Table II: VIMS ring stellar occultations: Observations

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Mb)	cubes	Remarks[4]
o Cet (8)	2005-144T04:03	80	S	994	5:13	56	48	FBF chord (B5); shad[5]; v. good
o Cet (9)	2005-162T07:25	80	S	996	3:49	62	40	FAF chord; shad; v. good
o Cet (10)	2005-180T11:53	80	S	1175	4:02	57	39	FAF chord; shad; v. good
o Cet (12)	2005-217T00:05	80	S	1100	2:54	48	27	F chord; shad; exc.
α Sco (13)	2005-232T10:42	40	S	$\sim$ 780	3:55	138	74	FBF chord (B2)[6,24]; shad; OK
α Ori (26)	2006-204T16:00	20	–	956	1:00	34	29	AB rings (I)[7]; shad; exc.
α Tau (28)	2006-252T10:00	40	–	135-150	2:15	32	40	F-D rings (I)[6,8]; shad, poor
δ Vir (29)	2006-268T22:00	40	E	125	1:00	12	12	F-D chord[8,24]; v. good
α Sco (29)	2006-269T06:00	20	S	725	5:00	144	122	FAB rings (I)[9]
R Leo (30)	2006-285T01:30	20	S	62	1:30	48	48	FBF chord (B4)[6]; poor
CW Leo (31)	2006-301T01:00	80	–	(1050)	1:30	60	10	FBA chord (B1)[10]; OK
α Aur (34)	2006-336T12:00	80	S	410	2:20	17	22	F-D rings (I); shad
R Hya (36)	2007-001T16:00	40	S	330	5:00	81	73	F-D rings (I)[8]
α Aur (41)	2007-082T16:20	40	S	191	4:00	57	36	F-C rings (I)[8]; shad
R Hya (41)	2007-088T05:40	20	S	97	6:15	158	140?	F-B rings (I)[9]
R Hya (42)	2007-105T16:17	20	S	110	4:00	100	146?	F-A rings (I)
α Ori (46)	2007-163T01:30	20	–	[(205)]	1:00	122	21	F-A rings (I)[24]; shad; good
o Cet (52)	2007-321T06:49	80	–	[40]	0:55	21	5	No useful data[11]
α Sco (55)	2008-003T09:15	20	S	746	2:25	90	72	A-F rings (E)
α Aur (57)	2008-027T22:20	40	S	–	2:55	81	36	No data[12]
R Leo (60)	2008-063T14:45	40	S	448	3:00	60	40	FA chord
R Leo (61)	2008-074T06:25	40	S	420	2:30	57	42	FA chord
α TrA (63)	2008-092T01:35	80	S	235	6:20	55	57	FA chord; v. good
R Leo (63)	2008-094T12:20	40	S	360	3:00	69	58	FB chord (B5); v. good
R Cas (65)	2008-112T00:05	20	S	70	2:00	70	60	A-C rings (I)[7,8], shad.

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate @ 2.92 μm. Values in (...) are exceptions: α Ori(46) @ 1.13 μm, CW Leo @ 4.92 μm. Values in [...] are or may be unsummed.
4. I = ring ingress only; E = ring egress only.
5. 'Shad' indicates that part or all of the track is in Saturn's shadow. (Note that this has not been consistently flagged.)
6. Stellar flux reduced & baseline variable due to bad pointing.
7. F ring missed due to trajectory shift.
8. Ring occ followed by Saturn ingress occ in same data set.
9. C ring data lost due to data policing.
10. Truncated on egress at 132 kkm.
11. Truncated by data policing before ingress, due to piggy solar occs!
12. Star acquisition failed.
24. Very noisy due to charged particle hits.

Count rates for the brightest stars at 2.92 μm:
α Ori = 48,000 DN/s, α Sco = 36,000 DN/s, γ Cru = 18,000 DN/s, o Cet = 12,500 DN/s.

