

Port : Portsmouth Times are shown in UTC, ADD 1 hour for BST where necessary  
Heights in metres, all data shown is derived and should be considered approximate

1 Jan (Thu) 02:20 4.39 07:20 1.45 14:20 4.27 19:40 1.19	1 Feb (Sun) 03:00 4.48 08:10 1.32 15:10 4.30 20:30 1.21	1 Mar (Sun) 01:50 4.71 07:00 0.94 14:10 4.57 19:20 0.90	1 Apr (Wed) 03:00 4.38 08:20 1.26 15:40 4.24 20:50 1.56	1 May (Fri) 03:50 4.15 09:30 1.38 16:40 4.17 22:10 1.76	1 Jun (Mon) 05:50 3.98 11:20 1.51 18:40 4.17 23:00 1.72	1 Jul (Wed) 06:20 3.88 11:50 1.70 19:00 4.02 23:50 1.92	1 Aug (Sat) 01:00 2.00 08:00 3.63 13:30 2.08 20:20 3.74	1 Sep (Tue) 02:40 1.84 09:30 3.87 15:00 1.91 22:00 4.09	1 Oct (Thu) 02:40 1.63 09:30 3.87 15:00 1.65 22:00 4.09	1 Nov (Sun) 03:10 1.24 10:10 4.49 15:30 1.17 22:30 4.42	1 Dec (Tue) 03:20 1.19 10:10 4.56 15:40 0.99 22:50 4.52
2 Jan (Fri) 02:50 4.35 08:00 1.53 15:00 4.19 20:20 1.28	2 Feb (Mon) 02:30 4.35 09:00 1.47 16:00 4.15 21:30 1.43	2 Mar (Mon) 02:30 4.58 07:50 1.11 14:50 4.41 20:10 1.18	2 Apr (Thu) 04:00 4.13 09:30 1.51 16:40 4.04 22:10 1.82	2 May (Sat) 05:00 3.96 10:40 1.55 18:00 4.08 23:30 1.83	2 Jun (Tue) 00:10 1.73 07:00 3.93 13:00 1.82 20:00 3.97	2 Jul (Thu) 00:30 1.81 07:30 3.80 13:00 1.82 20:00 3.97	2 Aug (Sun) 02:10 1.92 09:10 3.74 14:30 2.00 21:20 3.85	2 Sep (Wed) 03:20 1.59 10:20 4.12 15:40 1.65 22:30 4.14	2 Oct (Fri) 03:10 1.38 10:20 4.34 15:30 1.39 22:30 4.30	2 Nov (Mon) 03:40 1.03 10:50 4.64 15:30 0.93 23:10 4.58	2 Dec (Wed) 04:00 1.00 11:10 4.68 16:20 0.76 23:40 4.66
3 Jan (Sat) 03:30 4.28 08:50 1.62 15:40 4.09 21:10 1.40	3 Feb (Tue) 04:40 4.19 10:00 1.64 17:00 3.98 22:30 1.66	3 Mar (Tue) 03:20 4.40 08:40 1.33 15:40 4.22 21:00 1.46	3 Apr (Fri) 05:10 3.90 10:50 1.70 18:00 3.92 23:40 1.95	3 May (Sun) 06:20 3.88 11:50 1.60 19:10 4.10 23:30 1.83	3 Jun (Wed) 01:10 1.69 08:00 3.95 13:30 1.59 20:30 4.18	3 Jul (Fri) 01:30 1.81 08:30 3.81 14:00 1.85 20:50 3.97	3 Aug (Mon) 03:00 1.77 10:00 3.89 15:20 1.86 22:10 3.98	3 Sep (Thu) 03:50 1.35 11:00 4.32 16:10 1.43 23:00 4.31	3 Oct (Sat) 03:40 1.14 10:50 4.53 16:00 1.14 23:00 4.48	3 Nov (Tue) 04:20 0.87 11:30 4.74 16:40 0.76 23:50 4.67	3 Dec (Thu) 04:40 0.88 11:50 4.75 17:10 0.61
