

TRANSIT CONTACTS

Location Name	External	Sun	Internal	Sun	Greatest	Sun	Internal	Sun	External	Sun
	Ingress	Altitud	Ingress	Altitud	Transit	Altitud	egress	Altitud	Egress	Altitud
	h:m:s	°	h:m:s	°	h:m:s	°	h:m:s	°	h:m:s	°
Addis Abeba	--	-	--	-	--	-	4:37:27	20	4:55:04	24
Adelaide	22:16:01	4	22:34:08	7	1:30:59	30	4:27:00	27	4:44:58	26
Algiers	--	-	--	-	--	-	4:37:56	1	4:55:38	4
Al-Kuwayt	--	-	--	-	--	-	4:37:06	34	4:54:37	38
'Amman	--	-	--	-	--	-	4:37:38	25	4:55:12	28
Amsterdam	--	-	--	-	--	-	4:37:12	9	4:54:51	11
Athens	--	-	--	-	--	-	4:37:50	16	4:55:26	20
Auckland	22:15:25	24	22:33:27	25	1:29:01	28	4:25:08	7	4:43:17	4
Baghdad	--	-	--	-	--	-	4:37:14	32	4:54:46	35
Baku	--	-	--	-	1:31:41	3	4:36:49	36	4:54:18	40
Bangkok	--	-	--	-	1:32:17	36	4:32:15	76	4:49:46	79
Barcelona	--	-	--	-	--	-	4:37:45	2	4:55:26	5
Beijing	22:09:53	14	22:27:40	17	1:30:32	52	4:31:51	72	4:49:20	71
Beirut	--	-	--	-	--	-	4:37:37	25	4:55:10	28
Beograd	--	-	--	-	--	-	4:37:36	16	4:55:11	19
Berlin	--	-	--	-	--	-	4:37:13	14	4:54:50	16
Bern	--	-	--	-	--	-	4:37:32	8	4:55:11	11
Birmingham	--	-	--	-	--	-	4:37:07	5	4:54:47	8
Blacktown	22:15:56	13	22:34:00	16	1:30:16	33	4:26:10	23	4:44:10	21
Bogota	22:05:21	13	22:23:10	9	--	--	--	--	--	--
Bombay	--	-	--	-	1:32:50	13	4:35:10	54	4:52:39	58
Brisbane	22:15:43	19	22:33:45	22	1:30:02	40	4:26:00	27	4:43:59	24
Brussels	--	-	--	-	--	-	4:37:17	8	4:54:56	10
Bucharest	--	-	--	-	--	-	4:37:31	20	4:55:06	23
Budapest	--	-	--	-	--	-	4:37:28	16	4:55:04	19
Cairo	--	-	--	-	--	-	4:37:51	20	4:55:25	24
Calcutta	--	-	--	-	1:32:22	28	4:33:47	69	4:51:16	73
Caracas	22:04:37	9	22:22:26	5	--	--	--	--	--	--
Christchurch	22:15:36	17	22:33:42	19	1:29:21	22	4:25:25	4	4:43:35	2
Colombo	--	-	--	-	1:33:09	15	4:34:09	56	4:51:40	60
Copenhagen	--	-	--	-	--	-	4:37:00	14	4:54:37	17
Dacca	--	-	--	-	1:32:15	30	4:33:37	71	4:51:06	75
Damascus	--	-	--	-	--	-	4:37:36	25	4:55:09	29
Dar-es-Salaam	--	-	--	-	--	-	4:36:48	14	4:54:30	18
Delhi	--	-	--	-	1:32:19	20	4:34:57	59	4:52:25	63
Dublin	--	-	--	-	--	-	4:36:59	4	4:54:40	6
Glasgow	--	-	--	-	--	-	4:36:51	6	4:54:32	8
Gorki	--	-	--	-	1:30:34	7	4:36:25	32	4:53:56	34
Guadalajara	22:06:04	45	22:23:44	41	1:25:20	1	--	--	--	--
Guangzhou (Cant)	22:11:34	6	22:29:27	10	1:31:22	50	4:31:20	89	4:48:51	85
Guatemala	22:05:36	32	22:23:19	28	--	--	--	--	--	--
