

KARNAPHULI RIVER TIDE TABLES 2019



Department of Hydrography
CHITTAGONG PORT AUTHORITY
www.cpa.gov.bd



CHITTAGONG PORT AUTHORITY

Country moves with us

Bandar Bhaban
Chittagong-4100
Bangladesh

+880-31-2522200-29 T
+880-31-2510889 F
info@cpa.gov.bd E

KARNAPHULI RIVER

Handbook of Tide Tables

2019



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Tide Tables 2019

KARNAPHULI RIVER

Hand Book of Tide Tables at
Kalurghat, Sadarghat, Khal No-10 & Khal No-18

Prediction datum is the CD (ISLWL)

Time zone is BST (+6 GMT)

- Full Moon
- New Moon

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CHITTAGONG PORT AUTHORITY

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About Chittagong Port Authority

The Chittagong Port is the principal seaport of Bangladesh handling about 92% of import-export trade of the country. It provides a major gateway for the country's trade with the outside world. As such its importance in the national economy is paramount. The Chittagong Port Authority (CPA) is a basic services provider. Its Objectives focuses mainly on providing necessary services and facilities to the port users efficiently & effectively at competitive price.



Historical Background

The history of CPA can be traced to the 4th century BC. During the 9th-15th century AD, Chittagong was known as “SHETGANG” to early European mariners. In the 16th century, Portuguese sailors took great interest in the locality around Chittagong which was then popularly known as ‘Porte Grande’. The port was established at its present location in 1887. By 1910; four jetties were constructed to handle 0.5 million tons of cargo annually. Since then the port has grown gradually to its present shape.

Location

Chittagong port is situated in the estuary of the river Karnaphuli; its main berths being around eight nautical inshore from the port’s outer anchorage.

Administration

The Chittagong Port Authority was established through promulgation of the Chittagong Port Ordinance 1976. The CPA now comprises of the Chairman and four other Members. The Chairman is appointed by the Government and also is the Chief Executive of the port. The Port operates under the administrative control of the Ministry of Shipping of the Government of the People’s Republic of Bangladesh.

Commitments

Our commitments are to help sustain the economy of Bangladesh and support the quality of life for communities along the river by:

- Keeping the river safe for all users-from the largest ships to the smallest rowing boats.
- Realizing the river’s sustainable development potential-principally making sure freight movements can switch from road to water.
- Protecting the river’s environment-making sure that developments in the river are properly managed.

Port Limit

- Uper Limit- The upper port limit extended up to 2.5 km of Halda & Karnaphuli River and
- Lower Limit- The lower limit extended up to 13 km radius drawn from Patenga Beacon to seaward.

Karnaphuli River

Karnaphuli, the largest and most important river in Chittagong and the Chittagong Hill Tracts. It is a 667 meters wide river in the south-eastern part of Bangladesh. Originating from the Lushai hills in Mizoram, India, it flows 270 km southwest through Chittagong Hill Tracts and Chittagong into the Bay of Bengal.

There are three bars in the river, one at the mouth of Karnaphuli River called the outer bar, second the inner bar at 2.26 km from the outer bar and third is the Gupta bar at 8.58 km from the outer bar. The least depth at outer bar is 5.3 meters (approx) from the chart datum (CD) i.e. from Indian Spring Low Water Level (ISLWL). The Least depth at the inner and Gupta bar are 7.2 meters, 6.9 meters respectively from Indian Spring Low Water Level (ISLWL).

Anchorage Area

The anchorage is divided into three areas 'A' 'B' & 'C'.

- Anchorage "A" is formed by extending 2 (Two) lines up to port limit, one (1st) having bearing $337^{\circ}45'$ and the other (2nd) $310^{\circ}30'$ from the point having lat $22^{\circ}12'30''$ N and long $91^{\circ}47'00''$ E.
- Anchorage "B" is formed in between 4th and 5th line having bearing 234° extended up to port limit from the previous point.
- Anchorage "C" is between 4th and 5th line having bearing $23^{\circ}40'$ & 157° respectively, extended up to Port limit from a point of lat $22^{\circ}12'00''$ N and long $91^{\circ}47'12''$ E.

The space between 3rd and 4th lines is prohibited anchorage.

- “A” Anchorage is for vessels over 9.2 m draught.
- “B” Anchorage is for vessels entering the port within 24 hours.
- “C” Anchorage is for vessels lightering and other vessels not scheduled to enter the port within 24 hours.

The holding ground at the anchorage is soft mud which is considered poor holding ground. Due to very strong current of up to 6 knots dragging of anchor by vessels is common at Chittagong outer anchorage. There is no limit imposed by Chittagong Port Authority in terms of number of vessels that can anchor within the limited area or the maximum draft of vessels that may be allowed. To improve the safety at Chittagong outer anchorage the port authority may need to consider imposing certain controls relating to maximum draft and number of vessels in the anchorage.

Important Telephone Number

- | | |
|-----------------------------|-----------------|
| • Chairman | +88 031 2510870 |
| • Member (Admin & Planning) | +88 031 2526004 |
| • Member (Finance) | +88 031 2510871 |
| • Member (Engineering) | +88 031 2510872 |
| • Member (Harbour & Marine) | +88 031 2510873 |
| • Deputy Conservator | +88 031 2510842 |
| • Director (Security) | +88 031 2510884 |
| • Chief Hydrographer | +88 031 2510840 |
| • Secretary | +88 031 2510869 |
| • Chief Medical Officer | +88 031 2510876 |

CHITTAGONG PORT AUTHORITY

HYDROGRAPHIC SERVICE

With a statutory responsibility to survey within port limit, CPA has the most sophisticated in-house survey capability. Take advantage of a service that offers:

- **Value-** low mobilization or weather downtime costs.
- **Experience-** time served surveyors and local crews.
- **Quality-** purpose built craft and latest equipment, including side scan sonar.
- **Response-** most surveys completed within a week of receiving instruction.



Digital Hydrographic Survey

Services include Bathymetric charting, dredging & dredging monitoring, volume computations, sampling and analysis, wreck detection & measurement of sound velocity including current observation in the port limit area.

Hydrographic Department

Chititagong Port Authority has its own Hydrographic Department comprising 07 in number survey vessels, one trailing suction hopper dredger (Capacity-2500 cum) and 298 manpower's. The department has in-house specialist in hydrographic, oceanographic, cartographic and GIS.

Department is headed by Chief Hydrographer including 2 Senior Hydrographer and 3 other Hydrographers in different disciplines. With the modern equipments the department maintains IHO (SP-44) standard survey. The main responsibilities of this department are:

- To carryout bathymetric survey and production of bathymetric data sheet for onward distribution to the pilots for safe navigation in the channel. Apprise the management about the up-to-date information to its entire port limits.

- To identify wrecks/underwater obstructions in the channel and apprise the same to the concerns.
- To identify sound velocity and current information within port limit area.
- Carryout capital and maintenance dredging in the port limit area to maintain the safe depth for navigation. Provide support to all stakeholders (various companies) at both bank of the river.
- Maintain, collect, preserve & analysis of tidal data from five tide gauges. Prediction and publish pocket Tide Tables for the users. Assist national agencies/organizations with relevant data for analysis or research purpose with the approval of competent Authority.

Information about navigation and hydrographic matters can be found of the CPA website at www.cpa.gov.bd

Trailing suction hopper dredger-MD KHANAK

CPA has its own dredger to maintain the channel depth as per the requirement. MD KHANAK is one of the largest dredger in Bangladesh. Dredger is also deployed to other places for dredging activities as per the requirement of the country. Dredger is controlled by hydrographic department.



General Properties

IMO number: 8900206

Call Sign: S2TB

Vessel type: TSHD

Flag: BD

Owner: CPA

Manager: CPA

Built in: 1991

Physical Properties

Length (OA): 83.5 m

Length (BP): 80 m

Width: 16.5 m

Depth: 6.75 M

Draft (loaded): 5.5 M

Numbr of engines: 2

Engine specs: Wartsila-8L26L-

4Str-8cyl-26.00x32.00-850 rpm

Speed (loaded): 12 knts

Total power: 3220 kW

Hopper volume: 2500 m³

Dredging depth: 15 m

Sucition pipe diameter: 0.55 m

Number of dredging pipes: 2

Shah Amanat Bridge

Shah Amanat Bridge It is the first cable-stayed type bridge over the Karnaphuli river in the country. The length of the four-lane bridge is 950 m and its breadth is 24.40 m. The clearance of which is 16.10 m from high water level. It was constructed during the year 2006-2010 to enhance the connectivity of commercial capital Chittagong to south Chittagong as well as Cox'sbazar, the tourism city of Bangladesh.



Kalurghat Bridge

An old bridge, once the only link between the southern region of Chittagong division on the bank of the river Karnaphuli with the rest of the country. This 239 m long bridge was installed as a simple rail bridge of steel structure between Janalihut and Gomdandi railway stations in 1930. The bridge was commissioned for operation of trains in Chittagong-Dohazari section in the year 1931. Thirty-one years after its inauguration, considering the suffering of the people it was modified with decking and carpeting and turned into a rail and road-bridge in 1962. The clearance of which is 5.19 m from high water level.



IMPORTANT NOTES

The chart datum of Karnaphuli River at Sadarghat is 6.56 m below the Bench Mark 'A' in front of old CPA Building at Sadarghat.

The prediction has been Predicted from the Geo Tide 3.0.18 software. This book is meant for departmental use & not for sale.

The total predicted depth in the channel is the sum of the charted depth & the height of tide.

The predictions in this booklet do not include exceptional changes due to meteorological disturbances.

All communications relating to this publication should be made to the

Chief Hydrographer

Hydrography Department

Chittagong Port Authority
Annex Building (3rd Floor)

Bandar Bhaban

Chittagong, Bangladesh

Phone : +88 (031) 2510840

E-mail : ch@cpa.gov.bd

PHASES OF THE MOON 2019
(DAY: HOUR: MINUTE)

MONTH	NEW MOON	FULL MOON
January	06:07:28	21:11:16
February	05:03:04	19:21:53
March	06:22:04	21:07:43
April	05:14:50	19:17:12
May	05:04:45	19:03:11
June	03:16:02	17:14:31
July	03:01:16	17:03:38
August	01:09:12	15:18:29
	30:16:37	
September	29:00:26	14:10:33
October	28:09:38	14:03:08
November	26:21:06	12:19:34
December	26:11:13	12:11:12

LIST OF CPA TIDE GAUGE STATION

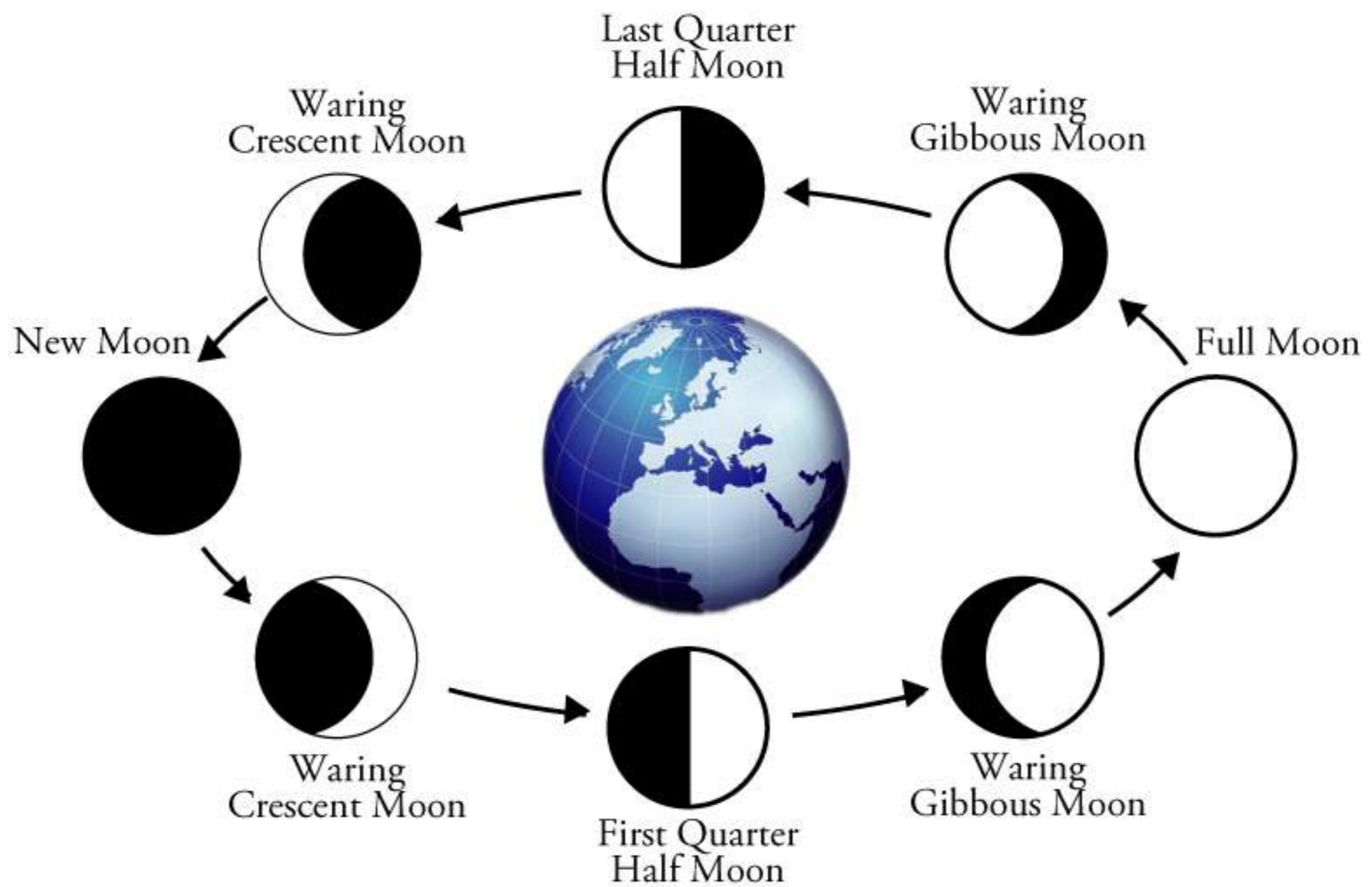
SL	TIDE GAUGE STATION (AUTO)	POSITION(AP.)
01	KHAL NO- 18	Lat:22°13'33"N Long:91°48'18"E
02	KHAL NO- 10	Lat:22°16'1.5"N Long:91°49'27"E
03	KALURGHAT	Lat:22°23'51"N Long:91°53'17"E
04	KAPTAI	Lat:22°29'37.5"N Long:92°11'34.5"E
05	SADARGHAT	Lat:22°19'27"N Long:91°50'0.5"E
06	DOCK OFFICE	Lat:22°18'06.8"N Long:91°47'47.7"E

PHASES OF THE MOON 2019

(DAY: HOUR: MINUTE)

MONTH	FIRST QTR.	LAST QTR.
JANUARY	14:12:45	28:03:10
FEBRUARY	13:04:26	26:17:28
MARCH	14:16:27	28:10:10
APRIL	13:01:06	27:04:18
MAY	12:07:12	26:22:33
JUNE	10:11:59	25:15:46
JULY	09:16:55	25:07:18
AUGUST	07:23:31	23:20:56
SEPTEMBER	06:09:10	22:08:41
OCTOBER	05:22:47	21:18:39
NOVEMBER	04:16:23	20:03:11
DECEMBER	04:12:58	19:10:57

PHASES OF THE MOON



HIGHEST & LOWEST TIDE OF 2018
IN SELECTED TIDE STATION

SADARGHAT STATION (MANUAL)

HIGHEST			LOWEST		
Ht(m).	Time	Date	Ht(m).	Time	Date
5.35	15:20	14/08/18	-0.12	08:20	02/03/18

KHAL NO-10 AUTO TIDE STATION

HIGHEST			LOWEST		
Ht(m).	Time	Date	Ht(m).	Time	Date
5.75	14:40	14/08/18	-0.10	08:35	19/03/18
Online Check: http://stormcentral.waterlog.com/public/cpahydrography1					

KHAL NO-18 AUTO TIDE STATION

HIGHEST			LOWEST		
Ht(m).	Time	Date	Ht(m).	Time	Date
6.20	14:30	14/08/18	-0.07	0750	11/09/18

KALURGHAT AUTO TIDE STATION

HIGHEST			LOWEST		
Ht(m).	Time	Date	Ht(m).	Time	Date
5.03	14:25	15/06/18	-0.53	09:40	19/03/18
Online Check: http://stormcentral.waterlog.com/public/cpahydrography2					

MAX CURRENT VELOCITY OPPOSITE

KHAL NO-10 IS AS UNDER

Spring tides (S.W Monsoon) 4.5 to 5.5 kn

Neap tides (S.W Monsoon) 2.5 to 3.5 kn

Spring tides (Winter Months) upto 3 kn

Neap tides (Winter Months) upto 2 kn

Freshet Ebbs upto 8 knots

TIDAL RANGES

The tides are semi diurnal with prominent diurnal effect

At Patenga Khal no-18	1.5m - 5.5m
At Khal no-10	1.5m - 4.8m
At Sadarghat	1.2m - 4.2m
At Kalurghat	1.0m - 4.1m