4 Jan (Sun) 04:20 4.21 09:40 1.70 16:30 4.00 22:00 1.52	4 Feb (Wed) 05:40 4.03 11:20 1.76 18:20 3.86 23:50 1.81	4 Mar (Wed) 04:10 4.18 09:40 1.56 16:40 4.01 22:10 1.74	4 Apr (Sat) 06:30 3.82 12:20 1.71 19:30 3.99	4 May (Mon) 00:40 1.79 07:30 3.93 13:00 1.54 20:10 4.21	4 Jun (Thu) 02:30 1.60 09:00 4.02 14:20 1.56 21:20 4.23	4 Jul (Sat) 02:30 1.73 09:30 3.88 14:50 1.80 21:40 4.03	4 Aug (Tue) 04:30 1.57 10:40 4.08 16:00 1.67 22:50 4.14	4 Sep (Fri) 04:20 1.12 11:30 4.49 16:30 1.21 23:30 4.46	4 Oct (Sun) 04:20 0.93 11:20 4.67 16:30 0.94 23:40 4.60	4 Nov (Wed) 05:00 0.80 12:00 4.77 17:20 0.68	4 Dec (Fri) 00:20 4.74 05:30 0.83 12:30 4.76 17:50 0.56
5 Jan (Mon) 05:10 4.13 10:40 1.76 17:40 3.91 23:10 1.63	5 Feb (Thu) 07:00 3.96 12:40 1.74 19:50 3.91	5 Mar (Thu) 05:20 3.94 11:00 1.76 18:10 3.84 23:50 1.94	5 Apr (Sun) 01:00 1.86 08:00 3.91 13:30 1.56 20:40 4.19	5 May (Tue) 01:40 1.62 08:40 4.06 14:00 1.41 21:10 4.34	5 Jun (Fri) 02:50 1.49 09:50 4.10 15:00 1.52 22:10 4.27	5 Jul (Sun) 03:20 1.62 10:20 3.99 15:30 1.72 22:30 4.11	5 Aug (Wed) 04:20 1.36 11:20 4.27 16:30 1.48 23:30 4.30	5 Sep (Sat) 04:50 0.94 12:00 4.61 17:00 1.06 00:00 4.55	5 Oct (Mon) 04:50 0.79 11:50 4.74 17:00 0.81	5 Nov (Thu) 00:30 4.70 05:40 0.84 12:50 4.72 18:00 0.71	5 Dec (Sat) 01:10 4.76 06:20 0.89 13:20 4.70 18:40 0.63
6 Jan (Tue) 06:20 4.09 11:50 1.75 18:50 3.91	6 Feb (Fri) 01:20 1.80 08:20 4.04 13:30 1.56 21:00 4.10	6 Mar (Fri) 08:40 3.84 12:30 1.78 19:40 3.89	6 Apr (Mon) 02:10 1.62 09:00 4.12 14:30 1.31 21:40 4.42	6 May (Wed) 02:30 1.43 09:30 4.20 14:50 1.28 22:00 4.45	6 Jun (Sat) 03:30 1.38 10:40 4.18 15:50 1.46 22:50 4.32	6 Jul (Mon) 04:10 1.47 11:00 4.13 16:10 1.61 23:10 4.21	6 Aug (Thu) 04:50 1.17 12:00 4.41 17:00 1.33 00:00 4.40	6 Sep (Sun) 00:10 4.58 05:20 0.82 12:30 4.68 17:30 0.96	6 Oct (Tue) 00:10 4.67 05:20 0.75 12:30 4.76 17:40 0.77	6 Nov (Fri) 01:20 4.65 06:30 0.98 13:30 4.61 18:50 0.84	6 Dec (Sun) 02:00 4.71 07:10 1.03 14:10 0.57 19:40 0.79
7 Jan (Wed) 00:20 1.66 07:30 4.12 13:00 1.64 20:10 4.01	7 Feb (Sat) 02:30 1.60 09:30 4.25 15:00 1.22 22:10 4.40	7 Mar (Sat) 01:10 1.89 08:10 3.94 13:50 1.58 21:00 4.14	7 Apr (Tue) 02:50 1.34 10:00 4.34 15:10 1.06 22:20 4.60	7 May (Thu) 03:10 1.26 10:20 4.32 15:30 1.18 22:30 4.53	7 Jun (Sun) 04:30 1.28 11:20 4.26 16:30 1.41 23:30 4.35	7 Jul (Tue) 04:30 1.34 11:40 4.24 16:50 1.51 23:40 4.28	7 Aug (Fri) 05:20 1.03 12:30 4.51 17:40 1.22	7 Sep (Mon) 00:40 4.60 05:50 0.79 13:00 4.70 18:10 0.94	7 Oct (Wed) 00:50 4.66 06:00 0.82 13:10 4.70 18:20 0.84	7 Nov (Sat) 02:10 4.55 07:20 1.21 14:20 4.44 19:50 1.05	7 Dec (Mon) 02:50 4.60 08:00 1.23 15:10 4.41
