

1 U/07B/1 Notes

1.1 Saturn Data

date: 19 Jan 2008
RA: 10 40.3
DEC: +10 17
npole: 354.34 (east of celestial north)
vmag: +0.76

1.2 Standard star

1.2.1 Choice of standard

list of stars on:

<http://www.gemini.edu/sciops/instruments/nir/index.html>
(use search tool)

Nearest/brightest is HIP 52911 (also called HD93702)

Info from <http://archive.ast.cam.ac.uk/hipp/hipparcos.html>

Name: HIP 52911, or HD93702
Type: A2V
Vmag: 5.32
RA: 10 49 15.433
DEC: +10 32 42.941

1.2.2 M-band magnitude

using the conversion from V magnitudes on:

<http://www.jach.hawaii.edu/UKIRT/astronomy/utils/temp.html>

for A2V star:

V-K = 0.14

K-M = 0.01

so V-M = 0.15

Mmag = Vmag - 0.15

Mmag = 5.17

1.3 Guiding - Titan

Inclination of orbit means Titan is never obscured by saturn
Titan is bright (VMAG=8) but moves quite fast so will need to update offset
regularly.

viewer:

http://pds-rings.seti.org/tools/viewer2_sat.html

see Figure 1

1.4 Guiding - Iapetus

Iapetus is less bright (VMAG=11) and further away but moves slowly, especiall on Jan 21 and 22.

viewer:

http://pds-rings.seti.org/tools/viewer2_sat.html

see Figure 2-4

1.5 Ephemeris

(SITE1)

<http://ssd.jpl.nasa.gov/horizons.cgi>

-”ephem_horizons.tab”

alternative:

(SITE2)

http://pds-rings.seti.org/tools/ephem2_sat.html

-times in UTC (= hawaii LT + 10hrs)

-see ”ephem_sat_337.tab”