01 | JANUARY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 TU	0450	0.14	0406	0.36	0349	0.72	0322	0.93	1 TU
	1030	2.59	1007	2.97	0941	3.22	0927	3.51	
	1705	-0.05	1627	0.29	1603	0.53	1543	0.80	
	2311	3.08	2242	3.42	2219	3.72	2203	3.97	
2 WE	0602	0.02	0519	0.29	0457	0.57	0434	0.80	2 WE
	1136	2.59	1114	2.99	1050	3.24	1035	3.55	
	1804	-0.05	1728	0.25	1702	0.49	1644	0.73	
			2334	3.48	2310	3.81	2255	4.08	
3 TH	0002	3.15	0616	0.21	0548	0.44	0528	0.66	3 TH
	0657	-0.07	1206	3.06	1143	3.31	1123	3.64	
	1228	2.65	1818	0.19	1749	0.42	1732	0.64	
	1853	-0.07			2351	3.89	2335	4.19	
4 FR	0044	3.22	0017	3.54	0632	0.37	0611	0.56	4 FR
	0743	-0.11	0702	0.16	1222	3.41	1200	3.73	
	1309	2.74	1246	3.14	1829	0.35	1813	0.55	
	1932	-0.10	1900	0.15					
5 SA	0119	3.28	0054	3.60	0026	3.97	0010	4.27	5 SA
	0822	-0.10	0741	0.15	0710	0.33	0649	0.52	
	1344	2.82	1320	3.21	1255	3.49	1233	3.81	
	2006	-0.12	1937	0.12	1904	0.30	1850	0.50	
6 SU	0151	3.32	0129	3.64	0059	4.01	0043	4.31	6 SU
	0855	-0.06	0815	0.16	0744	0.34	0722	0.51	
	1415	2.87	1352	3.25	1326	3.53	1305	3.85	
	2036	-0.13	2010	0.12	1935	0.28	1922	0.50	
7 MO	0221	3.33	0202	3.65	0131	4.01	0114	4.30	7 MO
	0923	-0.02	0844	0.17	0814	0.35	0753	0.52	
	1444	2.90	1422	3.25	1356	3.53	1335	3.85	
	2107	-0.12	2040	0.13	2005	0.28	1952	0.53	
8 TU	0252	3.32	0234	3.64	0201	3.98	0144	4.26	8 TU
	0950	-0.01	0913	0.16	0842	0.34	0822	0.53	
	1514	2.91	1452	3.24	1424	3.52	1404	3.83	
	2140	-0.10	2111	0.13	2036	0.29	2022	0.58	

01 | JANUARY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 WE	0324	3.30	0307	3.61	0231	3.94	0215	4.21	9 WE
	1019	-0.04	0942	0.13	0911	0.31	0851	0.52	
	1547	2.90	1523	3.22	1454	3.50	1436	3.80	
	2216	-0.07	2145	0.14	2110	0.33	2054	0.62	
10 TH	0400	3.23	0341	3.57	0304	3.88	0247	4.15	10 TH
	1051	-0.09	1014	0.10	0943	0.29	0923	0.52	
	1624	2.85	1557	3.20	1526	3.46	1510	3.75	
	2252	-0.04	2222	0.16	2146	0.40	2129	0.67	
11 FR	0436	3.12	0415	3.48	0339	3.78	0322	4.06	11 FR
	1125	-0.13	1047	0.10	1016	0.29	0956	0.55	
	1701	2.78	1633	3.15	1603	3.41	1547	3.70	
	2329	0.02	2259	0.21	2222	0.50	2205	0.75	
12 SA	0514	2.97	0451	3.36	0416	3.65	0359	3.93	12 SA
	1158	-0.15	1121	0.13	1050	0.31	1031	0.61	
	1740	2.73	1712	3.11	1643	3.36	1628	3.64	
			2339	0.27	2301	0.62	2243	0.85	
13 SU	0008	0.07	0530	3.21	0457	3.50	0440	3.78	13 SU
	0554	2.82	1158	0.16	1127	0.36	1109	0.70	
	1235	-0.17	1756	3.08	1729	3.32	1714	3.59	
	1823	2.70			2346	0.75	2328	0.98	
14 MO	0052	0.14	0023	0.34	0544	3.32	0528	3.59	14 MO
	0640	2.67	0615	3.05	1212	0.45	1155	0.82	
	1319	-0.15	1242	0.23	1832	3.29	1816	3.55	
	1914	2.69	1852	3.06					
15 TU	0148	0.24	0117	0.44	0046	0.88	0026	1.13	15 TU
	0735	2.50	0713	2.88	0650	3.13	0637	3.39	
	1416	-0.08	1339	0.33	1312	0.57	1255	0.95	
	2032	2.69	2010	3.08	1959	3.33	1937	3.58	
16 WE	0317	0.29	0236	0.50	0225	0.91	0157	1.20	16 WE
	0854	2.38	0833	2.76	0817	3.02	0801	3.30	
	1535	-0.03	1500	0.37	1438	0.62	1420	0.99	
	2203	2.83	2130	3.19	2110	3.48	2049	3.70	

01 | JANUARY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 TH	0444	0.16	0401	0.43	0339	0.77	0318	1.08	17 TH
	1022	2.41	0956	2.80	0931	3.04	0914	3.33	
	1654	-0.09	1619	0.29	1550	0.55	1533	0.89	
	2310	3.03	2239	3.37	2214	3.68	2156	3.90	
18 FR	0553	0.01	0511	0.30	0446	0.61	0424	0.89	18 FR
	1132	2.55	1108	2.96	1042	3.18	1023	3.50	
	1758	-0.18	1723	0.17	1652	0.42	1634	0.74	
			2336	3.56	2309	3.88	2251	4.13	
19 SA	0006	3.23	0615	0.18	0550	0.44	0524	0.69	19 SA
	0657	-0.10	1204	3.15	1138	3.38	1116	3.71	
	1230	2.73	1821	0.06	1750	0.28	1731	0.57	
	1855	-0.24			2355	4.07	2337	4.34	
20 SU	0053	3.38	0024	3.71	0644	0.29	0618	0.51	20 SU
	0753	-0.15	0712	0.10	1223	3.57	1201	3.92	
	1317	2.90	1250	3.31	1843	0.15	1824	0.41	
	1948	-0.27	1914	0.00					
21 MO	0134	3.49	0107	3.81	0036	4.20	0019	4.50	21 MO
	0843	-0.17	0801	0.04	0732	0.17	0706	0.36	
	1400	3.04	1331	3.42	1304	3.72	1244	4.09	
	2038	-0.25	2005	-0.04	1933	0.06	1914	0.30	
22 TU	0214	3.55	0148	3.88	0117	4.27	0101	4.61	22 TU
	0931	-0.16	0848	0.00	0818	0.09	0752	0.25	
	1442	3.13	1413	3.49	1346	3.80	1327	4.18	
	2128	-0.21	2054	-0.04	2021	0.04	2001	0.24	
23 WE	0257	3.56	0232	3.90	0200	4.27	0144	4.63	23 WE
	1016	-0.16	0932	-0.02	0902	0.04	0837	0.18	
	1527	3.17	1457	3.50	1429	3.81	1412	4.20	
	2216	-0.15	2142	-0.01	2107	0.08	2047	0.24	
24 TH	0342	3.50	0318	3.86	0246	4.19	0227	4.58	24 TH
	1100	-0.17	1015	-0.03	0946	0.02	0920	0.16	
	1613	3.16	1544	3.48	1516	3.78	1458	4.16	
	2304	-0.08	2229	0.03	2154	0.16	2132	0.30	

01 | JANUARY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 FR	0428	3.39	0406	3.77	0333	4.06	0313	4.46	25 FR
	1142	-0.19	1058	-0.02	1028	0.03	1002	0.18	
	1700	3.12	1634	3.45	1607	3.74	1546	4.09	
	2352	-0.02	2317	0.07	2240	0.27	2217	0.39	
26 SA	0516	3.23	0456	3.63	0426	3.89	0402	4.26	26 SA
	1225	-0.20	1141	0.00	1112	0.09	1045	0.26	
	1750	3.04	1730	3.40	1705	3.67	1641	3.99	
					2331	0.41	2306	0.55	
27 SU	0042	0.05	0006	0.14	0526	3.67	0458	4.00	27 SU
	0607	3.01	0550	3.42	1200	0.22	1133	0.42	
	1311	-0.17	1227	0.08	1813	3.59	1745	3.87	
	1852	2.93	1833	3.32					
28 MO	0140	0.14	0101	0.24	0032	0.59	0004	0.76	28 MO
	0712	2.73	0653	3.15	0632	3.39	0606	3.67	
	1404	-0.08	1322	0.22	1257	0.42	1231	0.66	
	2009	2.82	1943	3.22	1921	3.47	1856	3.73	
29 TU	0247	0.21	0207	0.37	0142	0.75	0115	0.96	29 TU
	0829	2.46	0804	2.86	0741	3.09	0722	3.36	
	1508	0.03	1430	0.37	1404	0.62	1341	0.90	
	2123	2.76	2054	3.13	2031	3.38	2011	3.63	
30 WE	0405	0.23	0323	0.46	0306	0.82	0241	1.07	30 WE
	0948	2.27	0926	2.66	0901	2.88	0849	3.16	
	1620	0.10	1546	0.45	1522	0.74	1504	1.02	
	2236	2.77	2209	3.12	2147	3.38	2132	3.64	
31 TH	0541	0.10	0455	0.41	0440	0.69	0417	0.96	31 TH
	1115	2.26	1058	2.67	1040	2.89	1022	3.20	
	1737	0.06	1704	0.40	1642	0.68	1624	0.96	
	2340	2.87	2316	3.20	2257	3.49	2242	3.78	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 FR	0645	-0.11	0604	0.24	0538	0.49	0518	0.76	1 FR
	1221	2.39	1202	2.82	1143	3.05	1119	3.36	
	1838	-0.04	1806	0.28	1737	0.55	1722	0.81	
					2346	3.63	2327	3.94	
2 SA	0029	2.99	0008	3.32	0623	0.35	0603	0.61	2 SA
	0731	-0.23	0652	0.11	1223	3.21	1156	3.51	
	1304	2.55	1244	2.98	1820	0.42	1805	0.67	
	1923	-0.11	1852	0.16					
3 SU	0107	3.10	0048	3.43	0021	3.75	0001	4.07	3 SU
	0809	-0.24	0730	0.05	0700	0.28	0638	0.52	
	1337	2.67	1316	3.10	1252	3.34	1225	3.64	
	1958	-0.15	1929	0.10	1855	0.32	1840	0.56	
4 MO	0139	3.17	0121	3.52	0050	3.84	0030	4.17	4 MO
	0841	-0.19	0802	0.05	0731	0.26	0709	0.47	
	1405	2.78	1344	3.18	1317	3.44	1252	3.76	
	2028	-0.15	2000	0.08	1925	0.26	1911	0.50	
5 TU	0207	3.23	0150	3.58	0117	3.90	0058	4.24	5 TU
	0907	-0.13	0830	0.05	0758	0.24	0736	0.43	
	1431	2.87	1409	3.25	1341	3.52	1319	3.84	
	2055	-0.15	2028	0.07	1952	0.21	1939	0.47	
6 WE	0236	3.27	0219	3.62	0143	3.93	0125	4.27	6 WE
	0932	-0.12	0855	0.03	0823	0.20	0802	0.38	
	1457	2.95	1435	3.29	1405	3.57	1345	3.89	
	2126	-0.16	2056	0.04	2022	0.18	2006	0.45	
7 TH	0306	3.29	0247	3.64	0212	3.92	0152	4.27	7 TH
	0959	-0.15	0922	0.00	0850	0.15	0830	0.33	
	1527	3.00	1502	3.32	1431	3.60	1412	3.92	
	2200	-0.15	2127	0.03	2054	0.18	2036	0.44	
8 FR	0338	3.25	0318	3.61	0242	3.88	0221	4.24	8 FR
	1029	-0.19	0951	-0.03	0920	0.12	0859	0.31	
	1600	2.98	1532	3.31	1501	3.60	1442	3.90	
	2236	-0.12	2201	0.04	2128	0.21	2107	0.46	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 SA	0412	3.15	0349	3.53	0314	3.80	0252	4.17	9 SA
	1059	-0.22	1021	-0.04	0950	0.11	0928	0.31	
	1633	2.92	1604	3.29	1533	3.58	1514	3.88	
	2310	-0.08	2236	0.07	2201	0.27	2139	0.50	
10 SU	0445	3.01	0421	3.43	0347	3.70	0325	4.07	10 SU
	1129	-0.26	1051	-0.04	1020	0.10	0958	0.33	
	1706	2.89	1638	3.28	1608	3.57	1549	3.86	
	2344	-0.06	2310	0.09	2235	0.34	2212	0.56	
11 MO	0521	2.89	0456	3.32	0424	3.59	0401	3.94	11 MO
	1201	-0.32	1123	-0.05	1051	0.10	1030	0.38	
	1743	2.88	1716	3.28	1648	3.56	1629	3.84	
			2348	0.12	2313	0.42	2250	0.68	
12 TU	0021	-0.04	0536	3.18	0506	3.43	0444	3.75	12 TU
	0602	2.75	1201	-0.01	1130	0.17	1108	0.50	
	1239	-0.34	1803	3.25	1735	3.50	1716	3.77	
	1828	2.85					2339	0.87	
13 WE	0108	0.03	0035	0.22	0001	0.59	0537	3.49	13 WE
	0652	2.57	0627	2.98	0557	3.20	1200	0.72	
	1329	-0.24	1251	0.13	1220	0.37	1822	3.65	
	1927	2.75	1905	3.16	1842	3.37			
14 TH	0221	0.18	0141	0.39	0121	0.79	0052	1.11	14 TH
	0800	2.33	0738	2.75	0717	2.93	0701	3.22	
	1440	-0.06	1404	0.33	1337	0.61	1314	0.97	
	2114	2.69	2040	3.10	2025	3.34	1959	3.61	
15 FR	0403	0.18	0319	0.46	0301	0.79	0239	1.14	15 FR
	0947	2.24	0918	2.66	0857	2.86	0836	3.17	
	1616	0.00	1542	0.39	1515	0.66	1455	1.02	
	2244	2.87	2209	3.22	2147	3.49	2123	3.75	
16 SA	0528	0.05	0447	0.36	0425	0.65	0402	0.96	16 SA
	1117	2.41	1050	2.83	1027	3.03	1003	3.36	
	1735	-0.09	1703	0.28	1633	0.54	1614	0.87	
	2351	3.11	2319	3.45	2253	3.74	2233	4.03	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 SU	0645	-0.11	0604	0.19	0542	0.42	0514	0.69	17 SU
	1225	2.67	1154	3.10	1131	3.31	1105	3.67	
	1845	-0.18	1812	0.13	1744	0.35	1723	0.63	
					2343	3.97	2323	4.31	
18 MO	0041	3.32	0012	3.65	0635	0.20	0608	0.44	18 MO
	0743	-0.22	0702	0.04	1215	3.58	1151	3.96	
	1312	2.91	1241	3.32	1839	0.16	1818	0.40	
	1943	-0.24	1909	0.00					
19 TU	0123	3.45	0055	3.80	0024	4.15	0005	4.53	19 TU
	0831	-0.25	0750	-0.06	0720	0.04	0654	0.23	
	1351	3.09	1321	3.49	1252	3.78	1231	4.18	
	○ 2034	-0.25	1958	-0.07	1926	0.03	1905	0.22 ○	
20 WE	0200	3.54	0135	3.91	0102	4.26	0045	4.68	20 WE
	0915	-0.25	0833	-0.10	0802	-0.05	0736	0.10	
	1428	3.23	1359	3.60	1330	3.92	1312	4.33	
	2121	-0.22	2044	-0.09	2011	-0.02	1950	0.12	
21 TH	0239	3.57	0216	3.95	0143	4.29	0126	4.74	21 TH
	0957	-0.24	0913	-0.12	0843	-0.10	0817	0.02	
	1507	3.31	1439	3.66	1409	3.99	1353	4.40	
	2206	-0.18	2128	-0.08	2054	-0.01	2032	0.11	
22 FR	0321	3.53	0259	3.93	0225	4.23	0207	4.69	22 FR
	1037	-0.24	0953	-0.12	0923	-0.10	0857	0.01	
	1549	3.34	1522	3.67	1451	4.00	1435	4.39	
	2250	-0.14	2211	-0.05	2137	0.04	2113	0.15	
23 SA	0405	3.44	0344	3.85	0310	4.11	0250	4.57	23 SA
	1116	-0.24	1031	-0.11	1001	-0.07	0935	0.04	
	1631	3.32	1607	3.65	1535	3.97	1518	4.34	
	2332	-0.10	2253	-0.01	2218	0.12	2154	0.24	
24 SU	0450	3.30	0429	3.71	0357	3.95	0334	4.37	24 SU
	1153	-0.24	1108	-0.08	1038	0.00	1012	0.14	
	1715	3.26	1654	3.59	1623	3.90	1604	4.24	
			2334	0.06	2301	0.25	2235	0.40	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 MO	0015	-0.05	0517	3.50	0447	3.72	0422	4.09	25 MO
	0536	3.09	1147	0.01	1116	0.16	1053	0.34	
	1229	-0.19	1746	3.48	1717	3.75	1656	4.07	
	1803	3.11			2349	0.45	2323	0.65	
26 TU	0100	0.05	0020	0.18	0545	3.41	0519	3.72	26 TU
	0628	2.79	0609	3.20	1202	0.43	1141	0.66	
	1310	-0.06	1233	0.19	1826	3.52	1758	3.81	
	1906	2.89	1848	3.28					
27 WE	0158	0.18	0116	0.37	0053	0.71	0025	0.97	27 WE
	0738	2.43	0714	2.83	0654	3.03	0629	3.30	
	1410	0.15	1334	0.46	1310	0.76	1247	1.04	
	2030	2.67	2001	3.05	1941	3.28	1915	3.54	
28 TH	0310	0.29	0229	0.56	0211	0.91	0151	1.22	28 TH
	0903	2.14	0837	2.52	0817	2.72	0802	2.98	
	1532	0.30	1458	0.65	1435	0.98	1418	1.30	
	2153	2.58	2126	2.93	2104	3.17	2048	3.42	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 FR	0513	0.24	0417	0.59	0420	0.85	0356	1.17	1 FR
	1052	2.11	1034	2.52	1026	2.73	1006	3.03	
	1708	0.26	1637	0.63	1623	0.93	1605	1.24	
	2313	2.69	2252	3.02	2238	3.29	2224	3.58	
2 SA	0628	-0.06	0547	0.35	0524	0.57	0505	0.89	2 SA
	1209	2.35	1148	2.78	1133	3.01	1110	3.30	
	1825	0.06	1753	0.41	1726	0.69	1711	0.99	
			2352	3.22	2334	3.52	2315	3.83	
3 SU	0010	2.89	0635	0.13	0608	0.36	0548	0.65	3 SU
	0713	-0.26	1230	3.02	1211	3.26	1146	3.56	
	1251	2.60	1839	0.21	1809	0.48	1753	0.76	
	1911	-0.11					2347	4.04	
4 MO	0050	3.06	0033	3.41	0008	3.70	0620	0.50	4 MO
	0748	-0.31	0711	0.01	0641	0.24	1211	3.77	
	1322	2.79	1301	3.21	1237	3.45	1826	0.59	
	1946	-0.17	1915	0.11	1842	0.34			
5 TU	0122	3.18	0105	3.54	0034	3.84	0013	4.20	5 TU
	0818	-0.27	0740	-0.02	0709	0.18	0647	0.40	
	1349	2.92	1326	3.33	1258	3.59	1235	3.94	
	2016	-0.16	1945	0.07	1910	0.25	1854	0.47	
6 WE	0150	3.27	0132	3.64	0058	3.93	0040	4.32	6 WE
	0844	-0.21	0807	-0.02	0733	0.14	0712	0.31	
	1412	3.04	1350	3.43	1319	3.71	1259	4.08	
	2043	-0.15	2012	0.05	1937	0.18	1921	0.39	
7 TH	0217	3.34	0158	3.71	0123	4.00	0106	4.40	7 TH
	0909	-0.18	0832	-0.03	0758	0.09	0738	0.23	
	1436	3.15	1413	3.51	1341	3.81	1324	4.17	
	2112	-0.14	2039	0.03	2005	0.12	1947	0.33	
8 FR	0244	3.38	0224	3.75	0149	4.02	0130	4.43	8 FR
	0935	-0.20	0857	-0.06	0825	0.04	0804	0.17	
	1503	3.22	1437	3.55	1405	3.86	1348	4.21	
	2145	-0.14	2109	0.01	2036	0.10	2016	0.31	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 SA	0314	3.36	0251	3.74	0218	3.99	0155	4.42	9 SA
	1004	-0.22	0925	-0.09	0854	0.01	0832	0.14	
	1534	3.23	1505	3.56	1434	3.88	1414	4.21	
	2219	-0.12	2141	0.01	2109	0.12	2046	0.32	
10 SU	0347	3.27	0321	3.67	0248	3.91	0224	4.35	10 SU
	1034	-0.24	0955	-0.10	0923	0.00	0900	0.15	
	1606	3.19	1535	3.55	1506	3.88	1444	4.21	
	2253	-0.09	2214	0.02	2141	0.16	2116	0.36	
11 MO	0420	3.15	0353	3.59	0321	3.82	0256	4.25	11 MO
	1103	-0.29	1025	-0.12	0952	-0.01	0929	0.17	
	1638	3.16	1608	3.56	1540	3.88	1518	4.20	
	2325	-0.09	2247	0.03	2213	0.20	2148	0.41	
12 TU	0455	3.02	0428	3.49	0357	3.72	0333	4.12	12 TU
	1134	-0.35	1056	-0.13	1023	0.00	1001	0.23	
	1714	3.14	1647	3.56	1619	3.87	1558	4.17	
			2323	0.06	2248	0.27	2224	0.52	
13 WE	0000	-0.09	0509	3.35	0439	3.57	0416	3.92	13 WE
	0535	2.89	1133	-0.07	1100	0.10	1038	0.39	
	1211	-0.36	1733	3.49	1705	3.77	1645	4.07	
	1759	3.08			2334	0.45	2310	0.74	
14 TH	0045	-0.02	0008	0.17	0531	3.32	0511	3.63	14 TH
	0626	2.68	0600	3.12	1149	0.36	1129	0.68	
	1300	-0.23	1222	0.12	1806	3.56	1746	3.87	
	1858	2.91	1833	3.33					
15 FR	0156	0.15	0112	0.38	0049	0.73	0021	1.04	15 FR
	0735	2.41	0711	2.84	0646	3.00	0630	3.32	
	1410	0.02	1334	0.42	1305	0.70	1243	1.03	
	2041	2.76	2006	3.17	1951	3.39	1922	3.70	
16 SA	0334	0.21	0249	0.53	0235	0.81	0211	1.16	16 SA
	0929	2.31	0858	2.72	0839	2.91	0816	3.25	
	1550	0.15	1518	0.55	1453	0.81	1432	1.15	
	2222	2.89	2147	3.24	2124	3.50	2059	3.80	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 SU	0508	0.11	0429	0.45	0413	0.66	0346	0.97	17 SU
	1108	2.52	1038	2.94	1017	3.15	0951	3.50	
	1721	0.08	1651	0.43	1626	0.67	1604	0.97	
	2333	3.14	2302	3.48	2236	3.76	2216	4.09	
18 MO	0632	-0.08	0552	0.23	0528	0.38	0501	0.66	18 MO
	1214	2.85	1141	3.26	1118	3.49	1054	3.88	
	1840	-0.06	1805	0.23	1738	0.42	1715	0.66	
			2356	3.70	2327	4.00	2308	4.39	
19 TU	0025	3.35	0647	0.05	0618	0.15	0552	0.38	19 TU
	0727	-0.21	1227	3.52	1200	3.78	1137	4.21	
	1259	3.11	1900	0.08	1829	0.22	1807	0.38	
	1936	-0.15					2349	4.64	
20 WE	0106	3.50	0038	3.87	0007	4.19	0635	0.16	20 WE
	0812	-0.24	0731	-0.04	0700	0.00	1215	4.47	
	1336	3.31	1303	3.71	1234	4.02	1851	0.19	
	2023	-0.17	1945	-0.01	1913	0.08			
21 TH	0142	3.61	0116	3.99	0044	4.32	0027	4.81	21 TH
	0853	-0.23	0811	-0.08	0740	-0.09	0714	0.02	
	1409	3.47	1338	3.85	1309	4.20	1252	4.66	
	○ 2107	-0.16	2028	-0.04	1955	0.00	1932	0.08	
22 FR	0220	3.67	0155	4.06	0123	4.37	0106	4.88	22 FR
	0932	-0.23	0848	-0.10	0818	-0.13	0752	-0.04	
	1445	3.58	1416	3.93	1346	4.30	1331	4.75	
	2149	-0.14	2109	-0.04	2036	-0.01	2012	0.06	
23 SA	0301	3.65	0237	4.05	0204	4.33	0147	4.84	23 SA
	1009	-0.22	0925	-0.11	0855	-0.12	0829	-0.04	
	1525	3.62	1457	3.95	1426	4.32	1411	4.75	
	2230	-0.12	2148	-0.01	2116	0.02	2051	0.10	
24 SU	0344	3.57	0320	3.97	0248	4.22	0228	4.72	24 SU
	1046	-0.22	1001	-0.09	0930	-0.06	0905	0.02	
	1606	3.59	1540	3.92	1508	4.29	1452	4.69	
	2310	-0.08	2227	0.04	2154	0.10	2128	0.19	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 MO	0427	3.42	0404	3.83	0332	4.07	0310	4.52	25 MO
	1120	-0.19	1037	-0.04	1005	0.04	0941	0.15	
	1647	3.51	1623	3.84	1551	4.19	1534	4.56	
	2348	-0.04	2304	0.10	2232	0.21	2206	0.34	
26 TU	0510	3.22	0447	3.62	0417	3.85	0354	4.25	26 TU
	1153	-0.12	1113	0.06	1040	0.20	1017	0.37	
	1731	3.35	1709	3.70	1637	4.02	1619	4.36	
			2344	0.21	2314	0.40	2247	0.59	
27 WE	0027	0.04	0534	3.34	0507	3.54	0443	3.89	27 WE
	0557	2.92	1153	0.26	1118	0.49	1058	0.71	
	1226	0.02	1801	3.47	1731	3.74	1711	4.06	
	1822	3.10					2339	0.94	
28 TH	0115	0.18	0032	0.41	0007	0.68	0543	3.47	28 TH
	0655	2.55	0630	2.97	0609	3.15	1154	1.15	
	1310	0.27	1244	0.56	1211	0.88	1819	3.70	
	1933	2.78	1908	3.18	1847	3.40			
29 FR	0224	0.34	0138	0.64	0123	0.95	0056	1.28	29 FR
	0819	2.21	0747	2.62	0731	2.81	0707	3.11	
	1440	0.54	1406	0.86	1350	1.21	1325	1.51	
	2105	2.58	2032	2.95	2012	3.18	1946	3.46	
30 SA	0346	0.38	0306	0.77	0254	1.05	0238	1.39	30 SA
	1006	2.16	0946	2.55	0937	2.77	0914	3.08	
	1622	0.53	1549	0.91	1532	1.23	1514	1.53	
	2230	2.64	2208	2.98	2149	3.23	2130	3.53	
31 SU	0549	0.19	0506	0.62	0453	0.81	0430	1.14	31 SU
	1139	2.46	1114	2.85	1101	3.11	1036	3.42	
	1753	0.30	1723	0.68	1701	0.95	1641	1.24	
	2338	2.87	2319	3.21	2301	3.49	2240	3.82	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 MO	0637	-0.06	0602	0.35	0537	0.54	0515	0.85	1 MO
	1224	2.78	1200	3.18	1140	3.44	1115	3.78	
	1844	0.07	1813	0.42	1744	0.67	1726	0.93	
					2339	3.74	2318	4.10	
2 TU	0023	3.10	0004	3.45	0608	0.36	0547	0.63	2 TU
	0712	-0.17	0638	0.18	1207	3.70	1142	4.07	
	1256	3.03	1232	3.44	1817	0.47	1759	0.69	
	1921	-0.03	1850	0.26			2347	4.31	
3 WE	0057	3.26	0037	3.64	0007	3.93	0614	0.46	3 WE
	0743	-0.17	0708	0.10	0635	0.25	1207	4.29	
	1322	3.19	1258	3.61	1229	3.89	1827	0.53	
	1953	-0.04	1920	0.20	1846	0.34			
4 TH	0126	3.36	0105	3.76	0032	4.05	0015	4.46	4 TH
	0812	-0.12	0735	0.07	0701	0.18	0641	0.33	
	1346	3.30	1321	3.74	1250	4.03	1233	4.44	
	2023	-0.01	1948	0.18	1914	0.26	1855	0.42	
5 FR	0152	3.43	0130	3.85	0057	4.13	0041	4.55	5 FR
	0839	-0.09	0801	0.05	0728	0.13	0707	0.23	
	1409	3.42	1344	3.82	1312	4.14	1256	4.54	
	2053	0.01	2016	0.16	1943	0.20	1923	0.35	
6 SA	0218	3.49	0155	3.90	0123	4.17	0104	4.61	6 SA
	0907	-0.09	0828	0.02	0756	0.08	0735	0.16	
	1436	3.51	1408	3.87	1337	4.22	1319	4.60	
	2127	0.01	2047	0.14	2015	0.17	1953	0.31	
7 SU	0248	3.51	0223	3.91	0152	4.15	0129	4.62	7 SU
	0937	-0.11	0858	-0.01	0825	0.04	0803	0.12	
	1507	3.54	1436	3.90	1407	4.26	1346	4.63	
	2202	0.03	2121	0.13	2049	0.17	2024	0.31	
8 MO	0323	3.45	0254	3.87	0225	4.10	0200	4.58	8 MO
	1009	-0.13	0930	-0.02	0857	0.03	0834	0.13	
	1542	3.53	1508	3.90	1442	4.27	1419	4.64	
	2237	0.04	2155	0.14	2123	0.20	2056	0.33	