8 Jan (Thu) 01:30 1.59 08:30 4.23 14:00 1.42 21:10 4.20	8 Feb (Sun) 03:20 1.29 10:30 4.49 15:40 0.87 23:00 4.66	8 Mar (Sun) 02:20 1.65 09:20 4.16 14:50 1.27 22:00 4.41	8 Apr (Wed) 03:40 1.07 10:40 4.52 15:50 0.86 23:00 4.73	8 May (Fri) 03:50 1.11 11:00 4.42 16:10 1.11 23:10 4.56	8 Jun (Mon) 05:10 1.22 12:20 4.33 17:30 1.43 00:00 4.35	8 Jul (Wed) 05:10 1.22 12:20 4.33 17:30 1.43	8 Aug (Sat) 00:30 4.47 05:50 0.94 13:00 4.56 18:10 1.17	8 Sep (Tue) 01:10 4.59 06:40 0.99 13:50 4.57 19:00 1.01	8 Oct (Thu) 01:30 4.59 06:50 0.99 14:30 4.57 19:10 1.01	8 Nov (Sun) 03:00 4.40 08:10 1.45 15:20 4.24 20:50 1.26	8 Dec (Tue) 03:50 4.47 09:00 1.43 16:10 4.22 21:30 1.23
9 Jan (Fri) 02:30 1.41 09:40 4.41 15:00 1.11 22:20 4.46	9 Feb (Mon) 04:10 0.97 11:10 4.69 16:30 0.55 23:50 4.86	9 Mar (Mon) 03:10 1.31 10:20 4.43 16:30 0.92 23:50 4.67	9 Apr (Thu) 04:30 1.07 11:20 4.63 16:40 1.11 23:40 4.79	9 May (Sat) 04:30 1.03 11:40 4.47 16:40 1.11 23:50 4.56	9 Jun (Tue) 05:20 1.18 12:30 4.33 17:40 1.41	9 Jul (Thu) 00:20 4.33 05:40 1.14 12:50 4.39 18:00 1.39	9 Aug (Sun) 01:10 4.48 06:20 0.93 13:30 4.57 18:40 1.17	9 Sep (Wed) 01:50 4.52 07:00 0.99 14:10 4.54 19:20 1.15	9 Oct (Fri) 02:10 4.46 07:30 1.23 14:30 4.50 19:50 1.21	9 Nov (Mon) 04:00 4.24 09:20 1.67 16:20 4.05 22:00 1.45	9 Dec (Wed) 04:50 4.32 10:10 1.60 17:10 4.06 22:40 1.43
10 Jan (Sat) 03:30 1.18 10:30 4.58 15:50 0.80 23:10 4.66	10 Feb (Tue) 04:50 0.72 11:50 4.82 17:10 0.37	10 Mar (Tue) 03:50 1.00 11:00 4.62 16:10 0.66 23:20 4.83	10 Apr (Fri) 04:50 0.76 12:00 4.67 17:10 0.75	10 May (Sun) 05:00 1.01 12:10 4.47 17:20 1.16 18:20 1.46	10 Jun (Wed) 06:40 4.33 13:00 1.18 13:10 4.33 18:30 1.39	10 Jul (Fri) 06:20 1.10 13:30 4.42 14:10 4.53 19:20 1.24	10 Aug (Mon) 07:00 0.98 14:10 4.66 14:50 4.37 20:10 1.35	10 Sep (Thu) 08:20 4.38 14:50 4.37 15:30 4.15 21:00 1.47	10 Oct (Sat) 08:10 4.26 14:40 4.14 15:30 4.15 21:00 1.47	10 Nov (Tue) 08:20 4.14 14:40 4.19 15:30 3.93 23:20 1.55	10 Dec (Thu) 06:00 4.21 11:30 3.69 18:20 3.95 23:50 1.56
11 Jan (Sun) 04:20 0.94 11:20 4.73 16:40 0.53 00:00 4.83	11 Feb (Wed) 05:40 4.94 12:40 4.87 18:00 0.33 00:00 4.93	11 Mar (Wed) 04:30 0.73 11:40 4.77 16:50 0.47 00:00 4.93	11 Apr (Sat) 00:10 4.77 05:20 0.77 12:30 4.65 17:40 0.85	11 May (Mon) 00:20 4.51 05:40 1.05 12:50 4.43 18:00 1.27	11 Jun (Thu) 01:20 4.28 06:40 1.23 13:50 4.29 19:00 1.54	11 Jul (Sat) 01:30 4.34 06:50 1.12 14:00 4.40 19:10 1.43	11 Aug (Tue) 02:10 4.39 07:30 1.08 14:40 4.45 19:50 1.34	11 Sep (Fri) 03:20 4.21 08:40 1.48 15:40 4.18 21:10 1.55	11 Oct (Sun) 04:10 4.09 09:30 1.77 16:30 3.96 22:10 1.63	11 Nov (Wed) 06:30 4.13 12:00 1.77 18:50 3.94	11 Dec (Fri) 07:00 4.16 12:30 1.70 19:30 3.94
