Chapter 4 - NIMS Spreadsheet for Earth/Moon 2 Encounter

Contents

Chapter 4

Introduction

The NIMS E2 spreadsheet consists of 4 pages. It is a rather comprehensive listing of design details for each observation. The NIMS Oapel name (NIMS alias) is given in the first column with the team responsible for the design in the second. The official OAPEL name (i.e. the name in the SROP Oapel dictionary) is in the third column. The fourth column gives the start time for the observation which, for most observations, is the end of the target slew which positions the instrument on the scan platform before the observation proper begins. The end slew time, that is, the time of the end of the last slew is considered to be the observation end in most cases. For observations that lack these targets or slews, the start time of the observation will usually be the start of the first instrument change and the end time which has been determined by the designer. Note that the times in the third and fourth columns were mostly taken from the Science Observation Design Package (SODP) and Opsgen reports. As a result, discrepancies may exist between these times and times within the Spacecraft Event File (SEF) or other files. Discrepancies on the order of rims have been found for some cases. The Opsgen report was used because it specifies the end of the target or mosaic slew - two quantities considered useful for timing purposes. For observations where Opsgen did not have the time listed, times from the SEF were used.

Where appropriate, the latitude (LAT) and west longitude (WLONG) of the observed body is given. The phase angle for the beginning and end of the observation and the starting cone angle, as given in the SODP and Opsgen report are included. The NIMS resolution is only approximated for the start of the observation.

The instrument state is given for each observation and the acronyms are decoded as follows:

SAFE - NIMS is in SAFE Mode
ALL - Every NIMS state is tested.
XM - Fixed Map; 17 wavelengths.
SM - Short Map; 102 wavelengths.
FM - Full Map; 204 wavelengths.
LM - Long Map; 408 wavelengths.
XS - Fixed Spectrometer; 17 wavelengths.
SS - Special Sequence; a modified Instrument Mode (see the OBSTAB for details).
SEL - Selected NIMS states are used.

Gain states are also included in the spreadsheet. Slew rates are given in the column to the right of the instrument state. The fourth column from the right, labeled "DN or N", shows whether the slew rate of the observation is at the Nyquist rate or the Double Nyquist rate. Grating start position and chopper mode are also listed. Finally, a brief objective is given for each observation.

NIMS E2 SPREADSHEET

NIMS OAPEL NAME	TEAM	OAPEL NAME	OBSERVATION START (TARGET TIME)	OBSERVATION END (END SLEW TIME)	LAT (DEG)	W. LONG (DEG)	PHASE START (DEG)	PHASE END (DEG)	CONE ANGLE (START)	NIMS RES (KM)	INST MODE	GAIN STATE	SLEW RATE MRAD/SEC / TYPE	DN OR N	GRAT STRT POS	CHOP MODE	OBJECTIVE
NNNIMS0N01	NIMS		1629550:00		-	-	-	-	-	-	SAFE	-	-	-	-	63	NIMS ON
			92-328/14:59:57														
NNQUICAL01	NIMS		1631235:94		-	-	-	-	-	-	SAFE	4	-	-	-	63	LISTEN/UVS
			92-329/18:39:04														
NNPCT___01	NIMS		1632666:84	1632816:84	-	-	-	-	-	-	ALL	ALL	-	-	SEL	SEL	FULL PCT -
			92-330/18:45:57	92-330/21:17:37													CAL
HNSTARFL01	NIMS	HPTSTARS02	1640053:41	1640156:01	-	-	-	-	128.9	-	XM	4	0.02/0.04	DN	6	63	BORESIGHT
			92-335/23:14:33	92-336/00:58:15									/CSMOS				& FLOODMODE
HNNSTAR_01	PPR		1640158:67	1640245:43	-	-	-	-	155.2	-	XM	4	0.02/CSMOS	DN	6	63	STAR CAL
			92-336/01:01:01	92-336/02:28:43													
NNMRO___01	NIMS		1640251:01	1640255:01	-	-	-	-	-	-	SAFE	4	-	-	-	63	MEMORY -
			92-336/02:34:21	92-336/02:38:24													READOUT
NNRCTON_01	NIMS		1641091:00	1641744:01	-	-	-	-	-	-	SAFE	4	-	-	-	63	RCT WARMUP
			92-336/16:43:48	92-337/03:43:54													
NNQUICAL02	NIMS	NMINTCAL04	1641382:12	1641388:06	-	-	-	-	-	-	SAFE	4	-	-	-	63	LISTEN/MAG
			92-336/21:38:00	92-336/21:44:00													
NNRCTCAL01	NIMS		1641470:89	1641744:01	-	-	-	-	0.0		ALL	ALL	-	-	SEL	SEL	FULL RCT -
			92-336/23:07:50	92-337/03:43:54													CAL
NNLOAD__01	NIMS		1641846:84	1641847:04	-	-	-	-	-	-	SAFE	4	-	-	-	63	MEMORY -
			92-337/05:27:57	92-337/05:28:04													LOAD
NNQUICAL03	MAG	NMINTCAL07	1642531:33	1642537:27	-	-	-	-	-	-	SAFE	4	-	-	-	63	LISTEN/MAG
			92-337/17:00:00	92-337/17:06:00													
NNQUICAL04	SSI	HSSTRCAL01	1643786:90	1643799:59	-	-	-	-	-	-	SAFE	4	-	-	-	63	LISTEN/SSI
		HSSTRCAL02	1643800:89	1643812:05	-	-	-	-	-	-	"	"	-	-	-	"	"
		HSSTRCAL03	1643814:89	1643856:60	-	-	-	-	-	-	"	"	-	-	-	"	"
		HSSTRCAL04	1643856:89	1643872:51	-	-	-	-	-	-	"	"	-	-	-	"	"
		HSSTRCAL05	1643872:90	1643883:68	-	-	-	-	-	-	"	"	-	-	-	"	"
		HSSTRCAL06	1643886:79	1643898:20	-	-	-	-	-	-	"	"	-	-	-	"	"

