

*Anthony F. Amos was a research fellow and past-director of the then Animal Rehabilitation Keep. He passed away in September of 2017. As an animal rehabilitator and oceanographer, he left a legacy that continues today. Prior to his passing Mr. Amos generated tide predictions through 2025.*

These tidal charts are provided for your personal, non-profit use only, and not intended for navigational use. The charts are provided free of charge, but if you would like to contribute to the Amos Rehabilitation Keep (ARK) here at UTMSI, we would gratefully accept any donations. The ARK rehabilitates injured and sick sea turtles and large aquatic birds such as pelicans, herons, loons, cormorants, gannets, boobies, gulls and terns. Send donation checks to The University of Texas Marine Science Institute, 750 Channel View Drive, Port Aransas, Texas 78373-5015. Make them out to UTMSI, but mark "For the ARK" on the check. All monies donated go towards the maintenance of the facility (food, medicines, supplies, etc.) and no overhead charges are assessed. Donations are fully tax-deductible.

### About Tides

Ocean "tides" are controlled by the gravitational pull of the moon and the sun on the surface of the sea, causing it to rise and fall in a rhythmic pattern which we familiarly call the tides. These are the astronomical tides, and it is these on which this calendar is based. Quite accurate predictions can be made of those changes in water level caused by the moon's and the sun's pull. However, predicting the tides for any location is a complex business and, in fact, is not completely possible because the rise and fall of the sea or of bay and estuary waters is also affected by the following: winds, storms, rainfall, floods, atmospheric pressure, temperature, earthquakes, the shape of the coastline and large-scale alteration of the natural topography (dredged channels, waterways, passes between bays and the sea).

Along the Texas coast the range of the tides (the difference in height between the highs and the lows) is quite small, amounting to less than two feet on average. Because the slopes of our beaches are slight and our bays are shallow, the tide is nonetheless very important to coastal residents, navigation, commerce, and recreation. There are many peculiarities about our tides some of which will be explained here without going into too much technical detail. There are 37 different periods of tidal fluctuation which go into the prediction of the tides. Two of those periods dominate: the once-per-day high and low (diurnal) tide, and the twice-per-day high and low (semidiurnal) tide. Unlike most places on the East Coast of the US, for example, where they get two high tides and two low tides each day, we get week-long periods of diurnal tides, followed by a week of semidiurnal tides. Because of this, you cannot rely on the time of high tide one day to be a predictable number of minutes later the next day, and so-on (as you can along other US coastlines).

Some say the "tide goes backwards" here (meaning that for a few days the tides progress as above, but then one day, the main tide is at an earlier time than it was the day before). This makes those watches and clocks that show the tides not too reliable here. The diurnal tides here have a much greater range than do the semidiurnal periods. To simplify all these

peculiarities, I have developed tide calendars for several places along the Texas coast. (Note, that only Port Aransas tides are available for 2018-2025).

### The Amos Tide Calendars

Tide-calendars are available showing predicted tides for the Aransas Pass Ship Channel connecting the Gulf of Mexico with Corpus Christi Bay. Predictions are based on measurements of the actual tides at each location. The method needs at least a year of data. At Port Aransas, the data is based on a one-year series of measurements, made in 1993 at the University of Texas Marine Science Institute's Pier Laboratory (located off the South Jetty of the Aransas Pass Ship Channel). From the series, 37 harmonic constituents of the astronomical tide were calculated and used in a modification of the standard National Ocean Survey tidal prediction program to make hourly water-level predictions and establish the times of the highs and lows for each day. The water level is adjusted to Mean Sea Level, rather than the Gulf Coast Datum. Consequently, the annual and semi-annual variation in sea level can be clearly seen in the position of the daily tide fluctuations relative to the zero mean sea level line (compare January when low tides prevail with October when the opposite is true). Each hour is indicated by a vertical line connecting the curve with the zero line. In general, slack water will be at the times which the curve intersects the zero axis, but when the curve is offset as in January and October, some interpolation may be necessary. Flood and ebb tidal currents will be at a maximum at the times of high and low water, respectively. This astronomical tide is often radically changed by strong winds before and during the passage of cold fronts and during extra tropical depressions. The astronomical signal will still be found "riding" on top of the meteorological surges. Past history has shown that the predicted times are quite accurate, although the range of the tides in the predictions is somewhat exaggerated.

Local times of the highs and lows are listed beneath each daily box (all heights are given in feet and all times are local because it is the system most commonly used by the general public). Highs and lows are listed in "order of appearance": if the first tide extreme is a low then the time and height will be preceded by L1 for Low 1; the next tide will be H1 for High 1, etc. (These numbers may be difficult to read on some older VGA screens.) The shaded areas each day show the hours of darkness. Phases of the moon are shown for each day with the New Moon (NM), First Quarter (FQ), Full Moon (FM), and Last Quarter (LQ) marked on the moon symbol where appropriate. The relative size and shape of the moon will be quite close to reality each day, but the moon's orientation is always vertical on the calendar (the author is working on a method of depicting the moon as it appears to the observer). The symbols appear on the night of the day closest to when the phase occurs, e.g., if full moon is at 1215 (24-hour clock) on the 25th of the month, then the symbol will appear straddling midnight of the 25th. Should it occur at 1145, then the symbol will appear on the 24th of the month. Also shown is the Julian Day (JD). In 2015, a non-leap year, 1 January = JD 1, and 31 December = JD 365. These numbers appear either to the upper right or lower right of each daily box. In case you want to know how fast time flies, in the opposite corner of each box, the number of days left in the year is printed. The local time zone in use is given at the top of each monthly chart. On the days when Daylight Savings Time comes into effect in April and reverts to standard time in October, the symbol "CDT" for Central Daylight Time, or "CST" for Central Standard Time appears. The appropriate

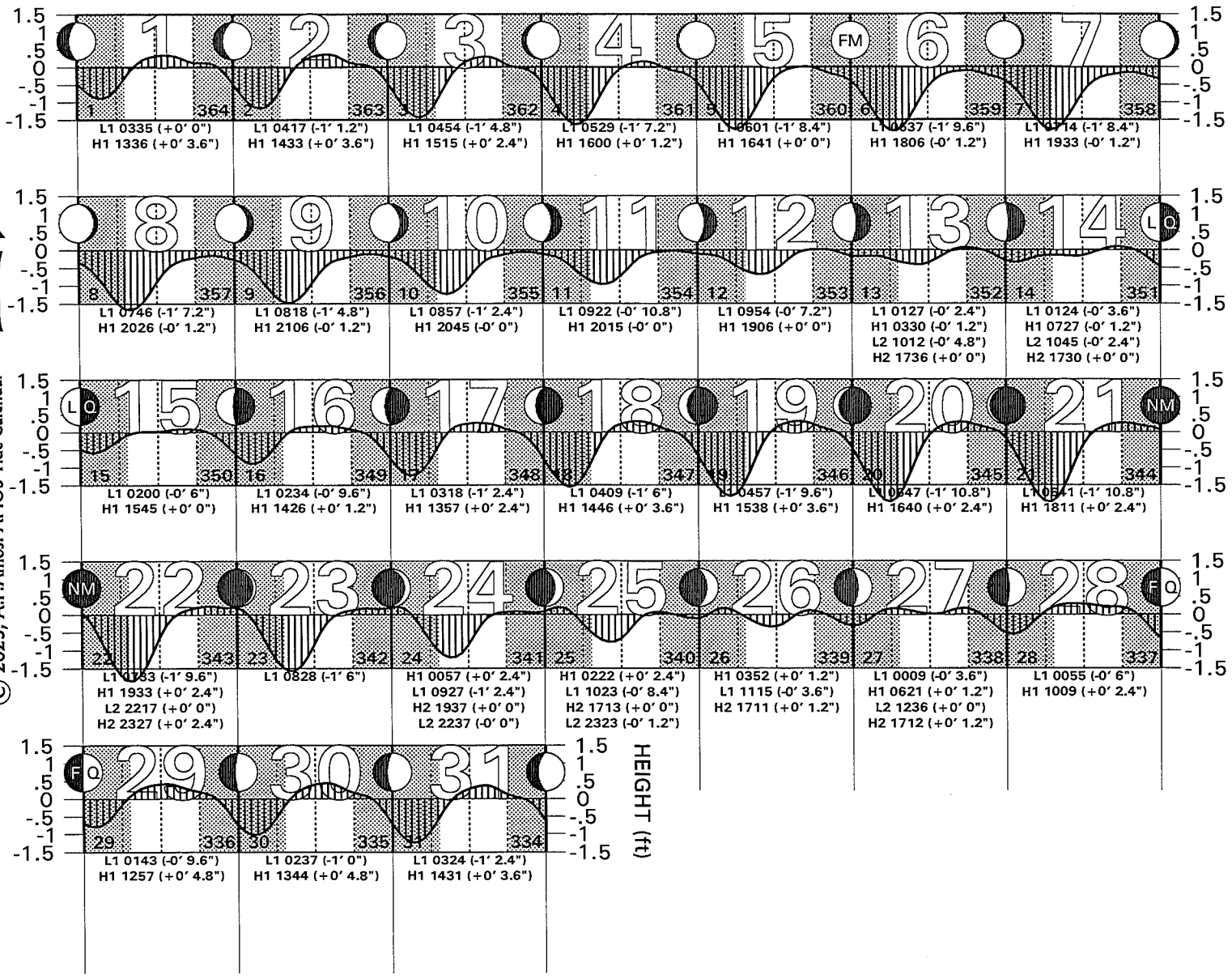
day's length will be 23 hours in April and 25 hours in October. Notice how this messes up a perfectly good calendar. This was one of the more difficult aspects of the calendar to program.

CENTRAL STANDARD TIME

SUN MON TUE WED THU FRI SAT

MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN

JAN 2023, A.F. Amos: AMOS Tide Calendar



PORT ARANSAS JETTIES

HEIGHT (ft) HEIGHT (ft) HEIGHT (ft) HEIGHT (ft) HEIGHT (ft)

SUNRISE, SUNSET and TWILIGHTS at Port Aransas for JAN 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LAN
		RISE	SET	LNPTH	START	END	LNPTH	START	END	LNPTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	
1	SUN 1 JAN	07:19	17:44	10:25	06:54	18:10	11:16	06:25	18:39	12:15	12:32
2	MON 2 JAN	07:20	17:45	10:26	06:54	18:11	11:17	06:25	18:40	12:15	12:32
3	TUE 3 JAN	07:20	17:46	10:26	06:54	18:11	11:17	06:25	18:41	12:15	12:33
4	WED 4 JAN	07:20	17:47	10:27	06:55	18:12	11:18	06:25	18:41	12:16	12:33
5	THU 5 JAN	07:20	17:47	10:27	06:55	18:13	11:18	06:26	18:42	12:16	12:34
6	FRI 6 JAN	07:20	17:48	10:28	06:55	18:14	11:19	06:26	18:43	12:17	12:34
7	SAT 7 JAN	07:21	17:49	10:28	06:55	18:14	11:19	06:26	18:43	12:17	12:35
8	SUN 8 JAN	07:21	17:50	10:29	06:55	18:15	11:20	06:26	18:44	12:18	12:35
9	MON 9 JAN	07:21	17:50	10:30	06:55	18:16	11:20	06:26	18:45	12:18	12:36
10	TUE 10 JAN	07:21	17:51	10:30	06:55	18:17	11:21	06:26	18:45	12:19	12:36
11	WED 11 JAN	07:21	17:52	10:31	06:55	18:17	11:22	06:27	18:46	12:20	12:36
12	THU 12 JAN	07:21	17:53	10:32	06:55	18:18	11:23	06:27	18:47	12:20	12:37
13	FRI 13 JAN	07:21	17:53	10:33	06:55	18:19	11:23	06:27	18:48	12:21	12:37
14	SAT 14 JAN	07:21	17:54	10:34	06:55	18:20	11:24	06:27	18:48	12:22	12:37
15	SUN 15 JAN	07:21	17:55	10:34	06:55	18:20	11:25	06:27	18:49	12:22	12:38
16	MON 16 JAN	07:21	17:56	10:35	06:55	18:21	11:26	06:27	18:50	12:23	12:38
17	TUE 17 JAN	07:20	17:57	10:36	06:55	18:22	11:27	06:27	18:50	12:24	12:39
18	WED 18 JAN	07:20	17:58	10:37	06:55	18:23	11:28	06:26	18:51	12:25	12:39
19	THU 19 JAN	07:20	17:58	10:38	06:55	18:23	11:28	06:26	18:52	12:26	12:39
20	FRI 20 JAN	07:20	17:59	10:39	06:55	18:24	11:29	06:26	18:53	12:26	12:39
21	SAT 21 JAN	07:20	18:00	10:40	06:55	18:25	11:30	06:26	18:53	12:27	12:40
22	SUN 22 JAN	07:19	18:01	10:41	06:54	18:26	11:31	06:26	18:54	12:28	12:40
23	MON 23 JAN	07:19	18:02	10:43	06:54	18:26	11:32	06:26	18:55	12:29	12:40
24	TUE 24 JAN	07:19	18:02	10:44	06:54	18:27	11:33	06:25	18:56	12:30	12:41
25	WED 25 JAN	07:18	18:03	10:45	06:54	18:28	11:34	06:25	18:56	12:31	12:41
26	THU 26 JAN	07:18	18:04	10:46	06:53	18:29	11:36	06:25	18:57	12:32	12:41
27	FRI 27 JAN	07:18	18:05	10:47	06:53	18:30	11:37	06:25	18:58	12:33	12:41
28	SAT 28 JAN	07:17	18:06	10:48	06:52	18:30	11:38	06:24	18:59	12:34	12:41
29	SUN 29 JAN	07:17	18:06	10:50	06:52	18:31	11:39	06:24	18:59	12:35	12:42
30	MON 30 JAN	07:16	18:07	10:51	06:52	18:32	11:40	06:24	19:00	12:36	12:42
31	TUE 31 JAN	07:16	18:08	10:52	06:51	18:33	11:41	06:23	19:01	12:38	12:42