-dRA = arcsec

-dDec = arcsec

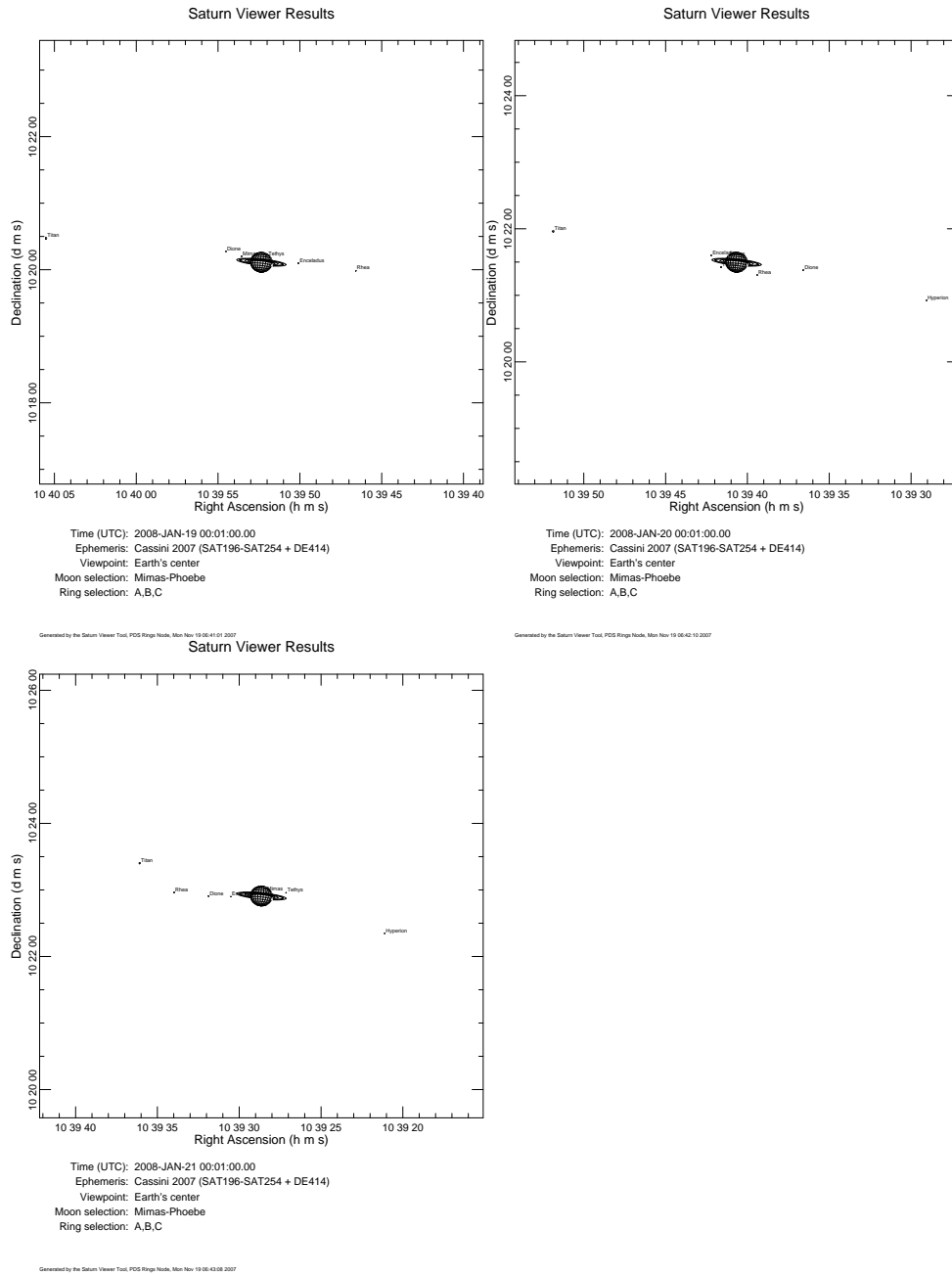
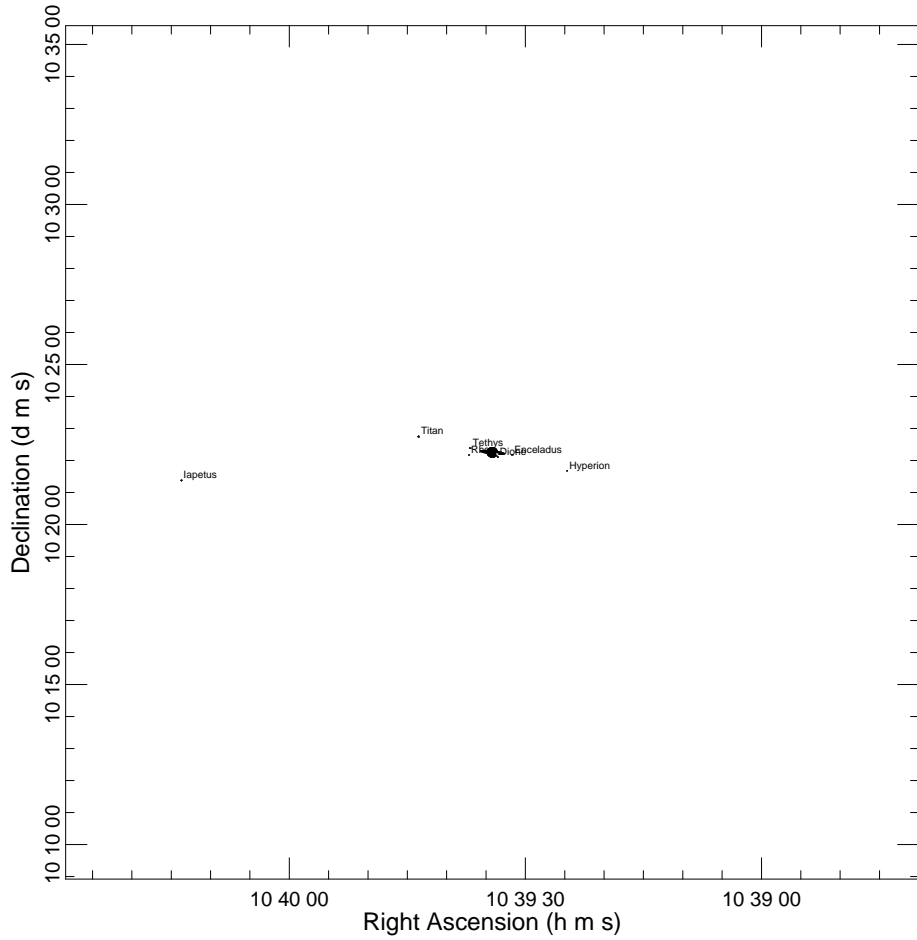