Table II (continued)

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Mb)	cubes	Remarks[4]
			Ring occultations (cont'd):					
α Cen (66)	2008-120T08:00	60	S	290	4:30	82	71	F-C rings (I); v. good
R Leo (66)	2008-123T04:40	40	S	–	3:00	66	57	No data[13]
R Leo (68)	2008-140T15:13	40	S	$\sim$ 50	4:31	76	66	FBF chord (B3); poor[6]
γ Cru (70)	2008-153T04:30	40	S	–	3:20?	76	66	No useful data[12]
η Car (70)	2008-153T08:50?	40	S	($\sim$ 40)	5:50?	45	39	No useful data[14]
CW Leo (70)[5]	2008-155T12:37	100	S	($\sim$ 900)	4:53	35	30	FBF chord (B3)[6]; OK
γ Cru (71)	2008-160T07:50	40	S	450–520	3:45	82	70	F-D rings (I),[6,8]; OK
CW Leo (71)[5]	2008-162T15:15	80	S	($\sim$ 900)	2:45	10	9	F-A rings (I)[6] poor
γ Cru (72)	2008-167T11:05	40	S	645	1:55	38	33	F-B rings (I), good
γ Cru (73)	2008-174T14:15	40	S	$\sim$ 620	3:40	80	69	F-D rings (I)[8]; OK
CW Leo (74)[5]	2008-183T23:45	40	S	(400)	4:15	100	77	FBF chord (B4); OK
R Leo (75)	2008-191T03:45	40	S	268	3:45	98	72	FBF chord (B3); good
γ Cru (77)	2008-202T17:45	20	S	80-130	4:10	163	141	F-D rings (I),[6,8] poor
R Leo (77)	2008-205T06:00	40	S	285	3:35	95	69	FBF chord (B3); good
γ Cru (78)	2008-209T18:50	20	S	$\sim$ 290	3:50	156	135	F-D rings (I),[6,8] good
η Car (78)[5]	2008-209T22:40	40	S	64	5:20	42	36	CD-F rings (E); good
β Gru (78)	2008-210T09:00	20	S	$\sim$ 270	1:45	60	52	F-C rings (I)[6]
γ Cru (79)	2008-216T11:00	40	S	697	4:45	93	80	F-D rings (I),[8,15] good
RS Cnc (80)	2008-226T00:49	80	S	305	8:16	89	77	FC chord; slow
γ Cru (81)	2008-231T05:25	40	S	$\sim$ 570	4:40	89	77	F-D rings (I),[6,8] good
γ Cru (82)	2008-238T13:50	40	S	720	4:40	96	83	F-D rings (I),[8] exc.
RS Cnc (85)	2008-262T20:40	80	S	311	9:00	88	76	FC chord
γ Cru (86)	2008-268T01:30	60	S	1031	4:35	53	46	F-D rings (I), exc.
R Leo (86)	2008-271T09:00	80	S	650	3:20	18	28	FA chord; OK
RS Cnc (87)	2008-277T14:15	80	S	324	8:52	88	76	FC chord
R Leo (87)	2008-278T18:15	40	–	304	2:57	243	42	FA chord; OK
γ Cru (89)	2008-290T02:45	40	S	706	4:40	86	74	F-D rings (I),[8] exc.
CW Leo (89)[5]	2008-293T07:01	40	S	(150)	3:25	54	49	pointing tests only
RS Cnc (92)	2008-315T00:00	60	S	224	4:13	56	49	F-B rings (I)
γ Cru (93)	2008-320T14:45	30	S	$\sim$ 480	4:57	115	133	F-D rings (I),[6,8] good

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm. Values in () are as follows: CW Leo @ 4.25 μm. R Leo (87) data summed.
4. I = ring ingress only; E = ring egress only.
5. CIRS rider; targeted with FP3 or FPB.
6. Stellar flux reduced & baseline variable due to bad pointing.
8. Ring occ followed by Saturn ingress occ in same data set.
12. Star acquisition failed.
13. All data lost due to DSN downtime.
14. Star split between 2 pixels; signal lost during occultation.
15. Most A ring & Cass. Div. data lost due to DSN problems.