04 | APRIL | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 TU	0359	3.34	0329	3.79	0300	4.02	0235	4.49	9 TU
	1041	-0.16	1002	-0.03	0928	0.04	0905	0.17	
	1617	3.49	1545	3.89	1519	4.26	1456	4.62	
	2311	0.05	2230	0.15	2157	0.24	2130	0.39	
10 WE	0437	3.21	0408	3.69	0340	3.91	0315	4.35	10 WE
	1114	-0.18	1037	0.00	1002	0.09	0940	0.27	
	1657	3.44	1627	3.86	1601	4.21	1538	4.56	
	2348	0.06	2308	0.19	2235	0.33	2208	0.50	
11 TH	0520	3.05	0453	3.53	0425	3.75	0402	4.14	11 TH
	1154	-0.14	1117	0.10	1043	0.25	1020	0.48	
	1744	3.32	1716	3.76	1649	4.06	1627	4.41	
			2355	0.31	2324	0.51	2257	0.73	
12 FR	0037	0.13	0547	3.30	0520	3.50	0459	3.87	12 FR
	0614	2.84	1209	0.33	1135	0.55	1114	0.81	
	1245	0.02	1819	3.56	1751	3.82	1730	4.17	
	1846	3.13							
13 SA	0151	0.26	0102	0.51	0043	0.75	0010	1.02	13 SA
	0730	2.61	0702	3.05	0641	3.24	0619	3.60	
	1400	0.27	1326	0.63	1257	0.89	1234	1.16	
	2026	2.97	1950	3.39	1930	3.63	1901	3.96	
14 SU	0318	0.29	0233	0.64	0217	0.81	0149	1.13	14 SU
	0919	2.59	0849	3.00	0829	3.23	0803	3.58	
	1536	0.37	1505	0.74	1440	0.96	1418	1.25	
	2159	3.06	2127	3.44	2102	3.69	2035	4.01	
15 MO	0449	0.20	0409	0.56	0351	0.67	0321	0.99	15 MO
	1052	2.84	1021	3.26	0959	3.51	0933	3.86	
	1713	0.29	1639	0.61	1614	0.80	1548	1.05	
	2311	3.25	2241	3.63	2214	3.90	2152	4.23	
16 TU	0608	0.05	0528	0.37	0503	0.44	0435	0.73	16 TU
	1155	3.16	1122	3.57	1056	3.84	1034	4.23	
	1827	0.15	1751	0.41	1721	0.57	1657	0.76	
			2335	3.82	2306	4.10	2247	4.49	

04 | APRIL | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 WE	0005	3.42	0622	0.21	0553	0.26	0526	0.48	17 WE
	0702	-0.04	1206	3.81	1138	4.11	1117	4.55	
	1240	3.40	1843	0.27	1811	0.38	1747	0.50	
	1921	0.07			2347	4.27	2328	4.71	
18 TH	0046	3.56	0018	3.96	0634	0.14	0608	0.29	18 TH
	0746	-0.05	0705	0.13	1212	4.34	1153	4.81	
	1316	3.59	1242	4.00	1854	0.24	1830	0.31	
	2006	0.04	1927	0.19					
19 FR	0123	3.68	0056	4.09	0024	4.40	0006	4.88	19 FR
	0826	-0.05	0744	0.08	0713	0.05	0646	0.15	
	1348	3.74	1315	4.15	1246	4.53	1228	5.00	
	○ 2048	0.04	2008	0.16	1935	0.16	1910	0.20	
20 SA	0200	3.76	0134	4.17	0103	4.47	0045	4.96	20 SA
	0903	-0.06	0821	0.04	0750	0.01	0723	0.08	
	1424	3.85	1352	4.24	1323	4.63	1306	5.09	
	2129	0.04	2047	0.16	2015	0.13	1949	0.18	
21 SU	0241	3.77	0216	4.18	0145	4.46	0125	4.95	21 SU
	0940	-0.07	0857	0.04	0826	0.02	0800	0.09	
	1503	3.87	1433	4.24	1403	4.65	1346	5.08	
	2208	0.07	2125	0.19	2053	0.16	2027	0.22	
22 MO	0323	3.69	0258	4.10	0227	4.36	0206	4.84	22 MO
	1016	-0.04	0933	0.07	0901	0.09	0836	0.18	
	1543	3.82	1515	4.18	1444	4.58	1426	4.98	
	2247	0.10	2202	0.24	2131	0.24	2103	0.31	
23 TU	0405	3.54	0340	3.95	0309	4.20	0247	4.66	23 TU
	1051	0.02	1009	0.15	0935	0.21	0911	0.33	
	1623	3.72	1556	4.08	1525	4.47	1506	4.84	
	2324	0.14	2238	0.31	2207	0.34	2139	0.45	
24 WE	0446	3.34	0421	3.76	0351	4.00	0328	4.43	24 WE
	1123	0.11	1044	0.27	1010	0.39	0946	0.54	
	1705	3.58	1639	3.94	1607	4.30	1548	4.65	
			2315	0.39	2246	0.49	2217	0.65	

04 | APRIL | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 TH	0000	0.20	0504	3.52	0436	3.74	0413	4.14	25 TH
	0529	3.10	1121	0.46	1046	0.65	1025	0.85	
	1156	0.24	1725	3.74	1654	4.05	1634	4.38	
	1750	3.36	2358	0.54	2332	0.72	2302	0.94	
26 FR	0043	0.30	0553	3.24	0530	3.43	0505	3.80	26 FR
	0619	2.81	1206	0.72	1130	1.00	1113	1.24	
	1235	0.45	1822	3.47	1754	3.72	1732	4.05	
	1845	3.07							
27 SA	0142	0.44	0054	0.75	0039	0.97	0005	1.26	27 SA
	0728	2.52	0700	2.95	0645	3.14	0617	3.49	
	1330	0.72	1311	1.03	1248	1.37	1225	1.61	
	2007	2.80	1937	3.21	1916	3.44	1849	3.77	
28 SU	0300	0.51	0213	0.91	0159	1.10	0129	1.45	28 SU
	0909	2.44	0833	2.84	0819	3.06	0749	3.40	
	1534	0.81	1453	1.16	1434	1.45	1407	1.72	
	2137	2.77	2104	3.14	2040	3.38	2011	3.70	
29 MO	0414	0.44	0338	0.90	0314	1.06	0251	1.41	29 MO
	1039	2.67	1012	3.05	0954	3.31	0925	3.63	
	1652	0.64	1619	1.02	1552	1.27	1529	1.54	
	2249	2.93	2224	3.30	2159	3.55	2133	3.86	
30 TU	0523	0.28	0455	0.72	0428	0.86	0404	1.20	30 TU
	1137	3.01	1109	3.40	1047	3.67	1022	4.00	
	1755	0.42	1725	0.77	1656	0.99	1633	1.24	
	2342	3.16	2318	3.54	2252	3.80	2230	4.13	

