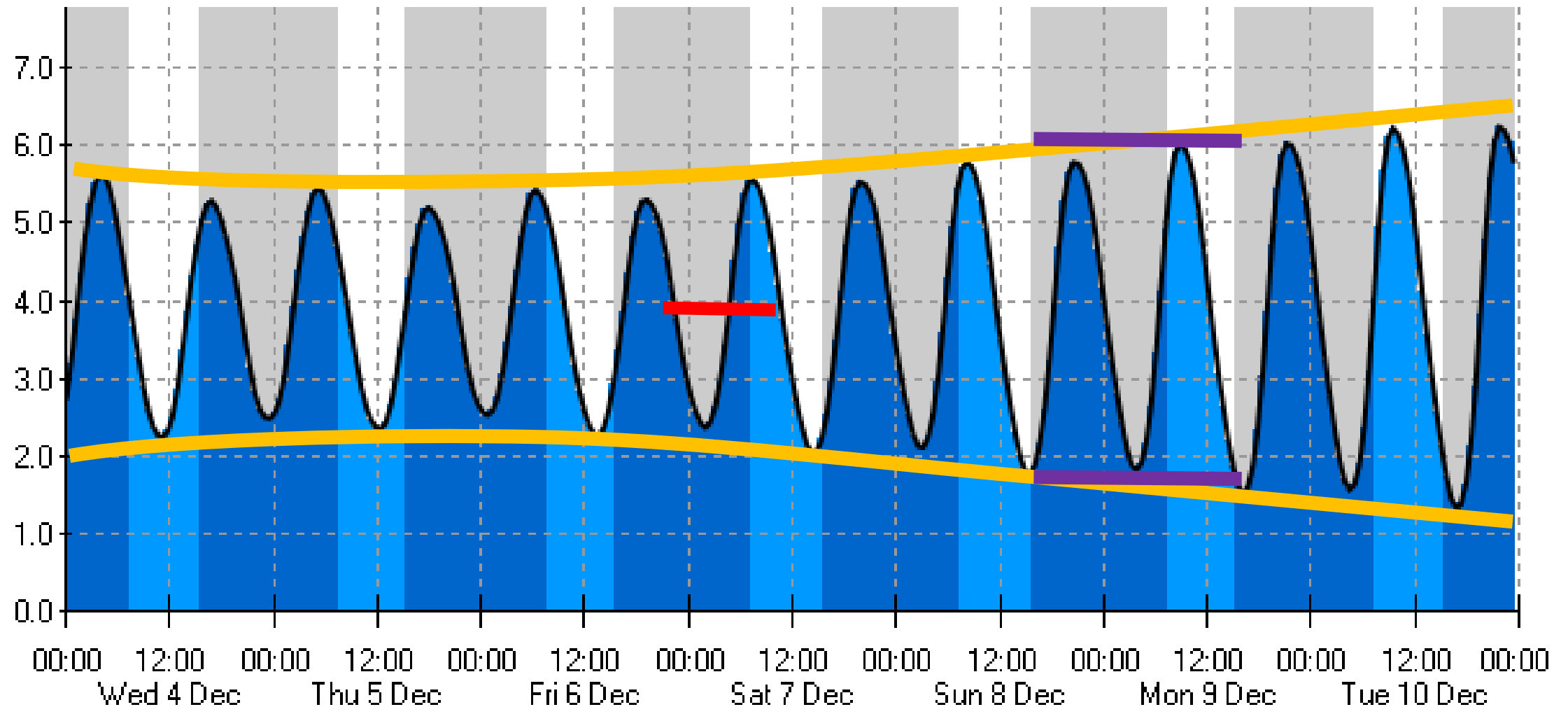


# Gezeiten Berechnung nach ATT

# Gezeitenwelle: Gezeiten Vorhersage Dover

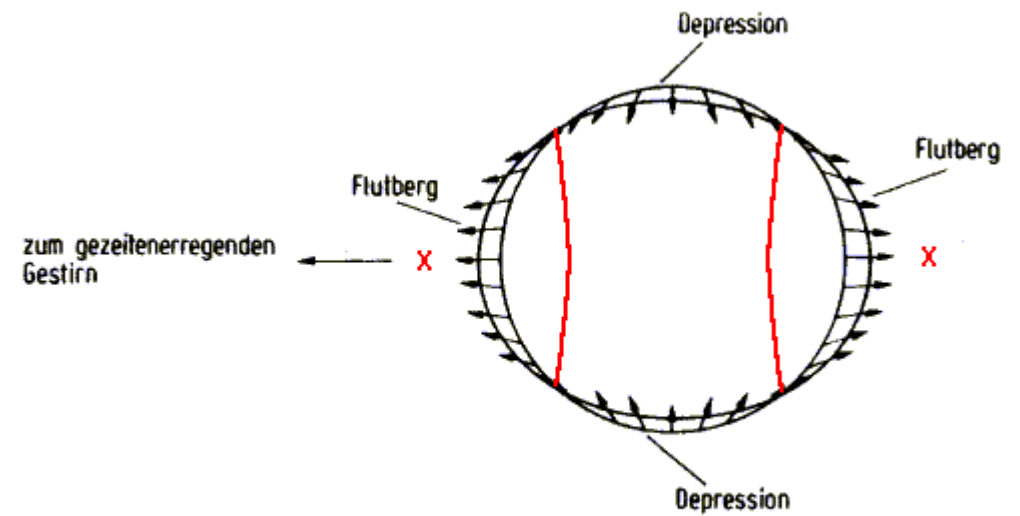
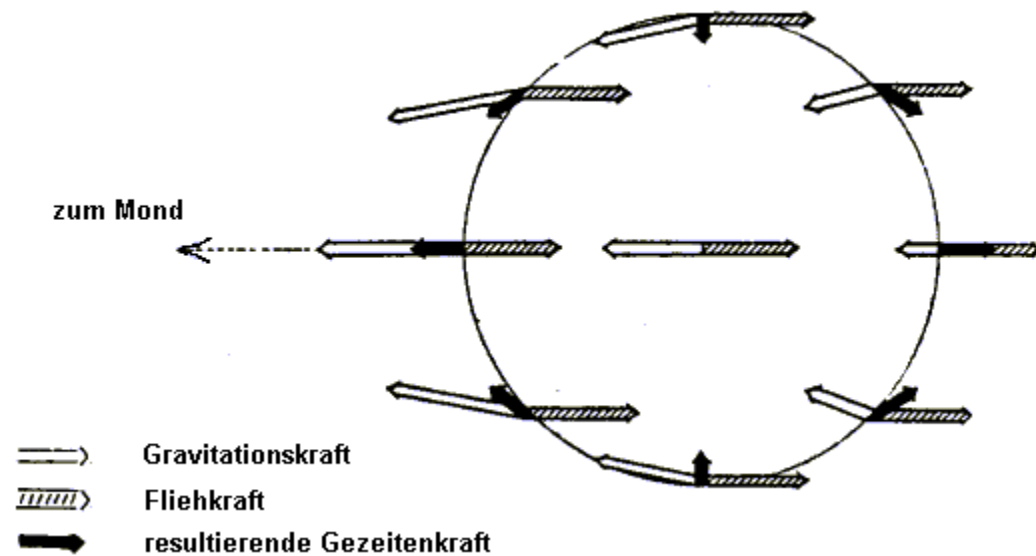
Height (m)

© Crown Copyright 2019



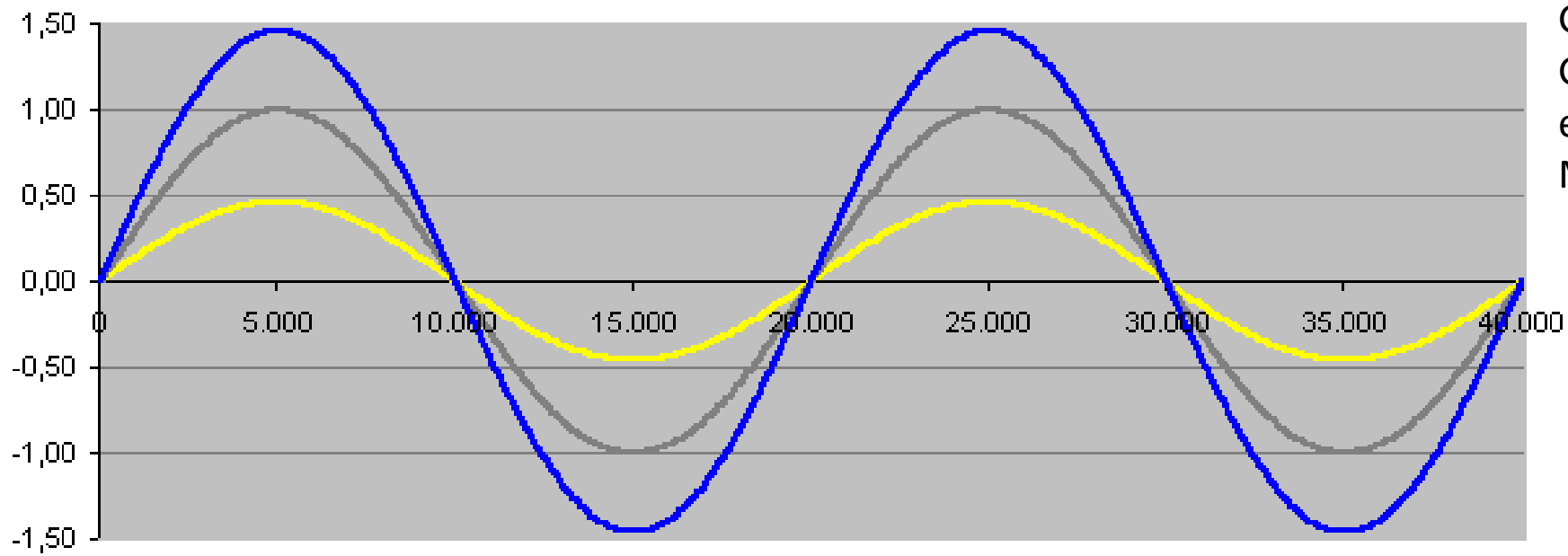
# Entstehung der Gezeitenwelle

Ein Gestirn erzeugt **zwei** Flutberge auf der Erde, einen auf der zugewandten und einen auf der abgewandten Seite der Erde.



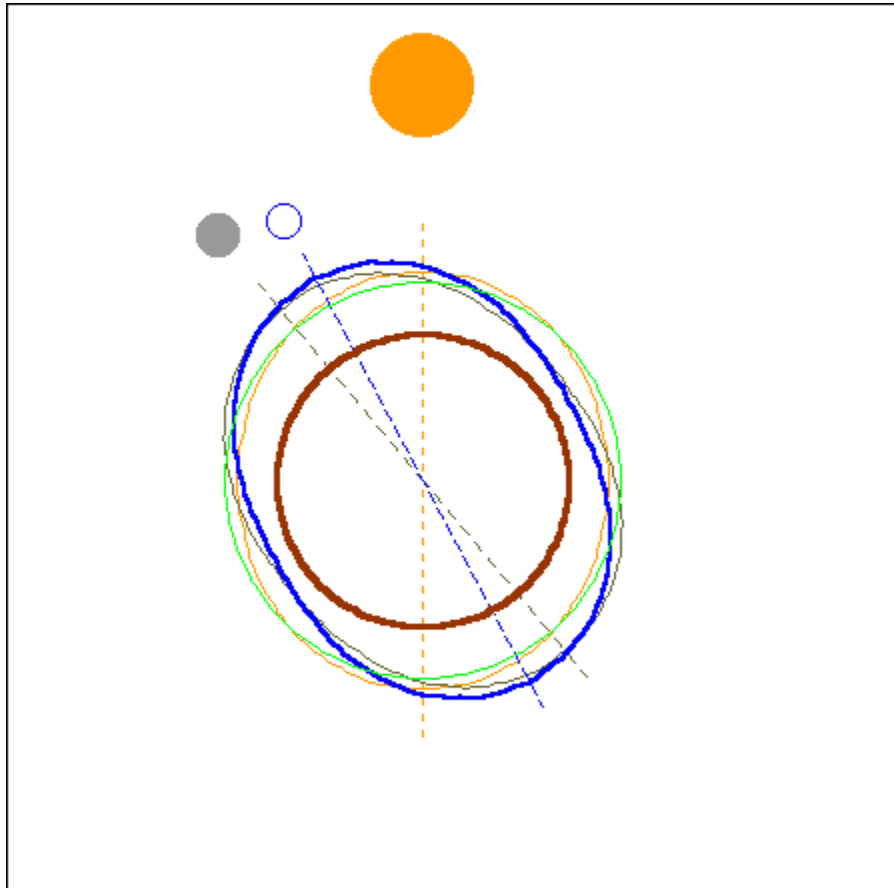
Vektoren der gezeitenerregenden Beschleunigungen (nicht maßstabgetreu)

# Überlagerung mehrere Gestirne hier Beispiel Mond, Sonne



Grau: Mondamplitude  
Gelb: Sonnenamplitude  
entspricht 0,46 der  
Mondamplitude

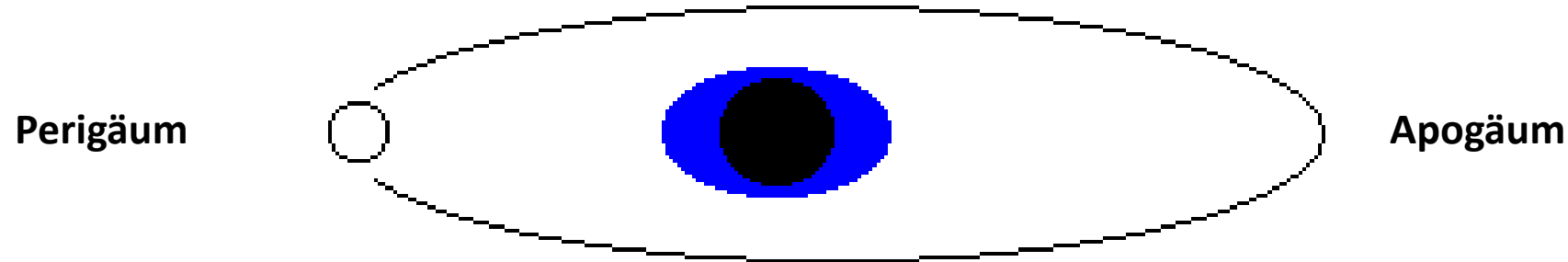
# Sonne und Mond erzeugen eine gemeinsame Gezeitenwelle



- a) Gemeinsame Gezeitenwelle -> Pseudogestirn
- b) Unregelmäßige Höhe der gemeinsamen Gezeitenwelle: Spring und Nipp, dazwischen Mid Zeit
- c) Unregelmäßiger Umlauf der gemeinsamen Gezeitenwelle: Priming und Lagging

➤ in den ATT wird dies über die Tabellen zum Standard Port berücksichtigt

# Elliptische Bahnen von Mond



- Die Stärke der Anziehungskraft des Mondes schwankt leicht mit einer Periodizität von 27,5 Tagen.  
=> Ungleichheiten in der Eintrittshöhe der HW und NW (Periodizität 27,5 Tage)  
**Berücksichtigt in der Grundtabelle zum Standard Port**
- Der Mond besitzt eine variable Bahngeschwindigkeit (Keplersche Gesetze), maximal im Perigäum, minimal im Apogäum.  
=> Ungleichheiten in der Länge des halben synodischen Monats (Zeitdauer zwischen Vollmond und Neumond).  
Wenn die elliptische Mondbahn mit ihrer großen Halbachse quer zur Erde-Sonne-Achse steht, liegt z. B. der zunehmende Mond im Apogäum (Bahnlauf dauert länger), der abnehmende im Perigäum (Bahnlauf dauert kürzer). Der halbe synodische Monat hat damit eine Dauer von  $14,8 \pm 1$  Tagen.  
=> Das führt real zu Variablen Dauer der Mittzeit zwischen 2 und 4 Tagen.  
**Bei den Berechnungen wird dies vereinfacht und die Mittzeit immer mit 3 Tagen angenommen**

