

KARNAPHULI RIVER

TIDE TABLES

2019



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



CHITTAGONG PORT AUTHORITY

Country moves with us

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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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Department of Hydrography
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CHITTAGONG PORT AUTHORITY

Country moves with us



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

- Upper 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 Janalihat 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

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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

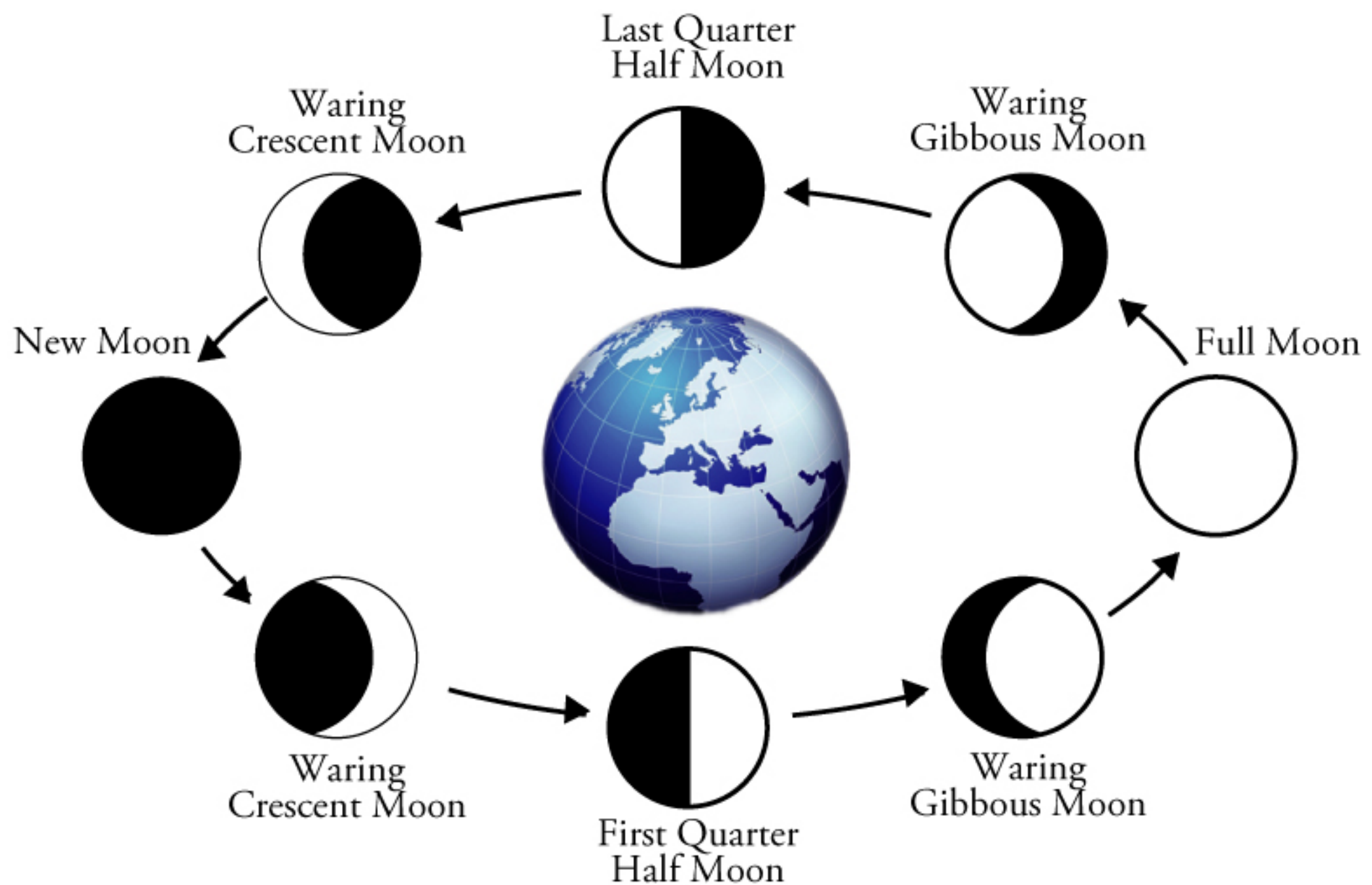
SL	TIDE GAUGE STATION (AUTO)	POSITION(AP.)
01	KHAL NO- 18	Lat:22°13'33"N Long:91°48'18"E
02	KHAL NO- 10	Lat:22°16'1.5"N Long:91°49'27"E
03	KALURGHAT	Lat:22°23'51"N Long:91°53'17"E
04	KAPTAI	Lat:22°29'37.5"N Long:92°11'34.5"E
05	SADARGHAT	Lat:22°19'27"N Long:91°50'0.5"E
06	DOCK OFFICE	Lat:22°18'06.8"N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