05 | MAY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 WE	0617	0.14	0547	0.51	0515	0.65	0453	0.94	1 WE
	1217	3.29	1148	3.70	1122	3.98	1100	4.34	
	1842	0.27	1810	0.57	1738	0.75	1716	0.96	
			2357	3.75	2328	4.01	2310	4.37	
2 TH	0022	3.34	0624	0.38	0551	0.50	0529	0.73	2 TH
	0658	0.09	1219	3.92	1150	4.20	1131	4.59	
	1247	3.48	1846	0.47	1812	0.58	1751	0.76	
	1920	0.22			2358	4.16	2342	4.53	
3 FR	0054	3.46	0029	3.89	0623	0.40	0601	0.56	3 FR
	0733	0.10	0657	0.32	1215	4.37	1158	4.76	
	1314	3.60	1246	4.06	1845	0.48	1823	0.62	
	1956	0.23	1918	0.43					
4 SA	0122	3.54	0058	3.99	0026	4.26	0009	4.65	4 SA
	0805	0.13	0727	0.28	0653	0.33	0632	0.43	
	1339	3.71	1311	4.16	1240	4.50	1223	4.89	
	2031	0.25	1951	0.41	1918	0.41	1855	0.52	
5 SU	0151	3.63	0125	4.06	0055	4.32	0035	4.74	5 SU
	0838	0.13	0758	0.24	0725	0.25	0702	0.32	
	1409	3.81	1338	4.22	1309	4.61	1249	4.98	
	2108	0.26	2026	0.39	1953	0.36	1928	0.45	
6 MO	0224	3.68	0156	4.09	0127	4.35	0105	4.80	6 MO
	0912	0.11	0832	0.20	0758	0.20	0734	0.26	
	1443	3.87	1409	4.26	1343	4.67	1320	5.05	
	2146	0.27	2102	0.38	2030	0.34	2003	0.42	
7 TU	0301	3.66	0231	4.08	0204	4.33	0140	4.81	7 TU
	0947	0.09	0908	0.19	0834	0.18	0809	0.26	
	1522	3.88	1446	4.27	1422	4.68	1357	5.06	
	2225	0.28	2140	0.38	2109	0.35	2039	0.43	
8 WE	0342	3.58	0311	4.02	0244	4.27	0219	4.74	8 WE
	1024	0.10	0945	0.21	0911	0.21	0846	0.32	
	1603	3.84	1527	4.25	1503	4.65	1437	5.02	
	2304	0.30	2219	0.40	2148	0.39	2118	0.48	

05 | MAY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 TH	0426	3.45	0355	3.92	0328	4.17	0303	4.61	9 TH
	1103	0.13	1025	0.28	0950	0.31	0926	0.46	
	1648	3.75	1614	4.19	1548	4.57	1523	4.92	
	2348	0.33	2302	0.45	2232	0.48	2201	0.59	
10 FR	0514	3.29	0443	3.78	0416	4.02	0352	4.42	10 FR
	1148	0.22	1111	0.41	1036	0.49	1012	0.68	
	1739	3.62	1706	4.07	1639	4.40	1615	4.75	
			2353	0.54	2326	0.62	2253	0.78	
11 SA	0042	0.38	0541	3.59	0514	3.83	0451	4.19	11 SA
	0613	3.12	1208	0.62	1133	0.77	1110	0.98	
	1244	0.38	1811	3.88	1743	4.17	1718	4.51	
	1843	3.45							
12 SU	0150	0.41	0058	0.67	0038	0.75	0003	0.99	12 SU
	0733	3.00	0658	3.43	0637	3.67	0611	4.00	
	1400	0.55	1323	0.83	1255	1.02	1230	1.24	
	2011	3.32	1937	3.73	1912	4.00	1844	4.31	
13 MO	0305	0.38	0217	0.74	0157	0.77	0126	1.09	13 MO
	0905	3.06	0835	3.46	0811	3.72	0746	4.03	
	1529	0.59	1453	0.89	1424	1.05	1400	1.28	
	2134	3.33	2104	3.73	2035	3.99	2009	4.29	
14 TU	0423	0.31	0340	0.70	0315	0.70	0245	1.03	14 TU
	1027	3.28	0956	3.68	0930	3.95	0905	4.27	
	1655	0.50	1618	0.79	1547	0.94	1521	1.14	
	2244	3.43	2215	3.84	2145	4.08	2122	4.40	
15 WE	0535	0.24	0455	0.58	0426	0.58	0356	0.87	15 WE
	1129	3.52	1056	3.93	1027	4.22	1006	4.58	
	1806	0.40	1728	0.64	1657	0.76	1630	0.92	
	2341	3.53	2311	3.96	2241	4.21	2220	4.56	
16 TH	0631	0.21	0552	0.47	0520	0.47	0452	0.70	16 TH
	1217	3.71	1142	4.13	1111	4.44	1051	4.85	
	1901	0.34	1822	0.52	1749	0.60	1723	0.71	
			2356	4.07	2325	4.34	2306	4.72	

05 | MAY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 FR	0026	3.63	0637	0.40	0605	0.38	0537	0.55	17 FR
	0717	0.22	1219	4.28	1148	4.64	1129	5.07	
	1255	3.85	1908	0.47	1834	0.48	1808	0.55	
	1947	0.32					2346	4.86	
18 SA	0105	3.73	0036	4.18	0005	4.46	0618	0.42	18 SA
	0758	0.21	0717	0.34	0645	0.30	1206	5.23	
	1329	3.97	1254	4.42	1224	4.80	1848	0.45	
	2030	0.32	1949	0.44	1915	0.40			
19 SU	0143	3.82	0115	4.26	0046	4.54	0025	4.96	19 SU
	0836	0.19	0755	0.29	0723	0.25	0656	0.35	
	1405	4.05	1331	4.49	1302	4.89	1244	5.31	
	○ 2110	0.33	2028	0.45	1955	0.38	1927	0.43 ○	
20 MO	0223	3.84	0156	4.27	0127	4.55	0105	4.98	20 MO
	0913	0.18	0832	0.29	0800	0.26	0733	0.36	
	1443	4.06	1411	4.49	1342	4.88	1323	5.28	
	2148	0.35	2105	0.49	2033	0.41	2005	0.47	
21 TU	0304	3.78	0237	4.20	0208	4.47	0146	4.90	21 TU
	0950	0.23	0908	0.35	0835	0.34	0810	0.44	
	1522	4.01	1451	4.41	1422	4.80	1402	5.18	
	2226	0.39	2141	0.54	2110	0.49	2041	0.56	
22 WE	0344	3.66	0318	4.07	0248	4.33	0225	4.76	22 WE
	1025	0.31	0944	0.44	0910	0.46	0845	0.59	
	1601	3.93	1531	4.31	1501	4.69	1440	5.04	
	2301	0.43	2216	0.59	2146	0.57	2116	0.66	
23 TH	0423	3.51	0356	3.92	0328	4.18	0304	4.59	23 TH
	1059	0.41	1019	0.56	0945	0.62	0921	0.77	
	1639	3.82	1611	4.20	1540	4.56	1520	4.89	
	2337	0.46	2252	0.64	2223	0.66	2152	0.79	
24 FR	0503	3.36	0436	3.76	0408	4.01	0345	4.40	24 FR
	1132	0.51	1056	0.70	1021	0.82	0959	1.00	
	1720	3.68	1653	4.05	1622	4.38	1602	4.70	
			2331	0.72	2304	0.78	2233	0.96	

05 | MAY | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 SA	0016	0.50	0520	3.60	0455	3.81	0431	4.19	25 SA
	0547	3.19	1138	0.88	1102	1.07	1042	1.27	
	1210	0.65	1742	3.86	1711	4.14	1651	4.46	
	1806	3.48			2354	0.95	2321	1.18	
26 SU	0103	0.57	0018	0.84	0555	3.62	0529	3.98	26 SU
	0639	3.01	0615	3.42	1153	1.36	1136	1.55	
	1256	0.83	1229	1.09	1816	3.88	1754	4.20	
	1902	3.24	1843	3.63					
27 MO	0207	0.65	0116	1.00	0104	1.11	0024	1.40	27 MO
	0755	2.91	0729	3.32	0713	3.54	0645	3.87	
	1405	1.00	1342	1.28	1333	1.55	1255	1.74	
	2024	3.08	1958	3.49	1933	3.72	1910	4.04	
28 TU	0319	0.65	0232	1.08	0215	1.14	0142	1.49	28 TU
	0926	3.01	0851	3.39	0831	3.64	0802	3.96	
	1554	0.96	1513	1.27	1450	1.47	1422	1.70	
	2145	3.11	2112	3.50	2044	3.73	2020	4.04	
29 WE	0423	0.57	0344	1.02	0316	1.07	0251	1.42	29 WE
	1032	3.26	1000	3.64	0938	3.90	0912	4.21	
	1658	0.78	1621	1.11	1551	1.28	1527	1.50	
	2246	3.25	2216	3.64	2148	3.87	2126	4.18	
30 TH	0520	0.46	0444	0.88	0412	0.95	0350	1.24	30 TH
	1123	3.52	1053	3.93	1028	4.19	1006	4.52	
	1753	0.62	1718	0.93	1645	1.06	1622	1.26	
	2335	3.42	2308	3.83	2239	4.05	2221	4.37	
31 FR	0609	0.40	0534	0.74	0500	0.81	0438	1.03	31 FR
	1203	3.73	1134	4.16	1106	4.44	1048	4.79	
	1842	0.52	1806	0.80	1732	0.88	1708	1.04	
			2349	3.98	2319	4.21	2303	4.55	

06 | JUNE | 2019

	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 SA	0015	3.56	0615	0.63	0541	0.69	0519	0.84	1 SA
	0652	0.38	1209	4.33	1138	4.63	1122	4.99	
	1237	3.88	1847	0.73	1813	0.75	1749	0.87	
	1926	0.50			2355	4.34	2337	4.71	
2 SU	0050	3.67	0025	4.10	0619	0.58	0556	0.67	2 SU
	0732	0.38	0653	0.56	1210	4.80	1152	5.16	
	1310	4.00	1241	4.44	1853	0.66	1827	0.73	
	2008	0.50	1927	0.70					
3 MO	0124	3.78	0059	4.20	0029	4.46	0009	4.85	3 MO
	0811	0.37	0731	0.51	0656	0.47	0632	0.53	
	1344	4.11	1312	4.53	1244	4.93	1223	5.30	
	2050	0.51	2007	0.67	1934	0.58	1906	0.63	
4 TU	0201	3.86	0134	4.26	0106	4.54	0044	4.97	4 TU
	0850	0.35	0811	0.46	0735	0.39	0710	0.44	
	1422	4.19	1348	4.59	1322	5.02	1259	5.40	
	2133	0.52	2048	0.65	2016	0.53	1946	0.56	
5 WE	0242	3.89	0213	4.29	0146	4.57	0123	5.03	5 WE
	0931	0.35	0851	0.45	0817	0.36	0751	0.42	
	1504	4.22	1428	4.62	1404	5.05	1339	5.43	
	2216	0.53	2130	0.64	2059	0.51	2028	0.54	
6 TH	0327	3.86	0256	4.26	0230	4.55	0206	5.01	6 TH
	1014	0.38	0934	0.48	0859	0.40	0833	0.47	
	1550	4.19	1513	4.60	1448	5.01	1423	5.39	
	2301	0.54	2214	0.65	2144	0.53	2111	0.56	
7 FR	0416	3.77	0343	4.19	0316	4.48	0252	4.91	7 FR
	1058	0.44	1019	0.56	0944	0.50	0919	0.60	
	1639	4.12	1601	4.52	1535	4.91	1510	5.28	
	2348	0.54	2300	0.67	2231	0.56	2157	0.63	
8 SA	0508	3.66	0434	4.08	0406	4.37	0342	4.77	8 SA
	1147	0.53	1109	0.68	1033	0.66	1009	0.77	
	1731	4.00	1655	4.40	1627	4.76	1603	5.11	
			2350	0.71	2323	0.62	2249	0.74	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 SU	0040	0.53	0532	3.96	0505	4.24	0440	4.60	9 SU
	0606	3.55	1206	0.82	1131	0.86	1107	0.98	
	1244	0.64	1758	4.23	1729	4.56	1704	4.89	
	1831	3.84					2349	0.87	
10 MO	0139	0.51	0048	0.77	0024	0.69	0556	4.47	10 MO
	0718	3.49	0645	3.87	0621	4.15	1217	1.16	
	1354	0.73	1314	0.95	1243	1.04	1822	4.68	
	1946	3.70	1916	4.07	1848	4.37			
11 TU	0244	0.48	0155	0.82	0130	0.73	0057	0.98	11 TU
	0840	3.54	0809	3.90	0742	4.19	0719	4.49	
	1511	0.75	1432	1.01	1400	1.10	1334	1.23	
	2103	3.62	2035	4.00	2003	4.26	1940	4.57	
12 WE	0351	0.46	0307	0.84	0237	0.76	0207	1.02	12 WE
	0954	3.67	0924	4.04	0855	4.33	0832	4.64	
	1628	0.72	1550	0.96	1515	1.06	1448	1.19	
	2212	3.60	2145	3.99	2112	4.22	2050	4.54	
13 TH	0458	0.46	0418	0.81	0345	0.76	0316	1.00	13 TH
	1059	3.81	1027	4.20	0955	4.49	0935	4.83	
	1741	0.66	1703	0.87	1629	0.95	1600	1.06	
	2314	3.61	2246	4.03	2214	4.25	2154	4.58	
14 FR	0558	0.48	0521	0.75	0447	0.72	0418	0.92	14 FR
	1152	3.93	1118	4.33	1045	4.65	1027	5.03	
	1841	0.61	1802	0.78	1728	0.81	1700	0.90	
			2338	4.10	2306	4.33	2248	4.69	
15 SA	0006	3.67	0612	0.68	0538	0.65	0510	0.80	15 SA
	0649	0.49	1200	4.45	1127	4.80	1111	5.20	
	1235	4.02	1851	0.73	1816	0.70	1750	0.76	
	1931	0.58			2351	4.43	2332	4.81	
16 SU	0049	3.75	0021	4.18	0622	0.58	0555	0.67	16 SU
	0733	0.48	0656	0.62	1207	4.92	1150	5.34	
	1313	4.11	1238	4.55	1859	0.63	1832	0.67	
	2015	0.58	1934	0.72					