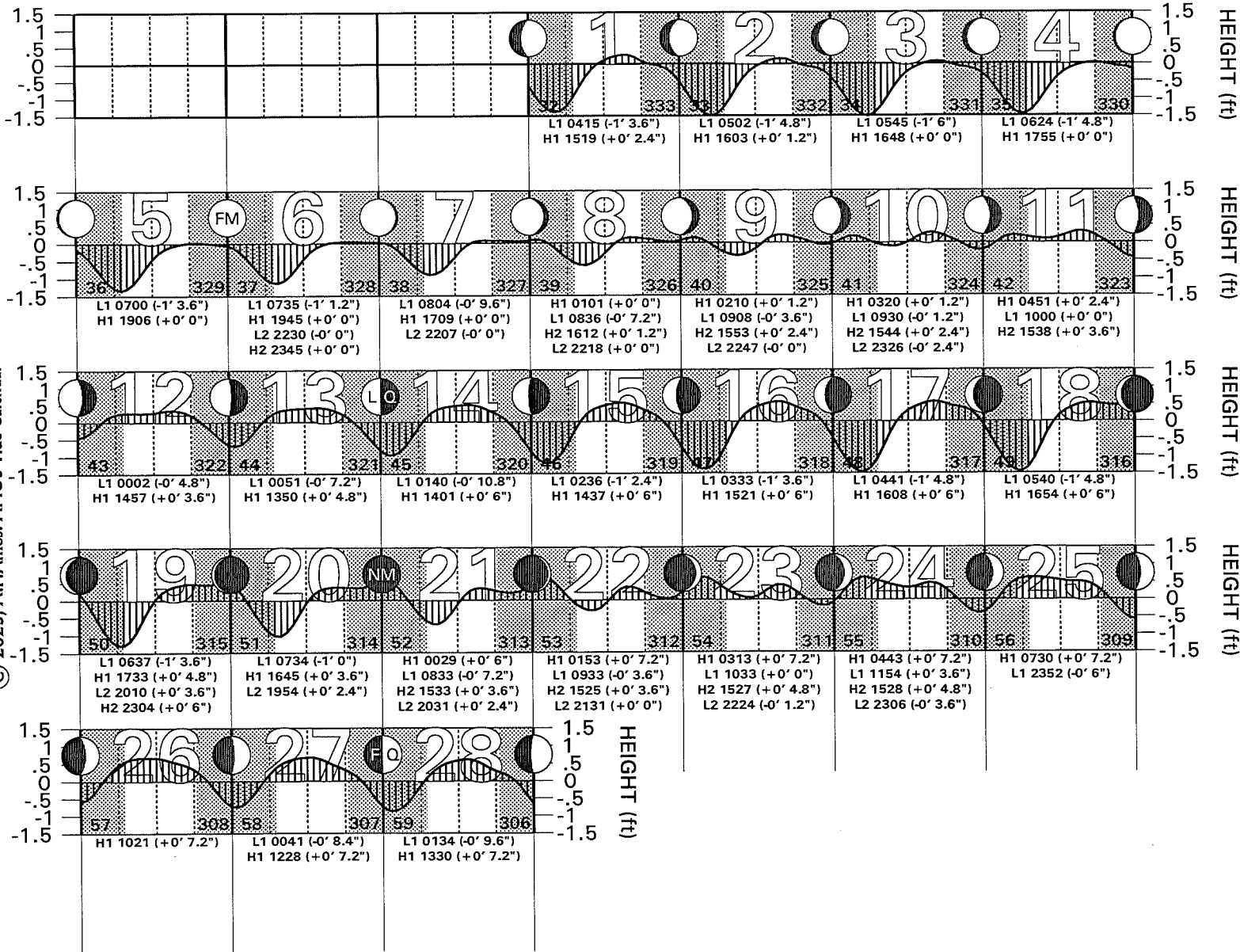
CENTRAL STANDARD TIME

SUN MON TUE WED THU FRI SAT

MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN

BFT

2023, A.F. AMOS: AMOS Tide Calendar



PORT ARANSAS JETTY-ES

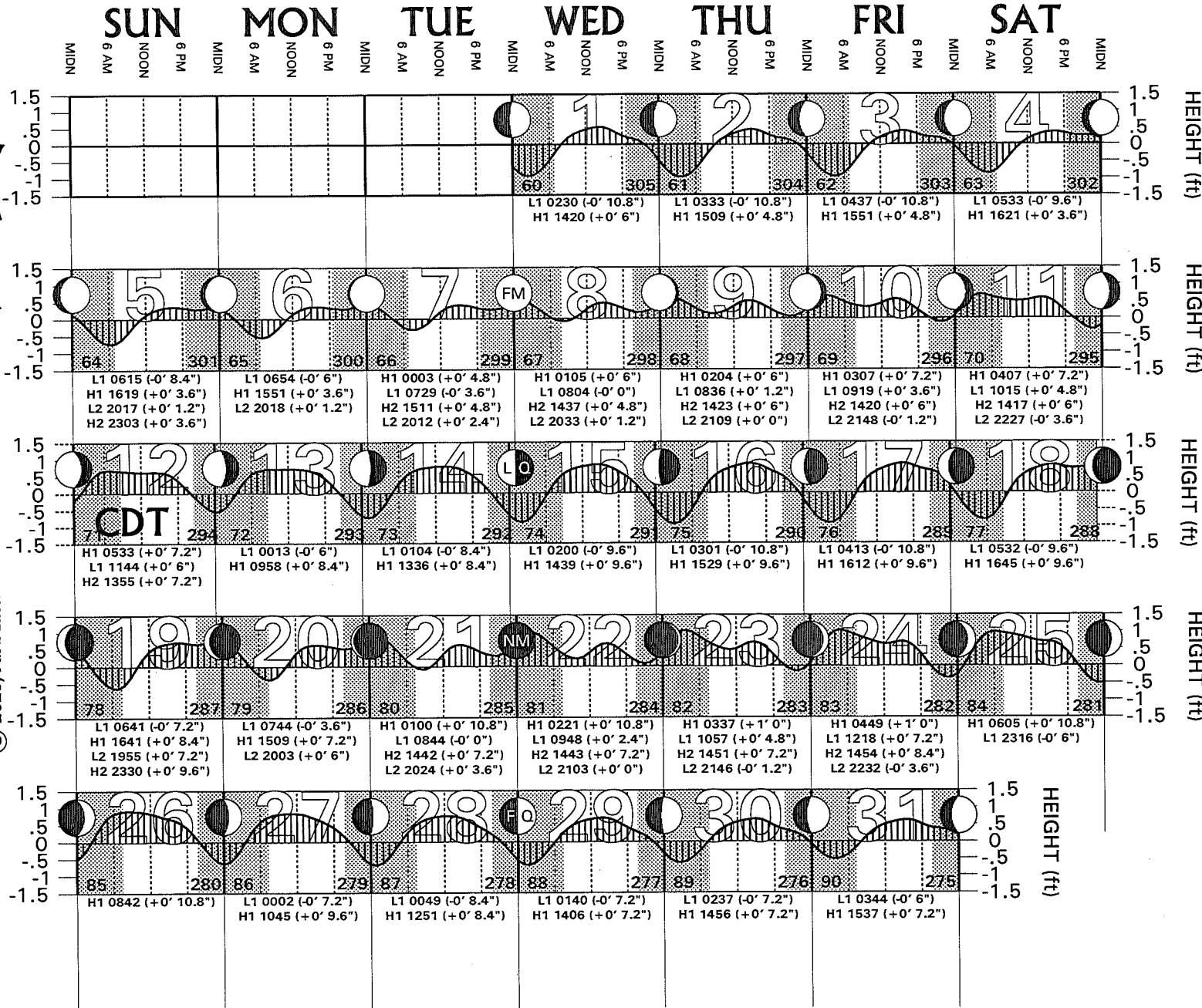
SUNRISE, SUNSET and TWILIGHTS at Port Aransas for FEB 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LANG
		RISE	SET	LNTH	START	END	LNHT	START	END	LNTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	
32	WED 1	FEB 07:15	18:09	10:54	06:51	18:33	11:43	06:23	19:01	12:39	12:42
33	THU 2	FEB 07:15	18:10	10:55	06:50	18:34	11:44	06:22	19:02	12:40	12:42
34	FRI 3	FEB 07:14	18:10	10:56	06:50	18:35	11:45	06:22	19:03	12:41	12:42
35	SAT 4	FEB 07:14	18:11	10:58	06:49	18:36	11:46	06:21	19:03	12:42	12:42
36	SUN 5	FEB 07:13	18:12	10:59	06:49	18:36	11:48	06:21	19:04	12:43	12:42
37	MON 6	FEB 07:12	18:13	11:00	06:48	18:37	11:49	06:20	19:05	12:45	12:43
38	TUE 7	FEB 07:12	18:14	11:02	06:47	18:38	11:50	06:20	19:06	12:46	12:43
39	WED 8	FEB 07:11	18:14	11:03	06:47	18:38	11:52	06:19	19:06	12:47	12:43
40	THU 9	FEB 07:10	18:15	11:05	06:46	18:39	11:53	06:18	19:07	12:48	12:43
41	FRI 10	FEB 07:10	18:16	11:06	06:46	18:40	11:54	06:18	19:08	12:50	12:43
42	SAT 11	FEB 07:09	18:16	11:08	06:45	18:41	11:56	06:17	19:08	12:51	12:43
43	SUN 12	FEB 07:08	18:17	11:09	06:44	18:41	11:57	06:16	19:09	12:52	12:43
44	MON 13	FEB 07:07	18:18	11:11	06:43	18:42	11:59	06:16	19:10	12:54	12:43
45	TUE 14	FEB 07:07	18:19	11:12	06:43	18:43	12:00	06:15	19:10	12:55	12:43
46	WED 15	FEB 07:06	18:19	11:14	06:42	18:43	12:01	06:14	19:11	12:56	12:43
47	THU 16	FEB 07:05	18:20	11:15	06:41	18:44	12:03	06:14	19:11	12:58	12:43
48	FRI 17	FEB 07:04	18:21	11:17	06:40	18:45	12:04	06:13	19:12	12:59	12:42
49	SAT 18	FEB 07:03	18:21	11:18	06:39	18:45	12:06	06:12	19:13	13:01	12:42
50	SUN 19	FEB 07:02	18:22	11:20	06:39	18:46	12:07	06:11	19:13	13:02	12:42
51	MON 20	FEB 07:02	18:23	11:21	06:38	18:47	12:09	06:10	19:14	13:04	12:42
52	TUE 21	FEB 07:01	18:24	11:23	06:37	18:47	12:10	06:10	19:15	13:05	12:42
53	WED 22	FEB 07:00	18:24	11:24	06:36	18:48	12:12	06:09	19:15	13:06	12:42
54	THU 23	FEB 06:59	18:25	11:26	06:35	18:49	12:13	06:08	19:16	13:08	12:42
55	FRI 24	FEB 06:58	18:25	11:28	06:34	18:49	12:15	06:07	19:16	13:09	12:42
56	SAT 25	FEB 06:57	18:26	11:29	06:33	18:50	12:16	06:06	19:17	13:11	12:42
57	SUN 26	FEB 06:56	18:27	11:31	06:32	18:50	12:18	06:05	19:18	13:12	12:41
58	MON 27	FEB 06:55	18:27	11:32	06:31	18:51	12:20	06:04	19:18	13:14	12:41
59	TUE 28	FEB 06:54	18:28	11:34	06:30	18:52	12:21	06:03	19:19	13:16	12:41