# Elliptische Bahn von Sonne

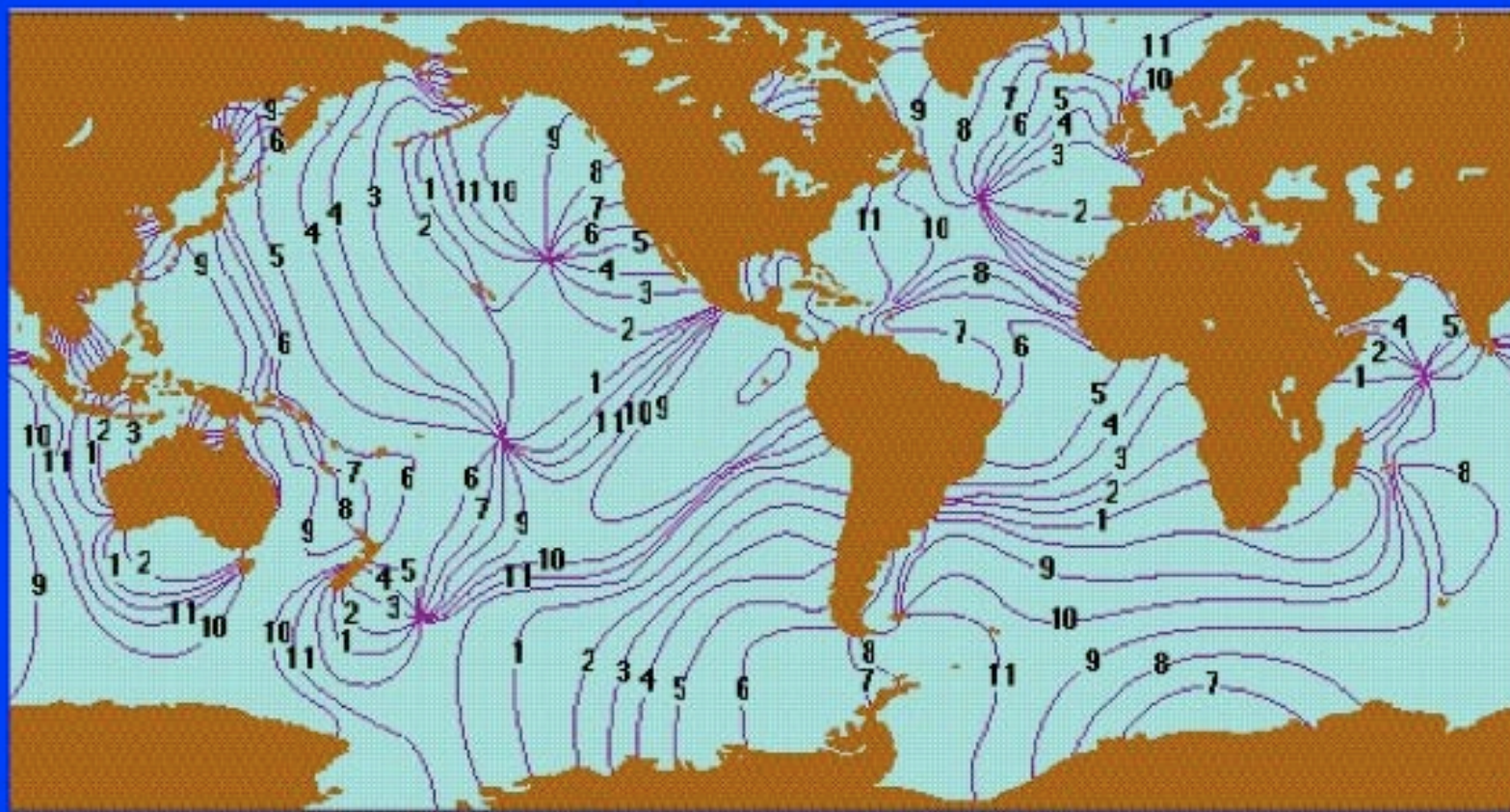
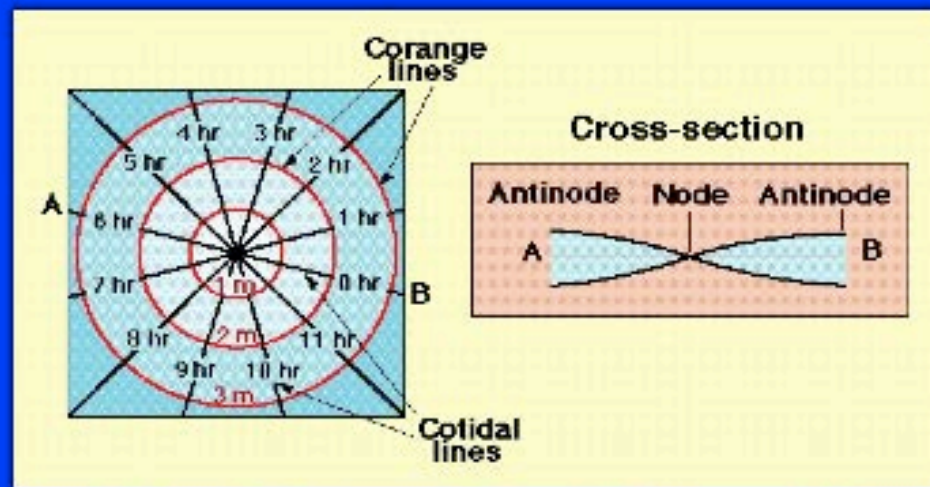
Die Erde ist auf ihrem elliptischen Sonnenumlauf (Exzentrizität  $1/30$ ) mal näher an der Sonne dran (Perihel) und mal weiter weg (Aphel):

- Die Stärke der Anziehungskraft der Sonne schwankt leicht mit einer Periodizität von 365 Tagen.
- in den ATT wird dies über die Korrektur der **Seasonal Changes** berücksichtigt.

# Amphidromic Circulation

Earth has about 12 amphidromic systems

- Tidal amplitude increases progressively away from amphidromic points





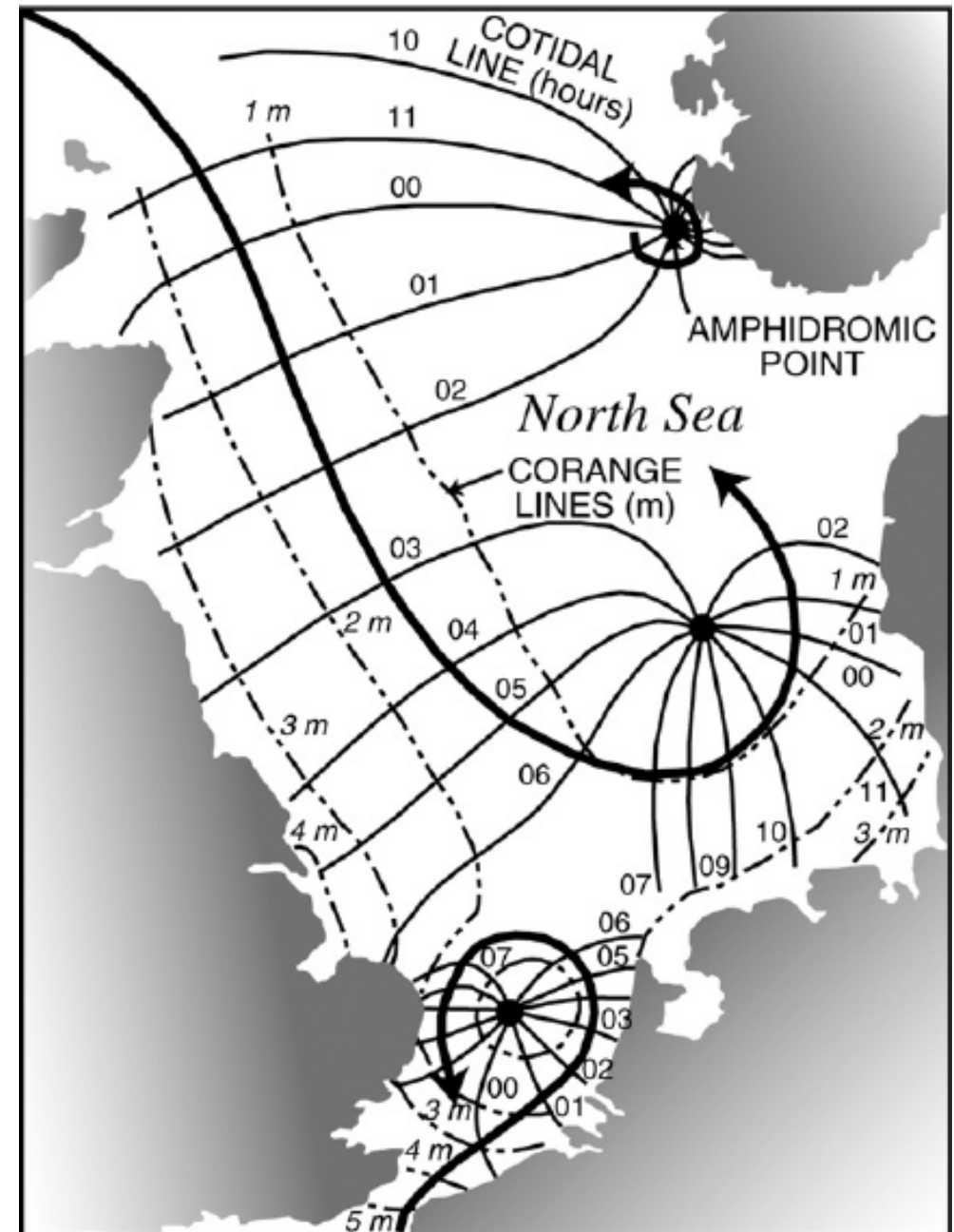
# Gezeitenwellen

Aus "Atlas der Elemente des Tidenhubs und der Gezeitenströme", Rostock 1963  
en Getij.nl -  
<http://www.getij.nl/index.cfm?page=uitleg.leeftijd>,  
CC BY-SA 3.0,  
<https://commons.wikimedia.org/w/index.php?curid=2966177>



# Richtung der Gezeitenwelle

Aufgrund der Erddrehung und den resultierenden Corioliskräften auf der Nordhalbkugel immer gegen den Uhrzeiger Sinn.



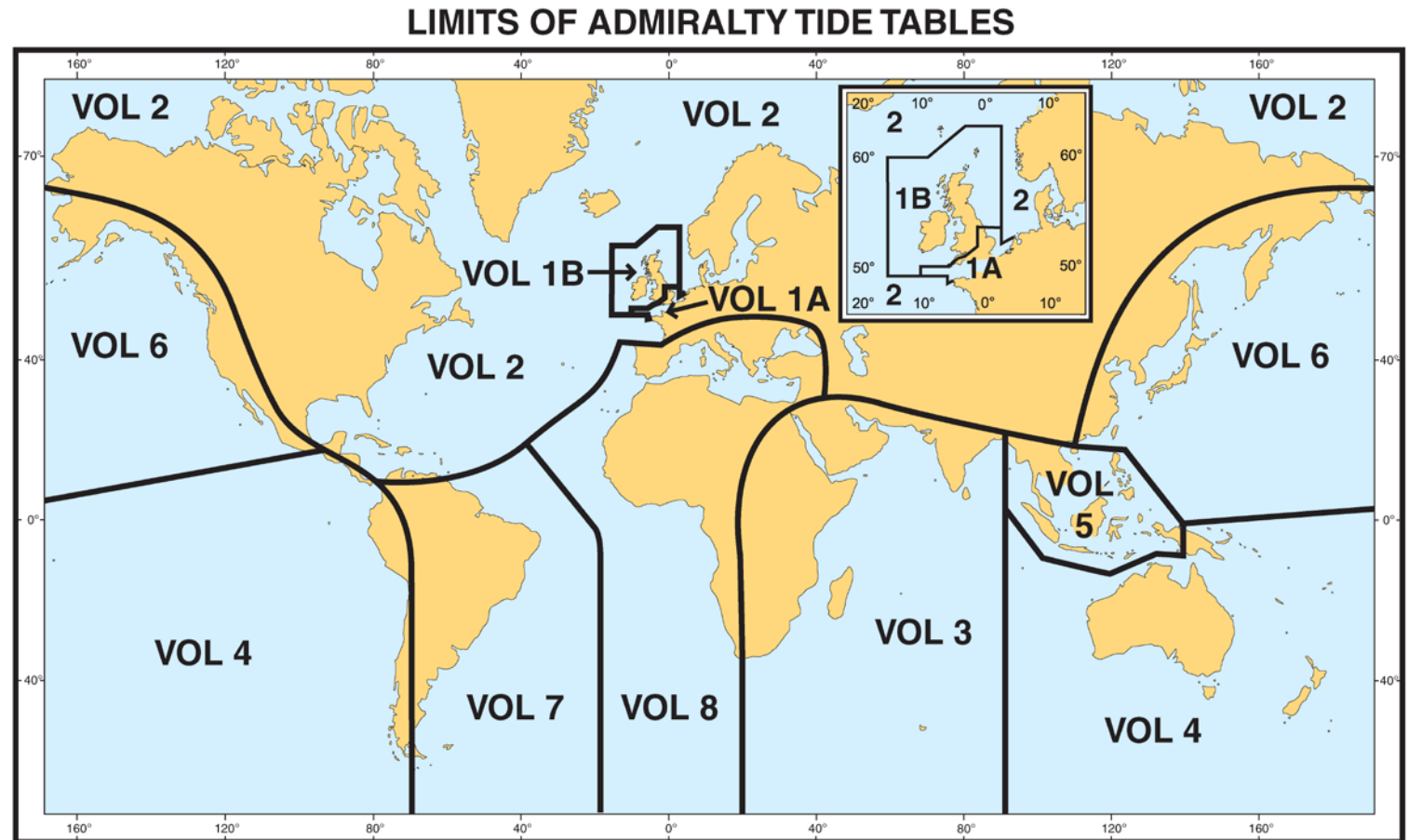
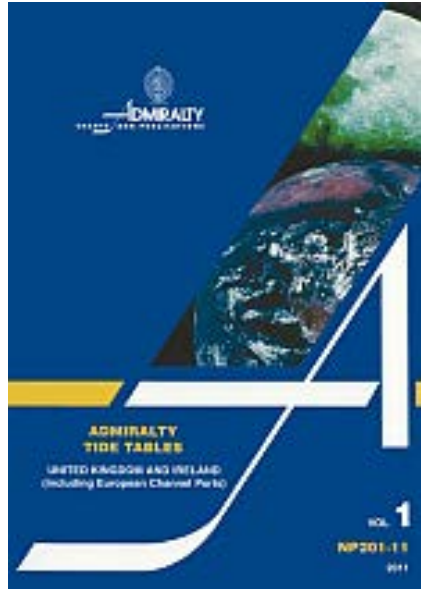


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ALFA BRAVO CHARLIE DELTA ECHO  
HOTEL INDIA JULIET

# Admiralty Tide Tables



published by the [United Kingdom Hydrographic Office \(UKHO\)](https://www.ukho.gov.uk/).