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 MO	0128	3.83	0102	4.26	0033	4.53	0012	4.93	17 MO
	0813	0.45	0736	0.58	0702	0.52	0636	0.59	
	1348	4.18	1315	4.61	1246	5.00	1228	5.41	
	○ 2055	0.59	2014	0.72	1940	0.61	1912	0.64	
18 TU	0207	3.88	0141	4.29	0113	4.57	0051	4.98	18 TU
	0851	0.45	0814	0.58	0740	0.51	0714	0.57	
	1424	4.20	1353	4.62	1325	5.01	1305	5.41	
	2132	0.62	2051	0.76	2018	0.64	1948	0.66	
19 WE	0244	3.86	0220	4.26	0151	4.55	0128	4.96	19 WE
	0927	0.50	0850	0.62	0816	0.56	0751	0.63	
	1500	4.18	1430	4.58	1402	4.96	1341	5.34	
	2207	0.66	2125	0.79	2053	0.68	2023	0.71	
20 TH	0320	3.80	0257	4.19	0228	4.47	0205	4.89	20 TH
	1003	0.57	0925	0.70	0850	0.65	0826	0.73	
	1536	4.14	1508	4.52	1438	4.89	1417	5.25	
	2241	0.69	2158	0.82	2127	0.71	2056	0.77	
21 FR	0356	3.73	0333	4.11	0304	4.39	0241	4.79	21 FR
	1037	0.65	0959	0.77	0924	0.75	0900	0.86	
	1613	4.08	1545	4.45	1514	4.80	1454	5.14	
	2315	0.69	2232	0.82	2201	0.74	2131	0.83	
22 SA	0434	3.66	0410	4.04	0340	4.31	0318	4.68	22 SA
	1112	0.72	1035	0.85	1000	0.88	0936	0.99	
	1651	3.99	1624	4.36	1553	4.69	1533	5.02	
	2351	0.68	2307	0.84	2237	0.79	2207	0.90	
23 SU	0515	3.59	0450	3.97	0420	4.21	0359	4.57	23 SU
	1148	0.80	1114	0.95	1038	1.04	1015	1.15	
	1732	3.86	1707	4.23	1634	4.52	1615	4.85	
			2345	0.89	2316	0.88	2246	1.03	
24 MO	0028	0.70	0534	3.88	0506	4.11	0444	4.45	24 MO
	0558	3.50	1157	1.08	1120	1.22	1059	1.33	
	1228	0.89	1754	4.05	1722	4.32	1703	4.64	
	1816	3.69			2359	1.01	2330	1.19	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 TU	0110	0.74	0027	0.99	0603	4.01	0541	4.34	25 TU
	0647	3.43	0627	3.79	1210	1.41	1151	1.52	
	1315	1.01	1246	1.23	1822	4.11	1804	4.43	
	1907	3.51	1850	3.86					
26 WE	0201	0.80	0116	1.11	0054	1.15	0023	1.36	26 WE
	0750	3.41	0734	3.77	0715	4.00	0653	4.31	
	1420	1.11	1351	1.36	1332	1.53	1300	1.66	
	2013	3.38	1958	3.74	1934	3.98	1917	4.29	
27 TH	0310	0.83	0222	1.19	0208	1.21	0133	1.46	27 TH
	0913	3.50	0847	3.85	0823	4.10	0802	4.41	
	1557	1.08	1517	1.35	1452	1.45	1425	1.62	
	2133	3.37	2108	3.74	2041	3.96	2023	4.27	
28 FR	0421	0.79	0339	1.16	0313	1.17	0248	1.41	28 FR
	1019	3.68	0953	4.04	0926	4.30	0905	4.61	
	1704	0.94	1626	1.22	1554	1.29	1530	1.45	
	2237	3.47	2213	3.84	2143	4.03	2126	4.37	
29 SA	0521	0.71	0443	1.04	0410	1.07	0347	1.25	29 SA
	1115	3.88	1049	4.26	1020	4.54	1002	4.86	
	1803	0.81	1726	1.07	1651	1.12	1626	1.23	
	2332	3.60	2310	3.99	2240	4.18	2222	4.54	
30 SU	0615	0.64	0537	0.91	0502	0.93	0438	1.05	30 SU
	1203	4.05	1136	4.46	1105	4.76	1048	5.11	
	1858	0.73	1820	0.96	1745	0.95	1717	1.03	
			2358	4.15	2328	4.36	2308	4.74	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 MO	0020	3.74	0626	0.80	0550	0.78	0525	0.84	1 MO
	0703	0.60	1217	4.61	1146	4.97	1127	5.34	
	1245	4.19	1909	0.89	1834	0.81	1804	0.85	
	1949	0.71					2348	4.96	
2 TU	0101	3.88	0039	4.29	0010	4.54	0610	0.66	2 TU
	0750	0.57	0712	0.71	0636	0.64	1205	5.54	
	1324	4.32	1254	4.73	1225	5.15	1849	0.69	
	2036	0.70	1955	0.84	1920	0.70			
3 WE	0142	4.00	0119	4.39	0050	4.70	0028	5.15	3 WE
	0836	0.55	0757	0.65	0722	0.52	0654	0.51	
	1404	4.42	1332	4.83	1305	5.28	1244	5.68	
	2123	0.70	2040	0.80	2006	0.60	1934	0.57	
4 TH	0225	4.08	0200	4.46	0131	4.80	0110	5.27	4 TH
	0922	0.55	0843	0.62	0808	0.45	0740	0.43	
	1447	4.48	1414	4.88	1347	5.33	1326	5.76	
	2209	0.69	2125	0.77	2052	0.54	2019	0.49	
5 FR	0312	4.10	0244	4.47	0215	4.83	0154	5.31	5 FR
	1009	0.58	0930	0.64	0854	0.46	0827	0.43	
	1534	4.47	1459	4.86	1432	5.30	1410	5.75	
	2255	0.67	2209	0.75	2137	0.50	2104	0.46	
6 SA	0400	4.07	0331	4.44	0301	4.80	0240	5.27	6 SA
	1056	0.63	1017	0.70	0941	0.53	0914	0.49	
	1622	4.41	1548	4.79	1519	5.21	1456	5.66	
	2340	0.64	2254	0.74	2222	0.49	2148	0.47	
7 SU	0450	4.02	0421	4.38	0350	4.73	0327	5.17	7 SU
	1145	0.69	1106	0.77	1028	0.64	1001	0.60	
	1712	4.30	1640	4.67	1609	5.06	1546	5.49	
			2340	0.74	2309	0.51	2234	0.53	
8 MO	0027	0.61	0515	4.31	0445	4.65	0421	5.04	8 MO
	0543	3.96	1158	0.86	1121	0.79	1053	0.76	
	1237	0.76	1738	4.50	1707	4.85	1642	5.25	
	1806	4.15					2324	0.64	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 TU	0118	0.59	0029	0.78	0000	0.58	0526	4.90	9 TU
	0645	3.89	0621	4.24	0552	4.56	1152	0.95	
	1337	0.83	1256	0.96	1222	0.95	1751	4.97	
	1911	3.95	1848	4.31	1818	4.62			
10 WE	0214	0.60	0126	0.85	0058	0.70	0022	0.82	10 WE
	0803	3.85	0736	4.21	0707	4.51	0642	4.82	
	1444	0.88	1404	1.06	1331	1.08	1301	1.12	
	2027	3.77	2002	4.13	1930	4.39	1907	4.72	
11 TH	0316	0.64	0231	0.95	0202	0.84	0128	1.01	11 TH
	0917	3.86	0849	4.22	0818	4.50	0756	4.81	
	1557	0.91	1519	1.10	1443	1.15	1416	1.21	
	2138	3.64	2114	4.01	2041	4.22	2021	4.55	
12 FR	0423	0.69	0343	1.01	0310	0.95	0239	1.12	12 FR
	1026	3.90	0957	4.27	0925	4.54	0905	4.87	
	1716	0.88	1638	1.06	1604	1.11	1534	1.18	
	2248	3.58	2225	3.97	2152	4.15	2134	4.49	
13 SA	0530	0.72	0454	0.99	0421	0.96	0351	1.12	13 SA
	1128	3.97	1059	4.34	1026	4.63	1008	4.99	
	1826	0.79	1748	0.96	1713	0.98	1645	1.04	
	2352	3.60	2328	4.02	2258	4.21	2237	4.57	
14 SU	0630	0.70	0556	0.91	0521	0.89	0454	1.01	14 SU
	1219	4.05	1150	4.43	1117	4.76	1100	5.15	
	1920	0.71	1842	0.86	1806	0.84	1739	0.89	
					2349	4.33	2325	4.72	
15 MO	0042	3.69	0018	4.11	0609	0.78	0544	0.86	15 MO
	0719	0.67	0645	0.82	1159	4.88	1141	5.30	
	1300	4.13	1232	4.53	1850	0.74	1823	0.78	
	2005	0.68	1927	0.81					
16 TU	0121	3.78	0058	4.20	0029	4.46	0004	4.86	16 TU
	0801	0.64	0728	0.75	0651	0.68	0626	0.73	
	1335	4.20	1308	4.61	1236	4.99	1217	5.41	
	2045	0.70	2006	0.80	1930	0.69	1901	0.71	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 WE	0155	3.86	0133	4.27	0104	4.56	0039	4.97	17 WE
	0839	0.63	0805	0.73	0729	0.63	0703	0.66	
	1408	4.26	1342	4.66	1310	5.05	1251	5.47	
	○ 2120	0.74	2041	0.82	2005	0.68	1935	0.69 ○	
18 TH	0227	3.91	0207	4.30	0137	4.62	0112	5.03	18 TH
	0913	0.66	0839	0.75	0802	0.63	0737	0.65	
	1439	4.28	1415	4.68	1343	5.06	1323	5.47	
	2151	0.78	2112	0.84	2037	0.69	2006	0.69	
19 FR	0257	3.94	0239	4.30	0208	4.63	0145	5.04	19 FR
	0946	0.71	0911	0.78	0834	0.66	0809	0.68	
	1512	4.29	1447	4.67	1416	5.04	1355	5.44	
	2222	0.79	2142	0.85	2107	0.68	2037	0.69	
20 SA	0330	3.95	0311	4.29	0239	4.62	0217	5.01	20 SA
	1019	0.75	0943	0.81	0906	0.71	0841	0.73	
	1546	4.27	1521	4.65	1449	4.99	1428	5.38	
	2253	0.78	2212	0.84	2138	0.68	2108	0.69	
21 SU	0406	3.94	0345	4.27	0312	4.59	0251	4.97	21 SU
	1054	0.79	1016	0.85	0940	0.78	0915	0.79	
	1622	4.20	1557	4.58	1524	4.90	1503	5.28	
	2325	0.76	2243	0.83	2210	0.69	2140	0.71	
22 MO	0442	3.90	0421	4.23	0347	4.54	0326	4.90	22 MO
	1128	0.84	1052	0.91	1014	0.88	0949	0.87	
	1659	4.09	1634	4.47	1601	4.78	1540	5.15	
	2357	0.75	2315	0.85	2242	0.74	2213	0.78	
23 TU	0520	3.84	0459	4.18	0425	4.47	0404	4.82	23 TU
	1203	0.89	1128	0.99	1050	1.00	1026	0.99	
	1738	3.96	1714	4.31	1640	4.61	1621	4.97	
			2349	0.90	2316	0.82	2249	0.89	
24 WE	0029	0.74	0540	4.12	0507	4.40	0446	4.73	24 WE
	0600	3.80	1208	1.10	1129	1.14	1107	1.16	
	1241	0.94	1758	4.13	1725	4.41	1706	4.74	
	1821	3.80			2354	0.94	2329	1.04	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 TH	0106	0.76	0026	0.97	0558	4.31	0537	4.62	25 TH
	0646	3.76	0629	4.06	1218	1.30	1157	1.37	
	1328	1.03	1255	1.23	1822	4.18	1805	4.49	
	1912	3.63	1853	3.94					
26 FR	0154	0.83	0114	1.08	0043	1.10	0020	1.24	26 FR
	0747	3.70	0735	4.01	0712	4.25	0649	4.54	
	1436	1.13	1403	1.35	1338	1.44	1308	1.55	
	2021	3.47	2006	3.79	1941	3.99	1924	4.30	
27 SA	0302	0.92	0222	1.20	0159	1.24	0130	1.40	27 SA
	0919	3.71	0855	4.05	0831	4.30	0809	4.58	
	1613	1.11	1535	1.34	1506	1.39	1441	1.53	
	2148	3.44	2125	3.78	2057	3.96	2039	4.29	
28 SU	0431	0.91	0352	1.20	0323	1.23	0257	1.38	28 SU
	1036	3.87	1009	4.21	0941	4.48	0920	4.77	
	1729	0.97	1651	1.20	1616	1.23	1552	1.34	
	2300	3.55	2238	3.92	2209	4.09	2148	4.45	
29 MO	0543	0.81	0505	1.06	0431	1.08	0405	1.19	29 MO
	1138	4.07	1111	4.43	1040	4.74	1021	5.06	
	1837	0.84	1759	1.03	1725	1.02	1654	1.09	
			2339	4.13	2310	4.33	2247	4.73	
30 TU	0001	3.73	0607	0.90	0533	0.87	0504	0.93	30 TU
	0644	0.71	1201	4.65	1129	5.01	1109	5.37	
	1229	4.26	1857	0.89	1822	0.80	1749	0.83	
	1936	0.74			2357	4.60	2334	5.03	
31 WE	0050	3.92	0027	4.33	0627	0.66	0557	0.66	31 WE
	0739	0.63	0701	0.75	1211	5.24	1151	5.65	
	1312	4.41	1243	4.82	1911	0.61	1838	0.59	
	2026	0.69	1946	0.78					

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 TH	0132	4.09	0108	4.48	0038	4.84	0016	5.31	1 TH
	0829	0.60	0751	0.65	0715	0.47	0646	0.42	
	1351	4.53	1322	4.95	1251	5.42	1232	5.87	
	2113	0.67	2031	0.71	1956	0.46	1923	0.40	
2 FR	0212	4.21	0148	4.59	0118	5.00	0058	5.50	2 FR
	0917	0.59	0838	0.59	0802	0.36	0733	0.26	
	1431	4.60	1402	5.02	1332	5.50	1313	5.99	
	2158	0.65	2115	0.67	2039	0.35	2007	0.27	
3 SA	0255	4.28	0231	4.64	0159	5.08	0140	5.59	3 SA
	1004	0.60	0924	0.58	0847	0.33	0819	0.20	
	1515	4.61	1445	5.02	1415	5.48	1355	6.00	
	2241	0.63	2157	0.64	2122	0.30	2049	0.21	
4 SU	0340	4.30	0315	4.64	0242	5.09	0223	5.58	4 SU
	1050	0.63	1009	0.61	0932	0.37	0903	0.22	
	1600	4.55	1532	4.94	1500	5.38	1439	5.90	
	2324	0.61	2239	0.63	2204	0.29	2130	0.21	
5 MO	0426	4.27	0402	4.61	0328	5.04	0308	5.50	5 MO
	1136	0.67	1054	0.67	1016	0.46	0947	0.31	
	1647	4.43	1621	4.81	1548	5.22	1525	5.71	
			2320	0.63	2246	0.33	2212	0.27	
6 TU	0006	0.59	0453	4.55	0417	4.96	0356	5.37	6 TU
	0513	4.22	1141	0.74	1102	0.59	1032	0.47	
	1223	0.72	1714	4.63	1641	4.99	1617	5.42	
	1737	4.26			2331	0.45	2256	0.43	
7 WE	0050	0.59	0004	0.67	0515	4.82	0452	5.18	7 WE
	0606	4.12	0550	4.46	1155	0.79	1124	0.71	
	1314	0.79	1232	0.85	1745	4.68	1718	5.06	
	1835	4.02	1816	4.38			2347	0.70	
8 TH	0140	0.65	0054	0.78	0022	0.67	0600	4.94	8 TH
	0716	3.97	0658	4.33	0627	4.63	1227	1.01	
	1413	0.88	1332	1.00	1259	1.01	1833	4.66	
	1951	3.75	1928	4.10	1858	4.35			

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 FR	0239	0.76	0154	0.96	0126	0.93	0050	1.04	9 FR
	0840	3.84	0812	4.19	0742	4.45	0718	4.73	
	1523	0.97	1445	1.14	1411	1.19	1343	1.25	
	2108	3.52	2045	3.87	2012	4.05	1953	4.36	
10 SA	0349	0.86	0309	1.11	0239	1.14	0207	1.31	10 SA
	0955	3.79	0929	4.12	0857	4.36	0838	4.64	
	1653	0.98	1614	1.15	1545	1.23	1514	1.31	
	2228	3.42	2210	3.78	2140	3.93	2120	4.25	
11 SU	0508	0.87	0434	1.12	0404	1.18	0334	1.36	11 SU
	1108	3.82	1045	4.17	1014	4.42	0956	4.73	
	1816	0.79	1738	0.98	1705	1.03	1637	1.14	
	2350	3.48	2326	3.88	2305	4.06	2235	4.38	
12 MO	0620	0.77	0547	0.97	0514	1.02	0448	1.19	12 MO
	1208	3.93	1146	4.30	1116	4.58	1055	4.93	
	1912	0.61	1835	0.78	1759	0.82	1733	0.92	
					2355	4.25	2323	4.58	
13 TU	0042	3.62	0019	4.03	0604	0.83	0540	0.96	13 TU
	0713	0.66	0640	0.81	1158	4.75	1136	5.12	
	1251	4.05	1230	4.43	1841	0.67	1815	0.75	
	1955	0.55	1918	0.67			2359	4.78	
14 WE	0118	3.74	0056	4.16	0029	4.42	0620	0.76	14 WE
	0755	0.60	0722	0.71	0645	0.68	1209	5.29	
	1324	4.14	1303	4.53	1229	4.89	1849	0.65	
	2032	0.57	1954	0.65	1917	0.59			
15 TH	0146	3.85	0126	4.26	0056	4.57	0029	4.95	15 TH
	0831	0.60	0757	0.66	0719	0.59	0654	0.63	
	1353	4.22	1332	4.62	1258	4.99	1239	5.40	
	○ 2104	0.63	2026	0.67	1949	0.55	1919	0.57	
16 FR	0212	3.96	0154	4.34	0122	4.68	0058	5.08	16 FR
	0902	0.62	0828	0.66	0750	0.55	0724	0.54	
	1421	4.29	1400	4.68	1326	5.06	1307	5.47	
	2132	0.67	2055	0.69	2017	0.53	1947	0.52	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 FR	0024	0.60	0520	4.46	0443	4.82	0424	5.19	17 FR
	0535	4.13	1203	0.81	1124	0.74	1054	0.66	
	1244	0.77	1742	4.37	1710	4.66	1646	5.05	
	1802	4.01			2346	0.69	2313	0.71	
18 SA	0104	0.69	0021	0.76	0540	4.59	0518	4.91	18 SA
	0627	3.95	0614	4.28	1217	1.01	1146	1.00	
	1332	0.89	1252	0.98	1812	4.29	1746	4.61	
	1902	3.70	1841	4.05					
19 SU	0152	0.84	0111	0.96	0039	1.01	0005	1.09	19 SU
	0739	3.72	0718	4.06	0650	4.31	0624	4.59	
	1431	1.03	1353	1.17	1322	1.27	1253	1.35	
	2015	3.39	1950	3.72	1922	3.91	1858	4.20	
20 MO	0256	1.00	0216	1.18	0148	1.31	0114	1.46	20 MO
	0858	3.56	0832	3.88	0806	4.10	0742	4.35	
	1541	1.11	1507	1.29	1436	1.43	1414	1.55	
	2132	3.20	2113	3.52	2045	3.68	2025	3.96	
21 TU	0410	1.06	0335	1.29	0308	1.44	0238	1.63	21 TU
	1014	3.54	0956	3.85	0926	4.07	0909	4.33	
	1725	1.03	1648	1.22	1628	1.34	1555	1.47	
	2300	3.23	2245	3.58	2224	3.74	2159	4.05	
22 WE	0532	0.95	0504	1.18	0438	1.31	0409	1.51	22 WE
	1125	3.68	1109	4.00	1040	4.25	1023	4.55	
	1837	0.75	1800	0.95	1730	1.05	1702	1.19	
			2346	3.80	2327	4.00	2256	4.31	
23 TH	0008	3.44	0607	0.95	0535	1.04	0510	1.22	23 TH
	0637	0.74	1200	4.21	1130	4.49	1110	4.83	
	1217	3.88	1846	0.74	1812	0.81	1746	0.93	
	1921	0.57					2334	4.58	
24 FR	0049	3.65	0027	4.01	0002	4.25	0552	0.95	24 FR
	0723	0.59	0651	0.76	0616	0.81	1144	5.06	
	1256	4.03	1237	4.38	1204	4.70	1820	0.74	
	1958	0.51	1922	0.64	1846	0.66			