Figure 1: Titan/Saturn on 19–21 Jan 2008.

Saturn Viewer Results

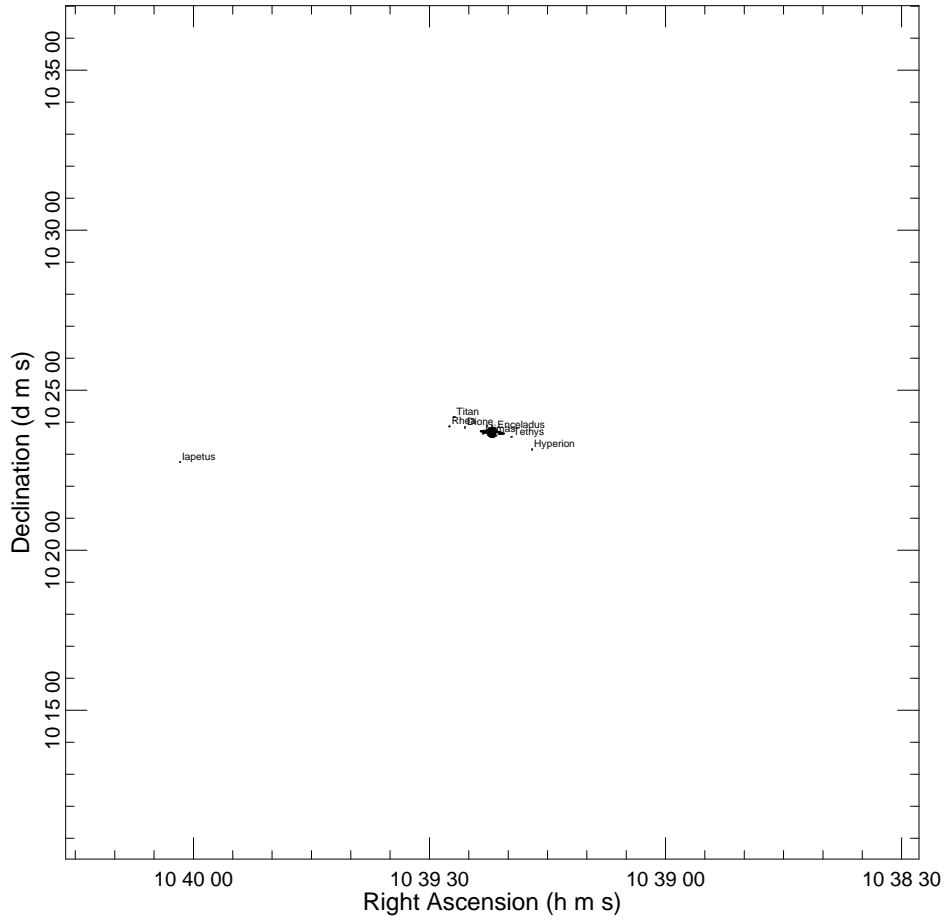


Time (UTC): 2008-JAN-20 13:00:00.00
Ephemeris: Cassini 2007 (SAT196-SAT254 + DE414)
Viewpoint: Mauna Kea Observatory (19.827, -155.472, 4215.)
Moon selection: Mimas-Phoebe
Ring selection: A,B,C

Generated by the Saturn Viewer Tool, PDS Rings Node, Mon Jan 14 05:55:57 2008

Figure 2: Iapetus/Saturn at 3am local time on 20 Jan 2008.