CENTRAL DAYLIGHT TIME STARTS AT 2 AM ON MARCH 12

MAR 2023

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PORT ARANSAS TIDES



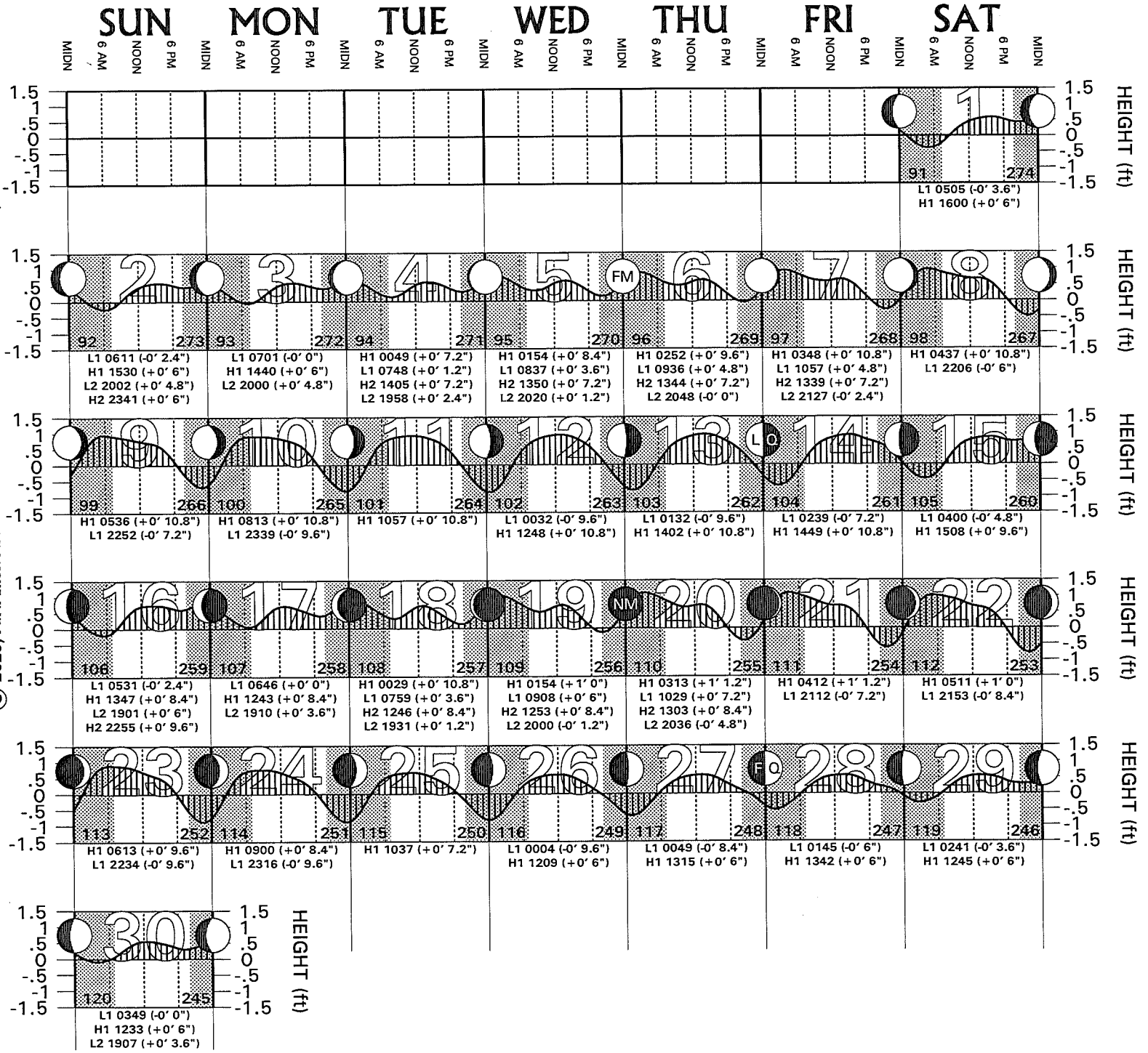
SUNRISE, SUNSET and TWILIGHTS at Port Aransas for MAR 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LANGTH	LAN
		RISE	SET	LANGTH	START	END	LANGHT	START	END	LANGTH		
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
60	WED 1 MAR	06:53	18:29	11:36	06:29	18:52	12:23	06:02	19:19	13:17	12:41	
61	THU 2 MAR	06:52	18:29	11:37	06:28	18:53	12:24	06:01	19:20	13:19	12:41	
62	FRI 3 MAR	06:51	18:30	11:39	06:27	18:53	12:26	06:00	19:21	13:20	12:40	
63	SAT 4 MAR	06:50	18:30	11:41	06:26	18:54	12:28	05:59	19:21	13:22	12:40	
64	SUN 5 MAR	06:49	18:31	11:42	06:25	18:55	12:29	05:58	19:22	13:23	12:40	
65	MON 6 MAR	06:48	18:32	11:44	06:24	18:55	12:31	05:57	19:22	13:25	12:40	
66	TUE 7 MAR	06:47	18:32	11:45	06:23	18:56	12:32	05:56	19:23	13:27	12:40	
67	WED 8 MAR	06:46	18:33	11:47	06:22	18:56	12:34	05:55	19:23	13:28	12:39	
68	THU 9 MAR	06:45	18:33	11:49	06:21	18:57	12:36	05:54	19:24	13:30	12:39	
69	FRI 10 MAR	06:44	18:34	11:50	06:20	18:57	12:37	05:53	19:25	13:32	12:39	
70	SAT 11 MAR	06:42	18:35	11:52	06:19	18:58	12:39	05:52	19:25	13:33	12:39	
71	SUN 12 MAR	07:41	19:35	11:54	07:18	19:59	12:41	06:51	20:26	13:35	13:38	
72	MON 13 MAR	07:40	19:36	11:55	07:17	19:59	12:42	06:50	20:26	13:37	13:38	
73	TUE 14 MAR	07:39	19:36	11:57	07:16	20:00	12:44	06:49	20:27	13:38	13:38	
74	WED 15 MAR	07:38	19:37	11:59	07:15	20:00	12:46	06:47	20:27	13:40	13:37	
75	THU 16 MAR	07:37	19:37	12:00	07:14	20:01	12:47	06:46	20:28	13:42	13:37	
76	FRI 17 MAR	07:36	19:38	12:02	07:12	20:01	12:49	06:45	20:28	13:43	13:37	
77	SAT 18 MAR	07:35	19:38	12:04	07:11	20:02	12:51	06:44	20:29	13:45	13:37	
78	SUN 19 MAR	07:34	19:39	12:05	07:10	20:02	12:52	06:43	20:30	13:47	13:36	
79	MON 20 MAR	07:32	19:40	12:07	07:09	20:03	12:54	06:42	20:30	13:48	13:36	
80	TUE 21 MAR	07:31	19:40	12:09	07:08	20:03	12:56	06:41	20:31	13:50	13:36	
81	WED 22 MAR	07:30	19:41	12:10	07:07	20:04	12:57	06:39	20:31	13:52	13:35	
82	THU 23 MAR	07:29	19:41	12:12	07:06	20:05	12:59	06:38	20:32	13:54	13:35	
83	FRI 24 MAR	07:28	19:42	12:14	07:04	20:05	13:01	06:37	20:32	13:55	13:35	
84	SAT 25 MAR	07:27	19:42	12:15	07:03	20:06	13:02	06:36	20:33	13:57	13:34	
85	SUN 26 MAR	07:26	19:43	12:17	07:02	20:06	13:04	06:35	20:34	13:59	13:34	
86	MON 27 MAR	07:24	19:43	12:19	07:01	20:07	13:06	06:34	20:34	14:00	13:34	
87	TUE 28 MAR	07:23	19:44	12:20	07:00	20:07	13:07	06:32	20:35	14:02	13:34	
88	WED 29 MAR	07:22	19:44	12:22	06:59	20:08	13:09	06:31	20:35	14:04	13:33	
89	THU 30 MAR	07:21	19:45	12:24	06:58	20:08	13:11	06:30	20:36	14:06	13:33	
90	FRI 31 MAR	07:20	19:45	12:25	06:56	20:09	13:12	06:29	20:36	14:08	13:33	