Table II (continued)

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Seq)	cubes	Remarks[4]
				Ring occultations (cont'd):				
γ Cru (94)	2008-327T23:40	20	S	269	4:44	173	150	F-D rings (I)[8]; good
ϵ Mus (94)	2008-328T05:59	60	S	190	8:46	130	112	FBF (B3) chord; good
γ Cru (96)	2008-343T10:08	20	S	$\sim$ 200	4:28	158	140	F-D rings (I)[6,8]; OK
γ Cru (97)	2008-351T09:28	60	S	$\sim$ 840	4:27	56	48	F-B rings (I)[6,16]; OK
γ Cru (100)	2009-012T08:35	25	S	384	4:50	149	129	F-D rings (I)[8]; exc.
α TrA (100)	2009-013T02:10	80	S	19–24	9:30	98	85	FBF chord (B1); poor[17]
γ Cru (101)	2009-021T22:25	30	S	290–410	4:50	131	113	F-D rings (I)[6,8]; OK
γ Cru (102)	2009-031T11:38	60	S	990	4:50	65	56	F-D rings (I)[8]; exc.
α TrA (102)	2009-032T05:07	80	S	—	9:15	101	(87)	No useful data[13]
TX Cam (102)	2009-034T22:14	40	S	44–51	5:40	119	103	F-C rings (I)[6]
γ Cru (104)	2009-053T06:40	20	S	226	7:35	289	250	FAF chord[6,7]; OK
β Peg (104)	2009-057T07:50	40	S	295	3:15	53	46	F-D rings (I)[8]; v.good
α Cen (105)[5]	2009-065T17:55	40	S	$\sim$ 190	4:50	112	97	F-D rings (I)[8]; good
γ Cru (106)	2009-077T05:53	60	S	$\sim$ 780	7:47	111	96	FAF chord[6], OK
R Cas (106)	2009-081T19:59	20	S	127	4:41	188	162	F-C rings (I)[20], shad.; exc.
β Peg (108)	2009-095T13:10	40	S	290	2:59	43	37	F-C rings (I)[21]; exc.
α Aur (110)	2009-129T09:48	80	S	250–320	8:54	96	83	FBF chord (B1)[6]; good
α Aur (112)	2009-160T08:20	80	S	393	0:18	$\sim$ 4	3	C ring (I)[22]; v.good
α Sco (115)	2009-208T21:20	80	S	2700	6:43	72	62	F-C rings (I)[23]; v.good
α Ori (117)	2009-239T06:45	20	S	400–550	2:25	$\sim$ 50	51	F-D rings (I)[6,8]; shad, OK
o Cet (132)	2010-154T05:55	80	–	$\sim$ 400	1:55	52	9	FBF chord (B4)[24,36]; OK
o Cet (135)	2010-205T19:15	60	S	$\sim$ 330	2:27	24	21	F-D rings[8,25,36]; v. good
α CMa (168)[5]	2012-180T22:45	20	S	39	1:30	S74		C ring (I)[8]; exc., shad.
α CMa (169)	2012-204T20:20	20	S	38	1:56			C ring (I)[6,8,25]; poor, shad.
β Peg (170)	2012-224T14:25	40	S	278	6:25		XD	C-F rings (E)[26]; exc.

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm. Values at 1.07 μm are 470 & 190 DN for α CMa (168, 169).
4. I = ring ingress only; E = ring egress only.
5. UVIS rider; targeted with UVIS HSP.
6. Stellar flux reduced & baseline variable due to bad pointing.
7. F ring egress lost due to trajectory shift.
8. Ring occ followed by Saturn ingress occ in same data set.
16. C ring and B1 region lost to DSN problems.
17. Bad star acquisition; signal very low.
13. Data lost or corrupted due to problems DSN station.
20. Very high resolution C ring wave profiles; in Saturn's shadow.
21. Star goes behind Saturn in middle C ring.
22. Short ring occ preceeding Saturn occ in same data set; inner C ring only.
23. Star goes behind Saturn at 03:15.
24. Very noisy due to charged particle hits.
25. Allocated as PIE.
26. Some A ring & F ring data lost due to DSN problems.
36. Unusually fast. Unexplained background variations of $>$ 100 DN on rev 132 & 20-30 DN on rev 135.

