u34_irtf_320cm_2200nm_predicted_ring_event_times.txt produced Mon Apr 5 07:32:00 2021 using
rfrench@Achilles.fios-router.home:/Volumes/PromisePegasus28TB_backup/dione_raid2/Research/uranus/PDART2014/programs/pro_occinfo2geom_plots_pds4_v7
.pro

Bundle ID: uranus_occ_u34_irtf_320cm

Event:	u34
Planet:	Uranus
Reference:	Unpublished
Title:	Unpublished
Computations from:	1987-02-26T14:00:27.6880Z to 1987-02-26T16:40:27.5454Z
Observatory name:	IRTF
Observatory code file directory:	/Volumes/dione_raid2/Research/kernels/
Observatory code file:	ObsCodes_pck00010_20200709_Elon+ocobs_v9BJ.obs
Observatory code:	568
Observatory abbreviation:	irtf
Entry from observatory code file:	
568 G +204 31 40.08 +19 49 34.0	4212 Mauna Kea pck00010.tpc
Telescope:	320cm
Instrument:	Generic InSb High Speed Photometer
Mean wavelength (nm)	2200nm
Observatory latitude (deg):	19.826111111
Observatory E longitude (deg):	204.527800000
Observatory altitude (km):	4.212000000
Ellipsoid source:	/Volumes/dione_raid2/Research/kernels/pck00010.tpc
Observatory reference frame:	ITRF93
Earth equatorial radius (km):	6378.136600000
Earth 1/flattening:	298.257006177
Topocentric position vector:	-5464.341062821 -2493.446346975 2151.026113131
Leapsecond kernel file:	/Volumes/dione_raid2/Research/kernels/naif0012.tls
Star catalog directory:	/Volumes/dione_raid2/Research/RINGFIT/stars/data/
Star catalog file:	ustarsALLd.v3.merged.sortedA.csv
Star catalog ID:	22289038
Star number:	94
Star name:	U34
Star source catalog:	UCAC2
Star RA (deg):	266.096316800
Star Dec (deg):	-23.517624500
Star epoch:	2000-01-01T00:00:00.0000Z
Star parallax (mas):	0.000000000
Star pm RA (mas/yr):	12.600000000
Star pm Dec (mas/yr):	16.200000000
Star catalog positions in frame:	J2000
Star frame for calculations:	J2000
Heliocentric frame for calculations:	J2000
Ringfit savefile directory:	/Volumes/dione_raid2/Research/RINGFIT/tests/Uranus/Ur017L/savefiles/
Ringfit savefile for star/time offsets:	ringfit_v1.8.Ur017L-RF-V0204.sav
Ringfit output file directory:	/Volumes/dione_raid2/Research/RINGFIT/tests/Uranus/Ur017L/outfiles/
Ringfit output file:	ringfit_v1.8.Ur017L-RF-V0204.out
Star offsets dRA,dDec (mas):	193.408731604 236.173618098
Time offset for this obstr./event (sec):	0.000000000
Kernel directory:	/Volumes/dione_raid2/Research/kernels/

../../../../kernels/ura111.bsp
../../../../kernels/vgr2.ura111.bsp
../../../../kernels/earthstns_itrf93_040916.bsp
../../../../kernels/earth_720101_031229.bpc
../../../../kernels/pg3f0000r.bsp
../../../../kernels/pg490000r.bsp
../../../../kernels/naif0012.tls
/Volumes/dione_raid2/Research/RINGFIT/tests/Uranus/Ur017L/savefiles/../kernels/RAJobs_U111+rgf9.spk
/Volumes/dione_raid2/Research/RINGFIT/tests/Uranus/Ur017L/savefiles/../kernels/URKALLv1.spk
/Volumes/dione_raid2/Research/kernels/uranus_ringframes_rfrench20201201_v1.tf
/Volumes/dione_raid2/Research/kernels/pck00010.tpc