# APR 2023

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## CENTRAL DAYLIGHT TIME



# PORT ARANSAS JETTIES

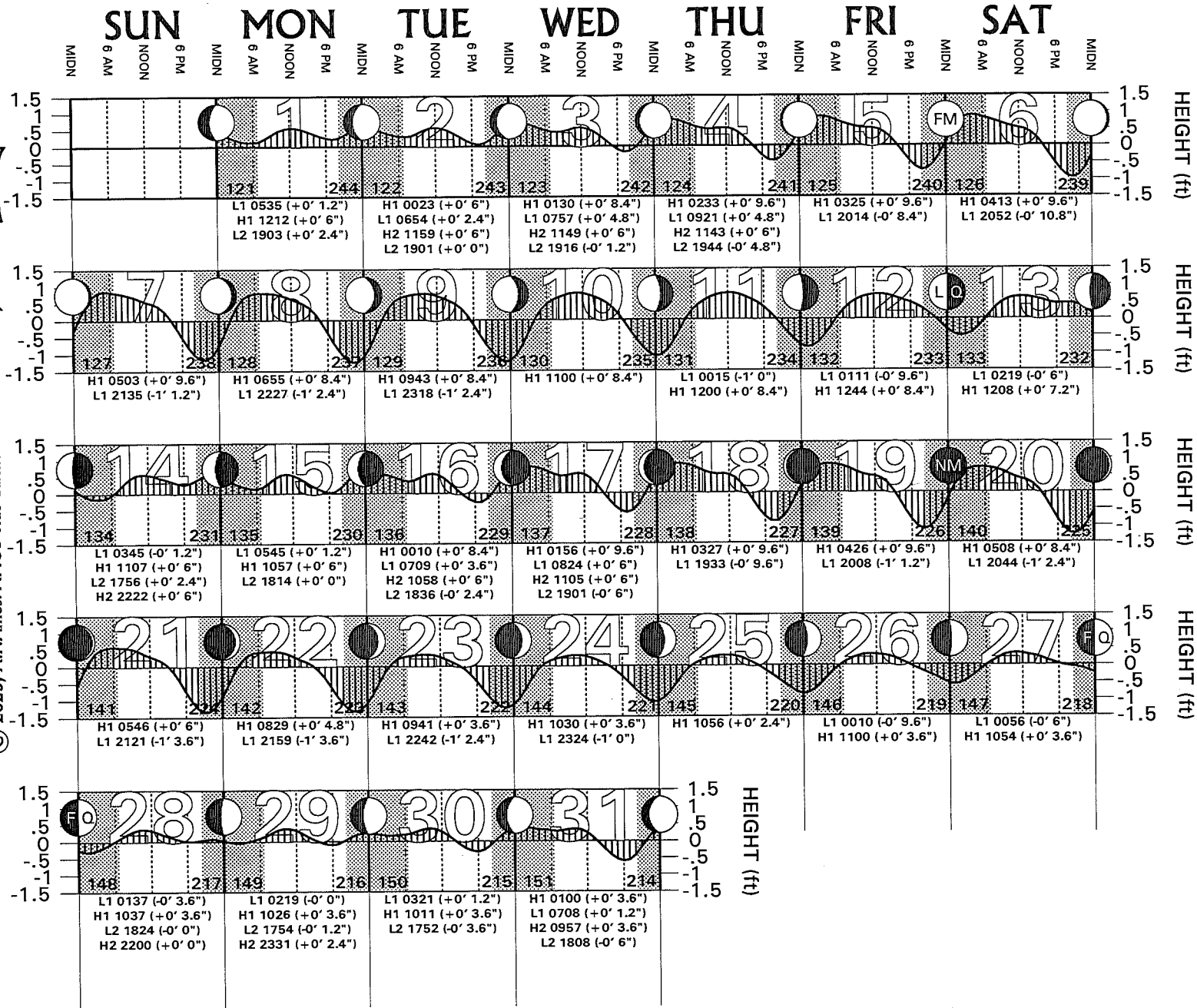
SUNRISE, SUNSET and TWILIGHTS at Port Aransas for APR 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LAN
		RISE	SET	LNGTH	START	END	LNGHT	START	END	LNGTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	
91	SAT 1 APR	07:19	19:46	12:27	06:55	20:09	13:14	06:28	20:37	14:09	13:32
92	SUN 2 APR	07:18	19:46	12:29	06:54	20:10	13:16	06:27	20:38	14:11	13:32
93	MON 3 APR	07:17	19:47	12:30	06:53	20:11	13:18	06:25	20:38	14:13	13:32
94	TUE 4 APR	07:15	19:47	12:32	06:52	20:11	13:19	06:24	20:39	14:15	13:31
95	WED 5 APR	07:14	19:48	12:34	06:51	20:12	13:21	06:23	20:39	14:16	13:31
96	THU 6 APR	07:13	19:48	12:35	06:50	20:12	13:23	06:22	20:40	14:18	13:31
97	FRI 7 APR	07:12	19:49	12:37	06:48	20:13	13:24	06:21	20:41	14:20	13:31
98	SAT 8 APR	07:11	19:50	12:38	06:47	20:13	13:26	06:19	20:41	14:22	13:30
99	SUN 9 APR	07:10	19:50	12:40	06:46	20:14	13:28	06:18	20:42	14:24	13:30
100	MON 10 APR	07:09	19:51	12:42	06:45	20:14	13:29	06:17	20:42	14:25	13:30
101	TUE 11 APR	07:08	19:51	12:43	06:44	20:15	13:31	06:16	20:43	14:27	13:29
102	WED 12 APR	07:07	19:52	12:45	06:43	20:16	13:33	06:15	20:44	14:29	13:29
103	THU 13 APR	07:06	19:52	12:46	06:42	20:16	13:34	06:14	20:44	14:31	13:29
104	FRI 14 APR	07:05	19:53	12:48	06:41	20:17	13:36	06:13	20:45	14:32	13:29
105	SAT 15 APR	07:04	19:53	12:50	06:40	20:17	13:38	06:11	20:46	14:34	13:28
106	SUN 16 APR	07:03	19:54	12:51	06:39	20:18	13:39	06:10	20:46	14:36	13:28
107	MON 17 APR	07:02	19:54	12:53	06:38	20:18	13:41	06:09	20:47	14:38	13:28
108	TUE 18 APR	07:01	19:55	12:54	06:36	20:19	13:43	06:08	20:48	14:39	13:28
109	WED 19 APR	07:00	19:55	12:56	06:35	20:20	13:44	06:07	20:48	14:41	13:28
110	THU 20 APR	06:59	19:56	12:57	06:34	20:20	13:46	06:06	20:49	14:43	13:27
111	FRI 21 APR	06:58	19:57	12:59	06:33	20:21	13:47	06:05	20:50	14:45	13:27
112	SAT 22 APR	06:57	19:57	13:00	06:32	20:21	13:49	06:04	20:50	14:46	13:27
113	SUN 23 APR	06:56	19:58	13:02	06:31	20:22	13:51	06:03	20:51	14:48	13:27
114	MON 24 APR	06:55	19:58	13:03	06:30	20:23	13:52	06:02	20:52	14:50	13:27
115	TUE 25 APR	06:54	19:59	13:05	06:29	20:23	13:54	06:01	20:52	14:52	13:26
116	WED 26 APR	06:53	19:59	13:06	06:29	20:24	13:55	06:00	20:53	14:53	13:26
117	THU 27 APR	06:52	20:00	13:08	06:28	20:25	13:57	05:59	20:54	14:55	13:26
118	FRI 28 APR	06:51	20:01	13:09	06:27	20:25	13:58	05:58	20:54	14:57	13:26
119	SAT 29 APR	06:50	20:01	13:11	06:26	20:26	14:00	05:57	20:55	14:59	13:26
120	SUN 30 APR	06:50	20:02	13:12	06:25	20:26	14:02	05:56	20:56	15:00	13:26

CENTRAL DAYLIGHT TIME

MAY 2023

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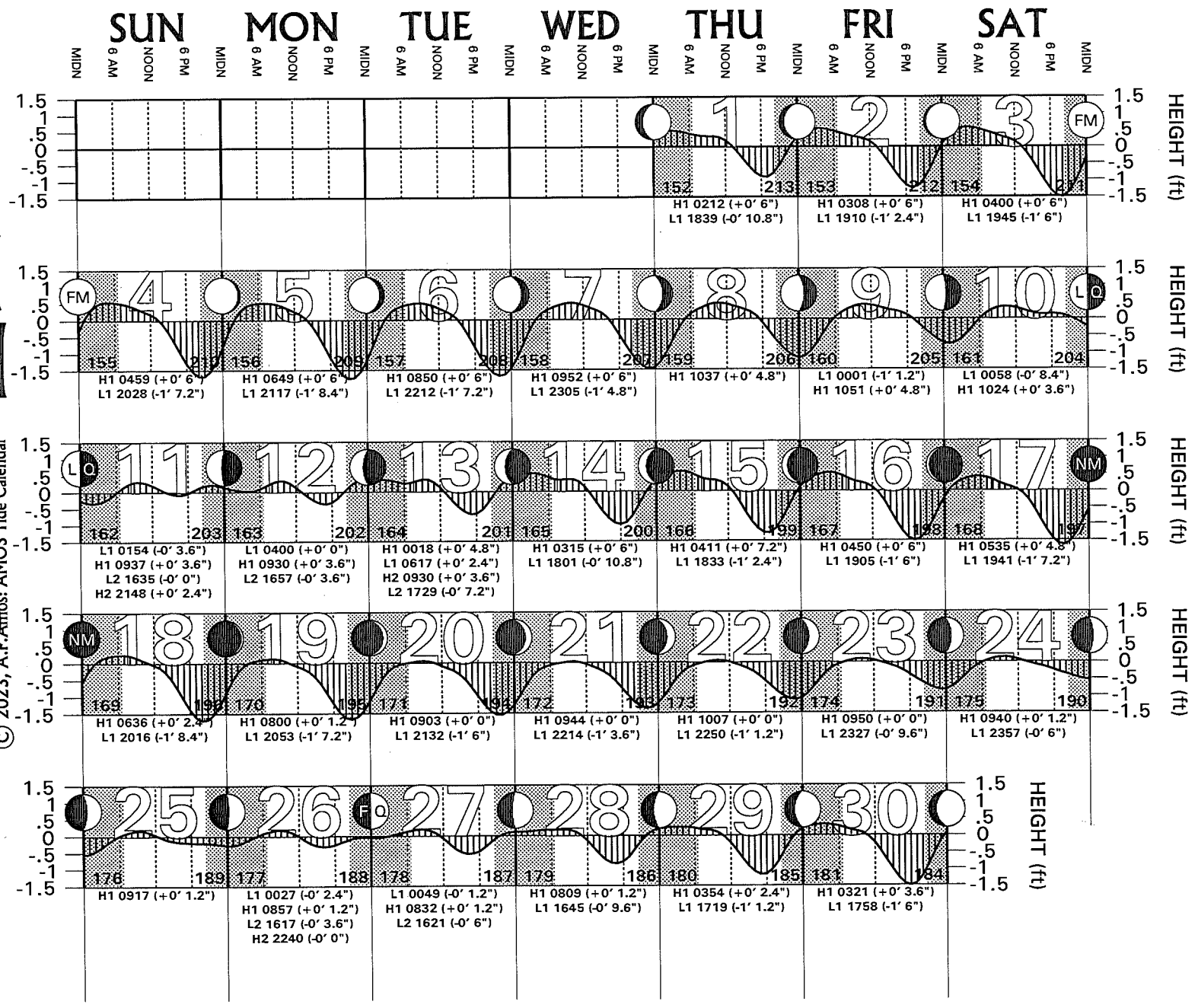
SUNRISE, SUNSET and TWILIGHTS at Port Aransas for MAY 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LAN
		RISE	SET	LNTH	START	END	LNTH	START	END	LNTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	
121	MON 1 MAY	06:49	20:02	13:14	06:24	20:27	14:03	05:55	20:56	15:02	13:25
122	TUE 2 MAY	06:48	20:03	13:15	06:23	20:28	14:05	05:54	20:57	15:04	13:25
123	WED 3 MAY	06:47	20:03	13:16	06:22	20:28	14:06	05:53	20:58	15:05	13:25
124	THU 4 MAY	06:46	20:04	13:18	06:21	20:29	14:08	05:52	20:59	15:07	13:25
125	FRI 5 MAY	06:46	20:05	13:19	06:21	20:30	14:09	05:51	20:59	15:08	13:25
126	SAT 6 MAY	06:45	20:05	13:20	06:20	20:30	14:10	05:50	21:00	15:10	13:25
127	SUN 7 MAY	06:44	20:06	13:22	06:19	20:31	14:12	05:49	21:01	15:12	13:25
128	MON 8 MAY	06:43	20:06	13:23	06:18	20:31	14:13	05:48	21:01	15:13	13:25
129	TUE 9 MAY	06:43	20:07	13:24	06:17	20:32	14:15	05:47	21:02	15:15	13:25
130	WED 10 MAY	06:42	20:08	13:26	06:17	20:33	14:16	05:47	21:03	15:16	13:25
131	THU 11 MAY	06:41	20:08	13:27	06:16	20:33	14:17	05:46	21:04	15:18	13:25
132	FRI 12 MAY	06:41	20:09	13:28	06:15	20:34	14:19	05:45	21:04	15:19	13:25
133	SAT 13 MAY	06:40	20:09	13:29	06:15	20:35	14:20	05:44	21:05	15:21	13:25
134	SUN 14 MAY	06:39	20:10	13:30	06:14	20:35	14:21	05:44	21:06	15:22	13:25
135	MON 15 MAY	06:39	20:10	13:32	06:13	20:36	14:23	05:43	21:06	15:24	13:25
136	TUE 16 MAY	06:38	20:11	13:33	06:13	20:37	14:24	05:42	21:07	15:25	13:25
137	WED 17 MAY	06:38	20:12	13:34	06:12	20:37	14:25	05:42	21:08	15:26	13:25
138	THU 18 MAY	06:37	20:12	13:35	06:12	20:38	14:26	05:41	21:09	15:28	13:25
139	FRI 19 MAY	06:37	20:13	13:36	06:11	20:38	14:27	05:40	21:09	15:29	13:25
140	SAT 20 MAY	06:36	20:13	13:37	06:11	20:39	14:29	05:40	21:10	15:30	13:25
141	SUN 21 MAY	06:36	20:14	13:38	06:10	20:40	14:30	05:39	21:11	15:32	13:25
142	MON 22 MAY	06:35	20:14	13:39	06:10	20:40	14:31	05:39	21:11	15:33	13:25
143	TUE 23 MAY	06:35	20:15	13:40	06:09	20:41	14:32	05:38	21:12	15:34	13:25
144	WED 24 MAY	06:35	20:16	13:41	06:09	20:42	14:33	05:38	21:13	15:35	13:25
145	THU 25 MAY	06:34	20:16	13:42	06:08	20:42	14:34	05:37	21:13	15:36	13:25
146	FRI 26 MAY	06:34	20:17	13:43	06:08	20:43	14:35	05:37	21:14	15:37	13:25
147	SAT 27 MAY	06:34	20:17	13:44	06:08	20:43	14:36	05:36	21:15	15:38	13:25
148	SUN 28 MAY	06:33	20:18	13:44	06:07	20:44	14:37	05:36	21:15	15:40	13:26
149	MON 29 MAY	06:33	20:18	13:45	06:07	20:44	14:38	05:35	21:16	15:41	13:26
150	TUE 30 MAY	06:33	20:19	13:46	06:07	20:45	14:38	05:35	21:17	15:41	13:26
151	WED 31 MAY	06:33	20:19	13:47	06:06	20:46	14:39	05:35	21:17	15:42	13:26

