

u137\_hst\_fos\_540nm\_predicted\_ring\_event\_times.txt produced Mon Apr 5 14:30:56 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\_u137\_hst\_fos

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Event: u137
Planet: Uranus
Reference: Unpublished
Title: Unpublished
Computations from: 1996-03-16T15:25:38.0963Z to 1996-03-16T15:42:42.6512Z
Observatory name: Hubble Space Telescope
Observatory code file directory: /Volumes/dione_raid2/Research/kernels/
Observatory code file: ObsCodes_pck00010_20200709_Elon+ocobs_v9BJ.obs
Observatory code: HST
Observatory abbreviation: hst
Telescope: fos
Instrument: Fain Object Spectrograph
Mean wavelength (nm): 540nm
Ellipsoid source: /Volumes/dione_raid2/Research/kernels/pck00010.tpc
Observatory reference frame: ITRF93
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: 141-413386
Star number: 50
Star name: U137
Star source catalog: UCAC3
Star RA (deg): 305.946097400
Star Dec (deg): -19.906506400
Star epoch: 2000-01-01T00:00:00.0000Z
Star parallax (mas): 0.000000000
Star pm RA (mas/yr): -80.600000000
Star pm Dec (mas/yr): 86.400000000
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): 29.160505237 49.462419837
Time offset for this obst./event (sec): 0.635787142
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
/Volumes/dione_raid2/Research/kernels/ObsCodes_pck00010_20200709_Elon+ocobs_v9BJ.obs

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Predicted Ring/Atmosphere Occultation Events

Ring	I/E	----- UTC(Earth) -----	----- UTC(@ring) -----	R(model)	R-dot	Anomaly	Sin B	Ulon Alt (deg)	Sun (deg)
Atmosphere	E	1996-03-16T15:28:27.59Z						0.000	0.000
six	E	1996-03-16T15:30:36.38Z	1996-03-16T12:41:26.61Z	41799.21	28.086	26.425	-0.68811	12.218	0.000
five	E	1996-03-16T15:30:52.02Z	1996-03-16T12:41:42.25Z	42155.30	27.952	6.293	-0.68947	12.079	0.000
four	E	1996-03-16T15:31:07.85Z	1996-03-16T12:41:58.09Z	42613.81	27.875	200.233	-0.68919	11.944	0.000
alpha	E	1996-03-16T15:32:22.02Z	1996-03-16T12:43:12.27Z	44686.91	27.521	339.228	-0.68889	11.330	0.000
beta	E	1996-03-16T15:32:57.08Z	1996-03-16T12:43:47.34Z	45657.89	27.373	80.419	-0.68876	11.053	0.000
eta	E	1996-03-16T15:33:52.93Z	1996-03-16T12:44:43.20Z	47176.16	27.147	62.656	-0.68882	10.627	0.000
gamma	E	1996-03-16T15:34:09.43Z	1996-03-16T12:44:59.70Z	47623.85	27.087	299.629	-0.68882	10.505	0.000
delta	E	1996-03-16T15:34:34.45Z	1996-03-16T12:45:24.72Z	48300.53	27.001	253.133	-0.68882	10.323	0.000
lambda	E	1996-03-16T15:35:38.59Z	1996-03-16T12:46:28.87Z	50026.01	26.809	95.471	-0.68882	9.871	0.000
epsilon	E	1996-03-16T15:36:10.01Z	1996-03-16T12:47:00.29Z	50866.81	26.730	46.182	-0.68882	9.658	0.000

Event geometry at 1996-03-16T15:25:38.0000Z

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Ring opening angle B (deg): -43.53680
Position angle of pole P (deg): 267.71418
Observer-planet distance (km): 3043.025801 x 10^6
Light travel time (sec): 10150.441479

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