Hamburg	--	-	--	-	--	-	4:37:09	12	4:54:46	15
Harare	--	-	--	-	--	-	4:36:28	2	4:54:17	6
Havana	22:04:38	27	22:22:20	23	--	--	--	--	--	--
Helsinki	--	-	--	-	1:29:58	1	4:36:36	22	4:54:10	24
Ho Chi Minh	--	-	--	-	1:32:06	41	4:31:28	77	4:49:01	78

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	Ingress	Altitud	Ingress	Altitud	Transit	Altitu	egress	Altitud	Egress	Altitud
	h:m: s	°	h:m: s	°	h:m: s	°	h:m: s	°	h:m: s	°
Istanbul	--	-	--	-	--	-	4:37:36	21	4:55:10	24
Jakarta	--	-	--	-	1:32:28	33	4:30:44	61	4:48:22	61
Jerevan	--	-	--	-	--	-	4:37:05	32	4:54:35	36
Jerusalem	--	-	--	-	--	-	4:37:40	24	4:55:14	28
Kabul	--	-	--	-	1:32:05	15	4:35:39	52	4:53:06	55
Kampala	--	-	--	-	--	-	4:37:27	11	4:55:08	15
Karachi	--	-	--	-	1:32:37	10	4:35:46	50	4:53:14	54
Katowice	--	-	--	-	--	-	4:37:19	16	4:54:55	19
Khartoum	--	-	--	-	--	-	4:37:50	17	4:55:27	21
Kiev	--	-	--	-	--	-	4:37:07	24	4:54:41	26
Kingston	22:04:37	21	22:22:21	17	--	-	--	-	--	-
Kuala Lumpur	--	-	--	-	1:32:32	33	4:31:41	68	4:49:15	70
Lima	22:06:54	9	22:24:49	5	--	-	--	-	--	-
London	--	-	--	-	--	-	4:37:12	6	4:54:52	8
Lusaka	--	-	--	-	--	-	4:36:44	1	4:54:33	5
Lyon	--	-	--	-	--	-	4:37:34	6	4:55:14	9
Madrid	--	-	--	-	--	-	--	-	4:55:25	1
Manchester	--	-	--	-	--	-	4:37:02	6	4:54:43	8
Manila	22:12:39	10	22:30:33	14	1:31:14	55	4:30:10	78	4:47:44	75
Marseille	--	-	--	-	--	-	4:37:42	5	4:55:22	8
Melbourne	22:16:03	7	22:34:10	10	1:30:39	28	4:26:35	22	4:44:35	20
Mexico City	22:05:51	41	22:23:32	37	--	-	--	-	--	-
Milan	--	-	--	-	--	-	4:37:37	9	4:55:16	12
Minsk	--	-	--	-	--	-	4:36:59	22	4:54:33	25
Monterrey	22:05:34	43	22:23:13	39	1:25:25	0	--	-	--	-
Montreal	22:03:34	24	22:21:13	21	--	-	--	-	--	-
Moscow	--	-	--	-	1:30:30	4	4:36:38	28	4:54:10	31
Nairobi	--	-	--	-	--	-	4:37:11	15	4:54:52	19
Novosibirsk	22:07:12	1	22:24:59	3	1:30:39	27	4:34:37	51	4:52:05	53
Omsk	--	-	--	-	1:30:45	22	4:35:09	47	4:52:37	49
Osaka	22:10:47	27	22:28:32	31	1:29:47	68	4:30:02	66	4:47:36	63
Oslo	--	-	--	-	--	-	4:36:42	15	4:54:19	17
Ottawa	22:03:39	26	22:21:17	23	--	-	--	-	--	-
Panama City	22:05:19	20	22:23:06	16	--	-	--	-	--	-
Papeete	22:12:30	50	22:30:22	49	1:26:38	25	--	-	--	-
Paris	--	-	--	-	--	-	4:37:23	6	4:55:03	9
Perth	--	-	--	-	1:32:10	23	4:28:56	35	4:46:47	35
Port Moresby	22:14:52	24	22:32:49	28	1:30:05	56	4:26:43	44	4:44:32	40