# JUN 2022

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## CENTRAL DAYLIGHT TIME



# PORT ARANSAS JETTIES

SUNRISE, SUNSET and TWILIGHTS at Port Aransas for JUN 2023

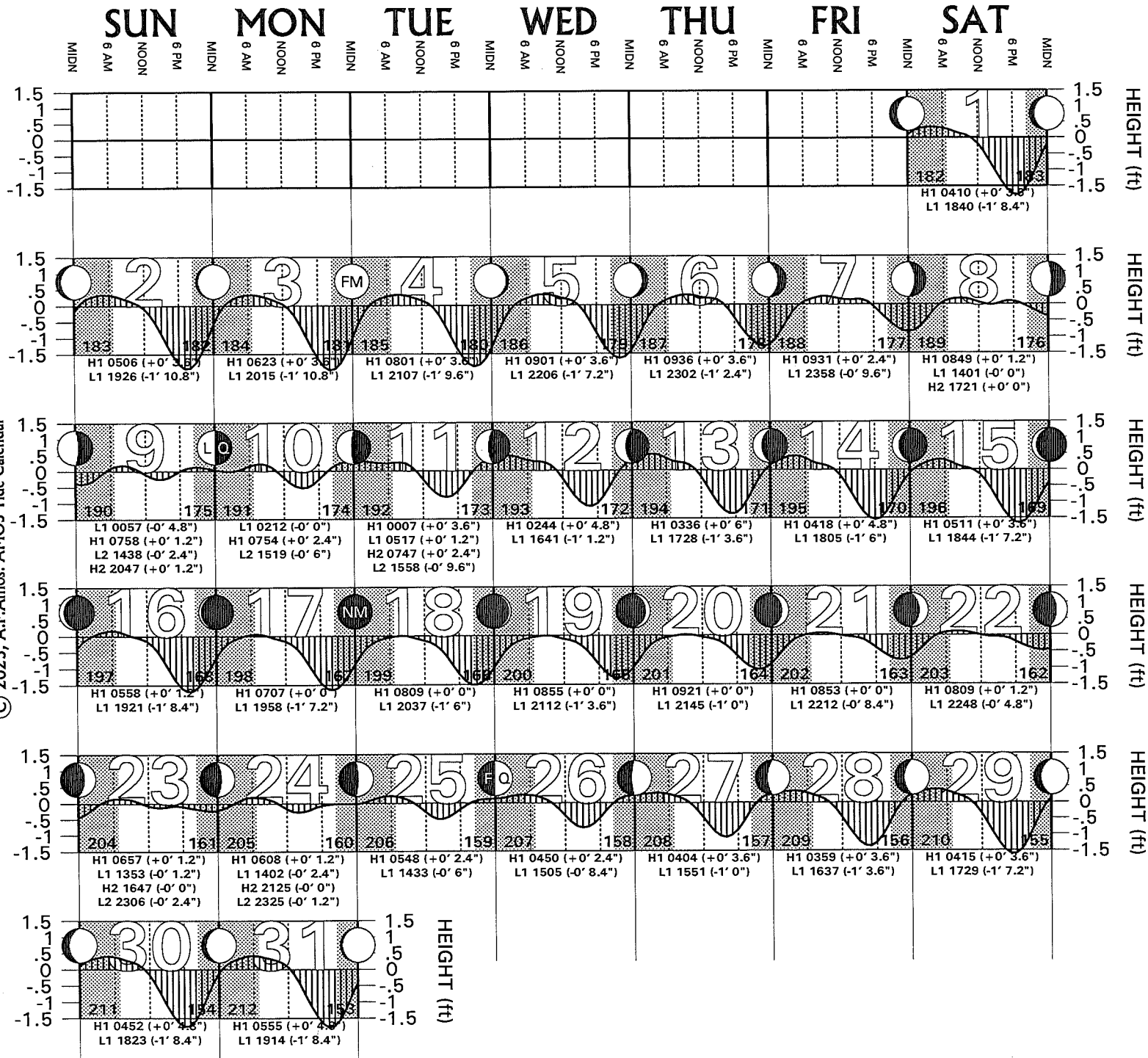
JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LNPTH	LAN
		RISE	SET	LNPTH	START	END	LNPTH	START	END	LNPTH		
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
152	THU 1 JUN	06:32	20:20	13:47	06:06	20:46	14:40	05:34	21:18	15:43	13:26	
153	FRI 2 JUN	06:32	20:20	13:48	06:06	20:47	14:41	05:34	21:18	15:44	13:26	
154	SAT 3 JUN	06:32	20:21	13:49	06:06	20:47	14:41	05:34	21:19	15:45	13:26	
155	SUN 4 JUN	06:32	20:21	13:49	06:05	20:48	14:42	05:34	21:19	15:46	13:27	
156	MON 5 JUN	06:32	20:22	13:50	06:05	20:48	14:43	05:33	21:20	15:47	13:27	
157	TUE 6 JUN	06:32	20:22	13:50	06:05	20:49	14:43	05:33	21:21	15:47	13:27	
158	WED 7 JUN	06:32	20:23	13:51	06:05	20:49	14:44	05:33	21:21	15:48	13:27	
159	THU 8 JUN	06:32	20:23	13:51	06:05	20:50	14:44	05:33	21:22	15:48	13:27	
160	FRI 9 JUN	06:32	20:23	13:52	06:05	20:50	14:45	05:33	21:22	15:49	13:27	
161	SAT 10 JUN	06:31	20:24	13:52	06:05	20:50	14:45	05:33	21:22	15:50	13:28	
162	SUN 11 JUN	06:32	20:24	13:53	06:05	20:51	14:46	05:33	21:23	15:50	13:28	
163	MON 12 JUN	06:32	20:25	13:53	06:05	20:51	14:46	05:33	21:23	15:50	13:28	
164	TUE 13 JUN	06:32	20:25	13:53	06:05	20:52	14:47	05:33	21:24	15:51	13:28	
165	WED 14 JUN	06:32	20:25	13:54	06:05	20:52	14:47	05:33	21:24	15:51	13:28	
166	THU 15 JUN	06:32	20:26	13:54	06:05	20:52	14:47	05:33	21:24	15:52	13:29	
167	FRI 16 JUN	06:32	20:26	13:54	06:05	20:53	14:47	05:33	21:25	15:52	13:29	
168	SAT 17 JUN	06:32	20:26	13:54	06:05	20:53	14:48	05:33	21:25	15:52	13:29	
169	SUN 18 JUN	06:32	20:26	13:54	06:05	20:53	14:48	05:33	21:25	15:52	13:29	
170	MON 19 JUN	06:32	20:27	13:54	06:06	20:53	14:48	05:33	21:26	15:52	13:30	
171	TUE 20 JUN	06:32	20:27	13:54	06:06	20:54	14:48	05:34	21:26	15:52	13:30	
172	WED 21 JUN	06:33	20:27	13:54	06:06	20:54	14:48	05:34	21:26	15:52	13:30	
173	THU 22 JUN	06:33	20:27	13:54	06:06	20:54	14:48	05:34	21:26	15:52	13:30	
174	FRI 23 JUN	06:33	20:28	13:54	06:06	20:54	14:48	05:34	21:26	15:52	13:30	
175	SAT 24 JUN	06:33	20:28	13:54	06:07	20:54	14:48	05:34	21:27	15:52	13:31	
176	SUN 25 JUN	06:34	20:28	13:54	06:07	20:55	14:48	05:35	21:27	15:52	13:31	
177	MON 26 JUN	06:34	20:28	13:54	06:07	20:55	14:47	05:35	21:27	15:52	13:31	
178	TUE 27 JUN	06:34	20:28	13:54	06:08	20:55	14:47	05:35	21:27	15:51	13:31	
179	WED 28 JUN	06:35	20:28	13:54	06:08	20:55	14:47	05:36	21:27	15:51	13:31	
180	THU 29 JUN	06:35	20:28	13:53	06:08	20:55	14:47	05:36	21:27	15:51	13:32	
181	FRI 30 JUN	06:35	20:28	13:53	06:09	20:55	14:46	05:37	21:27	15:50	13:32	

CENTRAL DAYLIGHT TIME

PORT ARANSAS TIDES

JUL 2023

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SUNRISE, SUNSET and TWILIGHTS at Port Aransas for JUL 2023

