

H.A.L. Astronomy School



Here Comes Saturn!

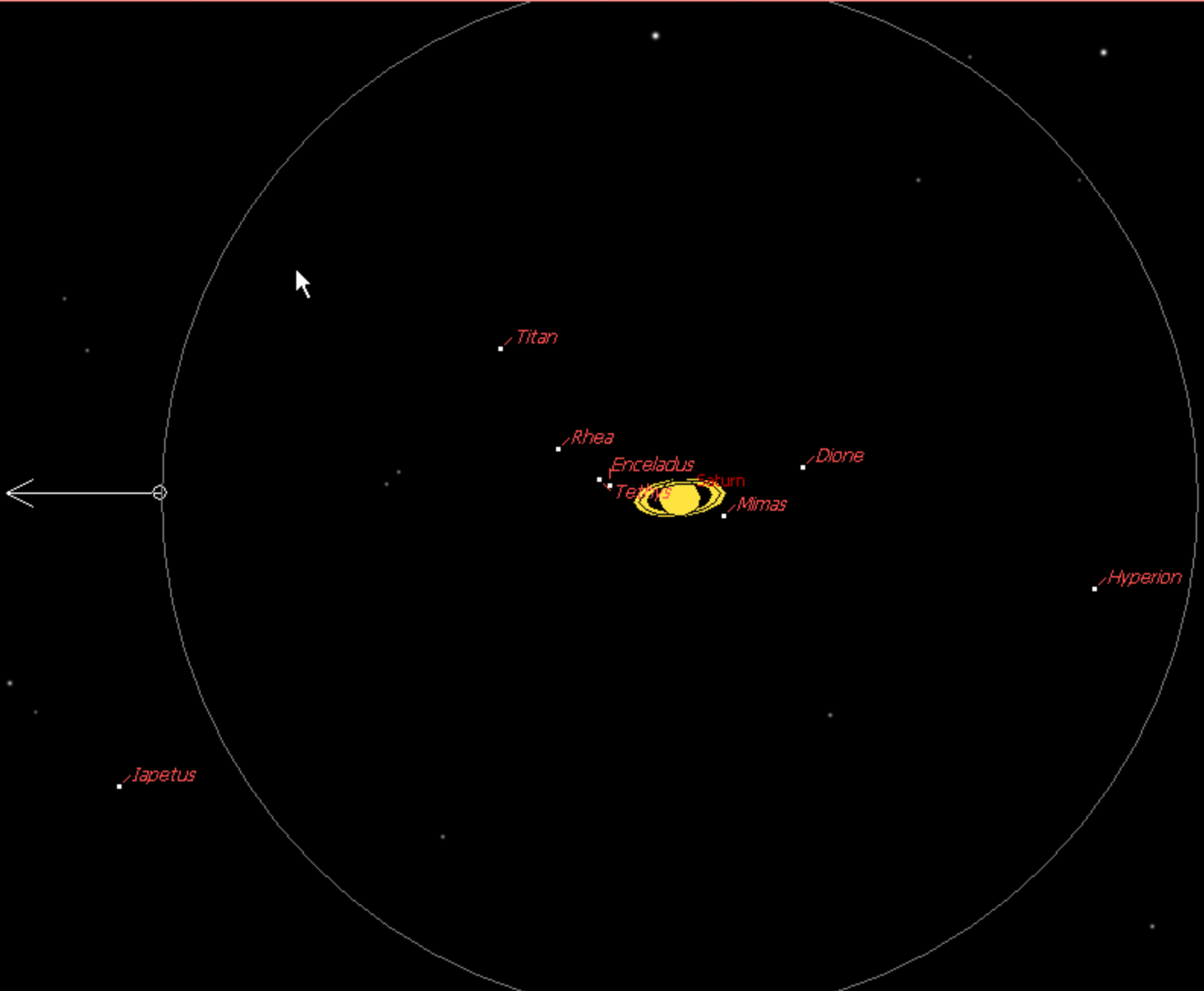