# Das Tabellen Werk ist in thematische Bereiche untergliedert

Bereich Angabe zu den Standard Ports

Zu ausgewählten Bezugsorten sind Gezeitengrundwerte kalendarisch abgedruckt. Zu jedem dieser Bezugsorte ist die Tidenkurve als Grafik jeweils vor den kalendarischen Gezeitengrundwerten abgebildet. Für jeden Tag werden die Hochwasserhöhen und Niedrigwasserhöhen mit den dazugehörigen Eintrittszeiten angegeben.

Bereich Angaben zu den sekundären Häfen

Es folgen die Tabellen zur Bestimmung der Gezeitenhöhen an den sekundär Häfen (secondary Port)

Weiter Kapitel; Allgemeine Vorgehensweise, Abkürzungen, Alphabetisch geordnete Häfe un ihre Ordnungsnummer

# PART I

TIDAL PREDICTIONS

FOR

STANDARD PORTS

## FRANCE – BREST

LAT 48°23'N LONG 4°30'W

TIME ZONE -0100

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

YEAR 1997

JANUARY				FEBRUARY				MARCH				APRIL			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
<b>1</b> 0321	2.5	<b>16</b> 0431	2.0	<b>1</b> 0422	2.6	<b>16</b> 0611	2.6	<b>1</b> 0258	2.0	<b>16</b> 0424	2.4	<b>1</b> 0431	2.4	<b>16</b> 0608	2.8
0917	5.6	1035	5.9	1022	5.4	1222	5.2	0851	5.8	1023	5.3	1039	5.3	1225	5.0
W 1550	2.5	TH 1702	2.1	SA 1655	2.6	SU 1848	2.7	SA 1522	2.2	SU 1650	2.7	TU 1707	2.6	W 1842	2.9
2152	5.3	2308	5.6	2306	5.3			2121	5.6	2256	5.2	2324	5.4		
<b>2</b> 0411	2.7	<b>17</b> 0536	2.3	<b>2</b> 0528	2.7	<b>17</b> 0107	5.3	<b>2</b> 0348	2.3	<b>17</b> 0532	2.7	<b>2</b> 0550	2.4	<b>17</b> 0057	5.2
1012	5.4	1143	5.6	1138	5.3	0735	2.6	0946	5.5	1142	5.0	1210	5.4	0727	2.7
TH 1645	2.7	F 1809	2.4	SU 1809	2.7	M 1347	5.3	SU 1617	2.5	M 1806	2.9	W 1833	2.5	TH 1339	5.2
2255	5.2					2007	2.6	2224	5.4					1953	2.6
<b>3</b> 0513	2.8	<b>18</b> 0022	5.5	<b>3</b> 0025	5.4	<b>18</b> 0221	5.5	<b>3</b> 0452	2.5	<b>18</b> 0025	5.1	<b>3</b> 0051	5.6	<b>18</b> 0201	5.4
1120	5.3	0649	2.4	0647	2.6	0844	2.3	1059	5.3	0657	2.8	0714	2.1	0826	2.4
F 1752	2.7	SA 1259	5.5	M 1301	5.4	TU 1451	5.6	M 1729	2.7	TU 1315	5.1	TH 1333	5.7	F 1431	5.6
		1923	2.4	1927	2.4	2106	2.3	2347	5.3	1933	2.8	1952	2.1	2045	2.3
<b>4</b> 0007	5.3	<b>19</b> 0138	5.6	<b>4</b> 0142	5.7	<b>19</b> 0314	5.8	<b>4</b> 0612	2.5	<b>19</b> 0149	5.3	<b>4</b> 0204	6.1	<b>19</b> 0248	5.8
0623	2.7	0802	2.3	0802	2.2	0936	2.0	1230	5.3	0814	2.5	0825	1.6	0912	2.0
SA 1234	5.4	SU 1410	5.6	TU 1415	5.8	W 1538	5.9	TU 1855	2.5	W 1424	5.4	F 1438	6.2	SA 1513	5.9
1903	2.6	2031	2.2	2036	2.0	2152	1.9			2037	2.5	2056	1.5	2127	1.9
<b>5</b> 0116	5.5	<b>20</b> 0241	5.8	<b>5</b> 0246	6.1	<b>20</b> 0356	6.1	<b>5</b> 0113	5.6	<b>20</b> 0245	5.6	<b>5</b> 0303	6.6	<b>20</b> 0328	6.1
0733	2.5	0904	2.1	0906	1.7	1018	1.7	0736	2.2	0908	2.2	0924	1.1	0950	1.7
SU 1343	5.6	M 1508	5.9	W 1516	6.3	TH 1616	6.2	W 1353	5.7	TH 1511	5.7	SA 1532	6.7	SU 1549	6.2
2007	2.2	2126	2.0	2134	1.5	2231	1.7	2013	2.1	2124	2.1	2150	1.0	2204	1.7
<b>6</b> 0216	5.9	<b>21</b> 0332	6.1	<b>6</b> 0341	6.7	<b>21</b> 0431	6.4	<b>6</b> 0225	6.1	<b>21</b> 0328	6.0	<b>6</b> 0355	7.1	<b>21</b> 0404	6.3
0834	2.1	0955	1.8	1002	1.1	1054	1.5	0846	1.7	0950	1.9	1015	0.7	1026	1.5
M 1442	6.0	TU 1555	6.1	TH 1608	6.7	F 1650	6.4	TH 1457	6.2	F 1549	6.1	SU 1620	7.1	M 1623	6.5
2103	1.9	2212	1.8	2226	1.0	2305	1.5	2115	1.5	2203	1.8	2240	0.6	2240	1.4

<b>7</b> 0309 6.3 0929 1.6 TU 1535 6.4 2154 1.5	<b>22</b> 0414 6.3 1037 1.6 W 1635 6.3 2251 1.6	<b>7</b> 0432 7.1 1053 0.7 F 1658 7.1 ● 2316 0.7	<b>22</b> 0503 6.6 1127 1.4 SA 1722 6.5 O -2337 1.4	<b>7</b> 0323 6.7 0944 1.1 F 1552 6.8 2209 1.0	<b>22</b> 0404 6.3 1026 1.6 SA 1623 6.3 2238 1.5	<b>7</b> 0442 7.4 1103 0.4 M 1705 7.4 ● 2326 0.4	<b>22</b> 0438 6.5 1100 1.3 TU 1657 6.7 O 2314 1.2
<b>8</b> 0359 6.7 1019 1.2 W 1624 6.8 2243 1.1	<b>23</b> 0451 6.5 1115 1.5 TH 1711 6.4 O 2326 1.5	<b>8</b> 0520 7.5 1141 0.3 SA 1744 7.4	<b>23</b> 0534 6.7 1158 1.3 SU 1752 6.6	<b>8</b> 0415 7.2 1035 0.6 SA 1641 7.2 2259 0.6	<b>23</b> 0436 6.5 1059 1.4 SU 1655 6.5 2310 1.3	<b>8</b> 0527 7.5 1147 0.4 TU 1747 7.4	<b>23</b> 0512 6.7 1133 1.2 W 1729 6.8 2348 1.2
<b>9</b> 0447 7.1 1108 0.8 TH 1711 7.0 ● 2330 0.8	<b>24</b> 0525 6.6 1149 1.4 F 1744 6.5 2359 1.4	<b>9</b> 0003 0.4 0606 7.7 SU 1228 0.2 1829 7.4	<b>24</b> 0008 1.3 0604 6.7 M 1228 1.3 1822 6.6	<b>9</b> 0503 7.6 1123 0.3 SU 1726 7.4 ● 2346 0.3	<b>24</b> 0508 6.7 1131 1.2 M 1725 6.7 O 2342 1.2	<b>9</b> 0010 0.4 0609 7.5 W 1230 0.5 1827 7.3	<b>24</b> 0545 6.7 1207 1.2 TH 1803 6.8
<b>10</b> 0534 7.3 1156 0.6 F 1758 7.2	<b>25</b> 0557 6.7 1222 1.4 SA 1816 6.5	<b>10</b> 0050 0.4 0651 7.6 M 1314 0.3 1913 7.3	<b>25</b> 0038 1.3 0634 6.7 TU 1258 1.3 1852 6.6	<b>10</b> 0548 7.7 1209 0.2 M 1809 7.5	<b>25</b> 0538 6.8 1201 1.2 TU 1756 6.7	<b>10</b> 0053 0.6 0649 7.2 TH 1311 0.8 1906 7.0	<b>25</b> 0023 1.1 0619 6.7 F 1241 1.3 1837 6.7
<b>11</b> 0018 0.7 0620 7.5 SA 1244 0.5 1844 7.2	<b>26</b> 0032 1.4 0628 6.6 SU 1254 1.4 1847 6.4	<b>11</b> 0135 0.6 0735 7.4 TU 1359 0.7 1956 6.9	<b>26</b> 0109 1.4 0704 6.6 W 1328 1.5 1922 6.4	<b>11</b> 0031 0.3 0631 7.7 TU 1253 0.3 1851 7.3	<b>26</b> 0013 1.2 0609 6.8 W 1232 1.2 1826 6.7	<b>11</b> 0134 0.9 0729 6.8 F 1352 1.3 1946 6.6	<b>26</b> 0100 1.2 0655 6.6 SA 1318 1.4 1915 6.6
<b>12</b> 0105 0.7 0707 7.4 SU 1331 0.6 1931 7.0	<b>27</b> 0103 1.5 0659 6.6 M 1325 1.5 1918 6.3	<b>12</b> 0221 0.9 0820 7.0 W 1444 1.1 2040 6.5	<b>27</b> 0141 1.5 0735 6.4 TH 1400 1.7 1955 6.2	<b>12</b> 0115 0.5 0713 7.4 W 1335 0.7 1931 7.0	<b>27</b> 0045 1.2 0640 6.7 TH 1303 1.3 1858 6.6	<b>12</b> 0217 1.4 0810 6.3 SA 1434 1.8 2027 6.1	<b>27</b> 0140 1.4 0736 6.3 SU 1359 1.7 1958 6.3
<b>13</b> 0153 0.9 0755 7.2 M 1419 0.9 2019 6.7	<b>28</b> 0135 1.6 0730 6.4 TU 1356 1.7 1950 6.1	<b>13</b> 0308 1.4 0906 6.4 TH 1532 1.7 2128 6.0	<b>28</b> 0216 1.8 0810 6.1 F 1437 1.9 2033 5.9	<b>13</b> 0158 0.9 0754 6.9 TH 1418 1.1 2012 6.6	<b>28</b> 0118 1.3 0712 6.5 F 1336 1.5 1932 6.4	<b>13</b> 0301 1.9 0854 5.8 SU 1520 2.3 2115 5.6	<b>28</b> 0225 1.6 0822 6.0 M 1447 2.0 2049 6.0
<b>14</b> 0242 1.2 0844 6.8 TU 1509 1.3 2109 6.3	<b>29</b> 0208 1.8 0802 6.2 W 1430 1.9 2025 5.9	<b>14</b> 0400 1.9 0958 5.9 F 1625 2.2 2226 5.6		<b>14</b> 0242 1.4 0836 6.4 F 1502 1.7 2055 6.1	<b>29</b> 0155 1.6 0749 6.3 SA 1415 1.8 2011 6.1	<b>14</b> 0352 2.3 0949 5.3 M 1614 2.7 2216 5.3	<b>29</b> 0317 1.9 0919 5.7 TU 1544 2.2 2152 5.7



<b>15</b>	0334	1.6	<b>30</b>	0245	2.1	<b>15</b>	0459	2.4
	0936	6.4		0839	5.9		1102	5.4
W	1602	1.7	TH	1509	2.2	SA	1729	2.6
	2204	5.9		2106	5.7		2340	5.3

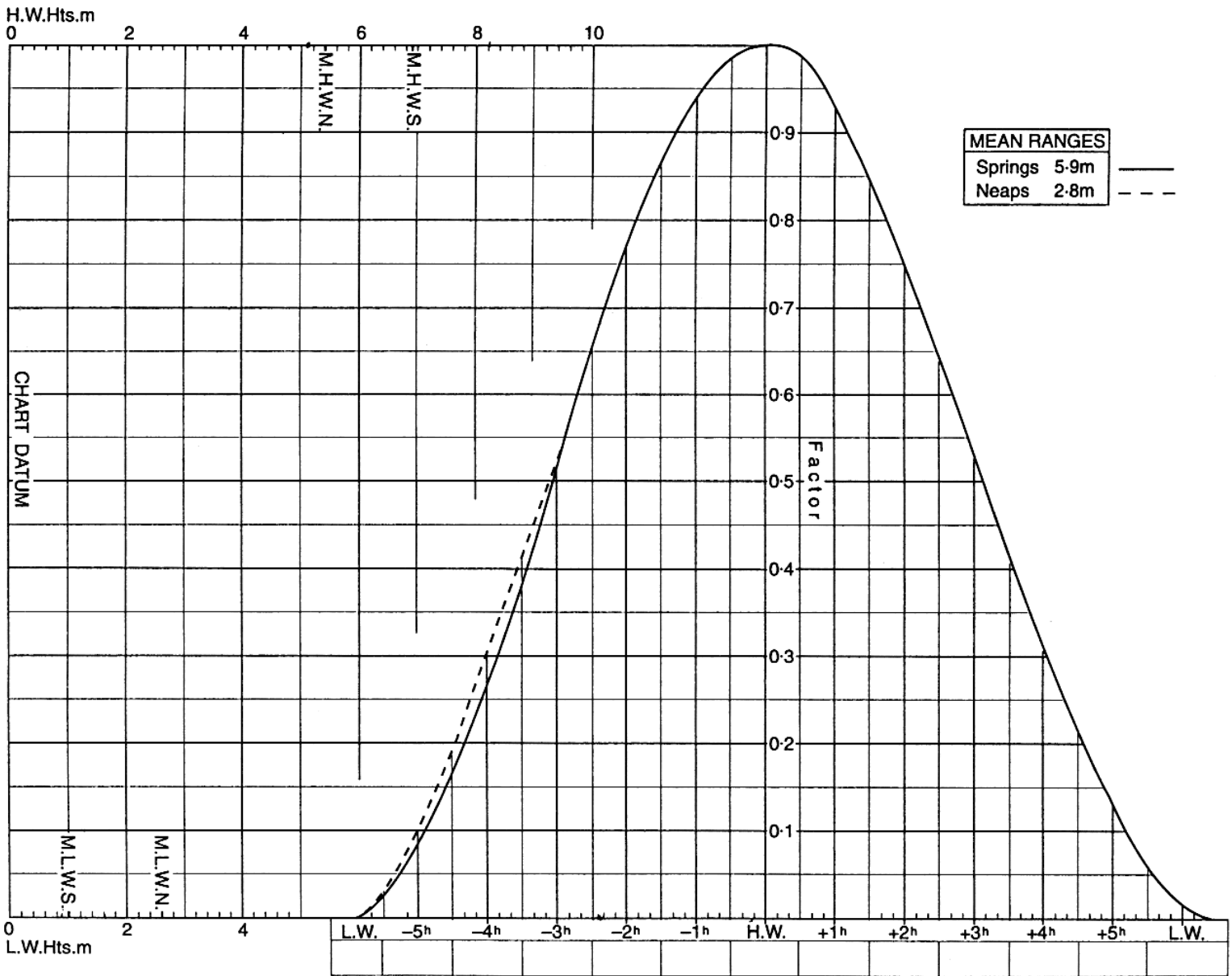
<b>31</b>	0329	2.3
	0924	5.6
F	1556	2.4
	2158	5.4

<b>15</b>	0329	1.9	<b>30</b>	0237	1.8	<b>15</b>	0453	2.7	<b>30</b>	0420	2.1
	0924	5.8		0832	5.9		1059	5.0		1030	5.5
SA	1551	2.3	SU	1459	2.1	TU	1721	2.9	W	1654	2.4
	2147	5.6		2059	5.8		2334	5.1		2309	5.6

<b>31</b>	0328	2.1
	0926	5.6
M	1555	2.4
	2202	5.5

**BREST**

MEAN SPRING AND NEAP CURVES  
 Springs occur 2 days after New and Full Moon.