Table II (continued)

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Seq.)	cubes (TWT)	Remarks[4]
			Ring occultations (cont'd.):					
β Peg (172)	2012-266T17:02	40	S	280	6:05	S75	XD	F-D rings (I)[8]; exc.
λ Vel (173)	2012-292T09:31	60	S	250	3:22			F-C rings (I)[27]; v. good
α Cet (174)	2012-315T09:15	80	–	245	3:16	S76		FCB chord[28]; v. good
α Lyr (175)[5]	2012-324T07:12	80	–	64	8:28		XD	F-D rings (I)[8]; good
R Lyr (176)	2012-339T14:15	40	S	230	15:23		XD	FBA chord (B3); exc.
W Hya (179)	2013-019T18:52	20	S	250	4:04	S77		F-D rings (I), exc.
R Lyr (180)	2013-026T17:52?	40	S	230	13:30		XD	FBA chord (B3), exc.
R Cas (180)	2013-030T09:32?	40	S	110	4:16		XD	F ring chord, v. good
W Hya (180)	2013-033T02:09	20	S	235	3:20			F-C rings (I), v. good
W Hya (181)	2013-046T09:22	20	S	265	4:06			F-D rings (I), exc.
μ Cep (185)	2013-090T13:41	40	S	200	7:00	S78	Rings	C-F rings (E), shad, good
R Cas (185)	2013-091T01:41	40	S	75	6:19		Rings	F-D rings (I)[25], OK[6]
R Hya (185)	2013-094T07:20	40	S	250	7:00			FBA chord (B1), good
R Dor (186)	2013-102T15:05	20	S	600	2:55			FBA chord (B4)[9], exc.
W Hya (186)	2013-103T19:36	20	S	245	3:30			C-F rings (E), exc.
γ Cru (187)	2013-112T13:15	20	S	320	9:30	S78		FDF chord[25]; exc.
R Dor (188)	2013-121T18:30	20	S	520	4:46			FBF chord[25] (B4), v good
W Hya (189)	2013-132T12:41	20	S	280	3:25			C-F rings (E); exc.
μ Cep (191)	2013-148T19:30	40	S	220	6:00		XD	F-D rings (I); good
R Cas (191)	2013-149T17:24	40	S	100	5:09		Rings	F-D rings (I); good
R Car (191)	2013-152T17:30	40	S	85	3:50			F-D rings (I); good
R Cas (192)	2013-161T16:24	40	S	~ 55	2:36	S79	Sat.	F-B rings (I)[6]; poor
μ Cep (193)	2013-172T17:35	40	S	240	5:55		XD	F-D rings (I), exc.
μ Cep (194)	2013-184T16:00	20	S	105	3:42		XD	F-CD rings (I), good
R Cas (194)	2013-185T23:22	40	S	105	5:43		Rings	D-F rings (E), shad, good
η Car (194)	2013-188T18:06	80	S	105–125	3:54	S79		F-D rings (I)[9], exc.
2 Cen (194)	2013-189T13:06	80	S	345	8:54			FCA chord, exc
μ Cep (195)	2013-196T15:00	40	S	225	4:45		Sat.	F-B rings (I), exc.
W Hya (196)	2013-229T17:00	20	S	340	6:41	S80		FBA chord (B2)[25], exc.
β And (196)	2013-241T00:00	100	S	460	7:45		XD	slow FAF chord; v good

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm.
4. I = ring ingress only; E = ring egress only.
5. UVIS rider; targeted with UVIS HSP.
8. Ring occ followed by Saturn ingress occ in same data set.
9. CIRS rider; targeted with FPB?
25. Allocated as a PIE.
27. Star goes behind Saturn in inner C ring.
28. Data unsummed; cut short by data policing.