Observing Saturn in Prime Time, or
Where Do We Get the Name Saturday?,
or
The Real Lord of the Rings

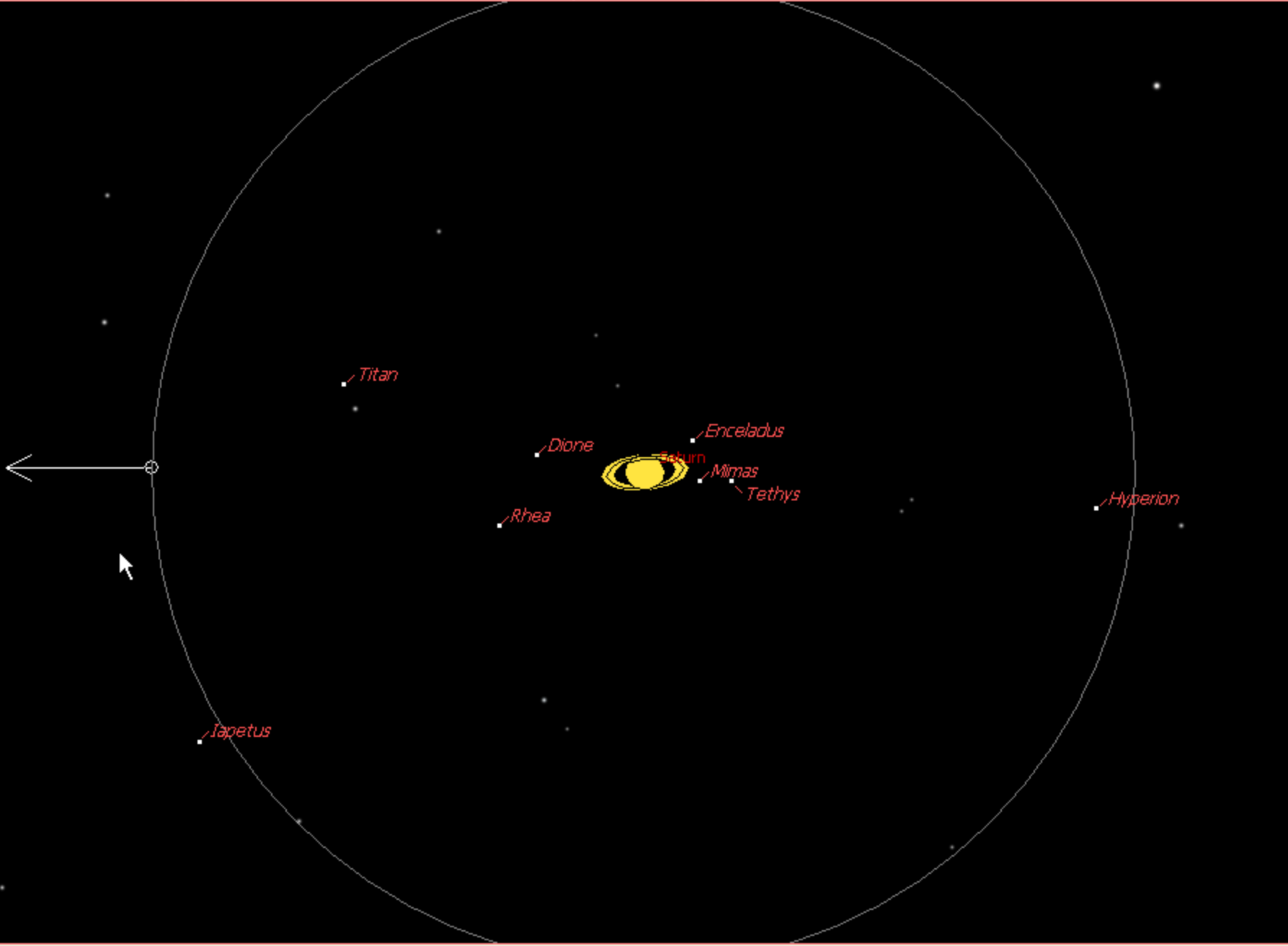