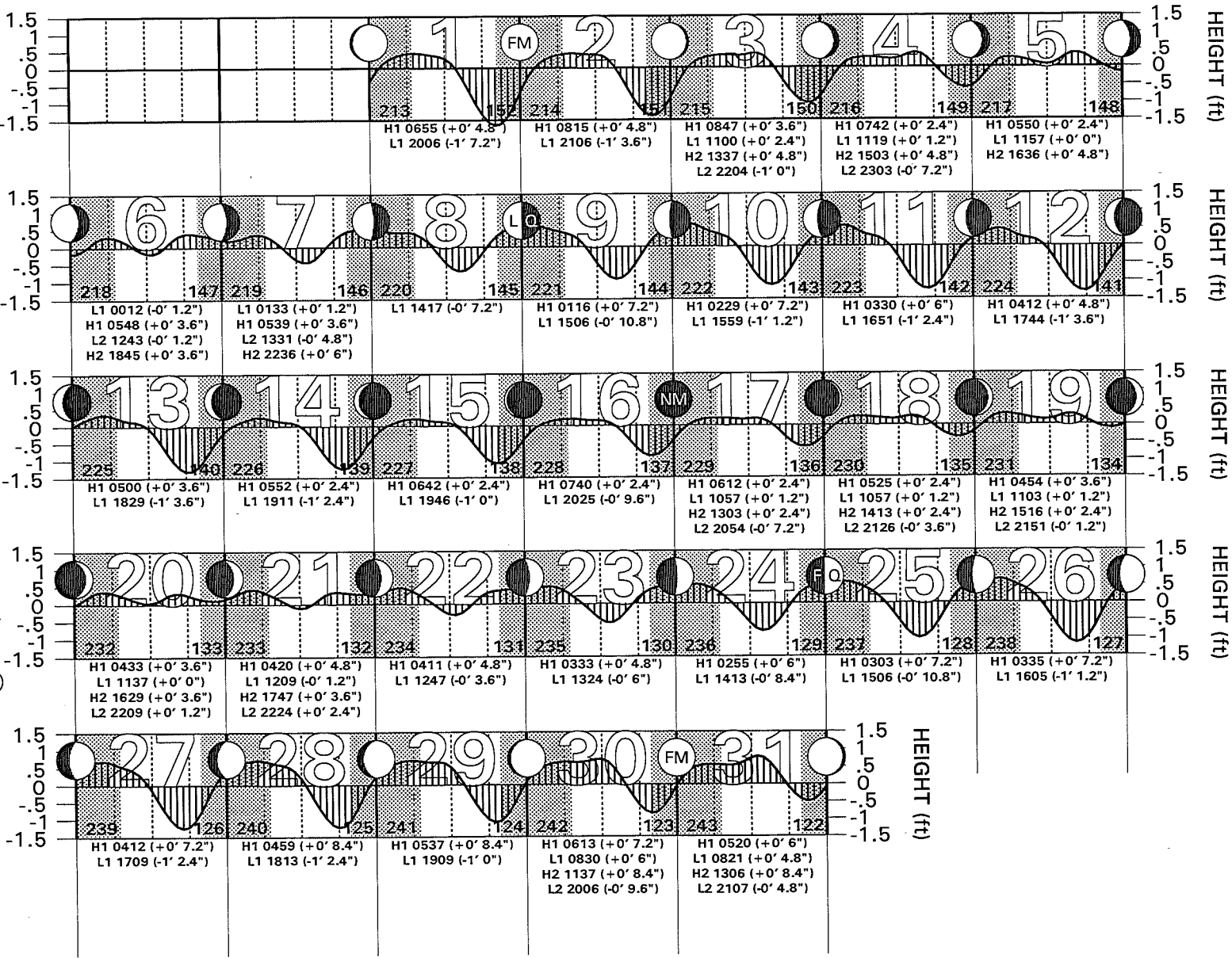
JDAY	DATE	SUNRISE/SUNSET		LNGTH	CIVIL TWILIGHT		NAUTICAL TWILIGHT			LAN		
		RISE	SET		START	END	LNGHT	START	END		LNGTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
182	SAT 1	JUL	06:36	20:28	13:53	06:09	20:55	14:46	05:37	21:27	15:50	13:32
183	SUN 2	JUL	06:36	20:28	13:52	06:09	20:55	14:45	05:37	21:27	15:50	13:32
184	MON 3	JUL	06:36	20:28	13:52	06:10	20:55	14:45	05:38	21:27	15:49	13:32
185	TUE 4	JUL	06:37	20:28	13:51	06:10	20:55	14:44	05:38	21:27	15:48	13:33
186	WED 5	JUL	06:37	20:28	13:51	06:11	20:55	14:44	05:39	21:27	15:48	13:33
187	THU 6	JUL	06:38	20:28	13:50	06:11	20:54	14:43	05:39	21:26	15:47	13:33
188	FRI 7	JUL	06:38	20:28	13:50	06:12	20:54	14:43	05:40	21:26	15:46	13:33
189	SAT 8	JUL	06:39	20:28	13:49	06:12	20:54	14:42	05:40	21:26	15:46	13:33
190	SUN 9	JUL	06:39	20:28	13:49	06:13	20:54	14:41	05:41	21:26	15:45	13:33
191	MON 10	JUL	06:39	20:27	13:48	06:13	20:54	14:41	05:41	21:25	15:44	13:33
192	TUE 11	JUL	06:40	20:27	13:47	06:14	20:54	14:40	05:42	21:25	15:43	13:34
193	WED 12	JUL	06:40	20:27	13:47	06:14	20:53	14:39	05:42	21:25	15:42	13:34
194	THU 13	JUL	06:41	20:27	13:46	06:15	20:53	14:38	05:43	21:25	15:41	13:34
195	FRI 14	JUL	06:41	20:26	13:45	06:15	20:53	14:37	05:44	21:24	15:40	13:34
196	SAT 15	JUL	06:42	20:26	13:44	06:16	20:52	14:37	05:44	21:24	15:39	13:34
197	SUN 16	JUL	06:42	20:26	13:44	06:16	20:52	14:36	05:45	21:23	15:38	13:34
198	MON 17	JUL	06:43	20:26	13:43	06:17	20:52	14:35	05:45	21:23	15:37	13:34
199	TUE 18	JUL	06:43	20:25	13:42	06:17	20:51	14:34	05:46	21:22	15:36	13:34
200	WED 19	JUL	06:44	20:25	13:41	06:18	20:51	14:33	05:47	21:22	15:35	13:34
201	THU 20	JUL	06:44	20:24	13:40	06:19	20:50	14:32	05:47	21:21	15:34	13:34
202	FRI 21	JUL	06:45	20:24	13:39	06:19	20:50	14:31	05:48	21:21	15:33	13:34
203	SAT 22	JUL	06:45	20:23	13:38	06:20	20:49	14:30	05:49	21:20	15:32	13:34
204	SUN 23	JUL	06:46	20:23	13:37	06:20	20:49	14:29	05:49	21:20	15:30	13:35
205	MON 24	JUL	06:47	20:23	13:36	06:21	20:48	14:27	05:50	21:19	15:29	13:35
206	TUE 25	JUL	06:47	20:22	13:35	06:21	20:48	14:26	05:51	21:18	15:28	13:35
207	WED 26	JUL	06:48	20:21	13:34	06:22	20:47	14:25	05:51	21:18	15:26	13:35
208	THU 27	JUL	06:48	20:21	13:33	06:23	20:46	14:24	05:52	21:17	15:25	13:35
209	FRI 28	JUL	06:49	20:20	13:32	06:23	20:46	14:23	05:53	21:16	15:24	13:35
210	SAT 29	JUL	06:49	20:20	13:30	06:24	20:45	14:21	05:53	21:16	15:22	13:34
211	SUN 30	JUL	06:50	20:19	13:29	06:24	20:44	14:20	05:54	21:15	15:21	13:34
212	MON 31	JUL	06:50	20:18	13:28	06:25	20:44	14:19	05:55	21:14	15:19	13:34

CENTRAL DAYLIGHT TIME

SUN MON TUE WED THU FRI SAT

MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN

AUGUST 2023  
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PORT ARANSAS TIDES

SUNRISE, SUNSET and TWILIGHTS at Port Aransas for AUG 2023

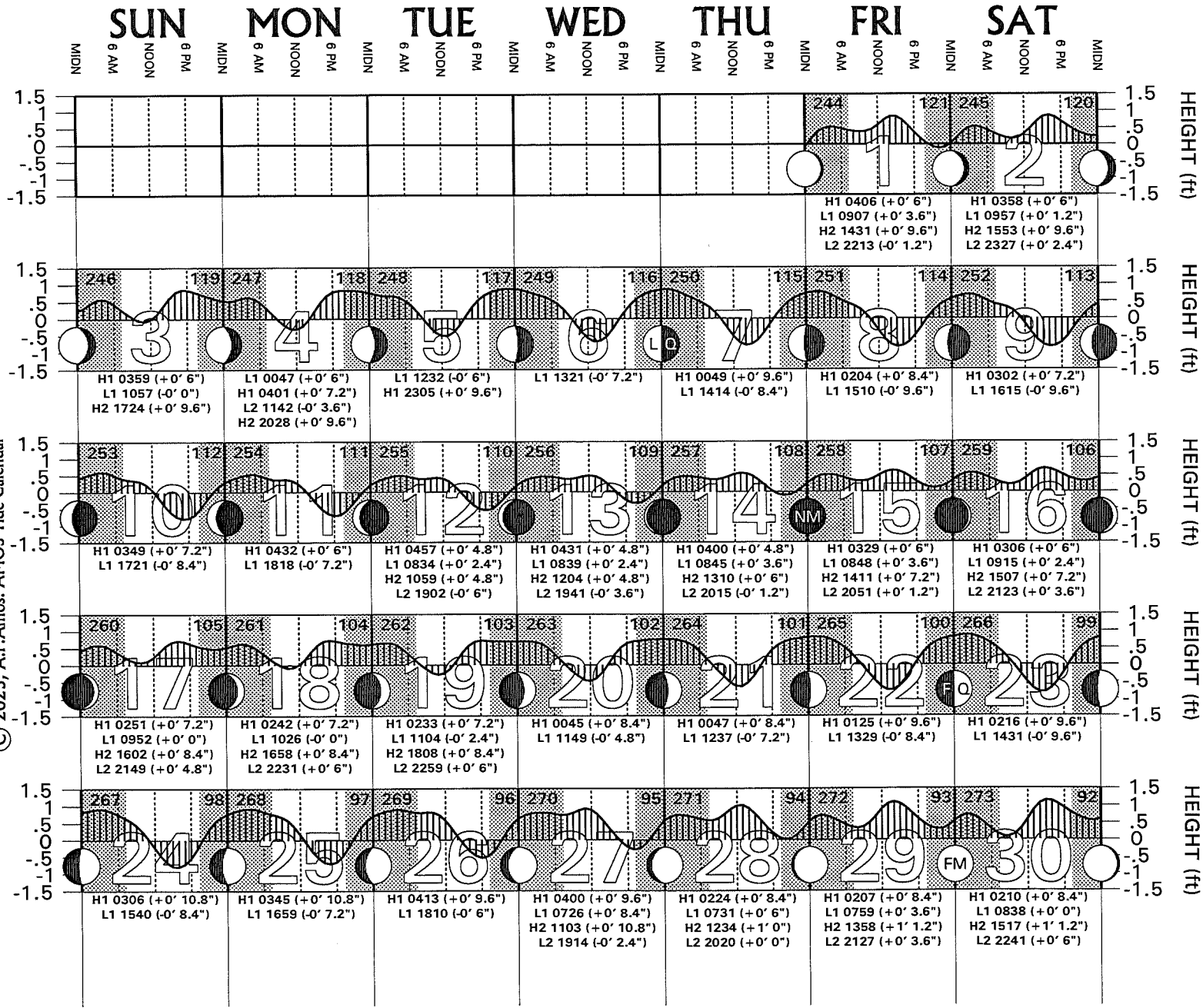
JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LAN
		RISE	SET	LNPTH	START	END	LNPTH	START	END	LNPTH	
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	
213	TUE 1 AUG	06:51	20:18	13:27	06:26	20:43	14:17	05:55	21:13	15:18	13:34
214	WED 2 AUG	06:51	20:17	13:26	06:26	20:42	14:16	05:56	21:12	15:16	13:34
215	THU 3 AUG	06:52	20:16	13:24	06:27	20:42	14:15	05:57	21:12	15:15	13:34
216	FRI 4 AUG	06:53	20:16	13:23	06:27	20:41	14:13	05:57	21:11	15:13	13:34
217	SAT 5 AUG	06:53	20:15	13:22	06:28	20:40	14:12	05:58	21:10	15:12	13:34
218	SUN 6 AUG	06:54	20:14	13:21	06:29	20:39	14:11	05:59	21:09	15:10	13:34
219	MON 7 AUG	06:54	20:13	13:19	06:29	20:38	14:09	05:59	21:08	15:09	13:34
220	TUE 8 AUG	06:55	20:13	13:18	06:30	20:37	14:08	06:00	21:07	15:07	13:34
221	WED 9 AUG	06:55	20:12	13:17	06:30	20:37	14:06	06:01	21:06	15:05	13:34
222	THU 10 AUG	06:56	20:11	13:15	06:31	20:36	14:05	06:01	21:05	15:04	13:33
223	FRI 11 AUG	06:56	20:10	13:14	06:32	20:35	14:03	06:02	21:04	15:02	13:33
224	SAT 12 AUG	06:57	20:09	13:12	06:32	20:34	14:02	06:03	21:03	15:01	13:33
225	SUN 13 AUG	06:57	20:08	13:11	06:33	20:33	14:00	06:03	21:02	14:59	13:33
226	MON 14 AUG	06:58	20:07	13:10	06:33	20:32	13:59	06:04	21:01	14:57	13:33
227	TUE 15 AUG	06:58	20:07	13:08	06:34	20:31	13:57	06:05	21:00	14:56	13:32
228	WED 16 AUG	06:59	20:06	13:07	06:34	20:30	13:56	06:05	20:59	14:54	13:32
229	THU 17 AUG	06:59	20:05	13:05	06:35	20:29	13:54	06:06	20:58	14:52	13:32
230	FRI 18 AUG	07:00	20:04	13:04	06:35	20:28	13:53	06:07	20:57	14:50	13:32
231	SAT 19 AUG	07:00	20:03	13:02	06:36	20:27	13:51	06:07	20:56	14:49	13:32
232	SUN 20 AUG	07:01	20:02	13:01	06:37	20:26	13:50	06:08	20:55	14:47	13:31
233	MON 21 AUG	07:01	20:01	12:59	06:37	20:25	13:48	06:08	20:54	14:45	13:31
234	TUE 22 AUG	07:02	20:00	12:58	06:38	20:24	13:46	06:09	20:53	14:44	13:31
235	WED 23 AUG	07:02	19:59	12:56	06:38	20:23	13:45	06:10	20:51	14:42	13:31
236	THU 24 AUG	07:03	19:58	12:55	06:39	20:22	13:43	06:10	20:50	14:40	13:30
237	FRI 25 AUG	07:03	19:57	12:53	06:39	20:21	13:42	06:11	20:49	14:38	13:30
238	SAT 26 AUG	07:04	19:56	12:52	06:40	20:20	13:40	06:11	20:48	14:37	13:30
239	SUN 27 AUG	07:04	19:55	12:50	06:40	20:19	13:38	06:12	20:47	14:35	13:30
240	MON 28 AUG	07:05	19:54	12:49	06:41	20:18	13:37	06:13	20:46	14:33	13:29
241	TUE 29 AUG	07:05	19:52	12:47	06:41	20:16	13:35	06:13	20:45	14:31	13:29
242	WED 30 AUG	07:06	19:51	12:46	06:42	20:15	13:33	06:14	20:43	14:30	13:29
243	THU 31 AUG	07:06	19:50	12:44	06:42	20:14	13:32	06:14	20:42	14:28	13:28