NIMS E2 SPREADSHEET

NIMS	TEAM	OAPEL	OBSERVATION	OBSERVATION	LAT	W. LONG	PHASE	PHASE	CONE	NIMS	INST	GAIN	SLEW RATE	DN	GRAT	CHOP	OBJECTIVE
OAPEL NAME		NAME	START	END	(DEG)	(DEG)	START	END	ANGLE	RES	MODE	STATE	MRAD/SEC	OR	STRT	MODE	
			(TARGET TIME)	(END SLEW TIME)			(DEG)	(DEG)	(START)	(KM)			/ TYPE	N	POS		
NNQUICAL05	NIMS	NDNOISE_04	1643955:49	1643956:03	-	-	-	-	-	-	SAFE	4	-	-	-	63	LISTEN/DDS
			92-338/17:00:00	92-338/17:00:30													
NNBOOM__01	NIMS	NMMAGSP_03	1644144:01	1644683:01	-	-	-	-	120.0	-	XM	1	0.07/CONE	-	0	63	BOOM MAP 1
			92-338/20:10:36	92-339/05:15:36													
NNBOOM__02	NIMS	NMMAGSP_04	1645232:01	1646004:01	-	-	-	-	90.0	-	XM	1	0.07/CONE	-	0	63	BOOM MAP 2
			92-339/14:30:42	92-340/03:31:17													
NNQUICAL06	PPR	WPNITLIT01	1649824:90	1649851:40	20.71	312.66	145.95	146.13	29.26	-	SAFE	4		-	-	63	LISTEN/EPD
			92-342/19:54:	92-342/20:28:38													
NNQUICAL07	PPR	LPLUNFAZ02	1649858:54	1649966:81	-48.6	187.6	128.8	60.	47.4	115	SM	1	0.06/CSMOS	DN	2	63	LISTEN/PPR
			92-342/20:28:38	92-342/22:18:08													
LNPHASE_01	SSI*	LSLUNMOS01	1649972:01	1650030:01	2.82	293.15	122.8	25.52	53.4	40	SM	1	0.06/CSMOS	DN	2	63	MOON PHASE
			92-342/22:23:22	92-342/23:22:21													
LN4GAIN_01	NIMS		1650016:72	1650025:57	24.98	250.02	118.9	118.21	57.36	94	XM	ALL	FIXED	-	6	63	4 GAIN CAL
			92-342/23:08:36	92-342/23:18:33								1	0.01/CSMOS	DN			& LIMB SCAN
LNPHASE_02	SSI*	LSLUNMOS02	1650028:38	1650076:43	-0.1	295.3	117.7	111.7	58.5	84	FM	1	0.03/SMOS	-	0	63	MOON PHASE
			92-342/23:20:21	92-343/00:08:57													
LNPHASE_03	SSI*	LSLUNMOS03	1650087:36	1650217:17	-7.2	292.5	111.4	84.6	65.	68	SM	1	0.06/SMOS	DN	2	63	MOON PHASE
			92-343/00:19:59	92-343/02:31:13													
LNPHASE_04	UVS	LULNRLMB01	1650232:49	1650251:84	2.5	176.5	81.4	81.4	95.2	57	XM	1	.074 DRIFT	DN	6	63	LIMB SCAN
			92-343/02:46:44	92-343/03:06:20													
LNPHASE_05	SSI*	LSLUNMOS04	1650256:09	1650272:48	-24.	293.7	78.5	73.8	98.3	56	XS	1	1.2 (SSI)	DN	6	63	MOON PHASE
			92-343/03:10:34	92-343/03:27:12													
LNHIRES_01	NIMS		1650274:60	1650331:00	3.4	29.8	74.2	58.2	102.5	55	FM	1	0.03/CSMOS	DN	0	63	MOON HIRES
			92-343/03:29:20	92-343/04:26:09													
LNPHASE_06	SSI*	LSLUNMOS05	1650332:29	1650348:48	-32.3	291.3	58.4	53.3	118.7	56	XS	1	1.2 (SMOS)	DN	6	63	MOON PHASE
			92-343/04:27:38	92-343/04:44:01													
LNPHASE_07	NIMS		1650350:67	1650380:86	-38.1	308.	54.2	45.6	122.9	58	SM	1	0.06/CSMOS	DN	2	63	MOON PHASE
			92-343/04:46:15	92-343/05:16:48													