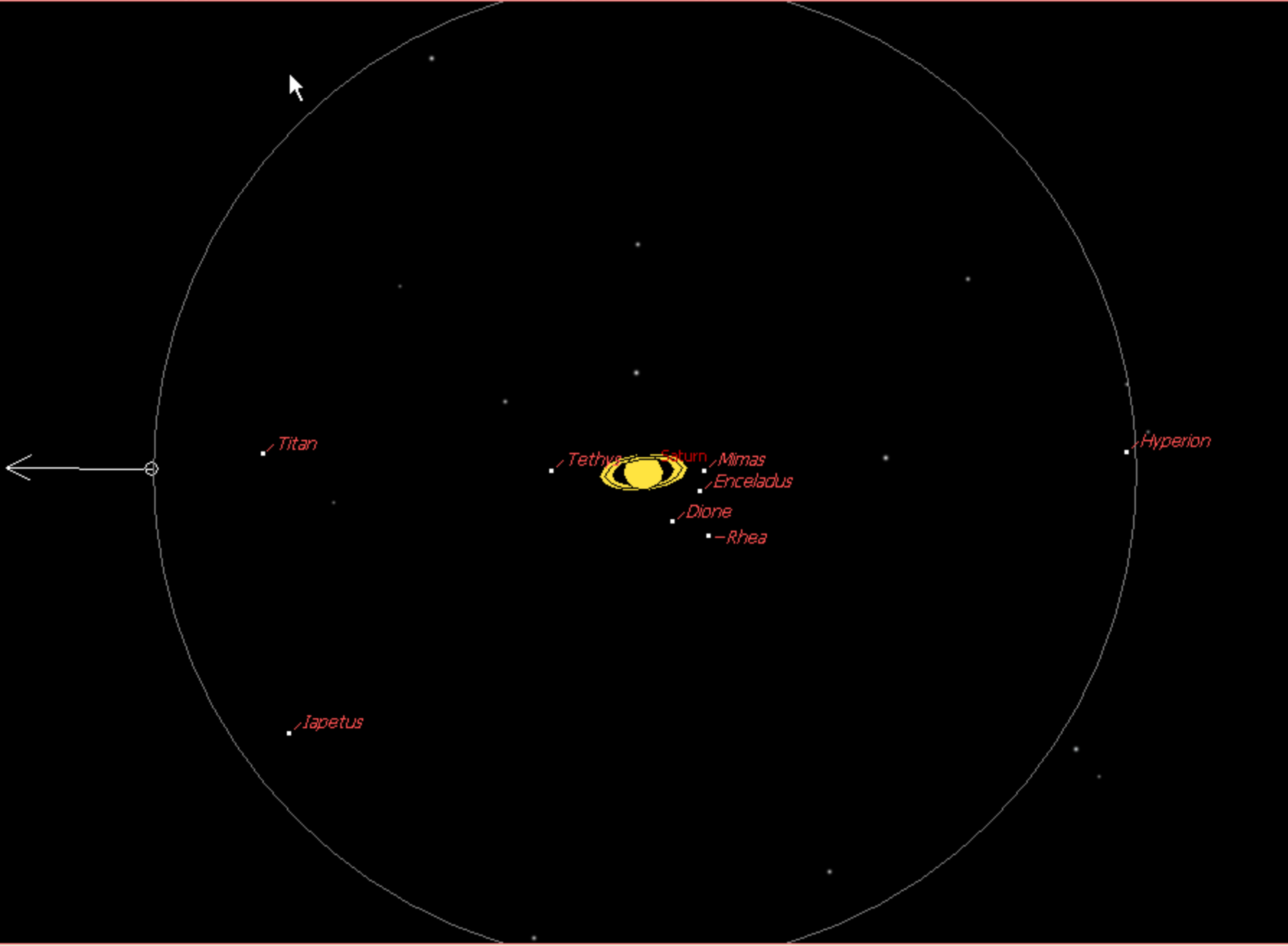


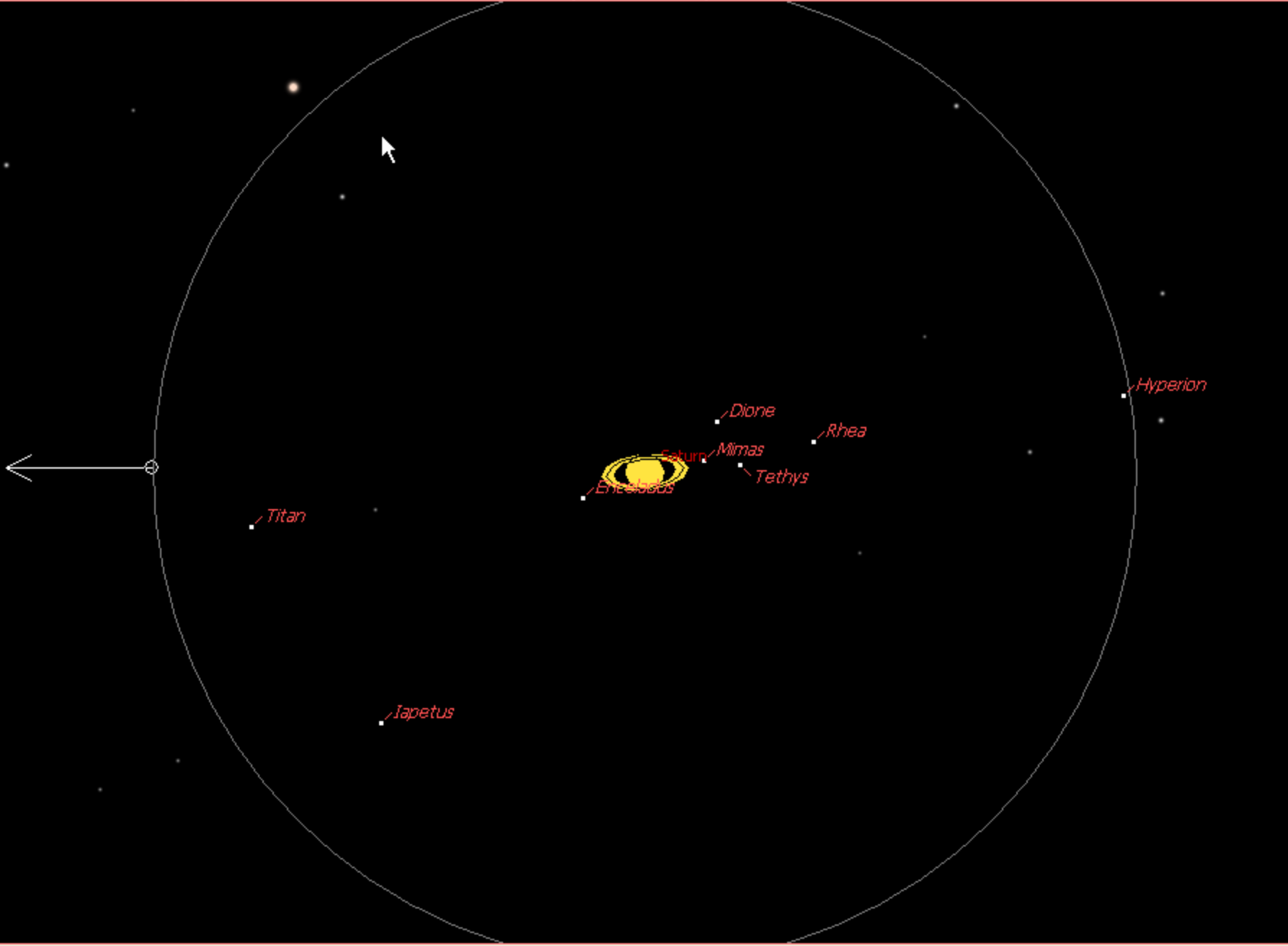