# PART II

## TIME AND HEIGHT DIFFERENCES

FOR PREDICTING THE TIDE AT

SECONDARY PORTS

## FRANCE, WEST COAST

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Zone	Water	Low -0100	Water	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . . .	47	17 2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . . .	47	13 2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . . .	47	16 2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . . .	F 47	16 2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . . .	47	18 2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . . .	47	17 1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	⊙
1666	Le Pellerin . . . . .	47	12 1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32
1667	Nantes (Chantenay) . . . . .	47	12 1 35	+0135	+0055	+0215	+0125	-0.6	-0.3	-0.8	-0.1	3.74

## SEASONAL CHANGES IN MEAN LEVEL

No.	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sep. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1
1628-1643	Negligible												
1644-1665	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1666	+0.1	+0.4	+0.5	+0.3	0.0	-0.2	-0.2	-0.1	-0.1	-0.2	-0.3	-0.2	+0.1
1667	+0.1	+0.8	+1.0	+0.6	0.0	-0.3	-0.3	-0.1	-0.2	-0.5	-0.7	-0.5	+0.1
1668-1673	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1674-1681	Negligible												
1682-1689	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1	+0.1



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# 1. Beispiel Aufgabe:

A) Bestimmung der Hoch- und Niedrigwasserzeiten im Hafen von „Le Pellerin“ am 25.02.1997 für die erste Tageshälfte

- Suche nach Hafennr. im Alphabetischen Register:

Ergebnis: Port „Le Pellerin“ 1666

- Im Part II: gesuchten Hafen und zugehörigen Standard Port finden

## FRANCE, WEST COAST

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.	
				High Zone	Water	Low -0100	Water	MHWS	MHWN	MLWN	MLWS		
1638	BREST			(see page 238)	0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen	. 47 17	2 25		+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier	. 47 13	2 19		+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet	. 47 16	2 21		+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>													
1664	St. Nazaire	F 47 16	2 12		+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges	. 47 18	2 05		+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais	. 47 17	1 54		+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	⊙
1666	Le Pellerin	. 47 12	1 46		+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32
1667	Nantes (Chantenay)	. 47 12	1 35		+0135	+0055	+0215	+0125	-0.6	-0.3	-0.8	-0.1	3.74

## SEASONAL CHANGES IN MEAN LEVEL

No.	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sep. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1
1628-1643													
1644-1665	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1666	+0.1	+0.4	+0.5	+0.3	0.0	-0.2	-0.2	-0.1	-0.1	-0.2	-0.3	-0.2	+0.1
1667	+0.1	+0.8	+1.0	+0.6	0.0	-0.3	-0.3	-0.1	-0.2	-0.5	-0.7	-0.5	+0.1
1668-1673	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1674-1681													
1682-1689	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1	+0.1

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT.....**Brest**..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT.....**Le Pellerin**..... DATE.....**25/02/1997** TIME ZONE\*\*.....  
 (No. **1666** ) Time on Board.....

Date: ●/O..... Springs occur ..... days after ●/O      Status: **Springs Mean Neaps**  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**					
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES					
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>					
If necessary, Time on Board:					

\*\* Official Standard Time



## FRANCE – BREST

LAT 48°23'N LONG 4°30'W

TIME ZONE -0100

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

YEAR 1997

JANUARY				FEBRUARY				MARCH				APRIL			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
<b>1</b> 0321 0917 W 1550 2152	2.5 5.6 2.5 5.3	<b>16</b> 0431 1035 TH 1702 2308	2.0 5.9 2.1 5.6	<b>1</b> 0422 1022 SA 1655 2306	2.6 5.4 2.6 5.3	<b>16</b> 0611 1222 SU 1848	2.6 5.2 2.7	<b>1</b> 0258 0851 SA 1522 2121	2.0 5.8 2.2 5.6	<b>16</b> 0424 1023 SU 1650 2256	2.4 5.3 2.7 5.2	<b>1</b> 0431 1039 TU 1707 2324	2.4 5.3 2.6 5.4	<b>16</b> 0608 1225 W 1842	2.8 5.0 2.9
<b>2</b> 0411 1012 TH 1645 2255	2.7 5.4 2.7 5.2	<b>17</b> 0536 1143 F 1809	2.3 5.6 2.4	<b>2</b> 0528 1138 SU 1809	2.7 5.3 2.7	<b>17</b> 0107 0735 M 1347 2007	5.3 2.6 5.3 2.6	<b>2</b> 0348 0946 SU 1617 2224	2.3 5.5 2.5 5.4	<b>17</b> 0532 1142 M 1806	2.7 5.0 2.9	<b>2</b> 0550 1210 W 1833	2.4 5.4 2.5	<b>17</b> 0057 0727 TH 1339 1953	5.2 2.7 5.2 2.6
<b>3</b> 0513 1120 F 1752	2.8 5.3 2.7	<b>18</b> 0022 0649 SA 1259 1923	5.5 2.4 5.5 2.4	<b>3</b> 0025 0647 M 1301 1927	5.4 2.6 5.4 2.4	<b>18</b> 0221 0844 TU 1451 2106	5.5 2.3 5.6 2.3	<b>3</b> 0452 1059 M 1729 2347	2.5 5.3 2.7 5.3	<b>18</b> 0025 0657 TU 1315 1933	5.1 2.8 5.1 2.8	<b>3</b> 0051 0714 TH 1333 1952	5.6 2.1 5.7 2.1	<b>18</b> 0201 0826 F 1431 2045	5.4 2.4 5.6 2.3
<b>4</b> 0007 0623 SA 1234 1903	5.3 2.7 5.4 2.6	<b>19</b> 0138 0802 SU 1410 2031	5.6 2.3 5.6 2.2	<b>4</b> 0142 0802 TU 1415 2036	5.7 2.2 5.8 2.0	<b>19</b> 0314 0936 W 1538 2152	5.8 2.0 5.9 1.9	<b>4</b> 0612 1230 TU 1855	2.5 5.3 2.5	<b>19</b> 0149 0814 W 1424 2037	5.3 2.5 5.4 2.5	<b>4</b> 0204 0825 F 1438 2056	6.1 1.6 6.2 1.5	<b>19</b> 0248 0912 SA 1513 2127	5.8 2.0 5.9 1.9
<b>5</b> 0116 0733 SU 1343 2007	5.5 2.5 5.6 2.2	<b>20</b> 0241 0904 M 1508 2126	5.8 2.1 5.9 2.0	<b>5</b> 0246 0906 W 1516 2134	6.1 1.7 6.3 1.5	<b>20</b> 0356 1018 TH 1616 2231	6.1 1.7 6.2 1.7	<b>5</b> 0113 0736 W 1353 2013	5.6 2.2 5.7 2.1	<b>20</b> 0245 0908 TH 1511 2124	5.6 2.2 5.7 2.1	<b>5</b> 0303 0924 SA 1532 2150	6.6 1.1 6.7 1.0	<b>20</b> 0328 0950 SU 1549 2204	6.1 1.7 6.2 1.7
<b>6</b> 0216 0834 M 1442 2103	5.9 2.1 6.0 1.9	<b>21</b> 0332 0955 TU 1555 2212	6.1 1.8 6.1 1.8	<b>6</b> 0341 1002 TH 1608 2226	6.7 1.1 6.7 1.0	<b>21</b> 0431 1054 F 1650 2305	6.4 1.5 6.4 1.5	<b>6</b> 0225 0846 TH 1457 2115	6.1 1.7 6.2 1.5	<b>21</b> 0328 0950 F 1549 2203	6.0 1.9 6.1 1.8	<b>6</b> 0355 1015 SU 1620 2240	7.1 0.7 7.1 0.6	<b>21</b> 0404 1026 M 1623 2240	6.3 1.5 6.5 1.4

# Zeitangaben

**UTC** (Universal Time Coordinated) Zeitstandard, wird mit Hilfe von Atomuhren gemessen und regelmäßig an die tatsächliche Länge eines Erdentages angepasst

**UT** (Universal Time): **UT** ist ein Zeitstandard, der die durchschnittliche Geschwindigkeit der Erdrotation und damit die tatsächliche Länge eines Tages auf der Erde widerspiegelt. Sie bezieht sich auf die mittlere Sonnenzeit am Nullmeridian in Greenwich, England.

**GMT** Greenwich Mean Time (**GMT**) ist eine **Zeitzone**

**UT-1** ist eine **Zeitzone** und entspricht der (Mittel Europäische Zeit, **MEZ**)

In Großbritannien werden die Uhren im Sommer um eine Stunde auf British Summer Time (**BST** entspricht UT-1)) vorgestellt, in Irland auf Irish Standard Time (**IST** entspricht UT-1).

**MESZ** bezeichnet die Mittel Europäischen Sommer Zeit (entspricht UT-2)

**LT**: (Local Time) Örtliche Zeit im Deutschen auch **GZ**: Gesetzliche Zeit

**BZ**: Bordzeit oder **BT**

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

Date: ●/○..... Springs occur ..... days after ●/○ ..... Status: **Springs Mean Neaps**  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**					
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES					
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>					
If necessary, Time on Board:					

\*\* Official Standard Time

<b>7</b> 0309 6.3 0929 1.6 TU 1535 6.4 2154 1.5	<b>22</b> 0414 6.3 1037 1.6 W 1635 6.3 2251 1.6	<b>7</b> 0432 7.1 1053 0.7 F 1658 7.1 ● 2316 0.7	<b>22</b> 0503 6.6 1127 1.4 SA 1722 6.5 O -2337 1.4	<b>7</b> 0323 6.7 0944 1.1 F 1552 6.8 2209 1.0	<b>22</b> 0404 6.3 1026 1.6 SA 1623 6.3 2238 1.5	<b>7</b> 0442 7.4 1103 0.4 M 1705 7.4 ● 2326 0.4	<b>22</b> 0438 6.5 1100 1.3 TU 1657 6.7 O 2314 1.2
<b>8</b> 0359 6.7 1019 1.2 W 1624 6.8 2243 1.1	<b>23</b> 0451 6.5 1115 1.5 TH 1711 6.4 O 2326 1.5	<b>8</b> 0520 7.5 1141 0.3 SA 1744 7.4	<b>23</b> 0534 6.7 1158 1.3 SU 1752 6.6	<b>8</b> 0415 7.2 1035 0.6 SA 1641 7.2 2259 0.6	<b>23</b> 0436 6.5 1059 1.4 SU 1655 6.5 2310 1.3	<b>8</b> 0527 7.5 1147 0.4 TU 1747 7.4	<b>23</b> 0512 6.7 1133 1.2 W 1729 6.8 2348 1.2
<b>9</b> 0447 7.1 1108 0.8 TH 1711 7.0 ● 2330 0.8	<b>24</b> 0525 6.6 1149 1.4 F 1744 6.5 2359 1.4	<b>9</b> 0003 0.4 0606 7.7 SU 1228 0.2 1829 7.4	<b>24</b> 0008 1.3 0604 6.7 M 1228 1.3 1822 6.6	<b>9</b> 0503 7.6 1123 0.3 SU 1726 7.4 ● 2346 0.3	<b>24</b> 0508 6.7 1131 1.2 M 1725 6.7 O 2342 1.2	<b>9</b> 0010 0.4 0609 7.5 W 1230 0.5 1827 7.3	<b>24</b> 0545 6.7 1207 1.2 TH 1803 6.8
<b>10</b> 0534 7.3 1156 0.6 F 1758 7.2	<b>25</b> 0557 6.7 1222 1.4 SA 1816 6.5	<b>10</b> 0050 0.4 0651 7.6 M 1314 0.3 1913 7.3	<b>25</b> 0038 1.3 0634 6.7 TU 1258 1.3 1852 6.6	<b>10</b> 0548 7.7 1209 0.2 M 1809 7.5	<b>25</b> 0538 6.8 1201 1.2 TU 1756 6.7	<b>10</b> 0053 0.6 0649 7.2 TH 1311 0.8 1906 7.0	<b>25</b> 0023 1.1 0619 6.7 F 1241 1.3 1837 6.7
<b>11</b> 0018 0.7 0620 7.5 SA 1244 0.5 1844 7.2	<b>26</b> 0032 1.4 0628 6.6 SU 1254 1.4 1847 6.4	<b>11</b> 0135 0.6 0735 7.4 TU 1359 0.7 1956 6.9	<b>26</b> 0109 1.4 0704 6.6 W 1328 1.5 1922 6.4	<b>11</b> 0031 0.3 0631 7.7 TU 1253 0.3 1851 7.3	<b>26</b> 0013 1.2 0609 6.8 W 1232 1.2 1826 6.7	<b>11</b> 0134 0.9 0729 6.8 F 1352 1.3 1946 6.6	<b>26</b> 0100 1.2 0655 6.6 SA 1318 1.4 1915 6.6
<b>12</b> 0105 0.7 0707 7.4 SU 1331 0.6 1931 7.0	<b>27</b> 0103 1.5 0659 6.6 M 1325 1.5 1918 6.3	<b>12</b> 0221 0.9 0820 7.0 W 1444 1.1 2040 6.5	<b>27</b> 0141 1.5 0735 6.4 TH 1400 1.7 1955 6.2	<b>12</b> 0115 0.5 0713 7.4 W 1335 0.7 1931 7.0	<b>27</b> 0045 1.2 0640 6.7 TH 1303 1.3 1858 6.6	<b>12</b> 0217 1.4 0810 6.3 SA 1434 1.8 2027 6.1	<b>27</b> 0140 1.4 0736 6.3 SU 1359 1.7 1958 6.3
<b>13</b> 0153 0.9 0755 7.2 M 1419 0.9 2019 6.7	<b>28</b> 0135 1.6 0730 6.4 TU 1356 1.7 1950 6.1	<b>13</b> 0308 1.4 0906 6.4 TH 1532 1.7 2128 6.0	<b>28</b> 0216 1.8 0810 6.1 F 1437 1.9 2033 5.9	<b>13</b> 0158 0.9 0754 6.9 TH 1418 1.1 2012 6.6	<b>28</b> 0118 1.3 0712 6.5 F 1336 1.5 1932 6.4	<b>13</b> 0301 1.9 0854 5.8 SU 1520 2.3 2115 5.6	<b>28</b> 0225 1.6 0822 6.0 M 1447 2.0 2049 6.0
<b>14</b> 0242 1.2 0844 6.8 TU 1509 1.3 2109 6.3	<b>29</b> 0208 1.8 0802 6.2 W 1430 1.9 2025 5.9	<b>14</b> 0400 1.9 0958 5.9 F 1625 2.2 2226 5.6	<b>14</b> 0242 1.4 0836 6.4 F 1502 1.7 2055 6.1	<b>29</b> 0155 1.6 0749 6.3 SA 1415 1.8 2011 6.1	<b>14</b> 0352 2.3 0949 5.3 M 1614 2.7 2216 5.3	<b>29</b> 0317 1.9 0919 5.7 TU 1544 2.2 2152 5.7	