Table II (continued)

Star (rev)	Date	τ^1 (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Seq.)	cubes (TWT)	Remarks[4]
				Ring occultations (cont'd.):				
W Hya (197)	2013-253T15:22	20	S	310	5:45	S80	XD	FBA chord (B2)[25]; exc.
L^2 Pup (198)	2013-281T11:40	80	S	210	7:10		XD	slow FAF chord[6,29]; OK
R Lyr (198)	2013-289T07:00	40	S	235	5:05		XD	F-D rings (I); exc.
L^2 Pup (199)	2013-327T06:30	40	S	100	10:30	S81	XD	C-F rings (E)[6]; OK
R Lyr (199a)	2013-336T23:00	40	S	215	6:00		XD	F-D rings (I); v. good
R Lyr (199b)	2013-337T06:00	40	S	215	4:05	S81	XD	B-F rings (E); v. good
R Lyr (200)	2014-003T16:24	40	S	220	4:12	S82	XD	F-D rings (I); exc.
L^2 Pup (201a)	2014-022T09:48	40	S	130	16:12		XD	slow FBF chord (B4)[6]; OK
γ Eri (201)	2014-041T18:12	40	S	85	3:20		XD	F-CD-F chord[6]; OK
L^2 Pup (201b)	2014-050T22:10	40	S	115	8:44		XD	F-D rings (I); good
α Lyr (202a)[5]	2014-067T02:30	80	S	30	3:35	S82	Rings	F-D rings (I)[8]; good
R Lyr (202a)	2014-067T06:05	40	S	185	2:58		Rings	F-C rings (I)[8]; OK
α Lyr (202b)[5]	2014-067T09:03	80	S	29	2:21		Rings	C-F rings (E), shad; good
R Lyr (202b)	2014-067T11:24	40	S	185	3:54		Rings	D-F rings (E); OK
λ Vel (203)	2014-084T14:13	50	S	170	24:05	S83	Sat.	slow FBF chord (B2); v. good
L^2 Pup (205a)	2014-174T20:35	40	S	130	7:43	S84	XD	F-C rings (I); good
L^2 Pup (205b)	2014-175T08:18	40	S	130	10:35		XD	D-F rings (E); good
α Lyr (206)[5]	2014-197T21:01	60	S	43	4:17		Rings	F-D rings (I)[25]; OK
R Lyr (206)	2014-198T01:18	20	S	100	1:42		Rings	F-B rings (I); v. good
L^2 Pup (206)	2014-206T16:40	40	S	80	6:47		XD	D-F rings (E)[6]; OK
R Lyr (208)	2014-262T08:43	40	S	200	4:32	S85	Rings	D-F rings (E); good
α Lyr (209)	2014-294T12:55	80	–	65	1:20	S86	Sat.	C ring (E)[30]; OK
α Her (211)	2015-009T06:21	20	S	360	2:46	S87	Rings	FAF chord; v good
α Her (212)	2015-041T10:30	20	S	375	1:10	S88	Sat.	F-C rings (I); exc.
X Oph (213)	2015-073T11:49	20	S	35	2:51		Rings	F-D rings (I)[8,25]
30 Psc (222)	2015-273T15:25	20	S	17	2:44	S91	Sat.	FAF chord[24,25]; noisy
30 Psc (225)	2015-315T08:36	20	S	—	2:50		MAPS	No data[12,25]
o Cet (231a)	2016-030T07:06	20	S	128	2:26	S92	Rings	F-B rings (I)[8.24,25]; v good
o Cet (231b)	2016-030T11:41	20	S	128	2:42		Rings	C-F rings (E)[25]; v good
R Aql (233)	2016-069T16:00	40	S	52	2:15	S93	Rings	FBF chord (B1)[31];OK

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm.
4. I = ring ingress only; E = ring egress only.
5. UVIS rider; targeted with UVIS-HSP boresight.
6. Stellar flux reduced & baseline variable due to bad pointing.
8. Ring occ followed by Saturn ingress occ in same data set.
25. Allocated as a PIE.
29. Split into 2 pieces: egress done at 40 ms with 45 DN.
30. Saturn egress rider; inner C ring out to 77.8 kkm; UVIS prime.
31. Major gaps due to DSN problems.