Praha	--	-	--	-	--	-	4:37:21	14	4:54:58	16
P'yongyang	22:10:11	21	22:27:57	24	1:30:09	59	4:31:03	70	4:48:34	67
Quebec	22:03:29	23	22:21:08	20	--	-	--	-	--	-
Quito	22:05:57	15	22:23:47	11	--	-	--	-	--	-
Reykjavik	22:03:25	5	22:21:07	4	--	-	4:35:54	4	4:53:36	6
Riyadh	--	-	--	-	--	-	4:37:11	32	4:54:43	36
Rome	--	-	--	-	--	-	4:37:47	10	4:55:26	13
St. Petersburg	--	-	--	-	1:30:06	3	4:36:32	24	4:54:05	27

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Location Name	External	Sun	Internal	Sun	Greatest	Sun	Internal	Sun	External	Sun
	Ingress	Altitud	Ingress	Altitud	Transit	Altitu	egress	Altitud	Egress	Altitud
	h:m: s	°	h:m: s	°	h:m: s	°	h:m: s	°	h:m: s	°
San Jose	22:05:31	24	22:23:16	20	--	-	--	-	--	-
San Juan	22:04:07	11	22:21:53	7	--	-	--	-	--	-
San Salvador	22:05:34	30	22:23:18	26	--	-	--	-	--	-
Santo Domingo	22:04:16	15	22:22:02	11	--	-	--	-	--	-
Seoul	22:10:22	21	22:28:08	25	1:30:08	60	4:30:52	70	4:48:24	68
Shanghai	22:10:57	15	22:28:46	19	1:30:39	57	4:30:58	78	4:48:30	75
Shenyang (Mukd	22:09:50	19	22:27:35	23	1:30:09	56	4:31:23	69	4:48:54	67
Singapore	--	-	--	-	1:32:29	35	4:31:23	67	4:48:57	68
Sofia	--	-	--	-	--	-	4:37:39	17	4:55:14	20
Stockholm	--	-	--	-	--	-	4:36:43	18	4:54:19	20
Stuttgart	--	-	--	-	--	-	4:37:26	10	4:55:04	13
Suva	22:14:29	41	22:32:24	43	1:28:14	44	4:24:51	15	4:42:56	11
Svalbard	22:04:32	11	22:22:13	11	1:28:51	14	4:35:05	22	4:52:41	23
Sydney	22:15:56	13	22:34:00	16	1:30:15	33	4:26:09	23	4:44:09	20
T'aipei	22:11:37	13	22:29:27	17	1:30:52	58	4:30:39	81	4:48:11	77
Taskent	--	-	--	-	1:31:41	17	4:35:37	51	4:53:04	54
Tehran	--	-	--	-	1:31:59	2	4:36:49	38	4:54:19	41
Tel Aviv	--	-	--	-	--	-	4:37:41	24	4:55:15	27
Tianjin	22:09:59	14	22:27:46	17	1:30:32	52	4:31:45	73	4:49:14	72
Tokyo	22:10:41	31	22:28:25	35	1:29:31	70	4:29:47	63	4:47:22	59
Toronto	22:03:48	28	22:21:27	25	--	-	--	-	--	-
Vancouver	22:05:48	55	22:23:22	53	1:25:53	24	--	-	--	-
Ulaanbaatar	22:08:45	10	22:26:31	13	1:30:31	43	4:32:54	65	4:50:23	65
Victoria	22:11:41	6	22:29:34	10	1:31:21	51	4:31:13	88	4:48:44	84
Vienna	--	-	--	-	--	-	4:37:27	14	4:55:04	17
Volgograd	--	-	--	-	1:31:04	3	4:36:46	32	4:54:17	35
Willemstad, Cura	22:04:36	11	22:22:24	7	--	-	--	-	--	-
Winnipeg	22:04:28	40	22:22:04	37	1:26:01	8	--	-	--	-
Xi'an	22:10:15	6	22:28:05	10	1:31:06	47	4:32:14	78	4:49:43	78