12 Jan (Mon) 05:10 0.76 12:10 4.82 17:30 0.37	12 Feb (Thu) 06:20 0.61 13:20 4.82 18:40 0.46	12 Mar (Thu) 05:10 0.61 13:20 4.82 17:30 0.46	12 Apr (Sun) 00:50 4.68 06:00 0.87 13:10 4.56 18:20 1.04	12 May (Tue) 01:00 4.42 06:20 1.14 13:30 4.35 18:40 1.42	12 Jun (Fri) 01:50 4.21 07:20 1.20 14:30 4.23 19:40 1.64	12 Jul (Sun) 02:10 4.29 07:30 1.18 14:40 4.36 19:50 1.50	12 Aug (Wed) 02:50 4.29 08:10 1.24 15:20 4.34 20:40 1.47	12 Sep (Sat) 04:10 4.02 09:40 1.74 16:40 3.98 22:20 1.71	12 Oct (Tue) 05:30 3.96 11:00 1.91 18:00 3.85 23:40 1.68	12 Nov (Thu) 07:40 4.21 13:00 1.63 20:00 4.05	12 Dec (Sat) 01:00 1.61 08:00 4.16 13:30 1.63 20:30 3.99
13 Jan (Tue) 00:50 4.90 05:50 0.69 12:50 4.83 18:20 0.37	13 Feb (Fri) 01:50 4.85 07:00 0.77 14:00 4.68 19:20 0.71	13 Mar (Fri) 01:50 4.90 05:50 0.62 12:50 4.78 18:10 0.59	13 Apr (Mon) 01:20 4.54 06:40 1.05 13:50 4.41 19:00 1.28	13 May (Wed) 01:40 4.29 07:00 1.28 14:10 4.23 19:20 1.60	13 Jun (Sat) 02:30 4.11 08:00 1.40 15:10 4.16 20:30 1.74	13 Jul (Mon) 03:40 4.22 08:10 1.26 15:20 4.30 20:30 1.57	13 Aug (Thu) 03:40 4.15 09:00 1.44 16:10 4.19 21:30 1.63	13 Sep (Sun) 05:30 3.87 11:00 1.92 18:00 3.85 23:50 1.76	13 Oct (Tue) 06:50 4.00 12:20 1.86 19:20 3.92	13 Nov (Fri) 08:40 4.33 14:00 1.44 21:00 4.20	13 Dec (Sun) 02:00 1.58 09:00 4.22 14:30 1.50 21:30 4.09
14 Jan (Wed) 01:30 4.89 06:40 0.75 13:40 4.75 19:00 0.52	14 Feb (Sat) 02:30 4.68 07:40 1.03 14:50 4.47 20:00 1.06	14 Mar (Sat) 01:20 4.81 06:30 0.76 13:30 4.66 18:50 0.82	14 Apr (Tue) 02:00 4.35 07:20 1.29 14:30 4.22 19:40 1.56	14 May (Thu) 02:10 4.14 07:40 1.43 14:50 4.10 20:10 1.78	14 Jun (Sun) 03:10 4.02 08:40 1.49 15:50 4.10 21:10 1.82	14 Jul (Wed) 03:20 4.13 08:50 1.38 16:00 4.22 21:20 1.67	14 Aug (Fri) 04:30 3.99 10:00 1.66 17:10 4.03 22:40 1.75	14 Sep (Mon) 04:30 3.99 10:30 1.66 17:40 4.03 23:10 1.63	14 Oct (Thu) 05:50 4.18 11:00 1.62 18:00 3.99 23:30 1.63	14 Nov (Sat) 06:50 4.46 12:30 1.53 21:50 4.35	14 Dec (Mon) 09:50 4.28 15:20 1.39 22:20 4.19