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 SU	0213	0.82	0135	1.04	0101	1.15	0038	1.29	25 SU
	0824	3.64	0806	3.96	0742	4.20	0715	4.46	
	1527	1.02	1449	1.26	1423	1.34	1356	1.50	
	2115	3.31	2049	3.64	2023	3.81	2003	4.12	
26 MO	0346	0.92	0309	1.16	0244	1.28	0213	1.44	26 MO
	1008	3.73	0937	4.04	0911	4.30	0847	4.56	
	1657	0.92	1622	1.15	1549	1.21	1526	1.34	
	2242	3.44	2217	3.78	2151	3.96	2127	4.30	
27 TU	0517	0.81	0440	1.05	0410	1.12	0342	1.26	27 TU
	1121	3.97	1051	4.29	1022	4.59	1001	4.88	
	1821	0.73	1743	0.92	1713	0.93	1639	1.03	
	2353	3.70	2325	4.06	2300	4.29	2234	4.67	
28 WE	0632	0.64	0554	0.83	0525	0.83	0453	0.92	28 WE
	1216	4.21	1147	4.56	1116	4.92	1056	5.26	
	1922	0.56	1843	0.70	1810	0.62	1738	0.68	
					2347	4.64	2323	5.06	
29 TH	0043	3.95	0015	4.33	0620	0.54	0550	0.55	29 TH
	0730	0.51	0652	0.62	1158	5.19	1140	5.60	
	1300	4.39	1231	4.77	1857	0.38	1825	0.38	
	2011	0.48	1932	0.55					
30 FR	0123	4.15	0056	4.52	0025	4.92	0004	5.39	30 FR
	0820	0.44	0741	0.48	0707	0.31	0638	0.24	
	1337	4.51	1309	4.91	1237	5.39	1219	5.86	
	● 2056	0.45	2015	0.48	1939	0.20	1908	0.16	
31 SA	0159	4.30	0134	4.65	0102	5.13	0044	5.62	31 SA
	0907	0.43	0827	0.41	0751	0.18	0723	0.04	
	1415	4.58	1347	4.99	1316	5.49	1259	5.99	
	2138	0.45	2056	0.44	2020	0.10	1950	0.02	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 SA	0454	4.06	0433	4.37	0358	4.81	0335	5.12	1 SA
	1154	0.68	1114	0.72	1034	0.58	1008	0.55	
	1717	3.98	1650	4.37	1618	4.71	1556	5.06	
			2328	0.56	2251	0.44	2226	0.46	
2 SU	0007	0.50	0516	4.34	0443	4.73	0420	5.03	2 SU
	0536	4.02	1156	0.77	1115	0.69	1051	0.72	
	1234	0.68	1740	4.18	1707	4.48	1648	4.80	
	1805	3.82			2336	0.59	2311	0.66	
3 MO	0052	0.51	0012	0.62	0538	4.55	0515	4.85	3 MO
	0629	3.91	0611	4.23	1213	0.92	1149	0.99	
	1331	0.76	1252	0.91	1813	4.16	1756	4.47	
	1907	3.58	1845	3.92					
4 TU	0152	0.64	0112	0.80	0038	0.88	0013	0.98	4 TU
	0747	3.73	0730	4.07	0703	4.33	0634	4.62	
	1455	0.84	1414	1.05	1347	1.11	1316	1.22	
	2045	3.40	2018	3.74	1951	3.95	1929	4.28	
5 WE	0317	0.75	0238	0.97	0213	1.08	0140	1.21	5 WE
	0940	3.74	0906	4.07	0839	4.33	0814	4.60	
	1624	0.81	1550	1.01	1518	1.06	1455	1.17	
	2218	3.47	2152	3.82	2123	4.02	2100	4.37	
6 TH	0447	0.72	0411	0.94	0344	1.00	0316	1.14	6 TH
	1058	3.93	1029	4.26	0958	4.54	0938	4.84	
	1802	0.65	1722	0.81	1653	0.82	1619	0.90	
	2337	3.70	2307	4.07	2241	4.31	2216	4.69	
7 FR	0614	0.57	0537	0.74	0508	0.75	0436	0.85	7 FR
	1200	4.14	1131	4.49	1059	4.82	1041	5.18	
	1908	0.45	1828	0.56	1755	0.51	1724	0.57	
					2335	4.62	2310	5.05	
8 SA	0033	3.93	0002	4.31	0607	0.47	0538	0.50	8 SA
	0718	0.43	0640	0.53	1146	5.07	1128	5.49	
	1247	4.29	1219	4.67	1842	0.27	1813	0.29	
	1958	0.35	1918	0.42			2353	5.35	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 MO	0446	0.93	0409	1.15	0350	1.33	0320	1.55	9 MO
	1044	3.54	1027	3.86	1002	4.08	0944	4.36	
	1801	0.66	1722	0.91	1654	1.02	1627	1.17	
	2344	3.33	2317	3.70	2302	3.91	2232	4.20	
10 TU	0610	0.71	0535	0.94	0506	1.07	0443	1.28	10 TU
	1152	3.69	1135	4.04	1112	4.31	1050	4.62	
	1855	0.41	1818	0.64	1746	0.74	1721	0.87	
					2348	4.19	2318	4.49	
11 WE	0032	3.56	0008	3.92	0555	0.79	0533	0.96	11 WE
	0702	0.50	0628	0.70	1152	4.53	1129	4.88	
	1235	3.86	1219	4.22	1825	0.55	1800	0.66	
	1935	0.31	1859	0.49			2349	4.74	
12 TH	0104	3.73	0042	4.10	0018	4.40	0609	0.70	12 TH
	0741	0.41	0707	0.55	0632	0.59	1158	5.08	
	1307	3.98	1250	4.36	1219	4.70	1830	0.51	
	2009	0.34	1932	0.44	1856	0.44			
13 FR	0130	3.86	0109	4.23	0041	4.57	0016	4.95	13 FR
	0815	0.41	0740	0.49	0704	0.47	0639	0.51	
	1335	4.08	1316	4.46	1243	4.83	1225	5.24	
	2038	0.40	2001	0.45	1924	0.38	1858	0.40	
14 SA	0153	3.98	0134	4.33	0103	4.71	0043	5.11	14 SA
	0845	0.44	0809	0.49	0732	0.40	0708	0.39	
	1402	4.16	1341	4.55	1307	4.92	1252	5.33	
	○ 2104	0.45	2028	0.47	1950	0.35	1924	0.31	
15 SU	0216	4.08	0159	4.40	0125	4.81	0109	5.20	15 SU
	0913	0.47	0836	0.49	0759	0.37	0735	0.31	
	1428	4.22	1406	4.59	1333	4.96	1317	5.37	
	2130	0.47	2054	0.48	2015	0.32	1951	0.26	
16 MO	0242	4.16	0225	4.42	0149	4.86	0134	5.22	16 MO
	0942	0.49	0904	0.50	0827	0.35	0803	0.29	
	1456	4.23	1433	4.59	1401	4.94	1342	5.34	
	2157	0.46	2120	0.48	2042	0.31	2018	0.25	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 TU	0311	4.17	0253	4.41	0217	4.86	0200	5.19	17 TU
	1014	0.51	0934	0.51	0857	0.37	0832	0.30	
	1528	4.16	1502	4.52	1430	4.86	1410	5.27	
	2226	0.46	2148	0.48	2110	0.32	2046	0.27	
18 WE	0344	4.12	0324	4.37	0247	4.83	0228	5.14	18 WE
	1046	0.53	1006	0.54	0927	0.42	0902	0.36	
	1602	4.04	1534	4.41	1503	4.75	1441	5.14	
	2255	0.45	2218	0.48	2139	0.35	2115	0.32	
19 TH	0417	4.05	0357	4.32	0321	4.78	0300	5.07	19 TH
	1119	0.54	1038	0.58	0958	0.47	0933	0.44	
	1637	3.88	1610	4.28	1538	4.60	1517	4.97	
	2325	0.42	2248	0.48	2208	0.39	2146	0.41	
20 FR	0453	3.97	0434	4.26	0358	4.69	0337	4.97	20 FR
	1151	0.54	1112	0.63	1031	0.56	1007	0.58	
	1717	3.72	1650	4.10	1619	4.41	1559	4.73	
	2359	0.40	2323	0.51	2243	0.50	2222	0.58	
21 SA	0536	3.87	0517	4.17	0442	4.54	0420	4.81	21 SA
	1230	0.57	1153	0.72	1111	0.72	1049	0.81	
	1805	3.50	1740	3.87	1708	4.13	1650	4.42	
					2328	0.73	2308	0.87	
22 SU	0043	0.47	0008	0.64	0537	4.29	0516	4.56	22 SU
	0630	3.68	0612	3.99	1211	1.00	1149	1.14	
	1329	0.69	1252	0.90	1816	3.80	1801	4.09	
	1911	3.24	1849	3.59					
23 MO	0145	0.66	0111	0.86	0032	1.08	0012	1.22	23 MO
	0753	3.47	0733	3.80	0705	4.03	0639	4.30	
	1459	0.78	1421	1.04	1354	1.18	1326	1.36	
	2057	3.12	2027	3.46	2004	3.65	1941	3.96	
24 TU	0318	0.80	0245	1.01	0220	1.25	0148	1.42	24 TU
	0945	3.51	0912	3.82	0848	4.08	0822	4.32	
	1629	0.70	1557	0.95	1529	1.06	1506	1.22	
	2230	3.32	2203	3.65	2140	3.87	2113	4.19	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 WE	0456	0.69	0420	0.90	0357	1.06	0328	1.23	25 WE
	1101	3.76	1033	4.07	1005	4.37	0944	4.63	
	1759	0.50	1721	0.70	1655	0.74	1624	0.89	
	2341	3.65	2311	3.98	2247	4.26	2223	4.61	
26 TH	0618	0.48	0539	0.66	0514	0.72	0443	0.84	26 TH
	1158	4.00	1130	4.34	1101	4.69	1043	5.02	
	1901	0.32	1822	0.46	1751	0.42	1722	0.52	
					2333	4.62	2311	5.02	
27 FR	0030	3.92	0000	4.26	0607	0.41	0539	0.44	27 FR
	0716	0.32	0637	0.44	1143	4.95	1126	5.35	
	1243	4.16	1215	4.54	1836	0.19	1807	0.22	
	1949	0.24	1909	0.33			2350	5.35	
28 SA	0108	4.12	0039	4.46	0010	4.90	0625	0.13	28 SA
	0805	0.25	0725	0.30	0652	0.19	1205	5.59	
	1320	4.27	1253	4.67	1221	5.13	1848	0.01	
	2032	0.22	1951	0.26	1917	0.04			
29 SU	0142	4.27	0116	4.59	0045	5.10	0028	5.57	29 SU
	0850	0.23	0809	0.23	0734	0.06	0707	-0.07	
	1357	4.34	1330	4.75	1259	5.22	1244	5.72	
	● 2112	0.23	2031	0.23	1956	-0.04	1928	-0.11	
30 MO	0217	4.36	0153	4.67	0122	5.22	0107	5.69	30 MO
	0934	0.24	0852	0.21	0816	0.01	0749	-0.15	
	1437	4.34	1411	4.74	1340	5.20	1324	5.71	
	2152	0.23	2111	0.22	2035	-0.05	2007	-0.13	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 TU	0256	4.38	0235	4.67	0201	5.23	0148	5.68	1 TU
	1017	0.25	0934	0.24	0857	0.04	0829	-0.13	
	1520	4.26	1454	4.65	1423	5.08	1406	5.58	
	2231	0.24	2150	0.24	2113	0.02	2046	-0.07	
2 WE	0338	4.32	0319	4.60	0243	5.14	0230	5.56	2 WE
	1058	0.28	1015	0.30	0937	0.13	0909	-0.02	
	1605	4.11	1540	4.48	1508	4.88	1450	5.36	
	2310	0.28	2229	0.29	2151	0.15	2124	0.08	
3 TH	0422	4.20	0405	4.49	0327	4.98	0312	5.37	3 TH
	1139	0.32	1055	0.38	1018	0.27	0949	0.16	
	1651	3.90	1627	4.26	1556	4.61	1536	5.05	
	2348	0.35	2309	0.38	2229	0.35	2202	0.32	
4 FR	0508	4.02	0453	4.32	0414	4.74	0358	5.09	4 FR
	1222	0.39	1138	0.51	1100	0.48	1032	0.43	
	1741	3.62	1719	3.97	1649	4.27	1628	4.66	
			2352	0.55	2311	0.66	2245	0.69	
5 SA	0028	0.49	0547	4.07	0511	4.40	0451	4.71	5 SA
	0600	3.75	1228	0.68	1152	0.78	1123	0.82	
	1310	0.51	1821	3.62	1757	3.87	1730	4.20	
	1844	3.27					2340	1.16	
6 SU	0119	0.72	0046	0.80	0007	1.07	0600	4.28	6 SU
	0714	3.41	0653	3.76	0628	4.00	1236	1.21	
	1411	0.65	1332	0.89	1303	1.09	1853	3.80	
	2010	2.97	1940	3.31	1917	3.52			
7 MO	0238	0.92	0159	1.04	0136	1.41	0103	1.57	7 MO
	0845	3.17	0814	3.49	0750	3.71	0727	3.96	
	1527	0.72	1452	1.01	1429	1.24	1409	1.39	
	2142	2.89	2123	3.22	2108	3.43	2043	3.72	
8 TU	0410	0.91	0329	1.11	0316	1.44	0247	1.65	8 TU
	1006	3.15	0951	3.45	0928	3.68	0911	3.96	
	1725	0.58	1641	0.89	1627	1.05	1557	1.23	
	2316	3.11	2248	3.44	2239	3.72	2209	3.99	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 WE	0543	0.67	0506	0.92	0447	1.14	0422	1.36	9 WE
	1119	3.31	1106	3.65	1047	3.92	1026	4.23	
	1823	0.32	1745	0.61	1720	0.75	1655	0.92	
			2339	3.72	2324	4.04	2256	4.34	
10 TH	0004	3.40	0602	0.64	0534	0.82	0512	1.00	10 TH
	0637	0.40	1152	3.87	1129	4.18	1107	4.52	
	1207	3.51	1826	0.42	1756	0.54	1732	0.67	
	1902	0.19			2353	4.30	2327	4.64	
11 FR	0037	3.63	0014	3.95	0610	0.57	0547	0.70	11 FR
	0716	0.26	0641	0.46	1157	4.38	1137	4.75	
	1242	3.67	1225	4.04	1825	0.40	1802	0.49	
	1934	0.16	1859	0.32			2354	4.87	
12 SA	0104	3.79	0042	4.12	0016	4.50	0616	0.49	12 SA
	0749	0.23	0713	0.37	0640	0.42	1205	4.91	
	1312	3.78	1252	4.17	1221	4.53	1829	0.35	
	2002	0.20	1927	0.29	1851	0.31			
13 SU	0129	3.89	0107	4.24	0037	4.64	0021	5.02	13 SU
	0820	0.26	0742	0.34	0708	0.33	0644	0.35	
	1338	3.85	1317	4.26	1244	4.62	1232	5.00	
	2029	0.24	1954	0.30	1917	0.25	1856	0.25	
14 MO	0152	3.98	0132	4.30	0059	4.73	0047	5.08	14 MO
	0848	0.30	0810	0.34	0735	0.28	0712	0.27	
	1404	3.90	1341	4.30	1309	4.66	1257	5.03	
	○ 2055	0.25	2021	0.30	1943	0.21	1923	0.20	
15 TU	0216	4.04	0158	4.32	0123	4.78	0111	5.09	15 TU
	0918	0.31	0839	0.34	0803	0.26	0741	0.24	
	1431	3.92	1407	4.29	1336	4.65	1320	5.01	
	2124	0.24	2048	0.29	2011	0.19	1951	0.18	
16 WE	0246	4.06	0226	4.30	0151	4.79	0135	5.06	16 WE
	0951	0.31	0910	0.34	0834	0.26	0811	0.25	
	1504	3.88	1436	4.24	1407	4.58	1347	4.95	
	2155	0.22	2119	0.29	2041	0.19	2020	0.21	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 TH	0320	4.01	0258	4.25	0223	4.76	0204	5.02	17 TH
	1025	0.32	0943	0.36	0906	0.28	0842	0.29	
	1540	3.76	1510	4.14	1441	4.47	1420	4.84	
	2227	0.21	2151	0.29	2112	0.22	2051	0.27	
18 FR	0356	3.92	0333	4.19	0259	4.69	0238	4.94	18 FR
	1100	0.32	1018	0.39	0940	0.33	0915	0.37	
	1619	3.59	1548	4.00	1519	4.32	1458	4.67	
	2301	0.21	2226	0.31	2146	0.29	2124	0.39	
19 SA	0435	3.81	0413	4.11	0339	4.57	0317	4.82	19 SA
	1136	0.33	1055	0.44	1015	0.43	0950	0.50	
	1701	3.40	1632	3.83	1602	4.13	1542	4.45	
	2338	0.25	2305	0.37	2223	0.44	2202	0.58	
20 SU	0520	3.65	0459	3.99	0424	4.39	0403	4.64	20 SU
	1218	0.37	1140	0.54	1058	0.59	1034	0.72	
	1752	3.19	1724	3.61	1654	3.88	1636	4.18	
			2354	0.51	2311	0.70	2251	0.87	
21 MO	0025	0.36	0555	3.81	0520	4.13	0459	4.38	21 MO
	0616	3.45	1241	0.68	1203	0.83	1137	1.01	
	1321	0.46	1834	3.37	1806	3.60	1747	3.90	
	1902	2.97					2359	1.20	
22 TU	0131	0.55	0101	0.71	0021	1.03	0619	4.12	22 TU
	0739	3.24	0713	3.61	0646	3.86	1310	1.18	
	1442	0.49	1403	0.76	1337	0.95	1928	3.83	
	2048	2.95	2015	3.32	1955	3.55			
23 WE	0303	0.64	0230	0.81	0205	1.15	0136	1.35	23 WE
	0923	3.26	0850	3.60	0827	3.88	0801	4.11	
	1606	0.40	1531	0.67	1506	0.82	1443	1.07	
	2217	3.21	2147	3.55	2125	3.83	2058	4.08	
24 TH	0438	0.52	0400	0.69	0339	0.96	0311	1.15	24 TH
	1039	3.44	1010	3.79	0943	4.09	0923	4.34	
	1729	0.24	1650	0.47	1627	0.57	1600	0.79	
	2322	3.53	2251	3.87	2228	4.20	2205	4.47	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 FR	0558	0.32	0517	0.48	0454	0.65	0425	0.80	25 FR
	1137	3.62	1109	4.00	1041	4.34	1024	4.64	
	1831	0.11	1751	0.29	1724	0.32	1657	0.49	
			2339	4.13	2314	4.50	2253	4.83	
26 SA	0011	3.79	0616	0.29	0547	0.38	0520	0.46	26 SA
	0657	0.17	1155	4.15	1126	4.53	1109	4.89	
	1224	3.75	1840	0.18	1809	0.14	1743	0.25	
	1920	0.06			2351	4.74	2333	5.11	
27 SU	0051	3.96	0019	4.29	0633	0.19	0606	0.21	27 SU
	0746	0.11	0705	0.18	1205	4.67	1148	5.07	
	1303	3.85	1235	4.26	1850	0.03	1824	0.08	
	2003	0.06	1923	0.13					
28 MO	0125	4.08	0056	4.41	0026	4.91	0010	5.30	28 MO
	0830	0.09	0749	0.13	0716	0.07	0649	0.04	
	1340	3.91	1313	4.33	1243	4.75	1227	5.17	
	2043	0.05	2003	0.10	1929	-0.04	1904	-0.01	
29 TU	0200	4.15	0134	4.46	0103	5.00	0048	5.38	29 TU
	0913	0.09	0831	0.12	0757	0.03	0730	-0.02	
	1420	3.92	1354	4.32	1324	4.73	1308	5.17	
	2122	0.05	2043	0.10	2008	-0.03	1943	0.00	
30 WE	0238	4.14	0215	4.44	0143	4.98	0129	5.34	30 WE
	0955	0.11	0912	0.15	0837	0.06	0810	0.01	
	1503	3.84	1437	4.23	1408	4.62	1350	5.05	
	2201	0.09	2123	0.14	2046	0.06	2022	0.09	
31 TH	0320	4.05	0259	4.35	0225	4.86	0210	5.21	31 TH
	1036	0.15	0952	0.22	0917	0.16	0850	0.12	
	1547	3.68	1521	4.06	1452	4.42	1433	4.85	
	2239	0.16	2202	0.22	2123	0.21	2100	0.26	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 FR	0402	3.91	0344	4.20	0308	4.68	0252	5.00	1 FR
	1116	0.19	1032	0.31	0956	0.30	0929	0.29	
	1631	3.48	1606	3.84	1537	4.18	1517	4.59	
	2316	0.26	2241	0.34	2200	0.42	2138	0.49	
2 SA	0445	3.73	0429	4.03	0351	4.45	0336	4.75	2 SA
	1156	0.25	1112	0.41	1036	0.47	1009	0.52	
	1717	3.24	1653	3.60	1626	3.90	1605	4.28	
	2353	0.41	2323	0.50	2239	0.70	2219	0.81	
3 SU	0532	3.49	0517	3.81	0440	4.15	0424	4.43	3 SU
	1239	0.32	1158	0.54	1122	0.69	1056	0.81	
	1812	2.96	1748	3.33	1727	3.59	1701	3.93	
					2326	1.05	2308	1.18	
4 MO	0034	0.60	0012	0.70	0545	3.80	0523	4.07	4 MO
	0628	3.18	0613	3.53	1225	0.94	1159	1.12	
	1334	0.42	1254	0.70	1843	3.32	1814	3.62	
	1931	2.71	1859	3.08					
5 TU	0142	0.82	0118	0.91	0052	1.39	0021	1.53	5 TU
	0753	2.89	0724	3.25	0704	3.49	0639	3.76	
	1442	0.48	1405	0.81	1342	1.08	1320	1.31	
	2058	2.66	2028	3.00	2012	3.25	1946	3.52	
6 WE	0322	0.85	0240	1.00	0222	1.45	0155	1.65	6 WE
	0917	2.79	0848	3.12	0825	3.37	0805	3.64	
	1554	0.44	1521	0.80	1457	1.06	1440	1.30	
	2219	2.85	2155	3.17	2143	3.46	2117	3.72	
7 TH	0441	0.67	0400	0.90	0352	1.27	0321	1.49	7 TH
	1028	2.88	1011	3.21	0949	3.49	0932	3.78	
	1705	0.30	1636	0.65	1620	0.88	1557	1.10	
	2317	3.15	2252	3.45	2236	3.78	2214	4.04	
8 FR	0549	0.42	0511	0.68	0457	0.95	0430	1.16	8 FR
	1125	3.07	1108	3.42	1044	3.72	1028	4.03	
	1802	0.14	1731	0.45	1707	0.65	1646	0.85	
	2358	3.42	2332	3.72	2312	4.07	2252	4.36	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 SA	0636	0.22	0559	0.46	0535	0.68	0512	0.86	9 SA
	1209	3.25	1148	3.62	1121	3.93	1107	4.26	
	1843	0.05	1811	0.30	1741	0.47	1722	0.64	
					2342	4.29	2324	4.59	
10 SU	0032	3.60	0005	3.93	0608	0.49	0545	0.64	10 SU
	0714	0.12	0636	0.33	1151	4.09	1139	4.42	
	1243	3.36	1220	3.76	1812	0.35	1754	0.48	
	1918	0.03	1845	0.23			2354	4.73	
11 MO	0100	3.70	0035	4.05	0007	4.43	0616	0.49	11 MO
	0748	0.11	0709	0.28	0638	0.38	1208	4.49	
	1312	3.43	1249	3.84	1218	4.17	1824	0.38	
	1949	0.05	1915	0.20	1841	0.27			
12 TU	0126	3.77	0104	4.10	0032	4.52	0021	4.78	12 TU
	0820	0.13	0741	0.26	0708	0.32	0646	0.41	
	1339	3.48	1316	3.88	1245	4.22	1234	4.52	
	○ 2019	0.05	1945	0.19	1909	0.21	1853	0.32	
13 WE	0153	3.82	0131	4.10	0058	4.57	0046	4.79	13 WE
	0854	0.14	0813	0.26	0739	0.28	0718	0.37	
	1409	3.52	1343	3.89	1314	4.23	1258	4.53	
	2052	0.02	2017	0.17	1940	0.16	1923	0.29	
14 TH	0225	3.84	0201	4.09	0128	4.59	0113	4.79	14 TH
	0930	0.14	0848	0.25	0813	0.26	0751	0.36	
	1444	3.51	1415	3.86	1347	4.20	1328	4.51	
	2127	0.01	2052	0.16	2015	0.14	1956	0.30	
15 FR	0301	3.81	0236	4.06	0204	4.56	0144	4.76	15 FR
	1007	0.14	0925	0.25	0849	0.26	0826	0.38	
	1524	3.43	1452	3.79	1425	4.11	1404	4.43	
	2203	0.01	2129	0.17	2051	0.18	2031	0.37	
16 SA	0341	3.73	0315	4.00	0243	4.49	0221	4.68	16 SA
	1045	0.15	1003	0.28	0927	0.31	0903	0.45	
	1606	3.28	1533	3.68	1506	3.99	1445	4.30	
	2242	0.06	2209	0.21	2130	0.28	2109	0.50	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 SU	0424	3.59	0358	3.92	0326	4.36	0303	4.56	17 SU
	1126	0.17	1044	0.32	1008	0.39	0943	0.56	
	1653	3.10	1620	3.53	1552	3.82	1531	4.12	
	2324	0.14	2253	0.30	2213	0.45	2152	0.68	
18 MO	0512	3.43	0446	3.80	0413	4.18	0351	4.39	18 MO
	1214	0.20	1132	0.38	1057	0.51	1031	0.72	
	1747	2.93	1714	3.37	1646	3.64	1626	3.91	
			2346	0.42	2304	0.69	2244	0.91	
19 TU	0016	0.27	0542	3.64	0509	3.95	0448	4.17	19 TU
	0609	3.24	1231	0.46	1200	0.64	1134	0.90	
	1314	0.23	1824	3.23	1802	3.47	1738	3.73	
	1900	2.81					2353	1.14	
20 WE	0123	0.42	0053	0.55	0015	0.94	0605	3.96	20 WE
	0726	3.06	0655	3.46	0631	3.73	1253	0.98	
	1426	0.20	1343	0.49	1319	0.69	1915	3.73	
	2033	2.87	1959	3.24	1942	3.52			
21 TH	0249	0.46	0214	0.59	0148	1.00	0121	1.21	21 TH
	0857	3.03	0824	3.40	0802	3.69	0739	3.91	
	1540	0.11	1501	0.43	1436	0.60	1413	0.91	
	2154	3.11	2122	3.46	2100	3.76	2036	3.96	
22 FR	0416	0.34	0336	0.50	0313	0.85	0246	1.07	22 FR
	1011	3.10	0942	3.48	0915	3.78	0855	4.02	
	1653	0.02	1613	0.31	1549	0.46	1526	0.75	
	2258	3.38	2225	3.72	2202	4.05	2141	4.26	
23 SA	0532	0.18	0449	0.36	0427	0.63	0359	0.82	23 SA
	1113	3.20	1045	3.59	1016	3.90	0959	4.17	
	1756	-0.04	1716	0.19	1650	0.31	1626	0.56	
	2349	3.58	2316	3.91	2250	4.28	2232	4.52	
24 SU	0634	0.07	0552	0.22	0525	0.42	0458	0.58	24 SU
	1204	3.28	1136	3.70	1106	4.02	1050	4.32	
	1848	-0.06	1808	0.12	1739	0.20	1716	0.41	
			2359	4.04	2331	4.44	2314	4.73	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 MO	0032	3.70	0643	0.14	0613	0.27	0548	0.40	25 MO
	0725	0.01	1219	3.77	1150	4.11	1133	4.44	
	1247	3.35	1854	0.07	1823	0.12	1800	0.29	
	1933	-0.07					2353	4.86	
26 TU	0110	3.78	0038	4.12	0009	4.56	0632	0.28	26 TU
	0811	-0.01	0729	0.11	0657	0.18	1213	4.52	
	1327	3.42	1259	3.83	1230	4.18	1842	0.23	
	2014	-0.08	1936	0.05	1904	0.08			
27 WE	0146	3.82	0116	4.15	0047	4.62	0032	4.91	27 WE
	0854	0.00	0812	0.12	0739	0.16	0714	0.24	
	1408	3.44	1340	3.83	1312	4.18	1254	4.52	
	2054	-0.08	2017	0.06	1943	0.09	1922	0.24	
28 TH	0224	3.80	0158	4.12	0128	4.58	0113	4.87	28 TH
	0935	0.02	0852	0.16	0820	0.20	0755	0.27	
	1449	3.38	1422	3.76	1355	4.09	1337	4.45	
	2132	-0.03	2057	0.12	2021	0.17	2002	0.33	
29 FR	0304	3.71	0241	4.03	0209	4.47	0154	4.75	29 FR
	1015	0.07	0932	0.22	0859	0.29	0834	0.37	
	1531	3.26	1504	3.62	1437	3.94	1418	4.31	
	2210	0.06	2136	0.22	2058	0.31	2040	0.48	
30 SA	0344	3.59	0323	3.90	0250	4.32	0234	4.58	30 SA
	1053	0.12	1009	0.29	0936	0.39	0912	0.50	
	1612	3.11	1546	3.45	1519	3.77	1459	4.12	
	2245	0.17	2214	0.33	2134	0.48	2118	0.67	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
1 SU	0423	3.45	0405	3.76	0329	4.14	0314	4.39	1 SU
	1129	0.14	1046	0.34	1013	0.49	0950	0.63	
	1653	2.95	1628	3.30	1602	3.59	1542	3.93	
	2319	0.28	2253	0.44	2210	0.67	2155	0.88	
2 MO	0504	3.28	0448	3.60	0412	3.94	0357	4.18	2 MO
	1205	0.16	1126	0.40	1052	0.59	1030	0.79	
	1737	2.79	1714	3.15	1652	3.41	1630	3.73	
	2355	0.39	2335	0.55	2250	0.90	2237	1.11	
3 TU	0549	3.06	0534	3.41	0501	3.69	0446	3.94	3 TU
	1248	0.19	1211	0.48	1139	0.72	1119	0.97	
	1832	2.63	1811	3.01	1758	3.25	1730	3.55	
					2340	1.16	2330	1.35	
4 WE	0039	0.54	0026	0.69	0608	3.43	0548	3.69	4 WE
	0642	2.81	0630	3.18	1245	0.86	1223	1.14	
	1343	0.25	1308	0.58	1909	3.18	1842	3.45	
	1956	2.55	1923	2.93					
5 TH	0146	0.69	0136	0.81	0123	1.33	0051	1.51	5 TH
	0806	2.59	0739	2.98	0719	3.24	0700	3.51	
	1453	0.26	1417	0.64	1355	0.91	1335	1.22	
	2113	2.64	2038	2.99	2024	3.26	1957	3.51	
6 FR	0336	0.63	0254	0.80	0236	1.26	0210	1.48	6 FR
	0926	2.54	0852	2.90	0829	3.18	0812	3.47	
	1558	0.20	1524	0.60	1456	0.85	1442	1.17	
	2216	2.86	2145	3.17	2130	3.48	2107	3.71	
7 SA	0441	0.44	0400	0.68	0340	1.08	0318	1.30	7 SA
	1030	2.63	1002	2.98	0938	3.27	0925	3.56	
	1656	0.09	1624	0.48	1554	0.73	1541	1.02	
	2308	3.11	2239	3.41	2221	3.74	2204	3.97	
8 SU	0539	0.24	0500	0.51	0440	0.84	0418	1.06	8 SU
	1124	2.77	1059	3.13	1034	3.42	1024	3.73	
	1747	-0.02	1715	0.34	1645	0.59	1632	0.84	
	2352	3.31	2324	3.62	2302	3.96	2248	4.20	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
9 MO	0630	0.09	0550	0.37	0527	0.63	0505	0.85	9 MO
	1208	2.89	1144	3.27	1117	3.56	1107	3.87	
	1832	-0.07	1759	0.24	1727	0.46	1714	0.69	
					2336	4.10	2324	4.34	
10 TU	0028	3.43	0002	3.75	0606	0.49	0545	0.70	10 TU
	0713	0.02	0634	0.28	1153	3.67	1141	3.96	
	1244	2.98	1221	3.38	1804	0.37	1750	0.58	
	1911	-0.09	1837	0.18			2355	4.42	
11 WE	0100	3.50	0037	3.82	0007	4.20	0622	0.60	11 WE
	0753	0.01	0713	0.25	0643	0.41	1211	4.02	
	1316	3.06	1253	3.45	1224	3.74	1825	0.50	
	1947	-0.10	1913	0.15	1839	0.28			
12 TH	0132	3.56	0109	3.85	0037	4.28	0024	4.47	12 TH
	0832	0.02	0751	0.23	0719	0.35	0658	0.54	
	1349	3.14	1324	3.50	1256	3.80	1240	4.08	
	○ 2024	-0.12	1951	0.11	1915	0.20	1900	0.44	
13 FR	0206	3.61	0141	3.87	0110	4.33	0055	4.50	13 FR
	0912	0.02	0831	0.21	0758	0.31	0736	0.49	
	1427	3.18	1359	3.52	1332	3.83	1314	4.11	
	2103	-0.14	2030	0.09	1955	0.16	1938	0.43	
14 SA	0245	3.62	0218	3.87	0148	4.33	0130	4.51	14 SA
	0953	0.02	0911	0.19	0839	0.29	0817	0.48	
	1510	3.16	1438	3.50	1412	3.80	1353	4.10	
	2145	-0.11	2113	0.11	2037	0.18	2019	0.47	
15 SU	0328	3.57	0300	3.85	0229	4.27	0210	4.46	15 SU
	1036	0.03	0953	0.20	0922	0.30	0858	0.50	
	1556	3.08	1521	3.44	1456	3.73	1435	4.02	
	2228	-0.05	2157	0.16	2121	0.28	2103	0.56	
16 MO	0414	3.46	0345	3.78	0313	4.17	0253	4.37	16 MO
	1119	0.04	1036	0.22	1006	0.34	0942	0.55	
	1644	2.97	1609	3.35	1543	3.62	1522	3.91	
	2315	0.05	2245	0.23	2207	0.42	2149	0.68	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
17 TU	0502	3.32	0433	3.68	0401	4.02	0340	4.24	17 TU
	1206	0.03	1123	0.24	1054	0.38	1029	0.62	
	1737	2.87	1702	3.26	1636	3.52	1616	3.79	
			2338	0.31	2259	0.59	2241	0.81	
18 WE	0007	0.16	0526	3.54	0455	3.84	0435	4.08	18 WE
	0555	3.15	1215	0.26	1148	0.42	1123	0.69	
	1300	0.01	1807	3.19	1749	3.45	1724	3.70	
	1841	2.81					2343	0.95	
19 TH	0110	0.26	0039	0.39	0003	0.76	0545	3.89	19 TH
	0658	2.97	0632	3.36	0609	3.64	1227	0.74	
	1401	-0.02	1316	0.29	1252	0.45	1850	3.72	
	2003	2.84	1932	3.21	1915	3.50			
20 FR	0228	0.30	0151	0.42	0124	0.84	0057	1.02	20 FR
	0821	2.84	0751	3.23	0731	3.51	0709	3.77	
	1507	-0.06	1426	0.29	1401	0.45	1337	0.76	
	2121	2.99	2049	3.35	2027	3.64	2004	3.86	
21 SA	0348	0.23	0308	0.39	0242	0.78	0215	0.98	21 SA
	0937	2.79	0908	3.17	0842	3.45	0823	3.72	
	1615	-0.09	1537	0.25	1509	0.43	1448	0.73	
	2228	3.16	2155	3.50	2131	3.81	2111	4.03	
22 SU	0505	0.13	0422	0.32	0359	0.65	0331	0.86	22 SU
	1045	2.78	1018	3.18	0949	3.45	0934	3.73	
	1721	-0.10	1643	0.20	1616	0.39	1554	0.66	
	2325	3.29	2253	3.63	2227	3.95	2211	4.19	
23 MO	0613	0.03	0530	0.23	0505	0.49	0440	0.70	23 MO
	1146	2.82	1119	3.23	1051	3.49	1037	3.80	
	1819	-0.11	1741	0.15	1713	0.34	1652	0.58	
			2343	3.71	2315	4.06	2300	4.33	
24 TH	0015	3.38	0627	0.17	0559	0.37	0535	0.56	24 TH
	0709	-0.04	1210	3.29	1143	3.56	1126	3.88	
	1237	2.88	1832	0.11	1802	0.28	1743	0.50	
	1908	-0.12			2358	4.14	2343	4.43	