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

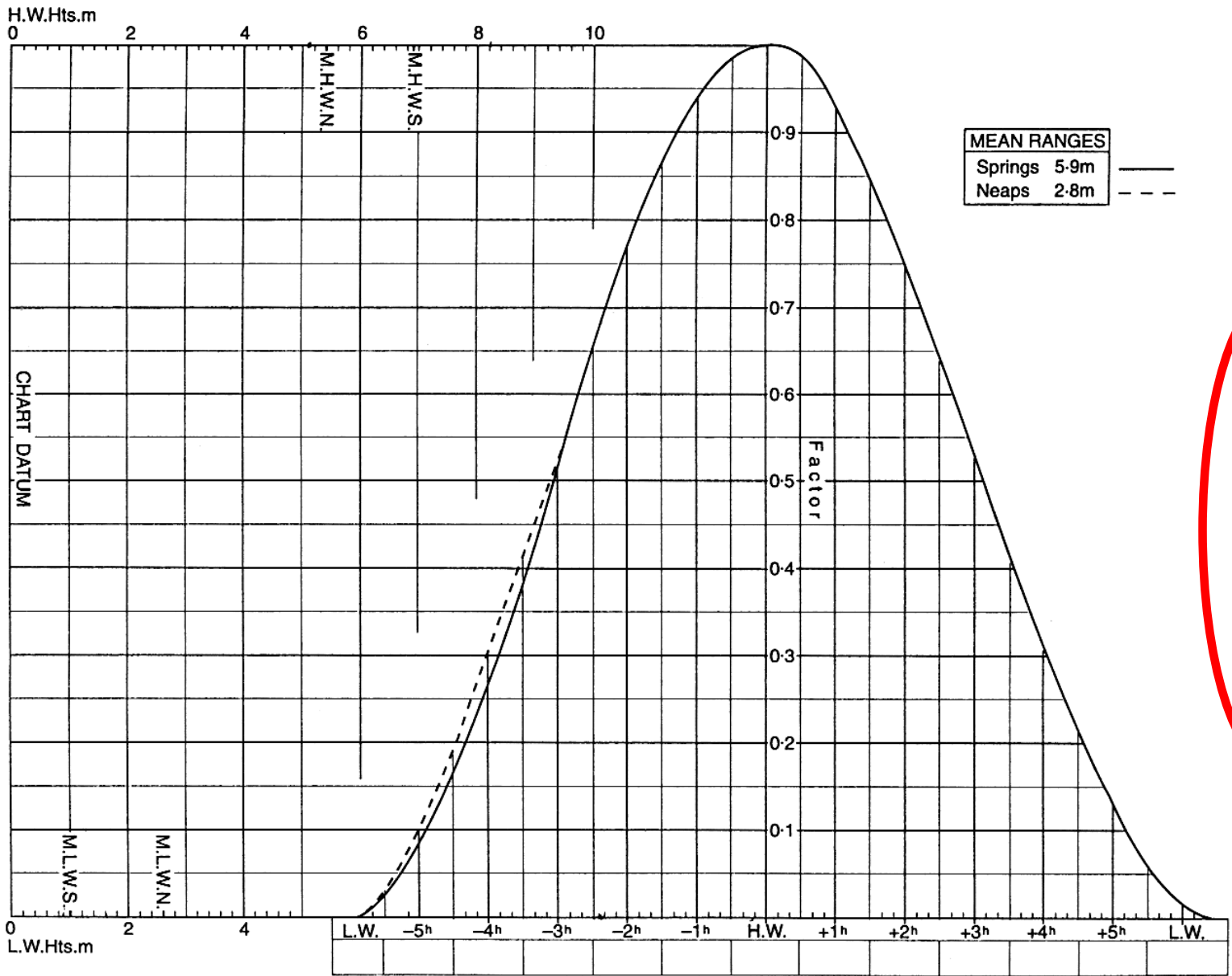
Date: ●/○..... Springs occur ..... days after ●/○ ..... Status: **Springs Mean Neaps**  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5.4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES					
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>					
If necessary, Time on Board:					

\*\* Official Standard Time

# Alter der Gezeit - engl. „*Status*“

- Frage in welcher Phase der Gezeit man sich befindet:



**BREST**  
MEAN SPRING AND NEAP CURVES  
Springs occur 2 days after New and Full Moon.

# Alter der Gezeit - engl. Status

- Frage in welcher Phase man sich befindet:  
“Springs occur x days after Full and New Moon”
  - Spring (4 Tage)
  - Mid (3 Tage)
  - Neap ( 4 Tage)



<b>7</b> 0309 6.3 0929 1.6 TU 1535 6.4 2154 1.5	<b>22</b> 0414 6.3 1037 1.6 W 1635 6.3 2251 1.6	<b>7</b> 0432 7.1 1053 0.7 F 1658 7.1 ● 2316 0.7	<b>22</b> 0503 6.6 1127 1.4 SA 1 122 6.5 O-2 137 1.4	<b>7</b> 0323 6.7 0944 1.1 F 1552 6.8 2209 1.0	<b>22</b> 0404 6.3 1026 1.6 SA 1623 6.3 2238 1.5	<b>7</b> 0442 7.4 1103 0.4 M 1705 7.4 ● 2326 0.4	<b>22</b> 0438 6.5 1100 1.3 TU 1657 6.7 O 2314 1.2
<b>8</b> 0359 6.7 1019 1.2 W 1624 6.8 2243 1.1	<b>23</b> 0451 6.5 1115 1.5 TH 1711 6.4 O 2326 1.5	<b>8</b> 0520 7.5 1141 0.3 SA 1744 7.4	<b>23</b> 0534 6.7 1158 1.3 SU 1752 6.6	<b>8</b> 0415 7.2 1035 0.6 SA 1641 7.2 2259 0.6	<b>23</b> 0436 6.5 1059 1.4 SU 1655 6.5 2310 1.3	<b>8</b> 0527 7.5 1147 0.4 TU 1747 7.4	<b>23</b> 0512 6.7 1133 1.2 W 1729 6.8 2348 1.2
<b>9</b> 0447 7.1 1108 0.8 TH 1711 7.0 ● 2330 0.8	<b>24</b> 0525 6.6 1149 1.4 F 1744 6.5 2359 1.4	<b>9</b> 0003 0.4 0606 7.7 SU 1228 0.2 1829 7.4	<b>24</b> 0008 1.3 0604 6.7 M 1228 1.3 1822 6.6	<b>9</b> 0503 7.6 1123 0.3 SU 1726 7.4 ● 2346 0.3	<b>24</b> 0508 6.7 1131 1.2 M 1725 6.7 O 2342 1.2	<b>9</b> 0010 0.4 0609 7.5 W 1230 0.5 1827 7.3	<b>24</b> 0545 6.7 1207 1.2 TH 1803 6.8
<b>10</b> 0534 7.3 1156 0.6 F 1758 7.2	<b>25</b> 0557 6.7 1222 1.4 SA 1816 6.5	<b>10</b> 0050 0.4 0651 7.6 M 1314 0.3 1913 7.3	<b>25</b> 0038 1.3 0634 6.7 TU 1258 1.3 1852 6.6	<b>10</b> 0548 7.7 1209 0.2 M 1809 7.5	<b>25</b> 0538 6.8 1201 1.2 TU 1756 6.7	<b>10</b> 0053 0.6 0649 7.2 TH 1311 0.8 1906 7.0	<b>25</b> 0023 1.1 0619 6.7 F 1241 1.3 1837 6.7
<b>11</b> 0018 0.7 0620 7.5 SA 1244 0.5 1844 7.2	<b>26</b> 0032 1.4 0628 6.6 SU 1254 1.4 1847 6.4	<b>11</b> 0135 0.6 0735 7.4 TU 1359 0.7 1956 6.9	<b>26</b> 0109 1.4 0704 6.6 W 1328 1.5 1922 6.4	<b>11</b> 0031 0.3 0631 7.7 TU 1253 0.3 1851 7.3	<b>26</b> 0013 1.2 0609 6.8 W 1232 1.2 1826 6.7	<b>11</b> 0134 0.9 0729 6.8 F 1352 1.3 1946 6.6	<b>26</b> 0100 1.2 0655 6.6 SA 1318 1.4 1915 6.6
<b>12</b> 0105 0.7 0707 7.4 SU 1331 0.6 1931 7.0	<b>27</b> 0103 1.5 0659 6.6 M 1325 1.5 1918 6.3	<b>12</b> 0221 0.9 0820 7.0 W 1444 1.1 2040 6.5	<b>27</b> 0141 1.5 0735 6.4 TH 1400 1.7 1955 6.2	<b>12</b> 0115 0.5 0713 7.4 W 1335 0.7 1931 7.0	<b>27</b> 0045 1.2 0640 6.7 TH 1303 1.3 1858 6.6	<b>12</b> 0217 1.4 0810 6.3 SA 1434 1.8 2027 6.1	<b>27</b> 0140 1.4 0736 6.3 SU 1359 1.7 1958 6.3
<b>13</b> 0153 0.9 0755 7.2 M 1419 0.9 2019 6.7	<b>28</b> 0135 1.6 0730 6.4 TU 1356 1.7 1950 6.1	<b>13</b> 0308 1.4 0906 6.4 TH 1532 1.7 2128 6.0	<b>28</b> 0216 1.8 0810 6.1 F 1437 1.9 2033 5.9	<b>13</b> 0158 0.9 0754 6.9 TH 1418 1.1 2012 6.6	<b>28</b> 0118 1.3 0712 6.5 F 1336 1.5 1932 6.4	<b>13</b> 0301 1.9 0854 5.8 SU 1520 2.3 2115 5.6	<b>28</b> 0225 1.6 0822 6.0 M 1447 2.0 2049 6.0
<b>14</b> 0242 1.2 0844 6.8 TU 1509 1.3 2109 6.3	<b>29</b> 0208 1.8 0802 6.2 W 1430 1.9 2025 5.9	<b>14</b> 0400 1.9 0958 5.9 F 1625 2.2 2226 5.6		<b>14</b> 0242 1.4 0836 6.4 F 1502 1.7 2055 6.1	<b>29</b> 0155 1.6 0749 6.3 SA 1415 1.8 2011 6.1	<b>14</b> 0352 2.3 0949 5.3 M 1614 2.7 2216 5.3	<b>29</b> 0317 1.9 0919 5.7 TU 1544 2.2 2152 5.7

## FRANCE – BREST

LAT 48°23'N LONG 4°30'W

TIME ZONE -0100

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

YEAR 1997

JANUARY				FEBRUARY				MARCH				APRIL			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
<b>1</b> 0321	2.5	<b>16</b> 0431	2.0	<b>1</b> 0422	2.6	<b>16</b> 0611	2.6	<b>1</b> 0258	2.0	<b>16</b> 0424	2.4	<b>1</b> 0431	2.4	<b>16</b> 0608	2.8
0917	5.6	1035	5.9	1022	5.4	1222	5.2	0851	5.8	1023	5.3	1039	5.3	1225	5.0
W 1550	2.5	TH 1702	2.1	SA 1655	2.6	SU 1848	2.7	SA 1522	2.2	SU 1650	2.7	TU 1707	2.6	W 1842	2.9
2152	5.3	2308	5.6	2306	5.3			2121	5.6	2256	5.2	2324	5.4		
<b>2</b> 0411	2.7	<b>17</b> 0536	2.3	<b>2</b> 0528	2.7	<b>17</b> 0107	5.3	<b>2</b> 0348	2.3	<b>17</b> 0532	2.7	<b>2</b> 0550	2.4	<b>17</b> 0057	5.2
1012	5.4	1143	5.6	1138	5.3	0735	2.6	0946	5.5	1142	5.0	1210	5.4	0727	2.7
TH 1645	2.7	F 1809	2.4	SU 1809	2.7	M 1347	5.3	SU 1617	2.5	M 1806	2.9	W 1833	2.5	TH 1339	5.2
2255	5.2					2007	2.6	2224	5.4					1953	2.6
<b>3</b> 0513	2.8	<b>18</b> 0022	5.5	<b>3</b> 0025	5.4	<b>18</b> 0221	5.5	<b>3</b> 0452	2.5	<b>18</b> 0025	5.1	<b>3</b> 0051	5.6	<b>18</b> 0201	5.4
1120	5.3	0649	2.4	0647	2.6	0844	2.3	1059	5.3	0657	2.8	0714	2.1	0826	2.4
F 1752	2.7	SA 1259	5.5	M 1301	5.4	TU 1451	5.6	M 1729	2.7	TU 1315	5.1	TH 1333	5.7	F 1431	5.6
		1923	2.4	1927	2.4	2106	2.3	2347	5.3	1933	2.8	1952	2.1	2045	2.3
<b>4</b> 0007	5.3	<b>19</b> 0138	5.6	<b>4</b> 0142	5.7	<b>19</b> 0314	5.8	<b>4</b> 0612	2.5	<b>19</b> 0149	5.3	<b>4</b> 0204	6.1	<b>19</b> 0248	5.8
0623	2.7	0802	2.3	0802	2.2	0936	2.0	1230	5.3	0814	2.5	0825	1.6	0912	2.0
SA 1234	5.4	SU 1410	5.6	TU 1415	5.8	W 1538	5.9	TU 1855	2.5	W 1424	5.4	F 1438	6.2	SA 1513	5.9
1903	2.6	2031	2.2	2036	2.0	2152	1.9			2037	2.5	2056	1.5	2127	1.9
<b>5</b> 0116	5.5	<b>20</b> 0241	5.8	<b>5</b> 0246	6.1	<b>20</b> 0356	6.1	<b>5</b> 0113	5.6	<b>20</b> 0245	5.6	<b>5</b> 0303	6.6	<b>20</b> 0328	6.1
0733	2.5	0904	2.1	0906	1.7	1018	1.7	0736	2.2	0908	2.2	0924	1.1	0950	1.7
SU 1343	5.6	M 1508	5.9	W 1516	6.3	TH 1616	6.2	W 1353	5.7	TH 1511	5.7	SA 1532	6.7	SU 1549	6.2
2007	2.2	2126	2.0	2134	1.5	2231	1.7	2013	2.1	2124	2.1	2150	1.0	2204	1.7
<b>6</b> 0216	5.9	<b>21</b> 0332	6.1	<b>6</b> 0341	6.7	<b>21</b> 0431	6.4	<b>6</b> 0225	6.1	<b>21</b> 0328	6.0	<b>6</b> 0355	7.1	<b>21</b> 0404	6.3
0834	2.1	0955	1.8	1002	1.1	1054	1.5	0846	1.7	0950	1.9	1015	0.7	1026	1.5
M 1442	6.0	TU 1555	6.1	TH 1608	6.7	F 1650	6.4	TH 1457	6.2	F 1549	6.1	SU 1620	7.1	M 1623	6.5
2103	1.9	2212	1.8	2226	1.0	2305	1.5	2115	1.5	2203	1.8	2240	0.6	2240	1.4