CENTRAL DAYLIGHT TIME

PETS

2023

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PORT ARANSAS TIDES

SUNRISE, SUNSET and TWILIGHTS at Port Aransas for SEP 2023

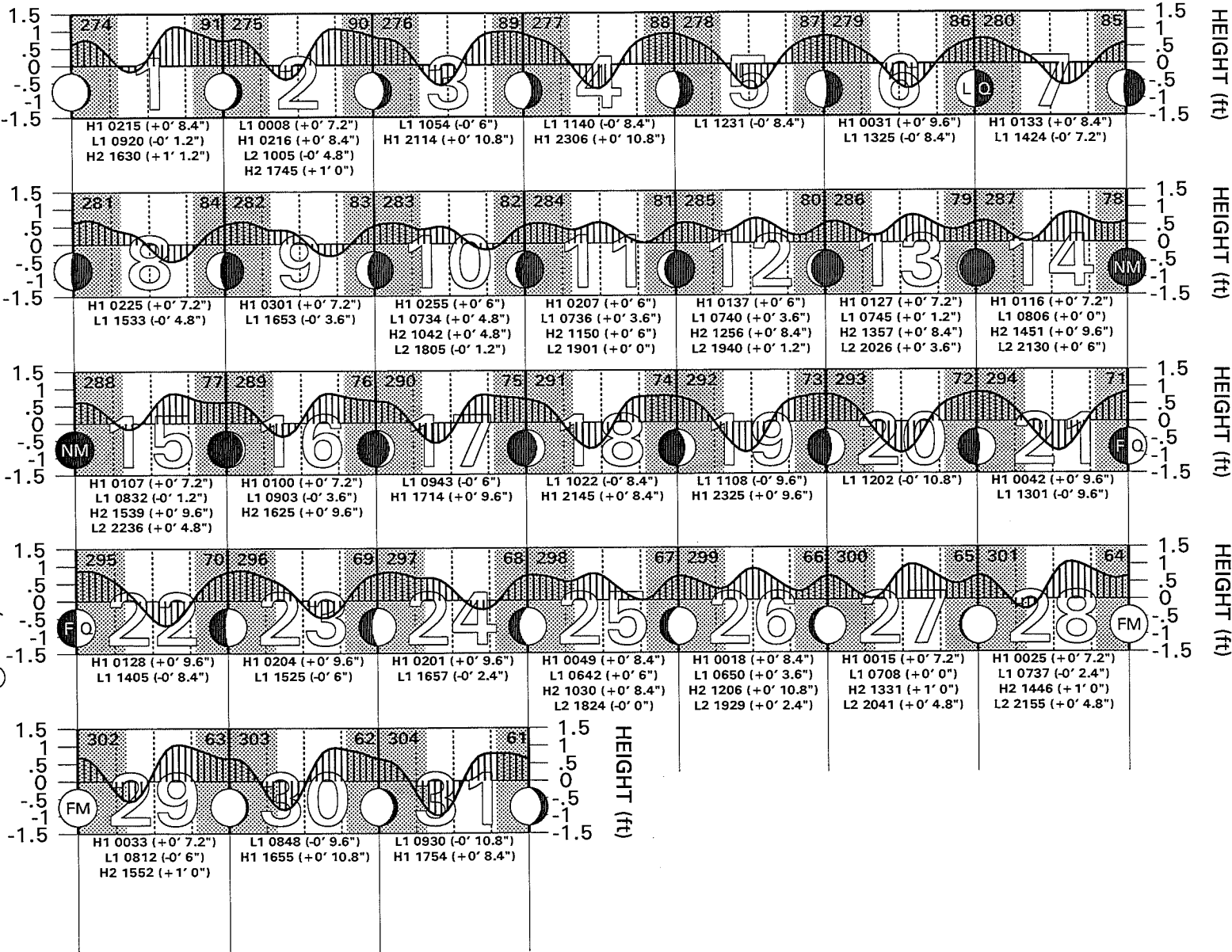
JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LANGTH	LAN
		RISE	SET	LANGTH	START	END	LANGHT	START	END	LANGTH		
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
244	FRI 1 SEP	07:07	19:49	12:42	06:43	20:13	13:30	06:15	20:41	14:26	13:28	
245	SAT 2 SEP	07:07	19:48	12:41	06:43	20:12	13:28	06:15	20:40	14:24	13:28	
246	SUN 3 SEP	07:08	19:47	12:39	06:44	20:11	13:27	06:16	20:39	14:23	13:27	
247	MON 4 SEP	07:08	19:46	12:38	06:44	20:10	13:25	06:17	20:37	14:21	13:27	
248	TUE 5 SEP	07:09	19:45	12:36	06:45	20:08	13:23	06:17	20:36	14:19	13:27	
249	WED 6 SEP	07:09	19:44	12:34	06:45	20:07	13:22	06:18	20:35	14:17	13:26	
250	THU 7 SEP	07:10	19:42	12:33	06:46	20:06	13:20	06:18	20:34	14:16	13:26	
251	FRI 8 SEP	07:10	19:41	12:31	06:46	20:05	13:18	06:19	20:33	14:14	13:26	
252	SAT 9 SEP	07:11	19:40	12:30	06:47	20:04	13:17	06:19	20:31	14:12	13:25	
253	SUN 10 SEP	07:11	19:39	12:28	06:47	20:03	13:15	06:20	20:30	14:10	13:25	
254	MON 11 SEP	07:11	19:38	12:26	06:48	20:01	13:13	06:20	20:29	14:09	13:25	
255	TUE 12 SEP	07:12	19:37	12:25	06:48	20:00	13:12	06:21	20:28	14:07	13:24	
256	WED 13 SEP	07:12	19:35	12:23	06:49	19:59	13:10	06:21	20:26	14:05	13:24	
257	THU 14 SEP	07:13	19:34	12:21	06:49	19:58	13:08	06:22	20:25	14:03	13:24	
258	FRI 15 SEP	07:13	19:33	12:20	06:50	19:57	13:07	06:22	20:24	14:02	13:23	
259	SAT 16 SEP	07:14	19:32	12:18	06:50	19:55	13:05	06:23	20:23	14:00	13:23	
260	SUN 17 SEP	07:14	19:31	12:17	06:51	19:54	13:03	06:23	20:22	13:58	13:22	
261	MON 18 SEP	07:15	19:30	12:15	06:51	19:53	13:02	06:24	20:20	13:56	13:22	
262	TUE 19 SEP	07:15	19:28	12:13	06:52	19:52	13:00	06:24	20:19	13:55	13:22	
263	WED 20 SEP	07:16	19:27	12:12	06:52	19:51	12:58	06:25	20:18	13:53	13:21	
264	THU 21 SEP	07:16	19:26	12:10	06:53	19:49	12:57	06:25	20:17	13:51	13:21	
265	FRI 22 SEP	07:17	19:25	12:08	06:53	19:48	12:55	06:26	20:16	13:50	13:21	
266	SAT 23 SEP	07:17	19:24	12:07	06:54	19:47	12:53	06:26	20:14	13:48	13:20	
267	SUN 24 SEP	07:17	19:23	12:05	06:54	19:46	12:52	06:27	20:13	13:46	13:20	
268	MON 25 SEP	07:18	19:21	12:03	06:55	19:45	12:50	06:27	20:12	13:45	13:20	
269	TUE 26 SEP	07:18	19:20	12:02	06:55	19:44	12:49	06:28	20:11	13:43	13:19	
270	WED 27 SEP	07:19	19:19	12:00	06:56	19:42	12:47	06:28	20:10	13:41	13:19	
271	THU 28 SEP	07:19	19:18	11:58	06:56	19:41	12:45	06:29	20:08	13:40	13:19	
272	FRI 29 SEP	07:20	19:17	11:57	06:57	19:40	12:44	06:29	20:07	13:38	13:18	
273	SAT 30 SEP	07:20	19:16	11:55	06:57	19:39	12:42	06:30	20:06	13:36	13:18	

CENTRAL DAYLIGHT TIME

SUN MON TUE WED THU FRI SAT

MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN 6 AM NOON 6 PM MIDN

PORT ARANSAS TIDES



100

202

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SUNRISE, SUNSET and TWILIGHTS at Port Aransas for OCT 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT				LAN	
		RISE	SET	LNPTH	START	END	LNPTH	START	END	LNPTH			
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
274	SUN	1	OCT	07:21	19:14	11:54	06:57	19:38	12:40	06:30	20:05	13:35	13:18
275	MON	2	OCT	07:21	19:13	11:52	06:58	19:37	12:39	06:31	20:04	13:33	13:17
276	TUE	3	OCT	07:22	19:12	11:50	06:58	19:36	12:37	06:31	20:03	13:31	13:17
277	WED	4	OCT	07:22	19:11	11:49	06:59	19:34	12:35	06:32	20:02	13:30	13:17
278	THU	5	OCT	07:23	19:10	11:47	06:59	19:33	12:34	06:32	20:00	13:28	13:16
279	FRI	6	OCT	07:23	19:09	11:45	07:00	19:32	12:32	06:33	19:59	13:27	13:16
280	SAT	7	OCT	07:24	19:08	11:44	07:00	19:31	12:31	06:33	19:58	13:25	13:16
281	SUN	8	OCT	07:24	19:07	11:42	07:01	19:30	12:29	06:34	19:57	13:23	13:16
282	MON	9	OCT	07:25	19:06	11:41	07:02	19:29	12:27	06:34	19:56	13:22	13:15
283	TUE	10	OCT	07:26	19:04	11:39	07:02	19:28	12:26	06:35	19:55	13:20	13:15
284	WED	11	OCT	07:26	19:03	11:37	07:03	19:27	12:24	06:35	19:54	13:19	13:15
285	THU	12	OCT	07:27	19:02	11:36	07:03	19:26	12:23	06:36	19:53	13:17	13:14
286	FRI	13	OCT	07:27	19:01	11:34	07:04	19:25	12:21	06:36	19:52	13:16	13:14
287	SAT	14	OCT	07:28	19:00	11:32	07:04	19:24	12:20	06:37	19:51	13:14	13:14
288	SUN	15	OCT	07:28	18:59	11:31	07:05	19:23	12:18	06:37	19:50	13:13	13:14
289	MON	16	OCT	07:29	18:58	11:29	07:05	19:22	12:17	06:38	19:49	13:11	13:14
290	TUE	17	OCT	07:29	18:57	11:28	07:06	19:21	12:15	06:39	19:48	13:10	13:13
291	WED	18	OCT	07:30	18:56	11:26	07:06	19:20	12:14	06:39	19:47	13:08	13:13
292	THU	19	OCT	07:31	18:55	11:25	07:07	19:19	12:12	06:40	19:46	13:07	13:13
293	FRI	20	OCT	07:31	18:54	11:23	07:08	19:18	12:11	06:40	19:45	13:05	13:13
294	SAT	21	OCT	07:32	18:53	11:21	07:08	19:17	12:09	06:41	19:45	13:04	13:13
295	SUN	22	OCT	07:33	18:52	11:20	07:09	19:16	12:08	06:41	19:44	13:02	13:12
296	MON	23	OCT	07:33	18:52	11:18	07:09	19:15	12:06	06:42	19:43	13:01	13:12
297	TUE	24	OCT	07:34	18:51	11:17	07:10	19:15	12:05	06:42	19:42	13:00	13:12
298	WED	25	OCT	07:34	18:50	11:15	07:11	19:14	12:03	06:43	19:41	12:58	13:12
299	THU	26	OCT	07:35	18:49	11:14	07:11	19:13	12:02	06:44	19:40	12:57	13:12
300	FRI	27	OCT	07:36	18:48	11:12	07:12	19:12	12:00	06:44	19:40	12:55	13:12
301	SAT	28	OCT	07:36	18:47	11:11	07:12	19:11	11:59	06:45	19:39	12:54	13:12
302	SUN	29	OCT	07:37	18:46	11:09	07:13	19:11	11:57	06:45	19:38	12:53	13:12
303	MON	30	OCT	07:38	18:46	11:08	07:14	19:10	11:56	06:46	19:37	12:51	13:12
304	TUE	31	OCT	07:38	18:45	11:06	07:14	19:09	11:55	06:47	19:37	12:50	13:12