Table II (continued)

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Seq.)	cubes (TWT)	Remarks[4]
				Ring occultations (cont'd.):				
ϵ Peg (233)	2016-069T18:15	40	S	80	2:14	S93	Rings	F-D rings (I)[8,13]; good
W Hya (236)	2016-148T01:40	60	S	750	10:20	S94	XD	F-C rings (I)[21]; OK
2 Cen (237)	2016-173T09:25	60	S	220–260	20:05		XD	FBA chord (B2); good
α Sco (237)	2016-177T11:49	60	S	2290	10:16		XD	FBF chord (B4)[25]; exc.
β Peg (237)	2016-180T20:24	40	S	270	5:30	S95	Rings	FBF chord (B5); exc.
α Sco (238)	2016-201T10:21	60	S	1736	10:08	S95	XD	FBA chord (B4)[6,25]; OK
α Sco (239)	2016-218T15:44	20	S	580	2:52		Rings	F-B rings (I); good
R Cas (239)	2016-220T20:53	40	S	100	6:22		Rings	FBF chord (B2); v good
ρ Per (239)	2016-221T13:20	40	S	95	2:30		Rings	C-F rings (E); v good
α Ori (240)	2016-234T12:35	20	S	950	4:00		XD	FBF chord (B3); exc.
α Sco (241a)	2016-243T11:00	20	S	660	2:44	S95	Rings	F-B rings (I), shad?; v good
α Sco (241b)	2016-243T13:44	20	S	680	4:28		Rings	D-F rings (E); v good
X Oph (241)	2016-244T04:55	20	S	33	1:25		Rings	FCF chord; v good
α Ori (241)	2016-246T11:32	20	S	890	3:53		Rings	FBF chord (B3); v good
α Sco (243)	2016-267T11:44	20	S	690	5:06	S96	Rings	D-F rings (E); exc.
X Oph (243)	2016-268T02:56	20	S	24	2:02	S96	Rings	FCF chord, fast; OK
R Cas (243)	2016-268T14:43	40	S	68	3:32		Rings	F-D rings (I); OK
λ Vel (245)	2016-284T15:45	90	S	44	8:55		XD	FAF chord; poor[6]
γ Cru (245)	2016-286T07:27	20	S	290	6:35		Rings	C-F rings(E); good
α Sco (245)	2016-287T01:10	20	S	700	5:29		Rings	FDF chord[25]; exc.
α Ori (245)	2016-289T11:27	20	S	920	3:39	S96	Rings	FCDF chord[25]; exc.
λ Vel (246)	2016-294T05:21	80	S	275	5:15		XD	FA partial chord; OK
α Cen (247)	2016-305T17:40	80	–	[25–32]	4:15		Rings	F chord (graze)[32];OK
α Ori (247)	2016-308T14:25	20	S	870	3:45		Rings	FCDF chord; v good
η Car (250)[5]	2016-331T08:43	80	S	55	11:17	S97	SOST	FCF chord; OK
				F-Prox period:				
α Ori (253)	2016-355T08:19	20	S	930	4:16	S97	Rings	FBF chord (B5); exc.
γ Cru (255)	2017-001T18:11	20	S	250	3:24		Rings	F-D rings (I)[8]; good
VY CMa (256)	2017-007T03:10	80	S	$\sim$ 85	8:35		Rings	FBF chord (B4); OK
α Ori (256)	2017-010T20:00	20	S	900	4:36		Rings	FBF chord (B3); exc.
α Ori (260)	2017-039T11:56	20	S	900	5:08	S98	Rings	FBF chord (B1); v. good

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm. α Cen (247) data are unsummed; 350 DN expected.
4. I = ring ingress only; E = ring egress only.
5. CIRS rider; targeted with CIRS-FPB boresight.
6. Stellar flux reduced & baseline variable due to bad pointing.
8. Ring occ followed by Saturn ingress occ in same data set.
13. Data partially lost and/or corrupted due to problems at DSN station.
25. Allocated as a PIE.
32. Reverted to 40 ms, summed mode for A ring appulse: 120 DN.

