undangaon Hill Tree	"	About 120 yards W.N.W. of the preceding station. 1846.	20 27 3	75 41 24	...	205 206
Unel Hill Tree ...	Gwalior State	On a small isolated hill, about 1 mile S. of the town of Unel (Unhal), close E. of the cart road from thence to Garla, and ¼ a mile N. by W. of the small village of Lasulia. 1848.	23 19 19	75 35 49	...	...
Upli Pagoda ...	Nizam's Territory	Near the village of that name on the bank of the Ajna, a tributary of the Púrna river, and about 7½ miles N.W. of Chintshaida village on the road from Aurangabad to Ajanta. 1846.	20 19 23.5	75 33 37.8	...	209
Vádagaon Hill Pagoda <i>Poonegaon H. Pag.</i>	"	Near the village so called on the road from Jálna to Gunsángvi, and about 2 miles S.W. of Bargaon on the high road from Jálna to Ranjani. 1845.	19 45 36.6	75 58 28.0	...	293 294
Vaduli House ... <i>Wadola house</i>	Ahmednagar	In the village of that name close S. of the high road from Ahmednagar to Shevgaon, and about 3 miles W.S.W. of the latter: táluca Shevgaon. 1845.	19 20 31	75 13 37	...	...
Vaigaon Hill Tree <i>Nandra H. Tree</i>	Nizam's Territory	On the table-land S.E. of the village of that name, about 2 miles N.E. of Donváda village, and 8 miles N.W. of Ladsángvi on the high road from Aurangabad to Akola. 1845-46.	20 1 26	75 33 7	...	...
Valvádi, XXIII ...	Khándesh	<i>Vide page 8—g.</i> ...	20 44 27.73	75 13 34.30	$\frac{1127.57}{2.0}$	30
Varad h.s. ... <i>Warad</i>	Nizam's Territory	On a peaked hill of the Ajanta range of gháts, about 1½ miles N.W. of village so called, 1 mile W. by N. of Sutundeh, and 13½ miles S. by W. of Páchora town. 1846.	20 29 5.14	75 23 15.66	...	194
Varjári Hill <i>Wurjarri pt.</i>	Khándesh	About ¼ of a mile W. of the village so called, a mile E.N.E. of Nimjári, and 5½ miles N.N.E. of Shirpur town which is 1½ miles off the high road from Bombay to Agra: táluca Shirpur. 1847.	21 25 43	74 56 51	[1151]	139

* To top of rectangular protecting pillar 2.8 feet high, built over circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure <i>feet</i>	No. of Triangle
Varod h.s. ... <i>Warow Stn.</i>	Khándesh	On a small hill near the site of the village of that name, and about 4½ miles N.W. by W. of the town of Bhadgaon: taluka Bhadgaon. 1846.	0 1 " 20 43 0·29	0 1 " 75 15 50·81	...	175 176
Varundi h.s. ... <i>Warandi pk. s.</i>	Nizam's Territory	On a hill about a mile N.E. of the village of that name, 1½ miles S. by E. of Gadadon village on the road from Pipri to Bhir Kingaon, and the same distance N.W. of Kasaner on the road from Bhir Kingaon. 1845.	19 43 17·97	75 28 26·34	...	274
Vási Hill Peak ... <i>Wassai</i>	"	Close E.S.E. of the village of that name, about 3 miles N.N.E. of the large village of Undangaoon, 5 miles W.S.W. of Ajanta town, and the same distance S.E. by S. of Baitalvádi. 1845-46.	20 29 49	75 43 38	...	193
Vatli h.s. ... <i>Dowla Hanmant Stn.</i>	Amjhera State	On a high hill of that name on the edge of the Vindhya range, about ¼ a mile S. of Dhamakheri village, and 1½ miles N.W. of Sironj village: Bheel Agency. 1847.	22 28 58·76	75 4 9·17	[1800]	119 120
Wadona Peak ... <i>Warud pt.</i>	Nizam's Territory	About a mile W. of the village so called close E. of the road from Temborni to Deulgaon Rája, 4 miles N.W. of the latter, and 5 miles S. by E. of the former. 1845.	20 3 46	76 2 46	...	247
Walauj Pagoda ... <i>Naigaon Pag.</i>	"	Close to the village of that name on the right bank of the Duddhna river and on the road from Aurangabad to Ahmednagar, and about 10 miles S.W. of the former. 1845.	19 47 58·3	75 16 4·0	...	275
Waragaon Hill Tomb ...	"	White tomb on a hill E. of the village of that name, and about 3 miles W. by S. of Pulmari town on the road from Aurangabad to Ajanta. 1846.	20 4 39·2	75 24 39·9	...	222
Yeklerwar Hill Dipmal ... <i>Yeklara dip.</i>	"	About a mile N.E. of the village of that name, 3½ miles S. by E. of Karmaud village on the high road from Aurangabad to Jálna, and 2 miles N.W. of Karvel village on the road from Hadgaon Buzurg to Badnapur. 1845.	19 49 11·8	75 36 1·6	...	261
Yelli Hill Tree ... <i>Pimpalgaon Tree</i>	Ahmednagar	Conspicuous tree towards the N. end of a flat-topped hill, about 2½ miles S.E. by E. of the village so called, 2½ miles W. of Kharvádi vilge, and 1½ miles N.N.W. of Timburni: taluka Shevgaon. 1845.	19 9 31	75 22 41	...	...
Yerúl, XXX ...	Nizam's Territory	<i>Fide page 9—<i>a</i>.</i>	19 58 37·15	75 11 34·13	$\frac{2959}{1·0}$	40
Yerúl Hill Tree ...	"	Conspicuous Bar tree 140 yards E. of the preceding station of the same name. 1845.	19 58 36	75 11 39	...	235

February, 1893.

J. ECCLES,
In charge of Computing Office.

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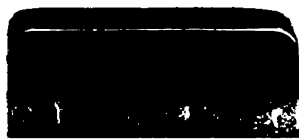
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