Rev 8 Cassini Radio Science Occultation: Event Times on DOY 2005-141

Essam Marouf 5/20/05

	SCET UTC	ERT UTC OWLT = 1:20:16	Pacific Time GMT-7hrs 7:00:00	Comments
Start LMB	2:59:44	4:20:00	21:20:00	Earth poined, but no DSN stations are tracking
DSS-34: Begin-of-Track	5:34:44	6:55:00	-0:05:00	No downlink until 08:11:14
DSS-34: Enable Monopulse	6:50:58	8:11:14	1:11:14	Cassini HGA is Earth pointed at this time
Start Baseline	6:50:58	8:11:14	1:11:14	Free-space: ~51, 39, 41 dB-Hz @ X, S, and Ka
Ring F	7:20:19	8:40:35	1:40:35	Narrow isolated ring; not much effect expected
Ring A in	7:25:41	8:45:57	1:45:57	Sudden drop in signal level
Enke Gap	7:30:11	8:50:27	1:50:27	Brief recovery of strong signal level
Ring A out	7:46:07	9:06:23	2:06:23	Strong signal expected in the Cassini Div
DSS-34: Disable Monopulse	7:52:00	9:12:16	2:12:16	Monopulse offset used to reintialize blind
Ring B in	7:52:15	9:12:31	2:12:31	Signal level drops substantially
DSS 55: Begin-of-Track	7:59:44	9:20:00	2:20:00	In Ring B; Blind pointing till exit from Ring B
Ring B out	8:25:49	9:46:05	2:46:05	Signal level in Ring B is small
DSS-34: Enable Monopulse	8:26:00	9:46:16	2:46:16	Monopulse enabled ~10 s after exit from Ring B
DSS-55: Enable Monopulse	8:26:00	9:46:16	2:46:16	Monopulse offset used to reintialize blind
Ring C out	8:48:22	10:08:38	3:08:38	High signal level but with fast fluctuations
DSS-34: End-of-Track	8:49:44	10:10:00	3:10:00	Canberra sets during the occultation period
DSS-55: Disable Monopulse	8:53:30	10:13:46	3:13:46	Monopulse offset used to reintialize blind
Ionoshere in	8:57:09	10:17:25	3:17:25	Strong signal level
Troposphere in	9:06:00	10:26:16	3:26:16	Signal level drops systematically and fast
End of Ingress	9:32:58	10:53:14	3:53:14	Signal absorbed in Saturn's atmosphere
Behind Saturn				

Start of Egress	11:00:58	12:21:14	5:21:14	Signal level builds up systematically
Troposphere out	11:33:00	12:53:16	5:53:16	Pointing error may affect free-space signal level
Ionosphere out	11:42:20	13:02:36	6:02:36	Strong signal level
DSS-55: Enable Monopulse	11:43:00	13:03:16	6:03:16	Monopulse enabled ~1 m before Ring C
Ring C in	11:44:32	13:04:48	6:04:48	Strong, dynamically changing signal level
DSS-55: Disable Monopulse	12:06:29	13:26:45	6:26:45	Monopulse offset used to reintialize blind
Ring B in	12:06:39	13:26:55	6:26:55	Signal level drops substantially
Ring B out	12:38:50	13:59:06	6:59:06	Signal level is small in Ring B
DSS-55: Enable Monopulse	12:39:00	13:59:16	6:59:16	Monopulse enabled ~10 s after exit from Ring B
Ring A in	12:45:35	14:05:51	7:05:51	Signa level comes back up in the Cassini Division
Enke Gap	12:59:17	14:19:33	7:19:33	Clear dynamic signal throughout most of Ring A
Ring A out	13:03:22	14:23:38	7:23:38	Sudden transition to free-space signal level
Ring F	13:08:12	14:28:28	7:28:28	Rings F is only detectable in postprocessing
End of Baseline	13:38:58	14:59:14	7:59:14	Strong signal level
End LMB	14:47:44	16:08:00	9:08:00	End of the rev 8 radio occultation experiment

Note: Some Ring Edges are known to be noncircular, which will affect event times above