

Astronomical Almanac for 2019 September

Blackpool, Lancs

Latitude: 53°49'08" N Longitude: 3°02'01" W

Elevation: 10 metres

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
SR: 05:20	SR: 05:22	SR: 05:24	SR: 05:25	SR: 05:27	SR: 05:29	SR: 05:31
SS: 19:03	SS: 19:01	SS: 18:58	SS: 18:56	SS: 18:54	SS: 18:51	SS: 18:49
MR: 07:47	MR: 09:14	MR: 10:39	MR: 12:01	MR: 13:19	MR: 14:31	MR: 15:35
MS: 20:22	MS: 20:43	MS: 21:04	MS: 21:28	MS: 21:57	MS: 22:32	MS: 23:15
	Mar Con		Mer SCon		FQ: 03:12	
8	9	10	11	12	13	14
SR: 05:32	SR: 05:34	SR: 05:36	SR: 05:38	SR: 05:39	SR: 05:41	SR: 05:43
SS: 18:46	SS: 18:44	SS: 18:41	SS: 18:39	SS: 18:36	SS: 18:34	SS: 18:32
MR: 16:28	MR: 17:11	MR: 17:45	MR: 18:12	MR: 18:34	MR: 18:52	MR: 19:08
MS: None	MS: 00:07	MS: 01:07	MS: 02:11	MS: 03:19	MS: 04:27	MS: 05:35
		Nep Opp				FM: 04:35
15	16	17	18	19	20	21
SR: 05:45	SR: 05:46	SR: 05:48	SR: 05:50	SR: 05:52	SR: 05:54	SR: 05:55
SS: 18:29	SS: 18:27	SS: 18:24	SS: 18:22	SS: 18:19	SS: 18:17	SS: 18:14
MR: 19:24	MR: 19:39	MR: 19:56	MR: 20:14	MR: 20:37	MR: 21:05	MR: 21:42
MS: 06:43	MS: 07:51	MS: 09:00	MS: 10:10	MS: 11:21	MS: 12:33	MS: 13:43
22	23	24	25	26	27	28
SR: 05:57	SR: 05:59	SR: 06:01	SR: 06:02	SR: 06:04	SR: 06:06	SR: 06:08
SS: 18:12	SS: 18:09	SS: 18:07	SS: 18:04	SS: 18:02	SS: 17:59	SS: 17:57
MR: 22:31	MR: 23:34	MR: None	MR: 00:50	MR: 02:14	MR: 03:42	MR: 05:12
MS: 14:49	MS: 15:45	MS: 16:32	MS: 17:08	MS: 17:38	MS: 18:02	MS: 18:23
LQ: 02:44	SEQ:07:50					NM: 18:28
29	30					
SR: 06:10	SR: 06:11					
SS: 17:54	SS: 17:52					
MR: 06:42	MR: 08:10					
MS: 18:43	MS: 19:04					

Twilight Report for 2019-09-01 to 2019-09-30

Date	Sun		Astronomical		Nautical		Civil	
	Rise	Set	Begin	End	Begin	End	Begin	End
2019-09-01	05:20	19:03	02:59	21:24	03:51	20:32	04:37	19:46
2019-09-08	05:32	18:46	03:18	21:00	04:07	20:12	04:51	19:28
2019-09-15	05:45	18:29	03:35	20:39	04:21	19:53	05:04	19:10
2019-09-22	05:57	18:12	03:51	20:18	04:35	19:34	05:16	18:52
2019-09-29	06:10	17:54	04:06	19:58	04:48	19:16	05:29	18:35

Meteor Showers Report for 2019-09-01 to 2019-09-30

Date	Meteor Shower	ZHR	RA	DEC	Illum. Frac.	Longitude
2019-09-09	Piscids	10	0h36m	7°	0.77	166°
2019-09-22	Piscids	5	0h24m	0°	0.51	178°

Planet View Info Report for 2019-09-01 to 2019-09-30

Mercury

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	04:58	19:10	10h31m07s	11°13'00"	3°28'32"	0.992	1.34700
2019-09-08	05:52	19:01	11h20m48s	5°51'01"	3°55'31"	0.992	1.38399
2019-09-15	06:40	18:47	12h05m53s	0°20'03"	9°23'09"	0.961	1.38103
2019-09-22	07:23	18:32	12h47m26s	-4°58'32"	14°08'42"	0.919	1.34983
2019-09-29	08:02	18:16	13h26m32s	-9°53'09"	18°07'36"	0.870	1.29620

Venus

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	05:46	19:19	11h00m08s	7°55'24"	5°04'49"	0.996	1.71941
2019-09-08	06:10	19:04	11h32m15s	4°30'12"	6°55'09"	0.993	1.71021
2019-09-15	06:33	18:49	12h04m02s	0°58'31"	8°45'41"	0.989	1.69859
2019-09-22	06:57	18:34	12h35m46s	-2°35'33"	10°35'36"	0.983	1.68467
2019-09-29	07:21	18:18	13h07m39s	-6°07'50"	12°24'31"	0.977	1.66854

Mars

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	05:20	19:09	10h43m11s	9°17'17"	1°11'20"	1.000	2.67498
2019-09-08	05:19	18:48	10h59m50s	7°34'22"	2°07'28"	1.000	2.67181
2019-09-15	05:18	18:27	11h16m23s	5°49'10"	4°18'00"	0.999	2.66538
2019-09-22	05:17	18:06	11h32m53s	4°02'11"	6°36'03"	0.999	2.65574
2019-09-29	05:16	17:45	11h49m21s	2°13'52"	8°56'42"	0.998	2.64283

Jupiter

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	14:37	22:14	16h55m39s	-22°16'06"	96°50'47"	0.991	5.05523
2019-09-08	14:13	21:48	16h57m47s	-22°20'33"	90°33'52"	0.991	5.16210
2019-09-15	13:48	21:22	17h00m30s	-22°25'40"	84°23'44"	0.991	5.26905
2019-09-22	13:25	20:57	17h03m46s	-22°31'17"	78°19'33"	0.991	5.37489
2019-09-29	13:02	20:33	17h07m32s	-22°37'15"	72°20'36"	0.992	5.47848

Saturn

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	16:44	00:21	19h01m11s	-22°27'20"	125°48'57"	0.998	9.43928
2019-09-08	16:16	23:49	19h00m32s	-22°29'01"	118°52'48"	0.998	9.53730
2019-09-15	15:48	23:21	19h00m13s	-22°30'12"	112°00'04"	0.998	9.64204
2019-09-22	15:21	22:53	19h00m14s	-22°30'54"	105°10'32"	0.998	9.75199
2019-09-29	14:54	22:26	19h00m36s	-22°31'05"	98°24'01"	0.998	9.86563

Uranus

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
2019-09-01	20:28	11:07	2h17m12s	13°11'05"	121°50'33"	1.000	19.28423
2019-09-08	20:00	10:39	2h16m42s	13°08'26"	128°45'20"	1.000	19.18812
2019-09-15	19:32	10:10	2h16m04s	13°05'06"	135°43'24"	1.000	19.10107
2019-09-22	19:04	09:41	2h15m18s	13°01'09"	142°44'55"	1.000	19.02437
2019-09-29	18:36	09:13	2h14m26s	12°56'40"	149°49'52"	1.000	18.95929