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	KALURGHAT		SADARGHAT		KHAL-10		KHAL-18		
	Time	m	Time	m	Time	m	Time	m	
25 WE	0058	3.44	0026	3.77	0645	0.30	0622	0.46	25 WE
	0758	-0.07	0716	0.14	1227	3.64	1208	3.97	
	1320	2.96	1253	3.35	1845	0.23	1827	0.43	
	1951	-0.13	1917	0.08					
26 TH	0135	3.48	0106	3.80	0038	4.19	0023	4.48	26 TH
	0841	-0.06	0759	0.14	0728	0.28	0705	0.42	
	1400	3.01	1333	3.39	1308	3.68	1248	4.02	
	2030	-0.13	1958	0.09	1926	0.22	1909	0.41	
27 FR	0212	3.49	0146	3.80	0117	4.19	0101	4.48	27 FR
	0920	-0.03	0839	0.17	0808	0.30	0745	0.44	
	1438	3.02	1412	3.37	1347	3.67	1326	4.01	
	2107	-0.10	2037	0.13	2003	0.26	1948	0.46	
28 SA	0248	3.44	0226	3.75	0155	4.13	0139	4.42	28 SA
	0956	0.02	0915	0.21	0845	0.35	0822	0.49	
	1514	2.97	1450	3.31	1424	3.61	1404	3.95	
	2143	-0.02	2114	0.20	2038	0.34	2025	0.57	
29 SU	0323	3.37	0305	3.68	0232	4.04	0215	4.32	29 SU
	1029	0.05	0948	0.24	0918	0.40	0856	0.56	
	1550	2.90	1526	3.23	1500	3.52	1439	3.86	
	2217	0.05	2149	0.27	2111	0.44	2059	0.68	
30 MO	0359	3.28	0342	3.60	0307	3.94	0251	4.21	30 MO
	1100	0.04	1020	0.24	0949	0.41	0929	0.61	
	1626	2.84	1603	3.17	1535	3.45	1516	3.77	
	2251	0.11	2224	0.31	2145	0.53	2132	0.79	
31 TU	0436	3.17	0420	3.52	0343	3.82	0328	4.09	31 TU
	1131	0.01	1053	0.23	1021	0.42	1002	0.65	
	1704	2.78	1641	3.13	1614	3.38	1555	3.69	
	2326	0.16	2301	0.35	2221	0.65	2207	0.89	