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

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

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

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

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

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

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

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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

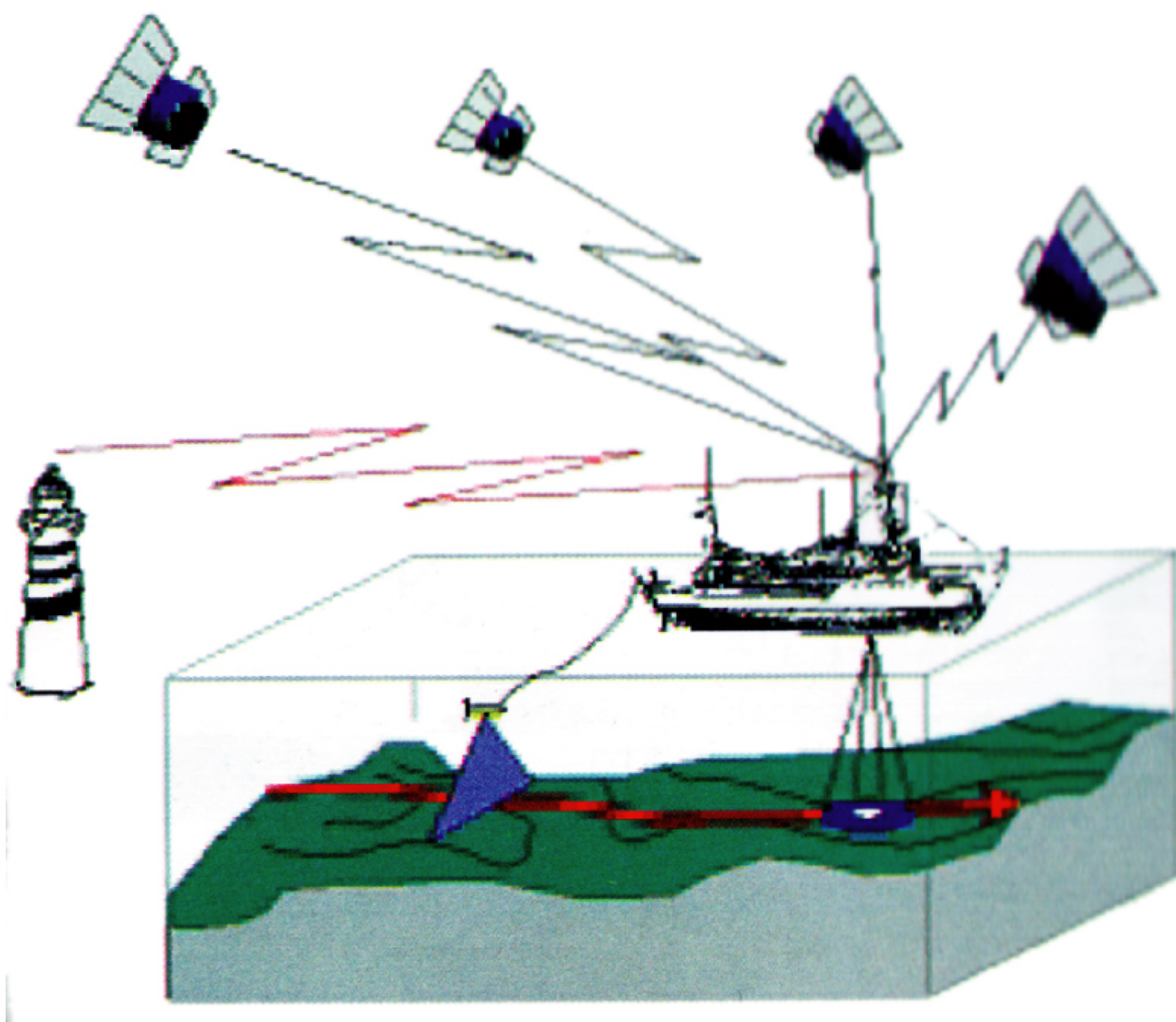
(Based on Hydrographic Survey Charts: 2012-13)