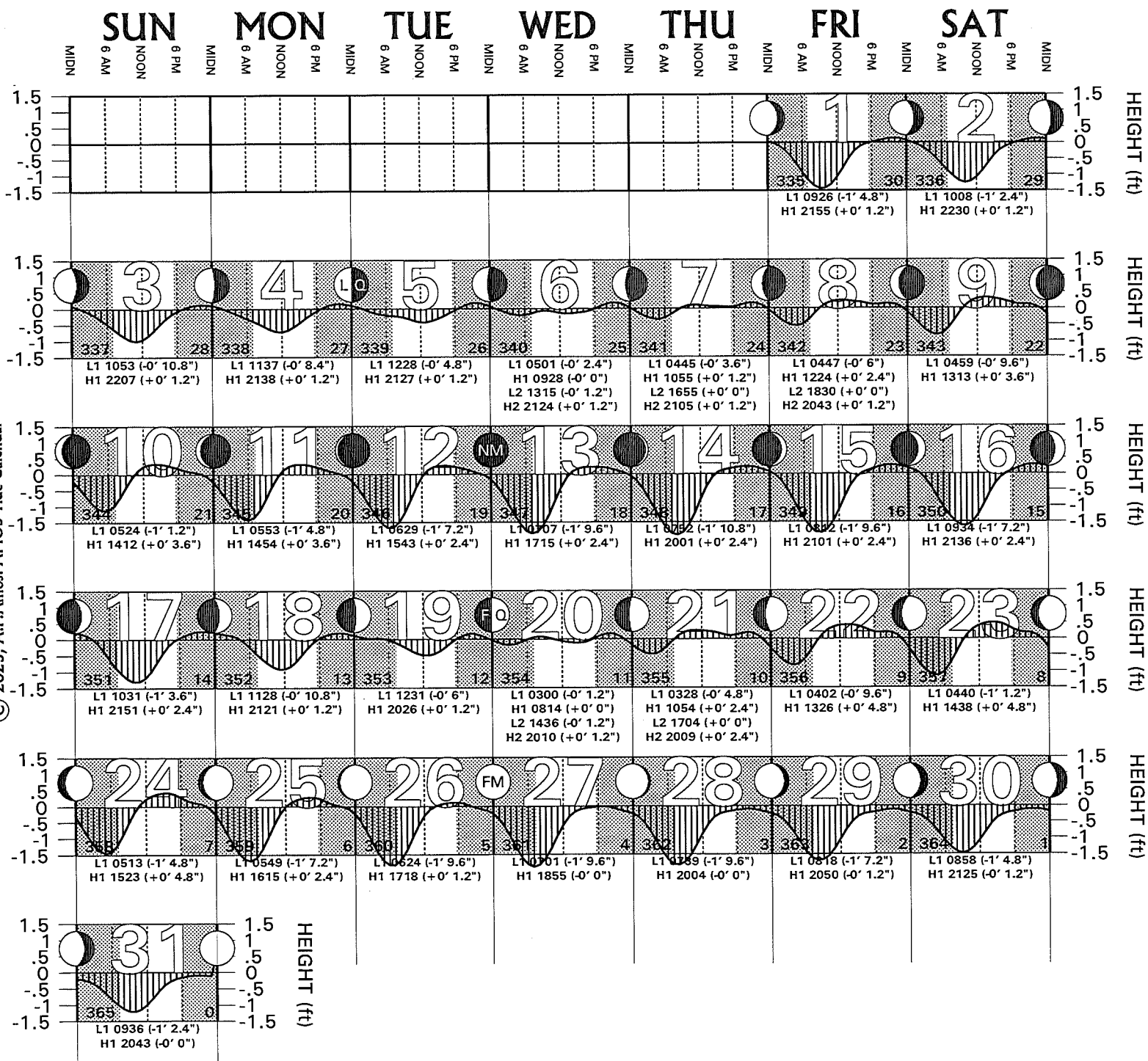
SUNRISE, SUNSET and TWILIGHTS at Port Aransas for NOV 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LANGTH	LAN	
		RISE	SET	LNGTH	START	END	LNGHT	START	END	LNGTH			
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m			
305	WED	1	NOV	07:39	18:44	11:05	07:15	19:08	11:53	06:47	19:36	12:49	13:12
306	THU	2	NOV	07:40	18:43	11:04	07:16	19:08	11:52	06:48	19:35	12:48	13:12
307	FRI	3	NOV	07:41	18:43	11:02	07:16	19:07	11:51	06:48	19:35	12:46	13:12
308	SAT	4	NOV	07:41	18:42	11:01	07:17	19:06	11:49	06:49	19:34	12:45	13:12
309	SUN	5	NOV	06:42	17:41	10:59	06:18	18:06	11:48	05:50	18:34	12:44	12:12
310	MON	6	NOV	06:43	17:41	10:58	06:18	18:05	11:47	05:50	18:33	12:43	12:12
311	TUE	7	NOV	06:43	17:40	10:57	06:19	18:05	11:46	05:51	18:32	12:41	12:12
312	WED	8	NOV	06:44	17:39	10:55	06:20	18:04	11:44	05:52	18:32	12:40	12:12
313	THU	9	NOV	06:45	17:39	10:54	06:20	18:03	11:43	05:52	18:31	12:39	12:12
314	FRI	10	NOV	06:46	17:38	10:53	06:21	18:03	11:42	05:53	18:31	12:38	12:12
315	SAT	11	NOV	06:46	17:38	10:51	06:22	18:02	11:41	05:54	18:31	12:37	12:12
316	SUN	12	NOV	06:47	17:37	10:50	06:22	18:02	11:39	05:54	18:30	12:36	12:12
317	MON	13	NOV	06:48	17:37	10:49	06:23	18:02	11:38	05:55	18:30	12:35	12:12
318	TUE	14	NOV	06:49	17:36	10:48	06:24	18:01	11:37	05:56	18:29	12:34	12:13
319	WED	15	NOV	06:49	17:36	10:47	06:25	18:01	11:36	05:56	18:29	12:33	12:13
320	THU	16	NOV	06:50	17:36	10:45	06:25	18:00	11:35	05:57	18:29	12:32	12:13
321	FRI	17	NOV	06:51	17:35	10:44	06:26	18:00	11:34	05:58	18:28	12:31	12:13
322	SAT	18	NOV	06:52	17:35	10:43	06:27	18:00	11:33	05:58	18:28	12:30	12:13
323	SUN	19	NOV	06:52	17:34	10:42	06:28	17:59	11:32	05:59	18:28	12:29	12:13
324	MON	20	NOV	06:53	17:34	10:41	06:28	17:59	11:31	06:00	18:28	12:28	12:14
325	TUE	21	NOV	06:54	17:34	10:40	06:29	17:59	11:30	06:01	18:27	12:27	12:14
326	WED	22	NOV	06:55	17:34	10:39	06:30	17:59	11:29	06:01	18:27	12:26	12:14
327	THU	23	NOV	06:56	17:33	10:38	06:31	17:58	11:28	06:02	18:27	12:25	12:14
328	FRI	24	NOV	06:56	17:33	10:37	06:31	17:58	11:27	06:03	18:27	12:24	12:15
329	SAT	25	NOV	06:57	17:33	10:36	06:32	17:58	11:26	06:03	18:27	12:24	12:15
330	SUN	26	NOV	06:58	17:33	10:35	06:33	17:58	11:25	06:04	18:27	12:23	12:15
331	MON	27	NOV	06:59	17:33	10:34	06:33	17:58	11:25	06:05	18:27	12:22	12:16
332	TUE	28	NOV	06:59	17:33	10:33	06:34	17:58	11:24	06:05	18:27	12:21	12:16
333	WED	29	NOV	07:00	17:33	10:32	06:35	17:58	11:23	06:06	18:27	12:21	12:16
334	THU	30	NOV	07:01	17:33	10:32	06:36	17:58	11:22	06:07	18:27	12:20	12:17

CENTRAL STANDARD TIME

3202  
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PORT ARANSAS TIDES



SUNRISE, SUNSET and TWILIGHTS at Port Aransas for DEC 2023

JDAY	DATE	SUNRISE/SUNSET			CIVIL TWILIGHT			NAUTICAL TWILIGHT			LAN	
		RISE	SET	LNGTH	START	END	LNGHT	START	END	LNGTH		
		h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m	h:m		
335	FRI 1	DEC	07:02	17:33	10:31	06:36	17:58	11:22	06:08	18:27	12:19	12:17
336	SAT 2	DEC	07:03	17:33	10:30	06:37	17:58	11:21	06:08	18:27	12:19	12:18
337	SUN 3	DEC	07:03	17:33	10:29	06:38	17:58	11:20	06:09	18:27	12:18	12:18
338	MON 4	DEC	07:04	17:33	10:29	06:39	17:58	11:20	06:10	18:27	12:18	12:18
339	TUE 5	DEC	07:05	17:33	10:28	06:39	17:58	11:19	06:10	18:27	12:17	12:19
340	WED 6	DEC	07:05	17:33	10:27	06:40	17:58	11:18	06:11	18:27	12:17	12:19
341	THU 7	DEC	07:06	17:33	10:27	06:41	17:59	11:18	06:12	18:28	12:16	12:20
342	FRI 8	DEC	07:07	17:33	10:26	06:41	17:59	11:17	06:12	18:28	12:16	12:20
343	SAT 9	DEC	07:08	17:33	10:26	06:42	17:59	11:17	06:13	18:28	12:15	12:21
344	SUN 10	DEC	07:08	17:34	10:25	06:43	17:59	11:17	06:14	18:28	12:15	12:21
345	MON 11	DEC	07:09	17:34	10:25	06:43	18:00	11:16	06:14	18:29	12:14	12:21
346	TUE 12	DEC	07:10	17:34	10:25	06:44	18:00	11:16	06:15	18:29	12:14	12:22
347	WED 13	DEC	07:10	17:34	10:24	06:45	18:00	11:16	06:15	18:29	12:14	12:22
348	THU 14	DEC	07:11	17:35	10:24	06:45	18:00	11:15	06:16	18:30	12:14	12:23
349	FRI 15	DEC	07:12	17:35	10:24	06:46	18:01	11:15	06:17	18:30	12:13	12:23
350	SAT 16	DEC	07:12	17:36	10:23	06:46	18:01	11:15	06:17	18:30	12:13	12:24
351	SUN 17	DEC	07:13	17:36	10:23	06:47	18:02	11:15	06:18	18:31	12:13	12:24
352	MON 18	DEC	07:13	17:36	10:23	06:48	18:02	11:14	06:18	18:31	12:13	12:25
353	TUE 19	DEC	07:14	17:37	10:23	06:48	18:03	11:14	06:19	18:32	12:13	12:25
354	WED 20	DEC	07:14	17:37	10:23	06:49	18:03	11:14	06:19	18:32	12:13	12:26
355	THU 21	DEC	07:15	17:38	10:23	06:49	18:03	11:14	06:20	18:33	12:13	12:26
356	FRI 22	DEC	07:15	17:38	10:23	06:50	18:04	11:14	06:20	18:33	12:13	12:27
357	SAT 23	DEC	07:16	17:39	10:23	06:50	18:04	11:14	06:21	18:34	12:13	12:27
358	SUN 24	DEC	07:16	17:39	10:23	06:51	18:05	11:14	06:21	18:34	12:13	12:28
359	MON 25	DEC	07:17	17:40	10:23	06:51	18:06	11:15	06:22	18:35	12:13	12:28
360	TUE 26	DEC	07:17	17:40	10:23	06:51	18:06	11:15	06:22	18:35	12:13	12:29
361	WED 27	DEC	07:18	17:41	10:23	06:52	18:07	11:15	06:23	18:36	12:13	12:29
362	THU 28	DEC	07:18	17:42	10:24	06:52	18:07	11:15	06:23	18:37	12:13	12:30
363	FRI 29	DEC	07:18	17:42	10:24	06:53	18:08	11:15	06:23	18:37	12:14	12:30
364	SAT 30	DEC	07:19	17:43	10:24	06:53	18:09	11:16	06:24	18:38	12:14	12:31
365	SUN 31	DEC	07:19	17:44	10:25	06:53	18:09	11:16	06:24	18:38	12:14	12:31

EARLIEST SUNRISE	=	161	SAT	10	JUN	06:31
LATEST SUNRISE	=	71	SUN	12	MAR	07:41
EARLIEST SUNSET	=	335	FRI	1	DEC	17:33
LATEST SUNSET	=	182	SAT	1	JUL	20:28
LONGEST DAY	=	172	WED	21	JUN	13:54
SHORTEST DAY	=	355	THU	21	DEC	10:23