

u36_sso_230cm_2200nm_predicted_ring_event_times.txt produced Mon Apr 5 08:20:37 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_u36_sso_230cm

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Event: u36
Planet: Uranus
Reference: J. L. Elliot and 13 colleagues. BAAS 19, 884 (1987)
Title: A four-day occultation by Uranus and its rings
Computations from: 1987-04-02T14:01:49.6790Z to 1987-04-02T15:07:54.5757Z
Observatory name: Siding Spring Observatory
Observatory code file directory: /Volumes/dione_raid2/Research/kernels/
Observatory code file: ObsCodes_pck00010_20200709_Elon+ocobs_v9BJ.obs
Observatory code: ANU
Observatory abbreviation: sso
Entry from observatory code file:
  ANU G +149 03 40.28 -31 16 24.1      1149 ANU 2.3m at Siding Spring pck00010.tpc
Telescope: 230cm
Instrument: Generic InSb High Speed Photometer
Mean wavelength (nm): 2200nm
Observatory latitude (deg): -31.273361111
Observatory E longitude (deg): 149.061188889
Observatory altitude (km): 1.149000000
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: -4680.819136016 2805.720615338 -3292.431494411
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: 333-124092
Star number: 114
Star name: U36
Star source catalog: UCAC4
Star RA (deg): 266.624681200
Star Dec (deg): -23.538897000
Star epoch: 2000-01-01T00:00:00.0000Z
Star parallax (mas): 0.000000000
Star pm RA (mas/yr): -3.200000000
Star pm Dec (mas/yr): -8.100000000
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): 17.783060768 75.423918081
Time offset for this obstr./event (sec): 0.000000000
Kernel directory: /Volumes/dione_raid2/Research/kernels/
  ../../../../kernels/urall1.bsp
  ../../../../kernels/vgr2.urall1.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

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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)
delta	E	1987-04-02T14:09:42.42Z	1987-04-02T11:32:27.53Z	48300.58	0.927	242.501	-0.97769	164.020 24.584	-63.589
epsilon	E	1987-04-02T14:52:16.92Z	1987-04-02T12:15:02.27Z	50767.90	1.004	339.928	-0.97769	164.131 33.524	-61.587

Event geometry at 1987-04-02T14:01:50.0000Z

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Ring opening angle B (deg): -77.87531
Position angle of pole P (deg): 311.95670
Observer-planet distance (km): 2828.403770 x 10^6
Light travel time (sec): 9434.539443

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