Table II (continued)

Star (rev)	Date	τ[1] (ms)	Spec edit[2]	DN[3]	Dur'n	Data (Seq.)	cubes (TWT)	Remarks[4]
				F-Prox period (cont'd):				
VY CMa (262)	2017-050T03:09	80	S	160	10:32	S98	Rings	FBF chord (B1); good
α Ori (262)	2017-053T20:10	20	S	$\sim$ 700	5:24		Rings	FCF chord; OK
γ Cru (264)	2017-066T07:12	20	S	270	2:38		Saturn	F-D rings (I)[8,25]; v. good
λ Vel (265)	2017-072T20:56	80	S	$\sim$ 20	4:24		XD	F-D rings (I)[6,8]; poor
λ Vel (268)	2017-094T08:23	80	S	$\sim$ 200	4:46		Rings	F-D rings (I)[8]; OK
γ Cru (268)	2017-095T00:39	20	S	320	[2:10]	S98	Rings	C-D rings (I)[8,22]; v. good
α Ori (268)	2017-096T22:00	20	S	900	3:36		Rings	D-F rings (E)[8]; exc.
VY CMa (269)	2017-100T06:20	80	S	$\sim$ 220	6:12		XD	F-D rings (I); v. good
η Car (269)[5]	2017-101T23:00	80	S	117	4:03		Rings	F-C rings (I); good
γ Cru (269)	2017-102T03:03	20	S	320	[3:06]		Rings	F-D rings (I)[8]; exc.
α Ori (269)	2017-104T02:05	20	S	900	3:15	S98	Rings	D-F rings (E); v. good
α CMa (272)	2017-120T17:36	40	S	50–90	8:04	S99	XD	FBF chord (B2)[33,35]; OK
α CMa (274)	2017-133T18:36	40	S	125	5:27		Rings	D-F egress[8,33]; good
γ Cru (276)	2017-148T09:35	20	S	215	[2:42]	S100	Rings	F-D rings (I)[6,8]; OK
α Ori (277)	2017-155T21:30	20	S	970	2:35		Rings	F-D rings (I)[8]; exc.
α CMa (281)	2017-178T16:54	40	S	115–130	10:42	S100	XD	FDF chord[25,33]; good
α CMa (282)	2017-185T04:36	40	S	$\sim$ 120	9:36		Rings	FBF chord[33]; good
γ Cru (282)	2017-187T04:58	20	S	$\sim$ 260	[2:30]		Rings	F-D rings (I)[6,8], OK
γ Cru (291)	2017-245T09:06	20	S	$\sim$ 260	1:39	S101	Saturn	F-D rings (I)[6,8]; OK
γ Cru (292)	2017-251T20:10	20	S	315	1:35		Saturn	F-D rings (I)[8]; exc.

NOTES:

1. IR integration time.
2. S = spectrally-summed, E = spectrally-edited.
3. Unocculted stellar count rate, @ 2.92 μm.
4. I = ring ingress only; E = ring egress only.
5. CIRS rider; targeted with CIRS-FPB boresight.
6. Stellar flux reduced & baseline variable due to bad pointing.
8. Ring occ is followed by, or follows, a Saturn ingress occ observation; [ ] denotes combined request.
25. Allocated as a PIE.
33. Radial sampling is $\sim$ 200 m at 40 msec. The projected stellar diameter is 30 m for α CMa.
22. Short C ring occ preceding Saturn ingress occ.
35. Ingress OK; egress signal lower by 50%..

On the F ring orbits, the estimated maximum radial velocities are: γ Cru: 8.9 km/s; α Ori: 10.4 km/s; λ Vel: 6.2 km/s; VY CMa: 3.8 km/s.

On the Proximal orbits, the estimated maximum radial velocities are: γ Cru: 13.2 km/s; α Ori: 9.2 km/s; α CMa: 4.7 km/s.

Revised 29 Sept 2017, PDN (fixed several DN values & Footnotes.).