Predicted Ring/Atmosphere Occultation Events

Ring	I/E	UTC(Earth)	UTC(@ring)	R(model)	R-dot	Anomaly	Sin B	Ulon	Alt(deg)	Sun(deg)
epsilon	I	1987-02-26T14:17:43.07Z	1987-02-26T11:35:37.53Z	50870.01	-16.761	46.811	-0.97903	183.264	24.016	-35.143
lambda	I	1987-02-26T14:18:33.43Z	1987-02-26T11:36:27.90Z	50026.01	-16.758	100.716	-0.97903	183.216	24.171	-34.946
delta	I	1987-02-26T14:20:16.42Z	1987-02-26T11:38:10.90Z	48300.22	-16.753	321.458	-0.97903	183.113	24.485	-34.542
gamma	I	1987-02-26T14:20:56.37Z	1987-02-26T11:38:50.85Z	47631.06	-16.751	149.079	-0.97903	183.071	24.607	-34.386
eta	I	1987-02-26T14:21:23.52Z	1987-02-26T11:39:18.01Z	47176.26	-16.750	101.436	-0.97903	183.042	24.690	-34.280
beta	I	1987-02-26T14:22:53.24Z	1987-02-26T11:40:47.74Z	45673.23	-16.745	126.494	-0.97904	182.941	24.963	-33.928
alpha	I	1987-02-26T14:23:48.18Z	1987-02-26T11:41:42.68Z	44752.55	-16.742	175.942	-0.97903	182.876	25.129	-33.713
four	I	1987-02-26T14:26:00.61Z	1987-02-26T11:43:55.12Z	42536.62	-16.734	319.919	-0.97896	182.709	25.529	-33.194
five	I	1987-02-26T14:26:23.72Z	1987-02-26T11:44:18.23Z	42155.87	-16.735	9.273	-0.97884	182.686	25.599	-33.104
six	I	1987-02-26T14:26:44.26Z	1987-02-26T11:44:38.78Z	41801.23	-16.730	327.988	-0.97907	182.643	25.660	-33.023
Atmosphere	I	1987-02-26T14:42:02.23Z							28.367	-29.429
Atmosphere	E	1987-02-26T15:34:43.14Z							36.745	-17.034
six	E	1987-02-26T15:50:04.85Z	1987-02-26T13:07:59.88Z	41875.73	16.598	154.538	-0.97907	9.354	38.833	-13.430
five	E	1987-02-26T15:50:30.44Z	1987-02-26T13:08:25.47Z	42312.34	16.603	195.763	-0.97884	9.332	38.889	-13.330
four	E	1987-02-26T15:50:48.70Z	1987-02-26T13:08:43.73Z	42609.01	16.600	146.359	-0.97896	9.301	38.928	-13.259
alpha	E	1987-02-26T15:52:53.80Z	1987-02-26T13:10:48.84Z	44684.72	16.601	2.075	-0.97903	9.143	39.196	-12.770
beta	E	1987-02-26T15:53:51.76Z	1987-02-26T13:11:46.81Z	45647.63	16.601	312.498	-0.97904	9.075	39.318	-12.543
eta	E	1987-02-26T15:55:23.80Z	1987-02-26T13:13:18.86Z	47176.18	16.601	287.246	-0.97903	8.973	39.512	-12.184
gamma	E	1987-02-26T15:55:50.64Z	1987-02-26T13:13:45.71Z	47621.66	16.601	334.835	-0.97903	8.944	39.568	-12.079
delta	E	1987-02-26T15:56:31.54Z	1987-02-26T13:14:26.61Z	48300.69	16.601	147.133	-0.97903	8.902	39.653	-11.919
lambda	E	1987-02-26T15:58:15.47Z	1987-02-26T13:16:10.55Z	50026.01	16.601	286.196	-0.97903	8.798	39.867	-11.513
epsilon	E	1987-02-26T15:59:38.02Z	1987-02-26T13:17:33.11Z	51396.34	16.600	232.172	-0.97903	8.721	40.035	-11.191

Event geometry at 1987-02-26T15:08:20.0000Z

Ring opening angle B (deg):	-78.24520
Position angle of pole P (deg):	313.65071
Observer-planet distance (km):	2915.395243 x 10^6
Light travel time (sec):	9724.711763