15 Jan (Thu) 02:20 4.79 07:30 0.94 14:30 4.59 19:50 0.78	15 Feb (Sun) 03:10 4.45 08:20 1.34 15:20 4.21 20:50 1.42	15 Mar (Sun) 01:50 4.64 07:10 1.01 14:10 4.46 19:30 1.16	15 Apr (Wed) 02:40 4.14 08:00 1.51 15:10 4.03 20:30 1.81	15 May (Fri) 03:00 3.98 08:30 1.60 15:30 3.97 21:00 1.94	15 Jun (Mon) 04:00 3.92 09:30 1.59 16:40 4.04 22:00 1.89	15 Jul (Wed) 04:10 4.03 09:40 3.87 16:40 4.14 22:10 1.73	15 Aug (Sat) 05:40 3.87 11:20 1.81 18:20 3.95 00:00 1.76	15 Sep (Tue) 06:50 4.09 12:30 3.95 19:30 4.11 20:50 1.44	15 Oct (Thu) 01:50 1.33 09:00 4.40 14:20 1.34 21:20 4.33	15 Nov (Sun) 03:00 1.15 10:10 4.56 15:30 1.06 22:40 4.46	15 Dec (Tue) 03:30 1.45 10:30 4.34 16:00 1.26 23:00 4.28
16 Jan (Fri) 03:00 4.63 08:10 1.18 15:20 4.39 20:40 1.08	16 Feb (Mon) 03:50 4.18 09:10 1.65 16:10 3.94 21:40 1.76	16 Mar (Mon) 02:30 4.43 07:50 1.27 14:50 4.25 20:10 1.46	16 Apr (Thu) 03:20 3.91 09:00 1.75 15:50 3.82 21:20 2.06	16 May (Sat) 03:40 3.83 09:20 1.73 16:20 3.87 21:50 2.05	16 Jun (Tue) 04:30 3.85 10:30 1.66 17:30 4.01 23:00 1.90	16 Jul (Thu) 05:10 3.93 10:40 1.63 17:40 4.07 23:10 1.78	16 Aug (Sun) 06:50 3.99 12:40 1.56 19:40 4.00	16 Sep (Wed) 08:40 4.08 14:00 1.62 21:00 4.12	16 Oct (Fri) 02:40 1.05 09:50 4.62 15:00 1.04 22:10 4.54	16 Nov (Mon) 03:40 1.07 10:50 4.60 16:10 0.95 23:20 4.52	16 Dec (Wed) 04:10 1.38 11:10 4.39 16:30 1.16 23:40 4.36
17 Jan (Sat) 03:50 4.41 09:10 1.47 16:10 4.13 21:30 1.44	17 Feb (Tue) 04:30 3.92 10:10 1.91 17:00 3.69 22:40 2.05	17 Mar (Tue) 03:10 4.17 08:30 1.58 15:30 3.98 21:00 1.81	17 Apr (Fri) 04:10 3.70 10:00 1.94 17:00 3.67 22:40 2.22	17 May (Sun) 04:30 3.71 10:20 1.83 17:20 3.83 23:00 2.10	17 Jun (Wed) 05:50 3.83 11:40 1.68 18:30 4.04 00:00 1.83	17 Jul (Fri) 06:10 3.89 11:40 1.71 18:50 4.05	17 Aug (Mon) 01:20 1.62 08:30 4.05 13:50 1.67 20:50 4.17	17 Sep (Thu) 02:10 1.62 09:40 4.05 15:10 1.67 22:30 4.65	17 Oct (Sat) 03:20 0.82 10:30 4.77 15:50 0.79 22:50 4.68	17 Nov (Tue) 04:20 1.05 11:30 4.61 16:50 0.91 00:00 4.53	17 Dec (Thu) 04:50 1.34 11:50 4.41 17:10 1.09
18 Jan (Sun) 04:40 4.17 10:10 1.74 17:00 3.88 22:30 1.75	18 Feb (Wed) 05:30 3.68 11:20 2.11 18:10 3.50 00:00 2.25	18 Mar (Wed) 03:50 3.90 09:30 1.85 16:20 3.73 22:00 2.09	18 Apr (Sat) 05:10 3.56 11:10 2.04 18:10 3.63 23:25 2.25	18 May (Mon) 05:40 3.67 11:20 1.84 18:20 3.86 00:00 2.04	18 Jun (Thu) 06:50 3.87 13:00 1.70 19:20 3.72 00:10 4.12	18 Jul (Sat) 07:30 3.93 13:00 1.74 19:40 4.33 00:20 4.12	18 Aug (Tue) 08:20 1.32 14:50 4.33 15:50 1.36 21:50 4.43	18 Sep (Fri) 09:40 4.33 15:00 1.66 17:10 4.03 23:10 4.81	18 Oct (Sun) 04:00 0.68 11:10 4.84 16:20 0.67 23:30 4.74	18 Nov (Wed) 05:00 1.09 12:0	