Saturn Viewer Results

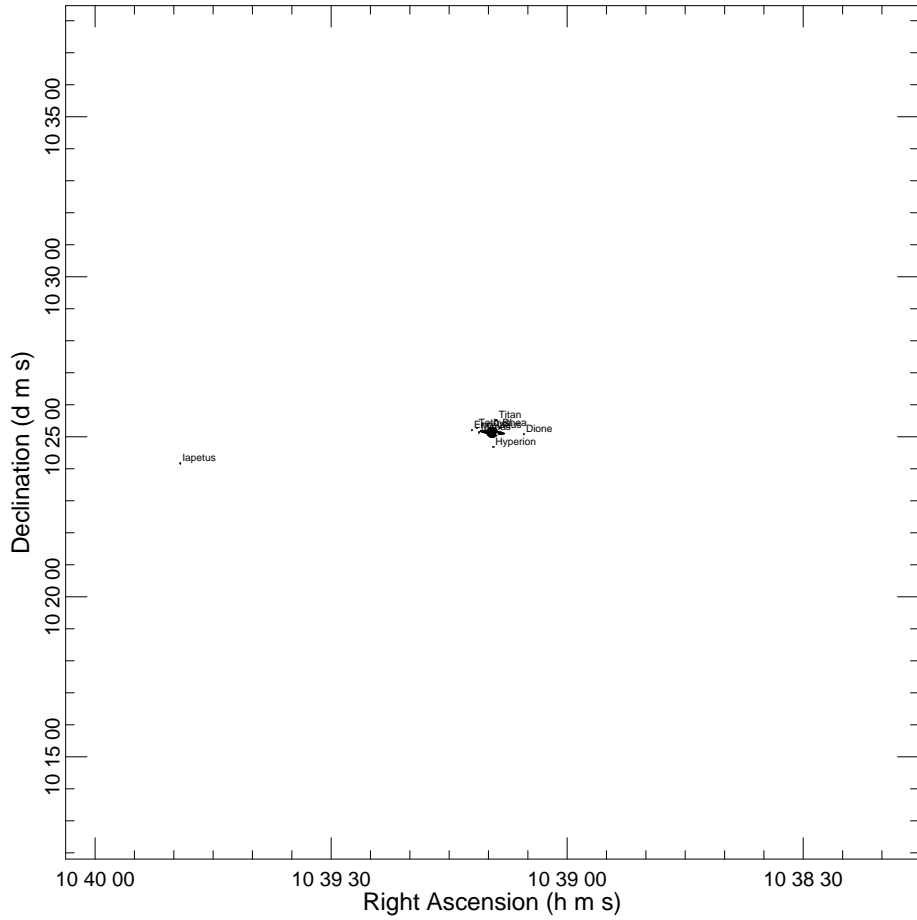


Time (UTC): 2008-JAN-21 13:00:00.00
Ephemeris: Cassini 2007 (SAT196-SAT254 + DE414)
Viewpoint: Mauna Kea Observatory (19.827, -155.472, 4215.)
Moon selection: Mimas-Phoebe
Ring selection: A,B,C

Generated by the Saturn Viewer Tool, PDS Rings Node, Mon Jan 14 05:57:15 2008

Figure 3: Iapetus/Saturn at 3am local time on 21 Jan 2008.

Saturn Viewer Results



Time (UTC): 2008-JAN-22 13:00:00.00
Ephemeris: Cassini 2007 (SAT196-SAT254 + DE414)
Viewpoint: Mauna Kea Observatory (19.827, -155.472, 4215.)
Moon selection: Mimas-Phoebe
Ring selection: A,B,C

Generated by the Saturn Viewer Tool, PDS Rings Node, Mon Jan 14 05:58:57 2008

Figure 4: Iapetus/Saturn at 3am local time on 22 Jan 2008.