NIMS E2 SPREADSHEET

NIMS OAPEL NAME	TEAM	OAPEL NAME	OBSERVATION START (TARGET TIME)	OBSERVATION END (END SLEW TIME)	LAT (DEG)	W. LONG (DEG)	PHASE START (DEG)	PHASE END (DEG)	CONE ANGLE (START)	NIMS RES (KM)	INST MODE	GAIN STATE	SLEW RATE MRAD/SEC / TYPE	DN OR N	GRAT STRT POS	CHOP MODE	OBJECTIVE
LNPHASE_08	SSI*	LSLUNMOS06	1650382:16	1650488:00	-37.9	291.2	46.1	26.5	131.3	65	SM	1	0.06/SMOS	DN	2	63	MOON PHASE
			92-343/05:18:03	92-343/07:05:02													
LNPHASE_09	PPR	LPFOVMAP01	1650490:35	1650519:81	-64.5	345.8	27.5	23.2	150.8	80	XM	1	0.12/CSMOS	DN	6	63	MOON PHASE
			92-343/07:07:27	92-343/07:37:17													
LNPHASE_10	SSI*	LSLUNMOS07	1650541:18	1650635:00	-40.7	277.4	21.4	14.1	157.8	95	FM	1	0.03/SMOS	DN	0	63	MOON PHASE
			92-343/07:58:50	92-343/09:33:40													
LNPHASE_11	NIMS		1650638:90	1650667:00	-41.3	274.3	15.4	13.6	165.7	109	FM	1	0.03/CSMOS	DN	0	63	MOON PHASE
			92-343/09:37:42	92-343/10:06:02													
WNLOWCAL01	NIMS		1650672:74	1650730:00	54.2	339.5	144.5	143.	30.1	80	SS	4	0.12/CSMOS	N	11	63	CAL/AURORA
			92-343/10:11:54	92-343/11:09:44													
NNNOOBS_01	NIMS		1650796:05	-	-	-	-	-	60./97.	-	SS	1	-	-	11	63	AVOID HEAT
NNNOOBS_02	NIMS		1650965:05	-	-	-	-	-	2./79.	-	SS	1	-	-	11	63	"
NNNOOBS_03	NIMS		1650972:27	-	-	-	-	_	2./10.	-	SS	1	-	-	11	63	"
NNNOOBS_04	NIMS		1650974:54	-	-	-	-	-	2./344.	-	SS	1	-	-	11	63	"
NNNOOBS_05	NIMS		1650993:43	-	-	-	-	-	60./295.	-	SS	1	-	-	11	63	"
WNANDES_01	SSI	WSANDES_01	1651002:83	1651013:11	-23.8	67.1	72.2	73.5	113.6	10	LM	1	4.86/SMOS	-	0	63	ANDES MOS.
			92-343/15:45:40	92-343/15:56:00													
WNHAWAUR01	SSI	WSHAWAUR01	1651025:75	1651036:75	18.6	155.7	60.8	66.2	93.1	15	XM	1	0.55/SMOS	-	0	63	DARK HAWAII
			92-343/16:08:50	92-343/16:19:58													& AURORA
WNANTAR_01	NIMS		1651102:47	1651149:00	-71.	56.2	76.6	75.2	109.2	40	LM	1	0.02/CSMOS	DN	0	63	ANTARCTICA
			92-343/17:26:23	92-343/18:13:23													
WNLTNINS01	SSI	WSLTNING01	1651283:18	1651302:11	5.	238.5	76.34	76.28	109.6	88	XM	1	0.55/SMOS	-	0	63	LIGHTNING
			92-343/20:29:05	92-343/20:48:13													
WNAUSIE_01	NIMS		1651303:57	1651340:05	-38.7	207.1	78.2	77.7	107.7	95	LM	1	0.02/CSMOS	DN	0	63	AUSTRALIA
			92-343/20:49:44	92-343/21:26:34													
WNINDO__01	NIMS		1651405:21	1651426:40	-7.7	231.9	78.55	78.3	107.4	121	LM	1	0.03/CSMOS	DN	0	63	INDONESIA
			92-343/22:32:38	92-343/22:53:54													