<b>7</b> 0309 6.3 0929 1.6 TU 1535 6.4 2154 1.5	<b>22</b> 0414 6.3 1037 1.6 W 1635 6.3 2251 1.6	<b>7</b> 0432 7.1 1053 0.7 F 1658 7.1 ● 2316 0.7	<b>22</b> 0503 6.6 1127 1.4 SA 1722 6.5 O 2337 1.4	<b>7</b> 0323 6.7 0944 1.1 F 1552 6.8 2209 1.0	<b>22</b> 0404 6.3 1026 1.6 SA 1623 6.3 2238 1.5	<b>7</b> 0442 7.4 1103 0.4 M 1705 7.4 ● 2326 0.4	<b>22</b> 0438 6.5 1100 1.3 TU 1657 6.7 O 2314 1.2
<b>8</b> 0359 6.7 1019 1.2 W 1624 6.8 2243 1.1	<b>23</b> 0451 6.5 1115 1.5 TH 1711 6.4 O 2326 1.5	<b>8</b> 0520 7.5 1141 0.3 SA 1744 7.4	<b>23</b> 0534 6.7 1158 1.3 SU 1752 6.6	<b>8</b> 0415 7.2 1035 0.6 SA 1641 7.2 2259 0.6	<b>23</b> 0436 6.5 1059 1.4 SU 1655 6.5 2310 1.3	<b>8</b> 0527 7.5 1147 0.4 TU 1747 7.4	<b>23</b> 0512 6.7 1133 1.2 W 1729 6.8 2348 1.2
<b>9</b> 0447 7.1 1108 0.8 TH 1711 7.0 ● 2330 0.8	<b>24</b> 0525 6.6 1149 1.4 F 1744 6.5 2359 1.4	<b>9</b> 0003 0.4 0606 7.7 SU 1228 0.2 1829 7.4	<b>24</b> 0008 1.3 0604 6.7 M 1228 1.3 1822 6.6	<b>9</b> 0503 7.6 1123 0.3 SU 1726 7.4 ● 2346 0.3	<b>24</b> 0508 6.7 1131 1.2 M 1725 6.7 O 2342 1.2	<b>9</b> 0010 0.4 0609 7.5 W 1230 0.5 1827 7.3	<b>24</b> 0545 6.7 1207 1.2 TH 1803 6.8
<b>10</b> 0534 7.3 1156 0.6 F 1758 7.2	<b>25</b> 0557 6.7 1222 1.4 SA 1816 6.5	<b>10</b> 0050 0.4 0651 7.6 M 1314 0.3 1913 7.3	<b>25</b> 0038 1.3 0634 6.7 TU 1258 1.3 1852 6.6	<b>10</b> 0548 7.7 1209 0.2 M 1809 7.5	<b>25</b> 0538 6.8 1201 1.2 TU 1756 6.7	<b>10</b> 0053 0.6 0649 7.2 TH 1311 0.8 1906 7.0	<b>25</b> 0023 1.1 0619 6.7 F 1241 1.3 1837 6.7
<b>11</b> 0018 0.7 0620 7.5 SA 1244 0.5 1844 7.2	<b>26</b> 0032 1.4 0628 6.6 SU 1254 1.4 1847 6.4	<b>11</b> 0135 0.6 0735 7.4 TU 1359 0.7 1956 6.9	<b>26</b> 0109 1.4 0704 6.6 W 1328 1.5 1922 6.4	<b>11</b> 0031 0.3 0631 7.7 TU 1253 0.3 1851 7.3	<b>26</b> 0013 1.2 0609 6.8 W 1232 1.2 1826 6.7	<b>11</b> 0134 0.9 0729 6.8 F 1352 1.3 1946 6.6	<b>26</b> 0100 1.2 0655 6.6 SA 1318 1.4 1915 6.6
<b>12</b> 0105 0.7 0707 7.4 SU 1331 0.6 1931 7.0	<b>27</b> 0103 1.5 0659 6.6 M 1325 1.5 1918 6.3	<b>12</b> 0221 0.9 0820 7.0 W 1444 1.1 2040 6.5	<b>27</b> 0141 1.5 0735 6.4 TH 1400 1.7 1955 6.2	<b>12</b> 0115 0.5 0713 7.4 W 1335 0.7 1931 7.0	<b>27</b> 0045 1.2 0640 6.7 TH 1303 1.3 1858 6.6	<b>12</b> 0217 1.4 0810 6.3 SA 1434 1.8 2027 6.1	<b>27</b> 0140 1.4 0736 6.3 SU 1359 1.7 1958 6.3
<b>13</b> 0153 0.9 0755 7.2 M 1419 0.9 2019 6.7	<b>28</b> 0135 1.6 0730 6.4 TU 1356 1.7 1950 6.1	<b>13</b> 0308 1.4 0906 6.4 TH 1532 1.7 2128 6.0	<b>28</b> 0216 1.8 0810 6.1 F 1437 1.9 2033 5.9	<b>13</b> 0158 0.9 0754 6.9 TH 1418 1.1 2012 6.6	<b>28</b> 0118 1.3 0712 6.5 F 1336 1.5 1932 6.4	<b>13</b> 0301 1.9 0854 5.8 SU 1520 2.3 2115 5.6	<b>28</b> 0225 1.6 0822 6.0 M 1447 2.0 2049 6.0
<b>14</b> 0242 1.2 0844 6.8 TU 1509 1.3 2109 6.3	<b>29</b> 0208 1.8 0802 6.2 W 1430 1.9 2025 5.9	<b>14</b> 0400 1.9 0958 5.9 F 1625 2.2 2226 5.6	<b>14</b> 0242 1.4 0836 6.4 F 1502 1.7 2055 6.1	<b>29</b> 0155 1.6 0749 6.3 SA 1415 1.8 2011 6.1	<b>14</b> 0352 2.3 0949 5.3 M 1614 2.7 2216 5.3	<b>29</b> 0317 1.9 0919 5.7 TU 1544 2.2 2152 5.7	

<b>15</b>	0334	1.6	<b>30</b>	0245	2.1	<b>15</b>	0459	2.4
	0936	6.4		0839	5.9		1102	5.4
W	1602	1.7	TH	1509	2.2	SA	1729	2.6
	2204	5.9		2106	5.7		2340	5.3

<b>31</b>	0329	2.3
	0924	5.6
F	1556	2.4
	2158	5.4

<b>15</b>	0329	1.9	<b>30</b>	0237	1.8	<b>15</b>	0453	2.7	<b>30</b>	0420	2.1
	0924	5.8		0832	5.9		1059	5.0		1030	5.5
SA	1551	2.3	SU	1459	2.1	TU	1721	2.9	W	1654	2.4
	2147	5.6		2059	5.8		2334	5.1		2309	5.6

<b>31</b>	0328	2.1
	0926	5.6
M	1555	2.4
	2202	5.5

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

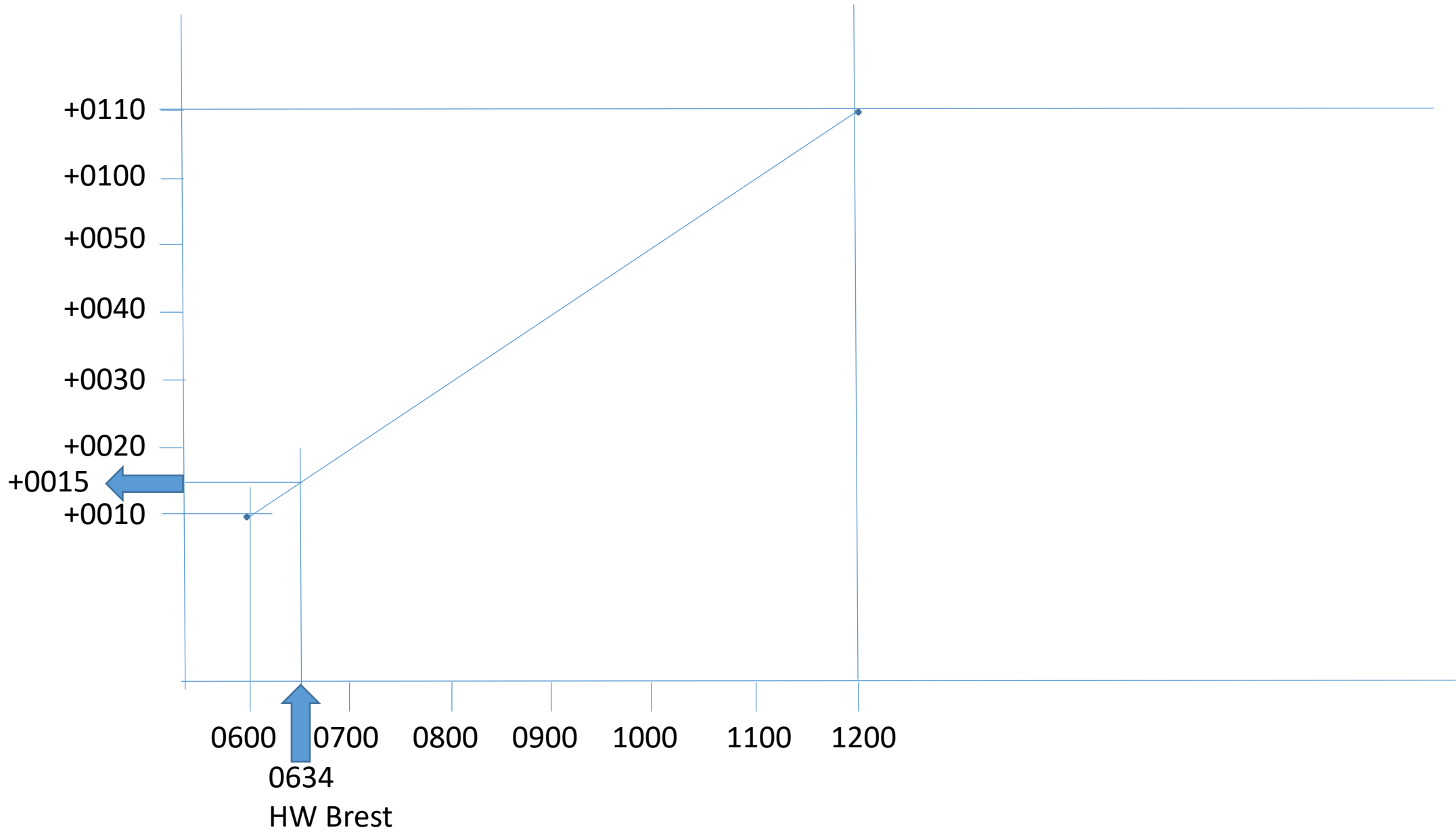
Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... Springs Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5,4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES					
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>					
If necessary, Time on Board:					

\*\* Official Standard Time

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Water Zone	Low Water -0100	High Water Zone	Low Water -0100	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . . .	47 17	2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . . .	47 13	2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . . .	47 16	2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . . .	F 47 16	2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . . .	47 18	2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . . .	47 17	1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	3.32
1666	Le Pellerin . . . . .	47 12	1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32

Auszug aus:



# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... Springs Mean Neaps  
 (NM/FM)

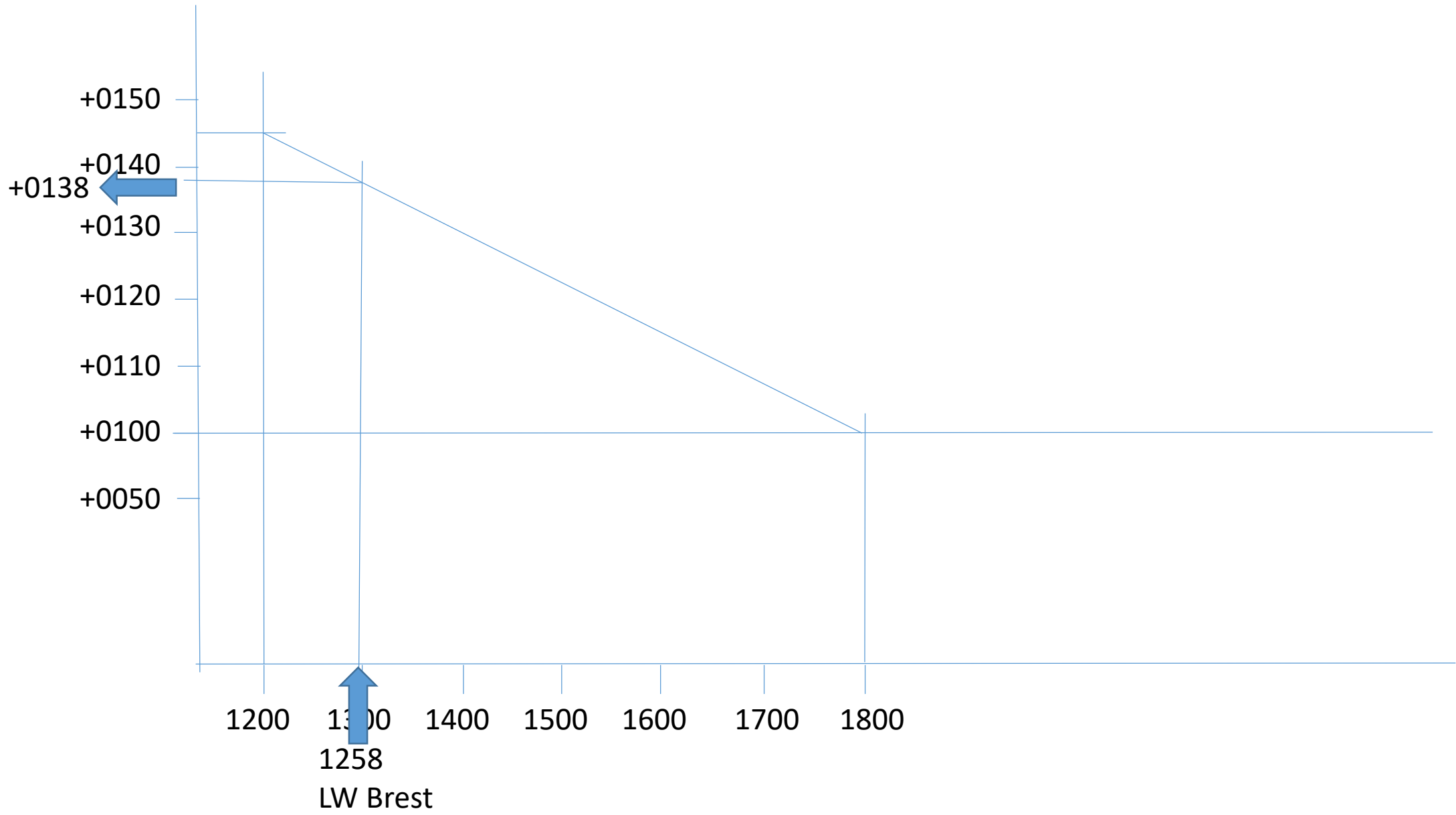
	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5,4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES	<b>+0015</b>				
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>	<b>0649</b>				
If necessary, Time on Board:					

\*\* Official Standard Time



No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Water Zone	Low Water -0100	High Water Zone	Low Water -0100	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . . .	. 47 17	2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . . .	. 47 13	2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . . .	. 47 16	2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . . .	F 47 16	2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . . .	. 47 18	2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . . .	. 47 17	1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	3.32
1666	Le Pellerin . . . . .	. 47 12	1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32

Auszug aus:



# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

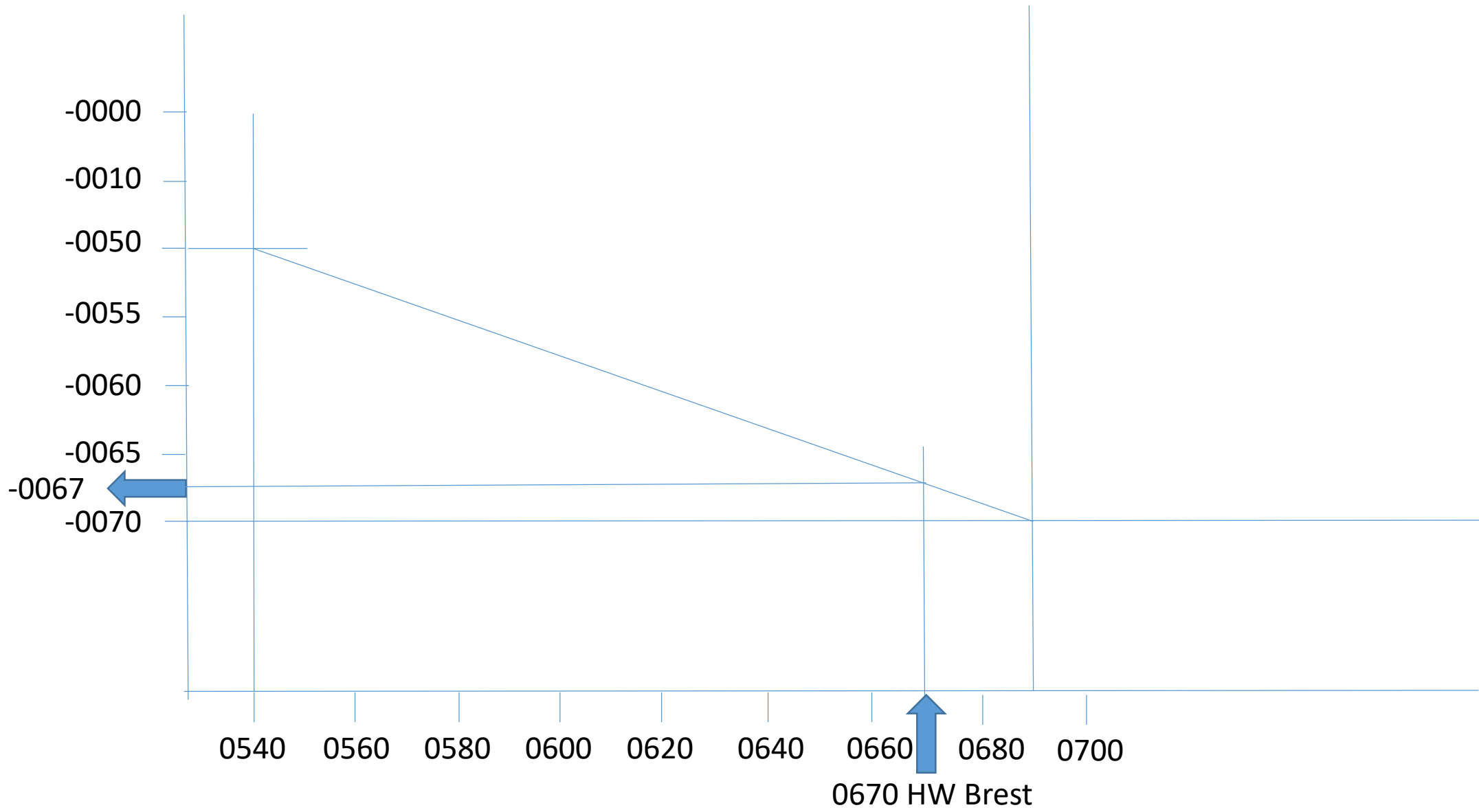
Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... Springs Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5.4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES	<b>+0015</b>	<b>+0138</b>			
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>	<b>0649</b>	<b>+1436</b>			
If necessary, Time on Board:					

\*\* Official Standard Time

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Water Zone	Low Water -0100	High Water Zone	Low Water -0100	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . . .	. 47 17	2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . . .	. 47 13	2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . . .	. 47 16	2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . . .	F 47 16	2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . . .	. 47 18	2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . . .	. 47 17	1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	3.32
1666	Le Pellerin . . . . .	. 47 12	1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32

Auszug aus:



# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

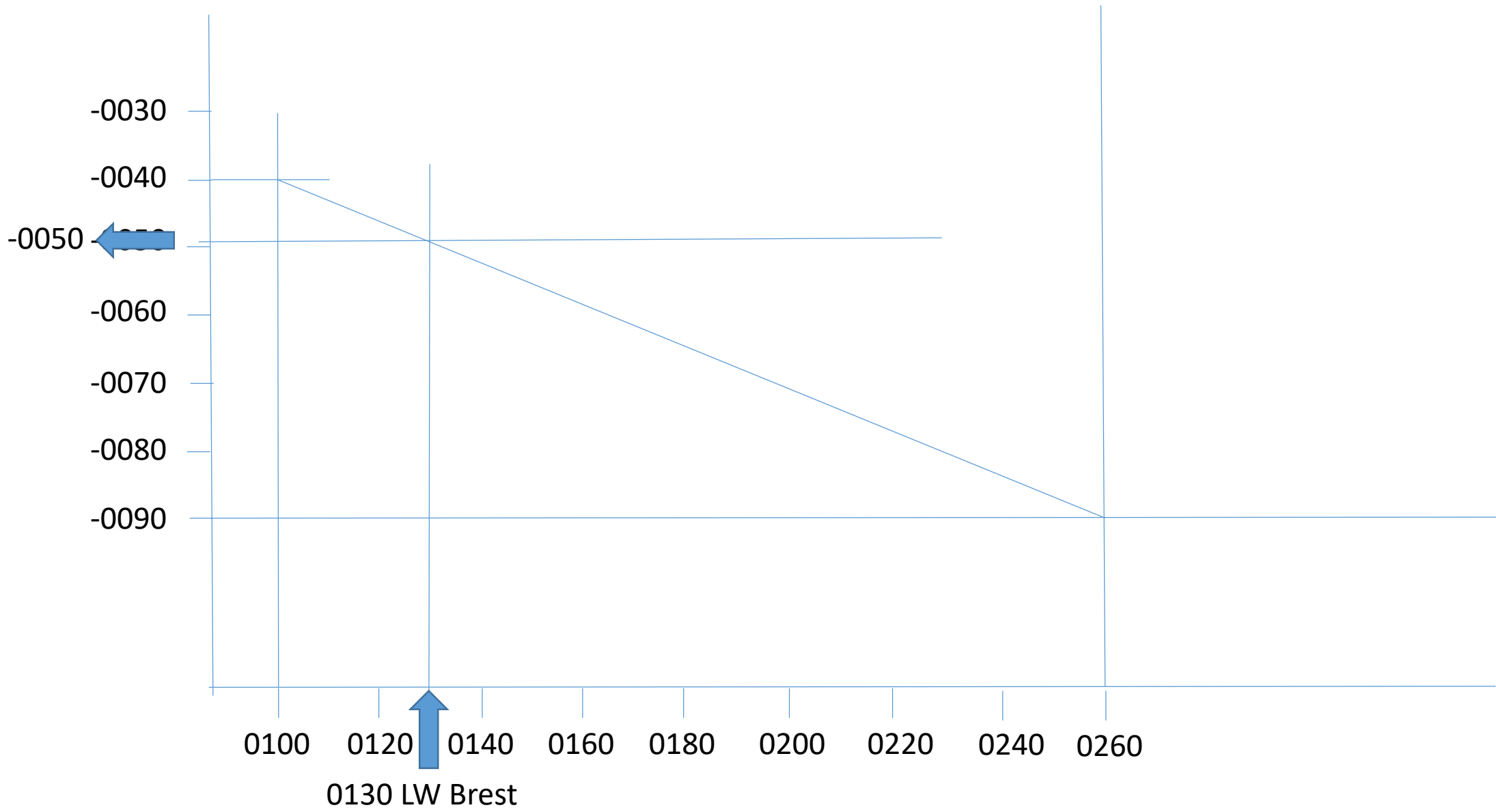
Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... Springs Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5,4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES	<b>+0015</b>	<b>+0138</b>	<b>-0,67</b>		
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>	<b>0649</b>	<b>+1436</b>			
If necessary, Time on Board:					

\*\* Official Standard Time

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Zone	Water -0100	Low Water	Water	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . . .	. 47 17	2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . . .	. 47 13	2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . . .	. 47 16	2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . . .	F 47 16	2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . . .	. 47 18	2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . . .	. 47 17	1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	3.32
1666	Le Pellerin . . . . .	. 47 12	1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32

Auszug aus:





# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... Springs Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5.4</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----			
DIFFERENCES	<b>+0015</b>	<b>+0138</b>	<b>-0,67</b>	<b>-0,50</b>	
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>	<b>0649</b>	<b>+1436</b>			
If necessary, Time on Board:					

\*\* Official Standard Time

## FRANCE, WEST COAST

No.	PLACE	Lat. N.	Long. W.	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)				M.L. Z <sub>n</sub> m.
				High Zone	Water	Low -0100	Water	MHWS	MHWN	MLWN	MLWS	
1638	BREST . . . .	(see page 238)		0000 and 1200	0600 and 1800	0000 and 1200	0600 and 1800	6.9	5.4	2.6	1.0	
1662	Le Pouliguen . . . .	47 17	2 25	+0020	-0025	-0020	-0025	-1.5	-1.1	-0.6	-0.3	3.33
1663	Le Grand-Charpentier . . . .	47 13	2 19	+0015	-0045	-0025	-0020	-1.5	-1.1	-0.6	-0.3	3.33
1663a	Pornichet . . . .	47 16	2 21	+0020	-0045	-0022	-0022	-1.4	-1.0	-0.5	-0.2	3.41
<i>La Loire</i>												
1664	St. Nazaire . . . .	F 47 16	2 12	+0030	-0040	-0010	-0010	-1.1	-0.8	-0.4	-0.2	3.57
1665	Donges . . . .	47 18	2 05	+0040	-0030	0000	0000	-0.9	-0.7	-0.5	-0.4	3.15
1665a	Cordemais . . . .	47 17	1 54	+0055	-0005	+0105	+0030	-0.7	-0.5	-0.7	-0.4	⊙
1666	Le Pellerin . . . .	47 12	1 46	+0110	+0010	+0145	+0100	-0.7	-0.5	-0.9	-0.4	3.32
1667	Nantes (Chantenay) . . . .	47 12	1 35	+0135	+0055	+0215	+0125	-0.6	-0.3	-0.8	-0.1	3.74

## SEASONAL CHANGES IN MEAN LEVEL

No.	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sep. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1
1628-1643	Negligible												
1644-1665	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1666	+0.1	+0.4	+0.5	+0.3	0.0	-0.2	-0.2	-0.1	-0.1	-0.2	-0.3	-0.2	+0.1
1667	+0.1	+0.8	+1.0	+0.6	0.0	-0.3	-0.3	-0.1	-0.2	-0.5	-0.7	-0.5	+0.1
1668-1673	+0.1	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1
1674-1681	Negligible												
1682-1689	+0.1	+0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	+0.1	+0.1

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... **TIME**/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

Date: ●/○..... **22/02/1997** ..... Springs occur ..... **2** ..... days after ●/○ ..... Status..... **Springs** ..... Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>0634</b>	<b>1258</b>	<b>6,7</b>	<b>1,3</b>	<b>5,4</b>
- Seasonal Change	Standard Port		- <b>0.0</b>	- <b>0.0</b>	
StP corrected	-----	-----	<b>6,7</b>	<b>1,3</b>	
DIFFERENCES	<b>+0015</b>	<b>+0138</b>	<b>-0,67</b>	<b>-0,50</b>	
+ Seasonal Change	Secondary Port		+ <b>0,4</b>	+ <b>0,4</b>	
<b>SECONDARY PORT**</b>	<b>0649</b>	<b>+1436</b>	<b>6,43</b>	<b>1,2</b>	<b>5,23</b>
If necessary, Time on Board:	<b>0649</b>	<b>+1436</b>			

\*\* Official Standard Time



SOHM  
one pint  
CE M 18 0113  
C 01

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<b>A</b> LF A	<b>B</b> R A V O	<b>C</b> H A R L I E	<b>D</b> E L T A	<b>E</b> C H O
<b>H</b> O T E L	<b>I</b> N D I A	<b>J</b> U L I E T	<b>K</b>	<b>L</b>

## 2. Beispiel Aufgabe:

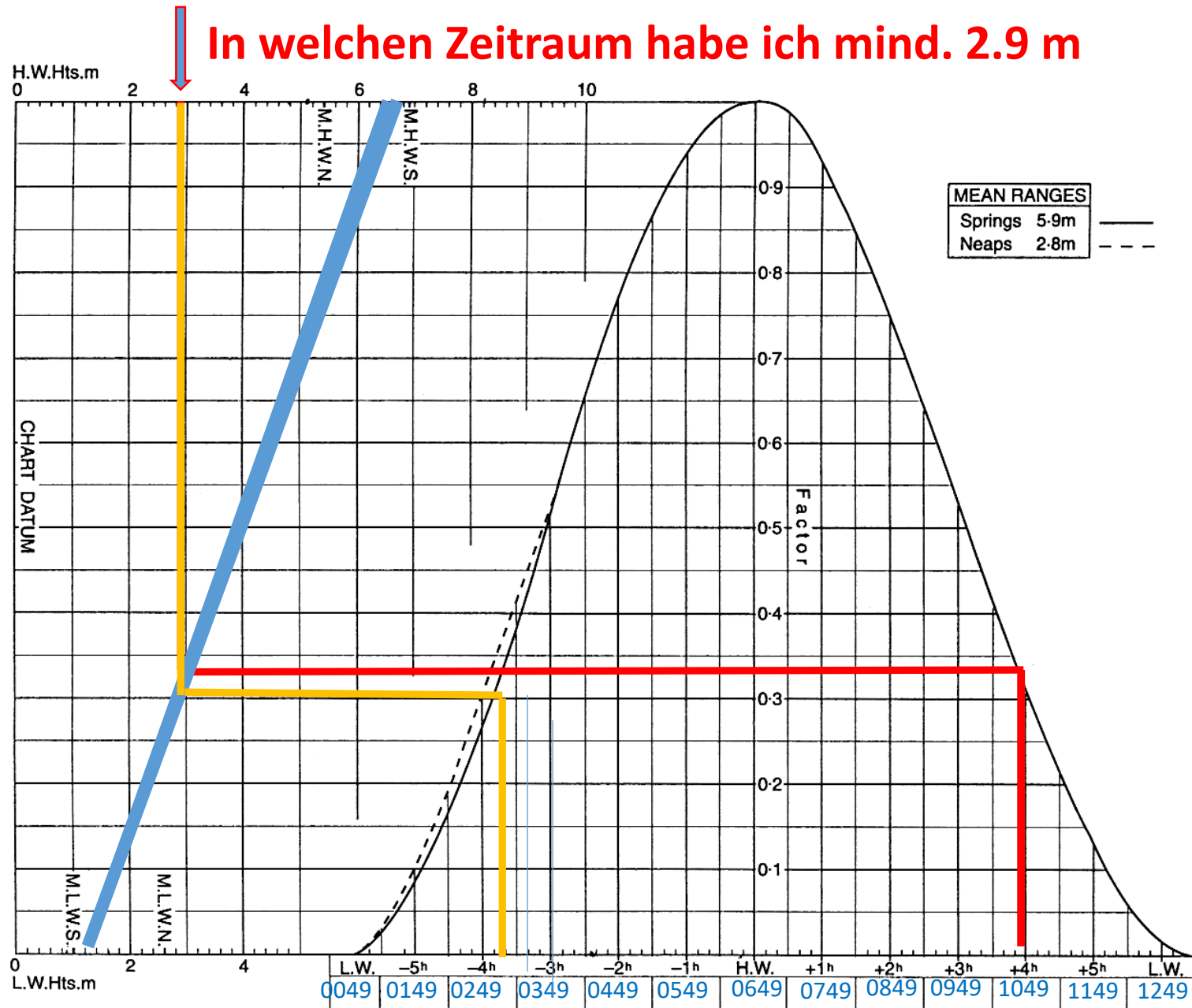
A) In welchen Zeitraum habe ich in „Le Pellerin“ am 25.02.1997 Vormittags einen Wasserstand von 2,9 m erreicht?

Übernehme die Werte für das HW und NW aus Aufgabe 1:

HW Le Pellerin 25.02.1997 06:49 UT-1; 6.43 m

NW Le Pellerin 25.02.1997 14:36 UT-1; 1.2 m

**BREST**  
 MEAN SPRING AND NEAP CURVES  
 Springs occur 2 days after New and Full Moon.



In welchen Zeitraum habe ich mind. 2.9 m

Lösung: 3h 45min vor HW (03:04) bis 3h 55min nach HW (10:44)

# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **Brest** ..... TIME/HEIGHT REQUIRED.....  
 (No. **1638** )

SECONDARY PORT..... **Le Pellerin** ..... DATE..... **24-25/02/1997** ..... TIME ZONE\*\*..... **UT-01** .....  
 (No. **1666** ) ..... Time on Board..... **UT-01** .....