CONVERSION TABLE, FEET TO METRES

Feet	Metres	Feet	Metres	Feet	Metres	Feet	Metres
0'0"	0.00	8'0"	2.44	16'0"	4.88	24'0"	7.32
3"	0.08	3"	2.51	3"	4.95	3"	7.39
6"	0.15	6"	2.59	6"	5.03	6"	7.47
9"	0.23	9"	2.67	9"	5.11	9"	7.54
1'0"	0.30	9'0"	2.74	17'0"	5.18	25'0"	7.62
3"	0.40	3"	2.82	3"	5.26	3"	7.70
6"	0.49	6"	2.90	6"	5.33	6"	7.77
9"	0.58	9"	2.97	9"	5.41	9"	7.85
2'0"	0.61	10'0"	3.05	18'0"	5.49	26'0"	7.92
3"	0.70	3"	3.12	3"	5.56	3"	8.00
6"	0.79	6"	3.20	6"	5.64	6"	8.08
9"	0.88	9"	3.28	9"	5.71	9"	8.15
3'0"	0.91	11'0"	3.35	19'0"	5.79	27'0"	8.23
3"	1.01	3"	3.43	3"	5.87	3"	8.31
6"	1.10	6"	3.51	6"	5.94	6"	8.38
9"	1.19	9"	3.58	9"	6.02	9"	8.46
4'0"	1.22	12'0"	3.66	20'0"	6.10	28'0"	8.53
3"	1.31	3"	3.73	3"	6.17	3"	8.61
6"	1.40	6"	3.81	6"	6.25	6"	8.69
9"	1.49	9"	3.89	9"	6.32	9"	8.76
5'0"	1.52	13'0"	3.96	21'0"	6.40	29'0"	8.84
3"	1.60	3"	4.04	3"	6.48	3"	8.92
6"	1.68	6"	4.11	6"	6.55	6"	8.99
9"	1.75	9"	4.19	9"	6.63	9"	9.07
6'0"	1.83	14'0"	4.27	22'0"	6.71	30'0"	9.14
3"	1.91	3"	4.34	3"	6.78	3"	9.22
6"	1.98	6"	4.42	6"	6.86	6"	9.30
9"	2.06	9"	4.50	9"	6.93	9"	9.37
7'0"	2.13	15'0"	4.57	23'0"	7.01	31'0"	9.45
3"	2.21	3"	4.65	3"	7.09	3"	9.52
6"	2.29	6"	4.72	6"	7.16	6"	9.60
9"	2.36	9"	4.80	9"	7.24	9"	9.68

LIST OF WRECKS IN KARNAPHULI RIVER AND OUTER ANCHORAGE AREA

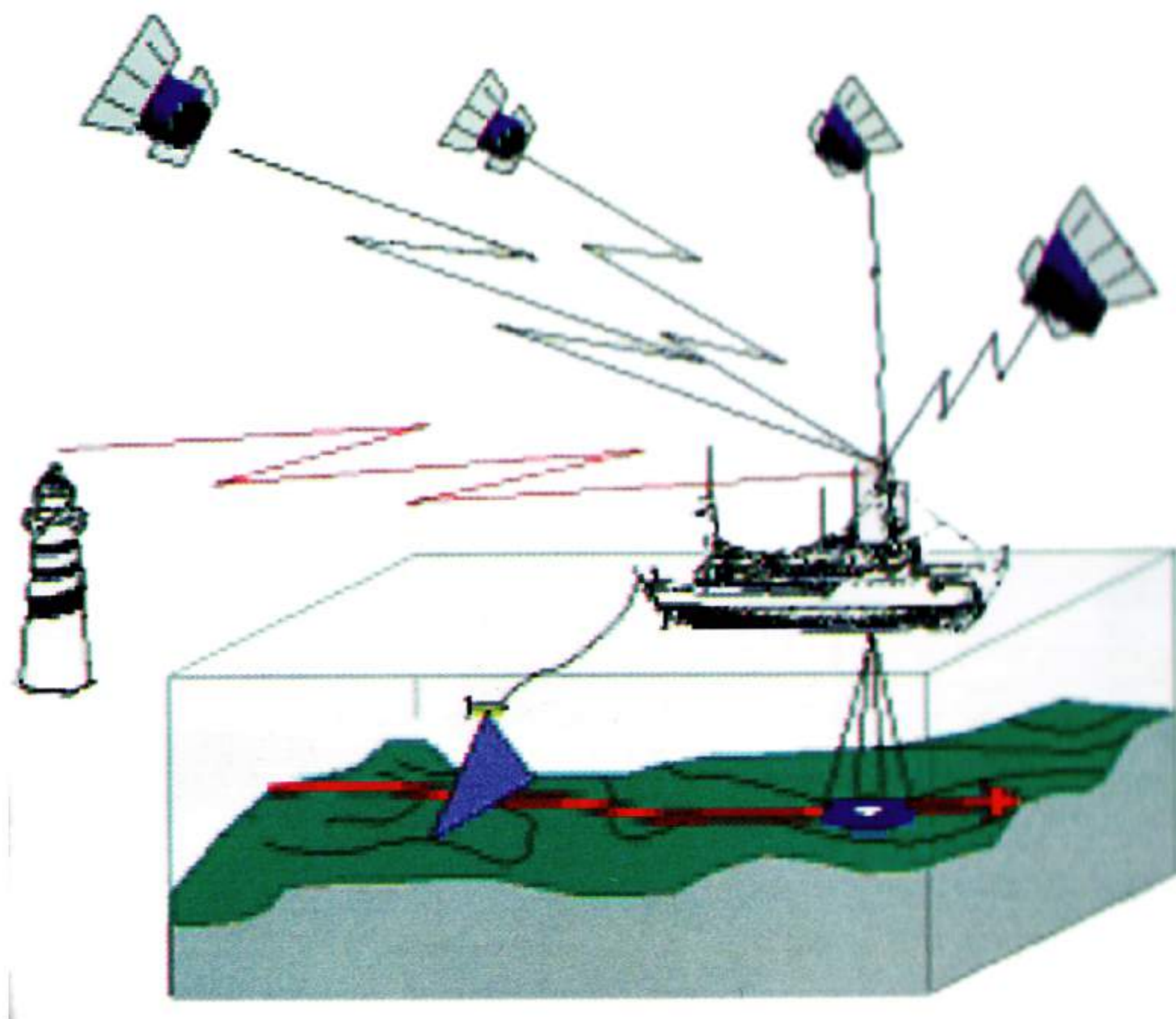
(Based on Hydrographic Survey Charts: 2012-13)

Co-ordinate system: BUTM

Ellipsoid: WGS 84

Sl.	Name of Wrecks	Geo-Position		Location
		Latitude	Longitude	
1	S. S.Thetic	22° 08' 00.600"	091° 45' 45.000"	Anchorage Area "C"
2	MV Kawana	22° 12' 37.469"	091° 47' 59.915"	Outer Bar Area
3	MV United Star	22° 12' 35.213"	091° 48' 03.784"	Outer Bar Area
4	MV Tina	22° 14' 23.346"	091° 46' 21.674"	Out side of Anchorage "A"
5	MV Sea Master-1	22° 15' 25.642"	091° 45' 43.008"	Out side of Anchorage "A"
6	MV Bangal Bridge	22° 18' 13.920"	091° 43' 03.598"	Anchorage Area "A"
7	MV Firoz Farjana	22° 14' 09.048"	091° 45' 58.779"	Anchorage Area "A"
8	MV Lita	22° 15' 29.936"	091° 45' 47.514"	Outside Anchorage Area "A"
9	MV Hang Gang-3	22° 15' 23.592"	091° 43' 49.198"	Anchorage Area "A"
10	MV Vishva Kusum	22° 15' 33.901"	091° 44' 18.058"	Anchorage Area "A"
11	MV Fortune	22° 17' 14.730"	091° 44' 02.598"	Anchorage Area "A"
12	MV BIWTC-1063	22° 17' 37.453"	091° 42' 46.430"	Anchorage Area "A"
13	MV Sea Horse	22° 18' 46.745"	091° 49' 01.063"	Near National Cement Factory
14	MV Ocan Pearl	22° 14' 49.954"	091° 46' 41.182"	Near Patenga Seabeach
15	MV Hyang Ro Bow	22° 12' 24.174"	091° 43' 45.426"	Anchorage Area "B"
16	MV Chattagram	22° 14' 13.860"	091° 45' 35.999"	Anchorage Area "A"
17	MV Sea Samrat	22° 15' 27.834"	091° 45' 41.500"	Outside of Anchorage "A"
18	MV Kader	22° 17' 13.736"	091° 43' 28.125"	Anchorage Area "A"
19	MV Mayur pankhi	22° 10' 26.134"	091° 48' 22.755"	Near Gohira
20	MV Sristy Sohan	22° 17' 58.290"	091° 43' 42.733"	Anchorage Area "A"
21	Unknown Wreck	22° 14' 09.600"	091° 46' 31.199"	Outside of Anchorage "A"

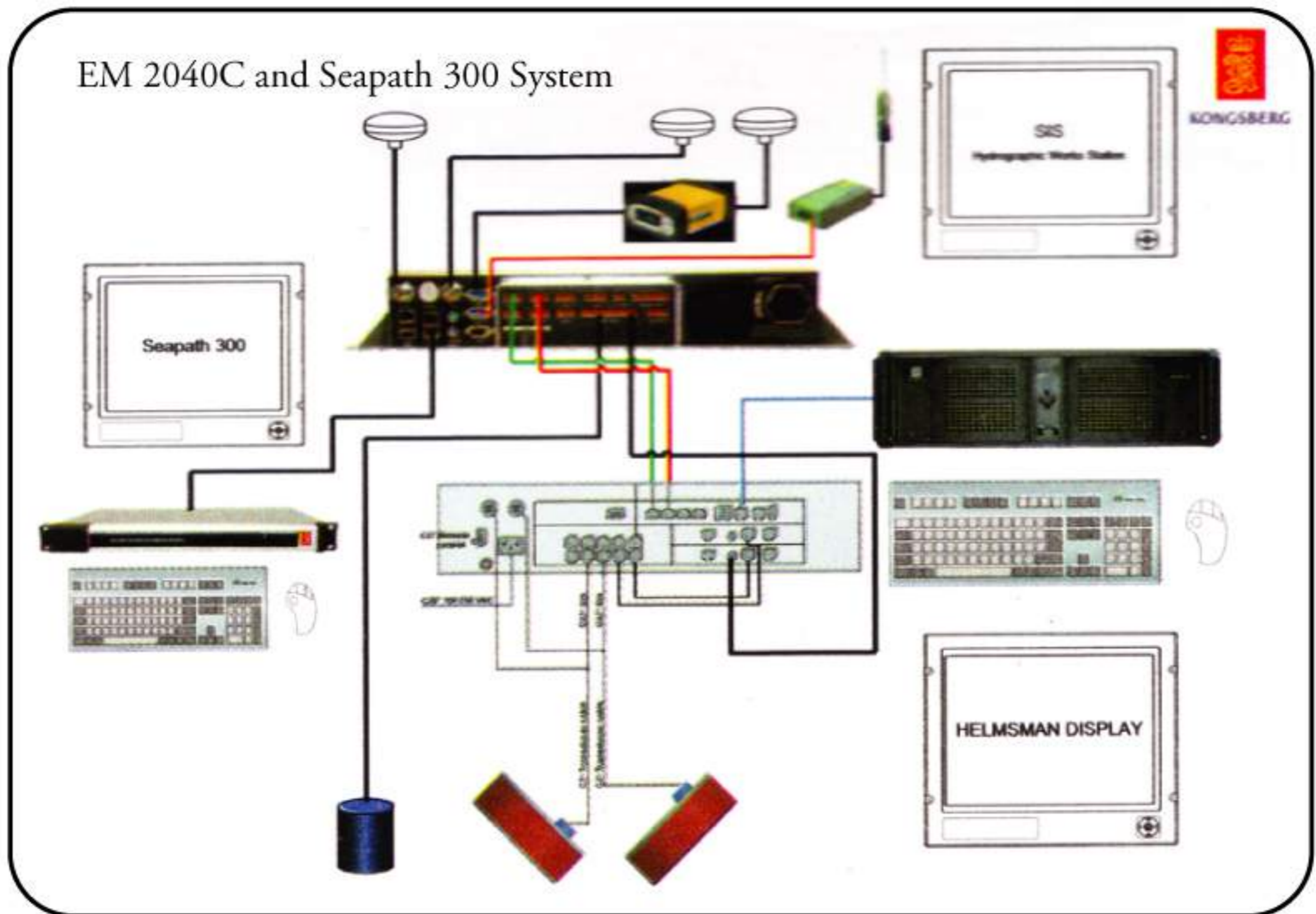
*Auto Tide Gauge Station
&
Hydrographic Survey Equipment*



**Hydrographic Department
CHITTAGONG PORT AUTHORITY**



Remotely Operated Vehicle: **RB-600 (Eprons, Latvia)**



Multi-Beam Echo-Sounder: **Kongsberg- EM 2040C**



Multi-Parameter Water quality measuring meter



Differential Global Positioning System (DGPS)- **JAVAD GNSS**



Acoustic Doppler Current Profiler- **SonTek ADP**



Digital Level - **Sokkia SDL-30**



Side Scan Sonar - **Edgetech 4125**



Sound Velocity Profiler- **AML Minos.X**



Sub Bottom Profiler- **Edgetech 3100P**



Echo Sounder- **Navisound 420**



Auto Tide Gauge Station at **Kalurghat**



Auto Tide Gauge Station at **Khal No-10**



Auto Tide Gauge Station at **Khal 18**



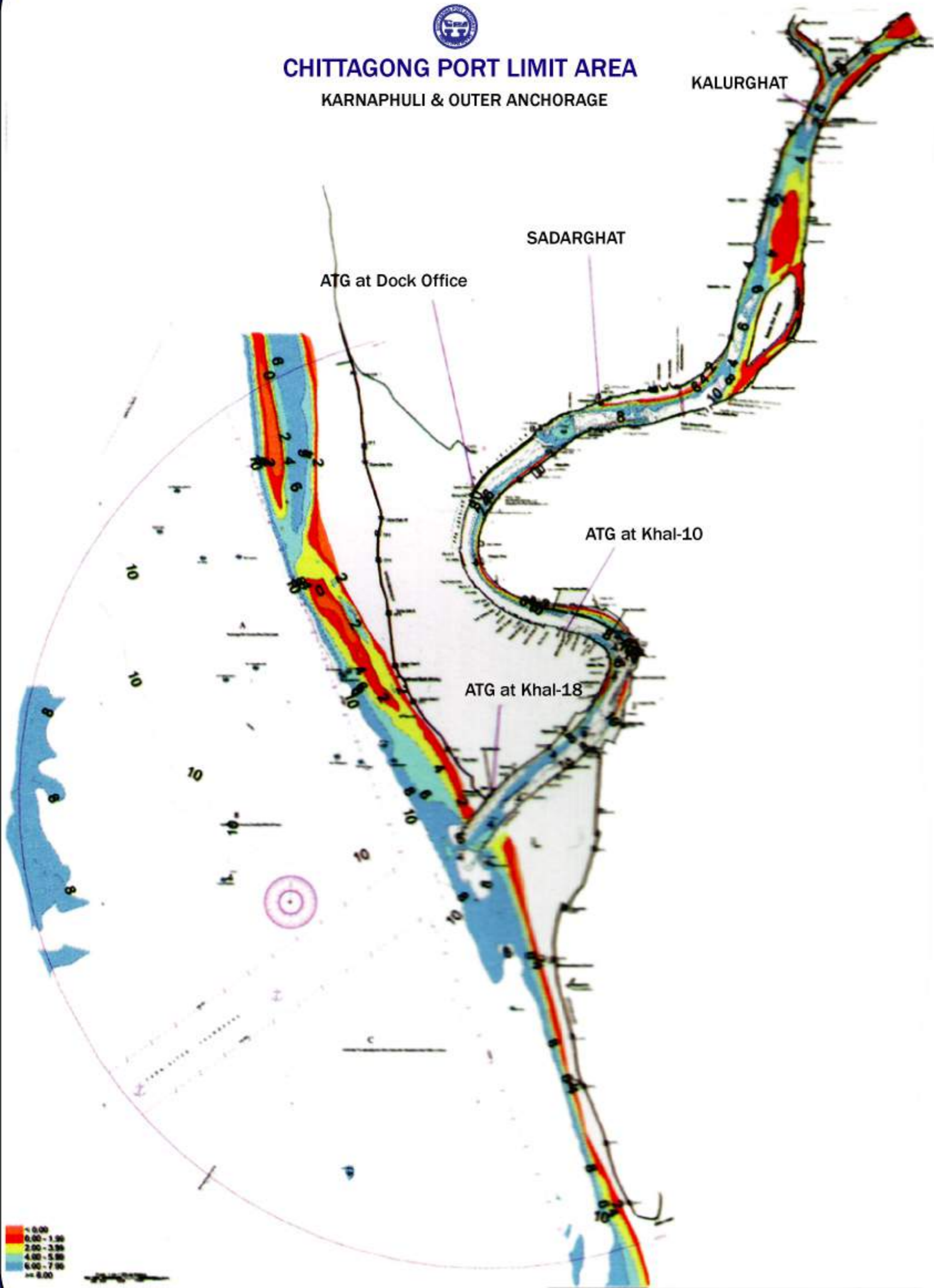
Auto Tide Gauge Station at **Kaptai**





CHITTAGONG PORT LIMIT AREA

KARNAPHULI & OUTER ANCHORAGE



Red	< 0.00
Orange	0.00 - 1.99
Yellow	2.00 - 3.99
Light Green	4.00 - 5.99
Blue	6.00 - 7.99
Dark Blue	≥ 8.00