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"

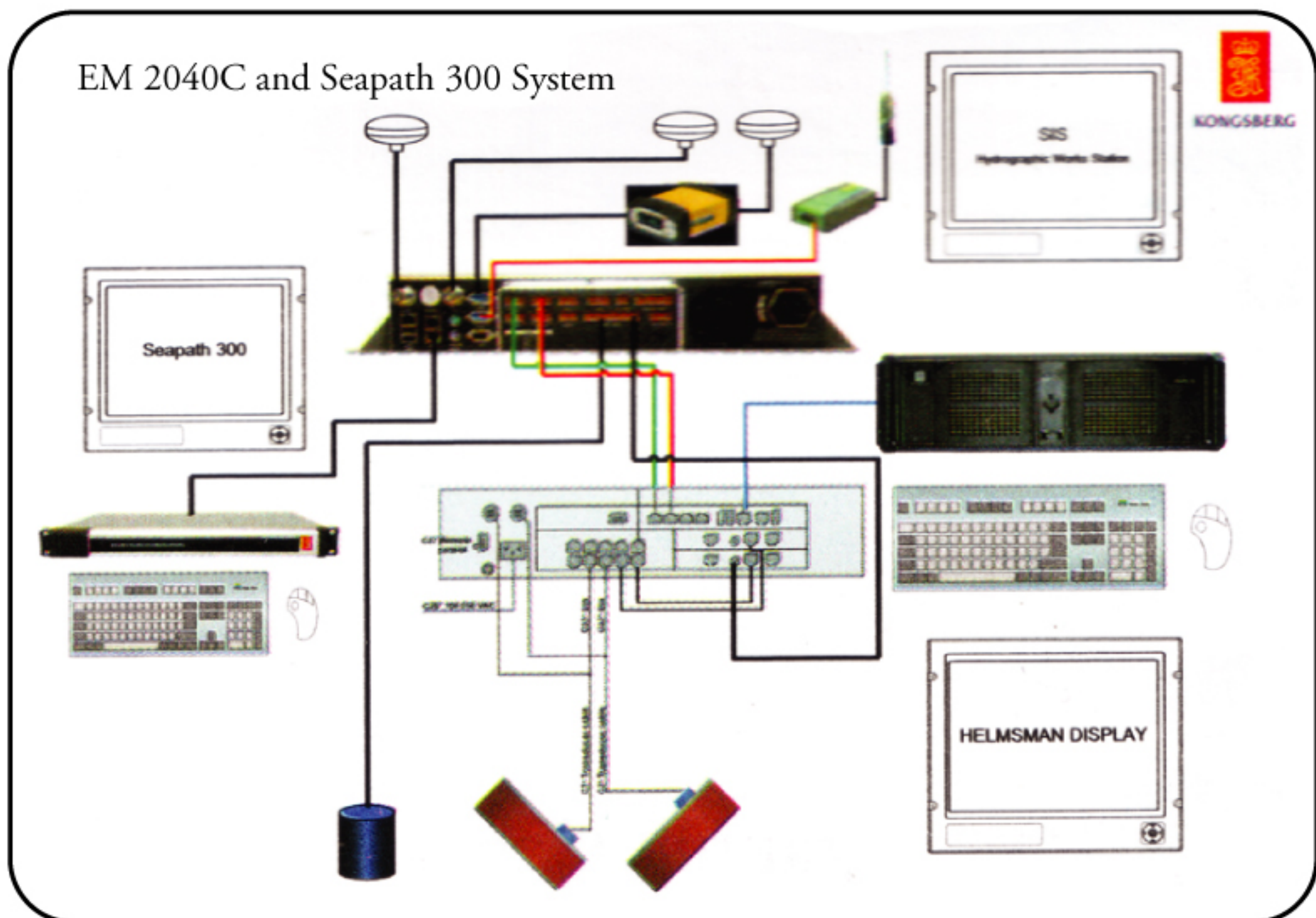
*Auto Tide Gauge Station
&
Hydrographic Survey Equipment*