NIMS E2 SPREADSHEET

NIMS OAPEL NAME	TEAM	OAPEL NAME	OBSERVATION START (TARGET TIME)	OBSERVATION END (END SLEW TIME)	LAT (DEG)	W. LONG (DEG)	PHASE START (DEG)	PHASE END (DEG)	CONE ANGLE (START)	NIMS RES (KM)	INST MODE	GAIN STATE	SLEW RATE MRAD/SEC / TYPE	DN OR N	GRAT STRT POS	CHOP MODE	OBJECTIVE
WNGMOS__01	NIMS		1651439:06	1651738:50	66.3	322.4	77.2	80.5	108.8	130	LM	1	0.03/CSMOS	N	0	63	GLOBAL MOS
			92-343/23:06:36	92-344/04:09:29													
WNGMOS__02	SSI	WSZOOMMV01	1651859:43	1652156:50	16.6	322.4	77.2	80.5	108.8	130	LM	1	4.86/SMOS	-	0	63	GLOBAL MOS
			92-344/06:11:45	92-344/11:12:08													
WNGOPEX_01	SSI	WSGOPEX_01	1652157:90	1652335:50	-12.85	111.52	80.	80.34	106.3	343	LM	1	-	-	0	63	GLOBAL MOS
			92-344/11:13:35	92-344/14:13:07													
WNGMOS__03	SSI	WSZOOMMV02	1652338:61	1652569:50	4.9	73.2	80.8	81.	105.9	375	LM	1	SSI DESIGN	-	-	63	GLOBAL MOS
			92-344/14:16:17	92-344/18:09:43													
WNGMOS__04	SSI	WSZOOMMV03	1652705:32	1653573:10	6.7	173.9	81.1	81.8	105.8	540	LM	1	4.86/SMOS	-	0	63	GLOBAL MOS
			92-344/20:28:40	92-345/11:04:26													
WNGOPEX_02	SSI	WSGOPEX_02	1653574:73	1653695:68	-33.7	165.	81.5	81.9	106.	-	LM	1	-	-	0	63	GLOBAL MOS
			92-345/11:06:08	92-345/13:08:26													
NNPCTMIN01	NIMS		1654847:84	1654861:84	-	-	-	-	-	-	SEL	SEL	-	-	0	63/REF	PARTIAL PCT
			92-346/03:33:24	92-346/08:47:37													CALIBRATION
NNRCTON_01	NIMS		1655003:01	1655420:01	-	-	-	-	-	-	-	-	-	-	-	63	RCT ON
			92-346/11:10:15	92-346/18:11:51													
NNRCTMIN01	NIMS		1655390:84	1655419:81	-	-	-	-	-	-	SEL	SEL	-	-	0	63/REF	PARTIAL RCT
			92-346/17:42:26	92-346/18:11:44													CALIBRATION
NNMIRCAL01	NIMS		1655429:84	1655768:00	-	-	-	-	-	-	SS	-	-	-	0	63	MIRROR CAL
			92-346/18:21:52	92-347/00:03:42													
NNNIMOFF01	NIMS		1655472:53	-	-	-	-	-	-	-	-	-	-	-	-	-	NIMS OFF