Date: ●/○ **22/02/1997** ..... Springs occur ..... **2** days after ●/○ ..... Status Springs Mean Neaps  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>1822</b>	<b>0033</b>	<b>6,8</b>	<b>1,3</b>	<b>5,4</b>
- Seasonal Change	Standard Port		- <b>0.0</b>	- <b>0.0</b>	
StP corrected	-----	-----	<b>6,8</b>	<b>1,42</b>	
DIFFERENCES	<b>+0012</b>	<b>+0142</b>	<b>-0,67</b>	<b>-0,50</b>	
+ Seasonal Change	Secondary Port		+ <b>0,4</b>	+ <b>0,4</b>	
<b>SECONDARY PORT**</b>	<b>1846</b>	<b>+0240</b>	<b>6,53</b>	<b>1,2</b>	<b>5,33</b>
If necessary, Time on Board:	<b>1846</b>	<b>+0240</b>			

\*\* Official Standard Time

## 2. Beispiel Aufgabe:

A) Wie ist der Wasserstand in „Le Pellerin“ am 25.02.1997 Vormittags um 10:29 UT-1?

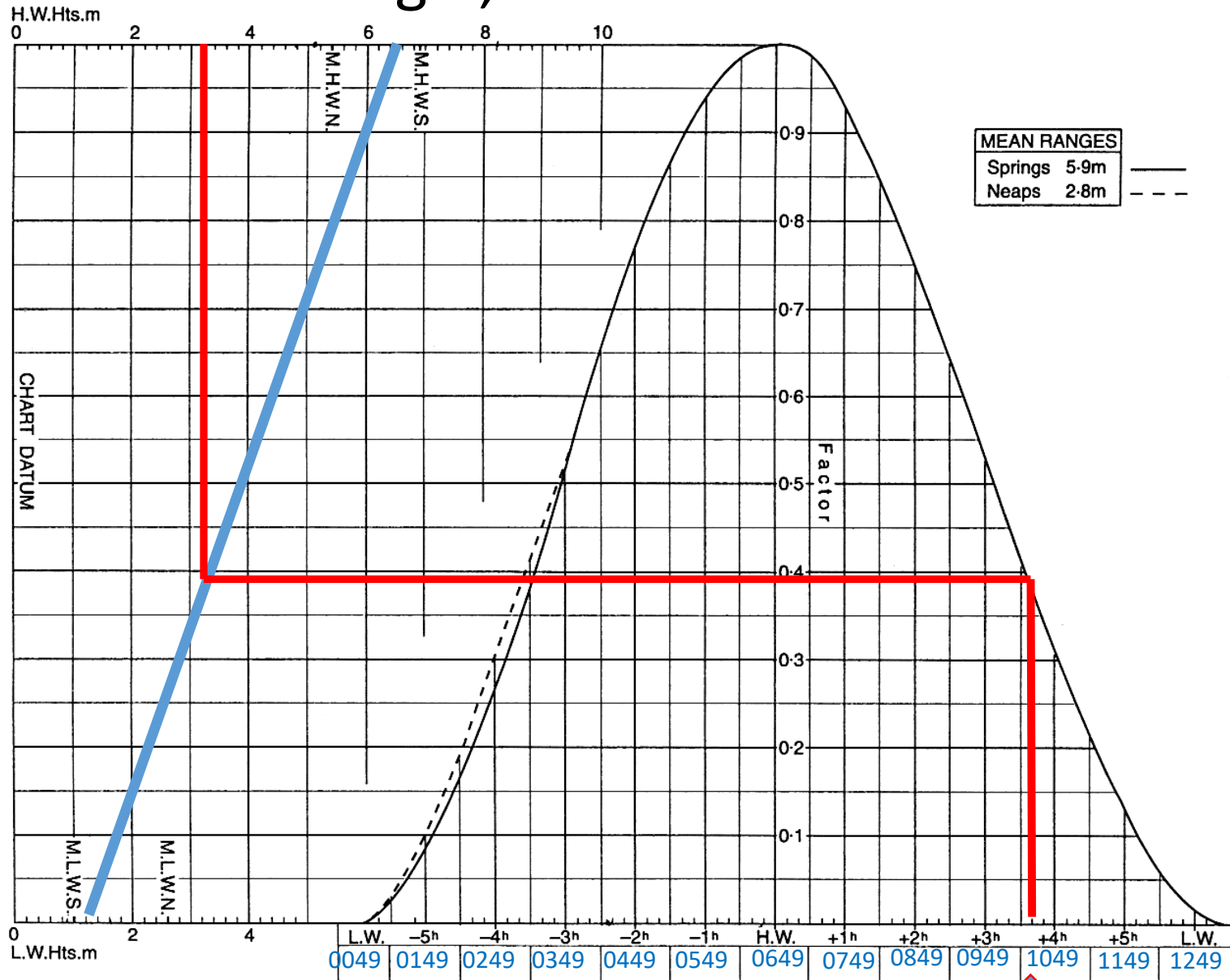
Übernehme die Werte für das HW und NW aus Aufgabe 1:

HW Le Pellerin 25.02.1997 06:49 UT-1; 6.4 m

NW Le Pellerin 25.02.1997 14:36 UT-1; 1.2 m



# Lösung 3,2 m



Wie ist der Wasserstand um 10:29 ?

# Ankern bei SARK

## 9.19.13 SARK

Sark 49°25'·81N 02°20'·45W Creux 🌊🌊🌊🌊🌊

**CHARTS** AC 808, 5604.12; SHOM 7159, 6904; Navi 1014; Imray C33A, 2500

**TIDES** -0450 Dover; ML 5.3; Duration 0550  
Standard Port ST HELIER (→)

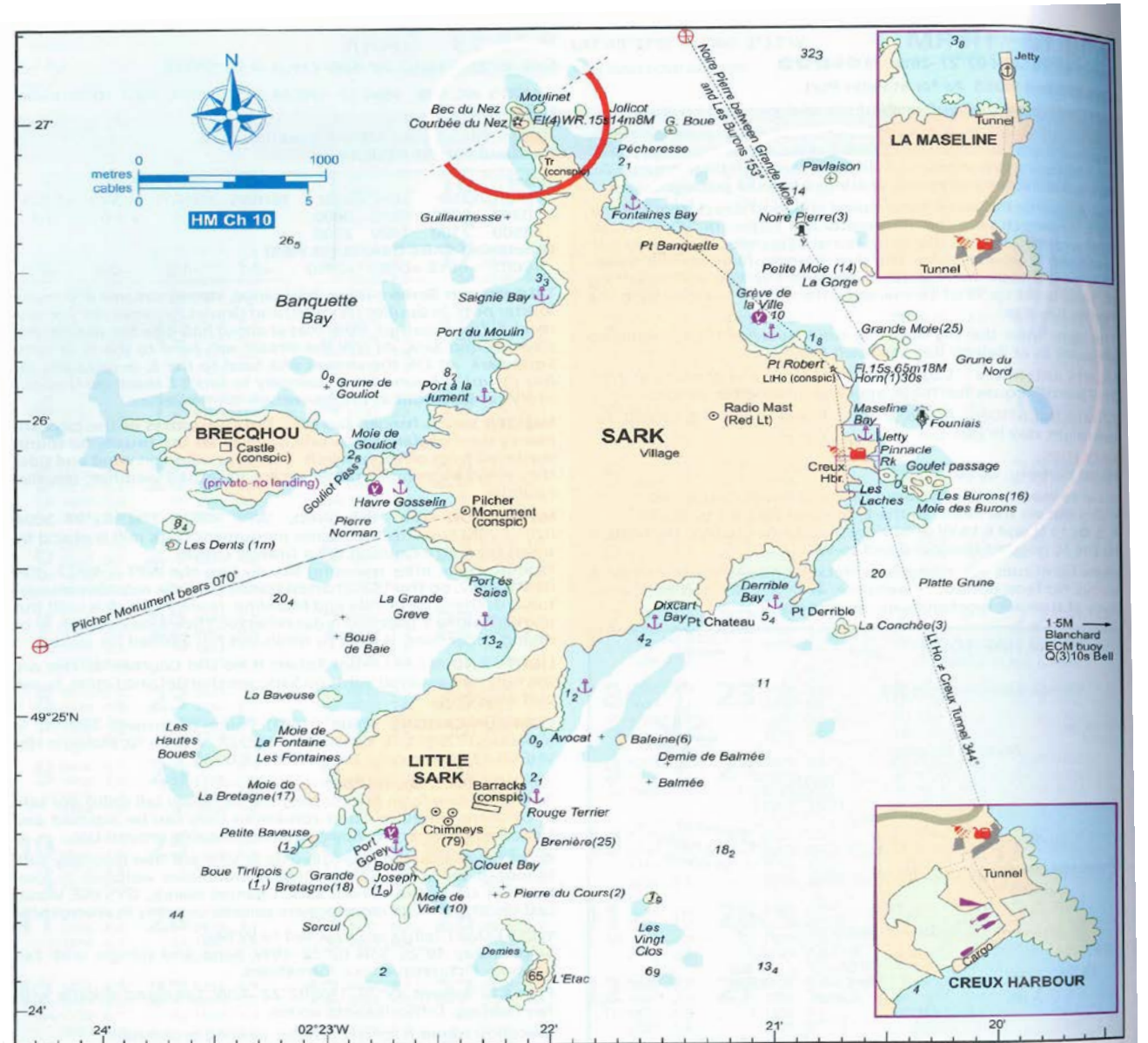
Times		Height (metres)			
High Water	Low Water	MHWS	MHWN	MLWN	MLWS
0300	0900	11.0	8.1	4.0	1.4
1500	2100				

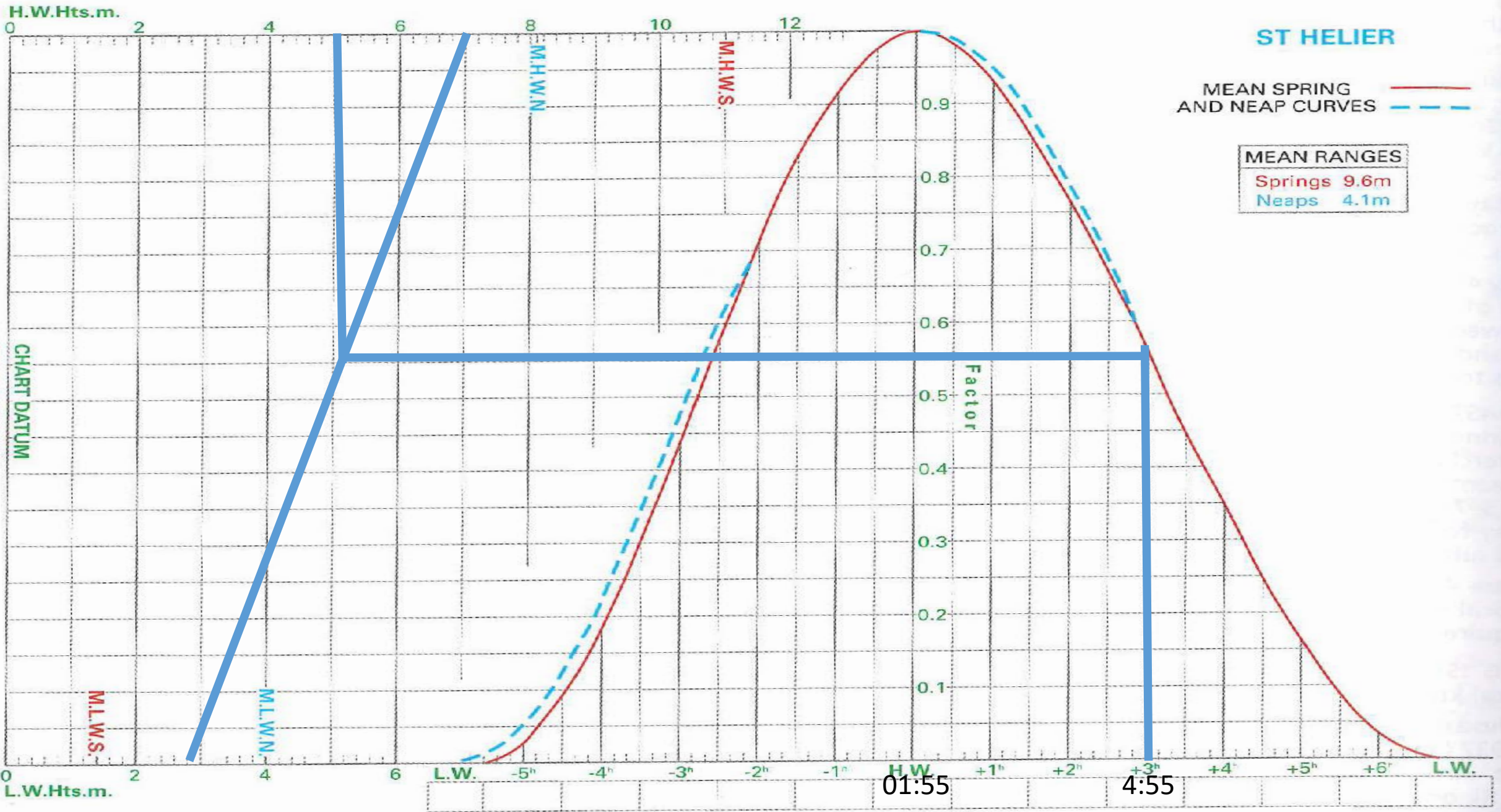
  

Differences SARK (MASELINE PIER)							
+0005	+0015	+0005	+0010	-2.1	-1.5	-0.6	-0.3

**Tidal streams** Beware large tidal range, strong streams and many lobster pots. In Gouliot (W coast) and Goulet Passages the streams reach 6-7kn at springs. Note that at about half-tide the streams are slack around Sark. At HW the stream sets hard to the N, ie onto Little Sark. At LW the stream sets hard to the S, ie onto Bec du Nez (N tip). If bound from Guernsey to Sark's E coast, go N-about at HW and S-about at LW; conversely on the return.

**SHELTER** Sark is fringed by rocks, but the centres of the bays are mainly clear of dangers. A safe anchor or mooring can usually be found sheltered from offshore winds. But, depending on wind and tide, they may be uncomfortable, except in settled weather; see also Facilities.







# TIDAL PREDICTION FORM

(for time and height calculations)

STANDARD PORT..... **ST Helier** ..... **TIME**/HEIGHT REQUIRED.....  
 (No. **Seite 851** )

SECONDARY PORT..... **Sark** ..... DATE..... **30.07.2020** ..... TIME ZONE\*\*..... **UT-01**  
 (No. **Seite 843** ) ..... Time on Board..... **UT-01**

Date: ●/○ **20/07/2020** ..... Springs occur ..... **2** days after ●/○ ..... Status: **Springs** Mean **Neaps**  
 (NM/FM)

	TIME		HEIGHT		RANGE
	HW	LW	HW	LW	
STANDARD PORT**	<b>01:48</b>	<b>08:34</b>	<b>8,6</b>	<b>3,4</b>	<b>5,2</b>
- Seasonal Change	Standard Port		-	-	
StP corrected	-----	-----	<b>8,6</b>	<b>3,4</b>	
DIFFERENCES	<b>+00:07</b>	<b>+00:09</b>	<b>-1,6</b>	<b>-0,55</b>	
+ Seasonal Change	Secondary Port		+	+	
<b>SECONDARY PORT**</b>	<b>01:55</b>	<b>+08:43</b>	<b>7,0</b>	<b>2,85</b>	<b>4,15</b>
If necessary, Time on Board:	<b>01:55</b>	<b>+08:43</b>			

\*\* Official Standard Time