**Hydrographic Department
CHITTAGONG PORT AUTHORITY**



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



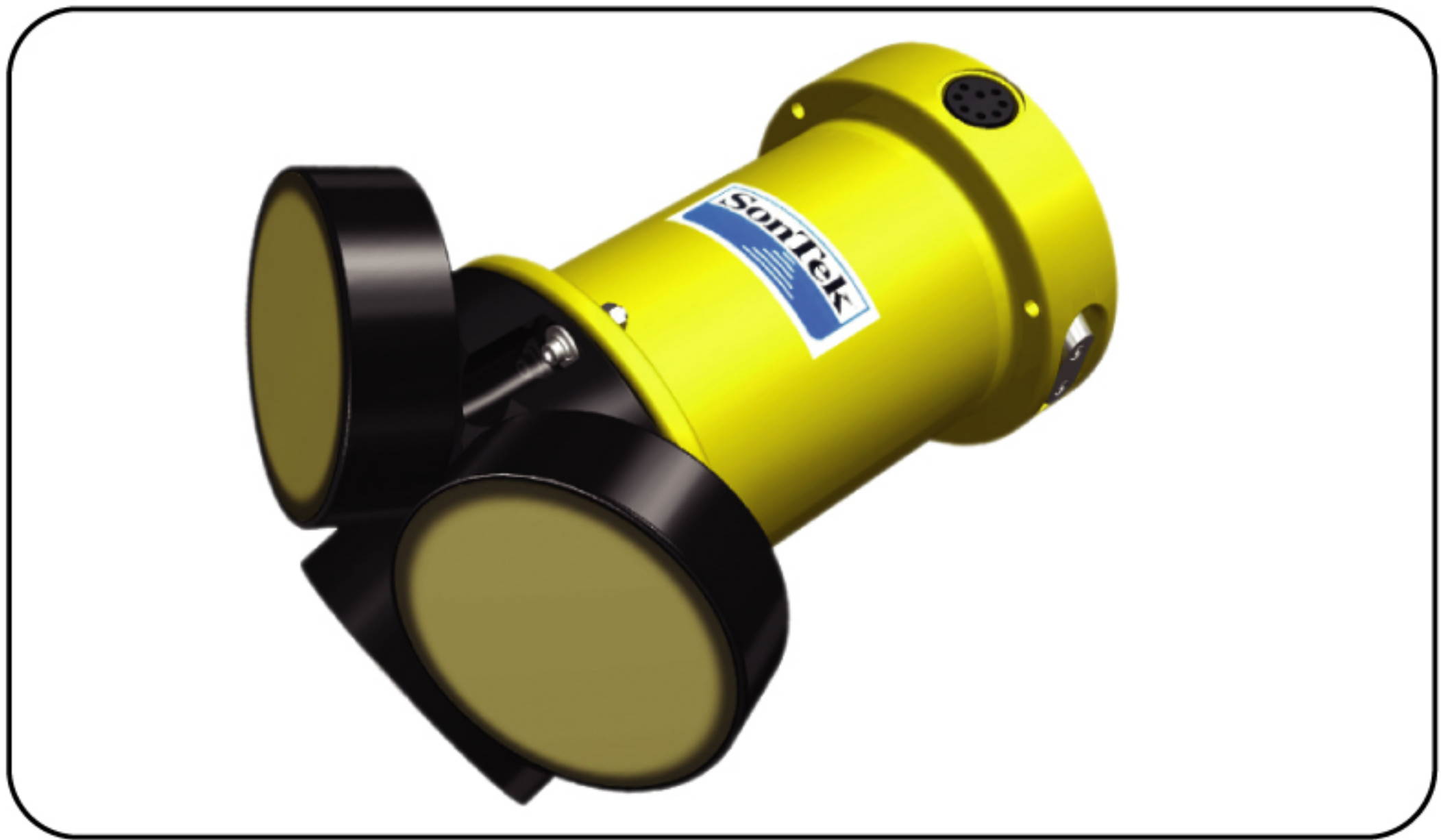
Multi-Beam Echo-Sounder: **Kongsberg- EM 2040C**



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