Saturn

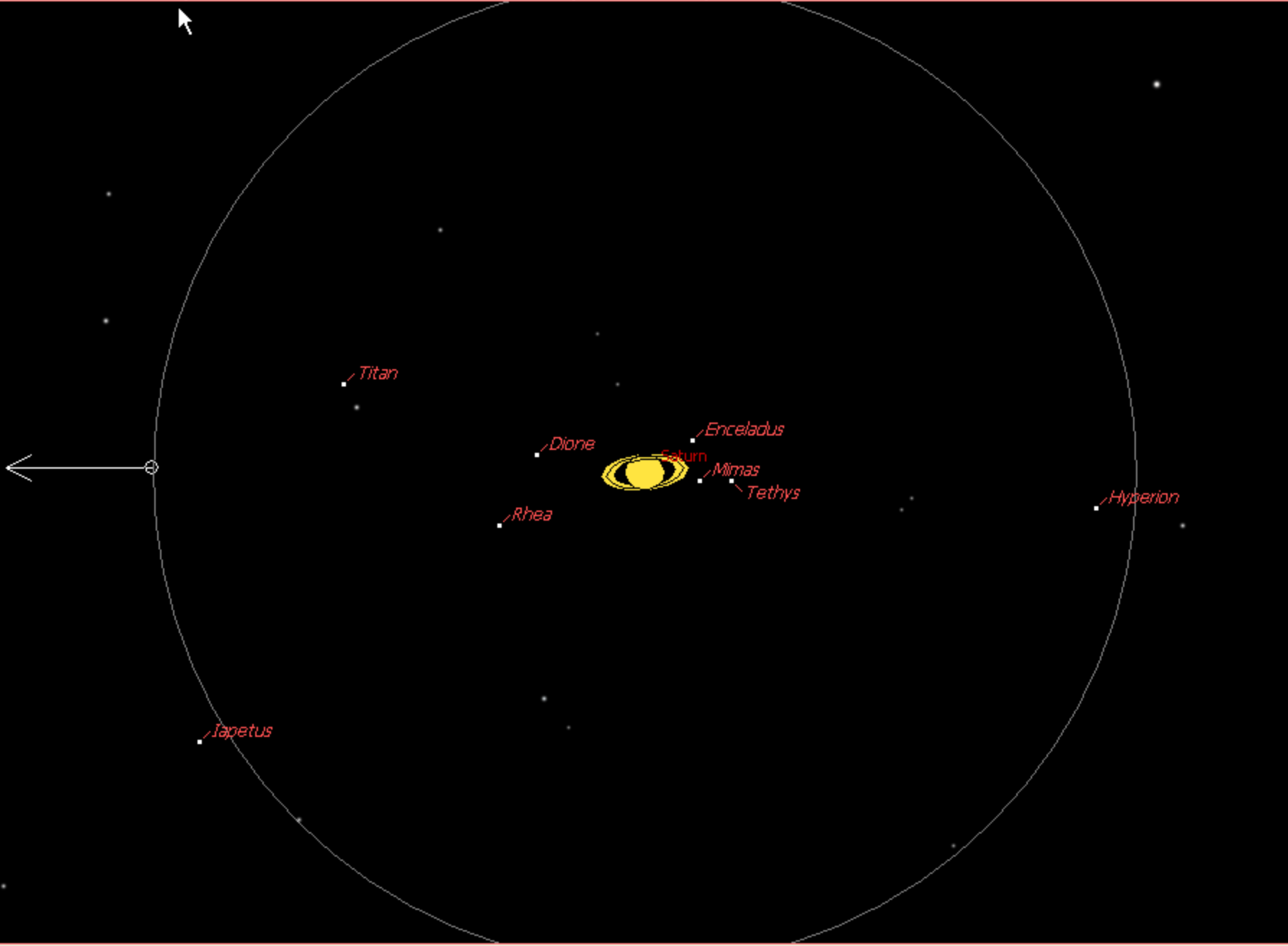
The View Through the
Telescope

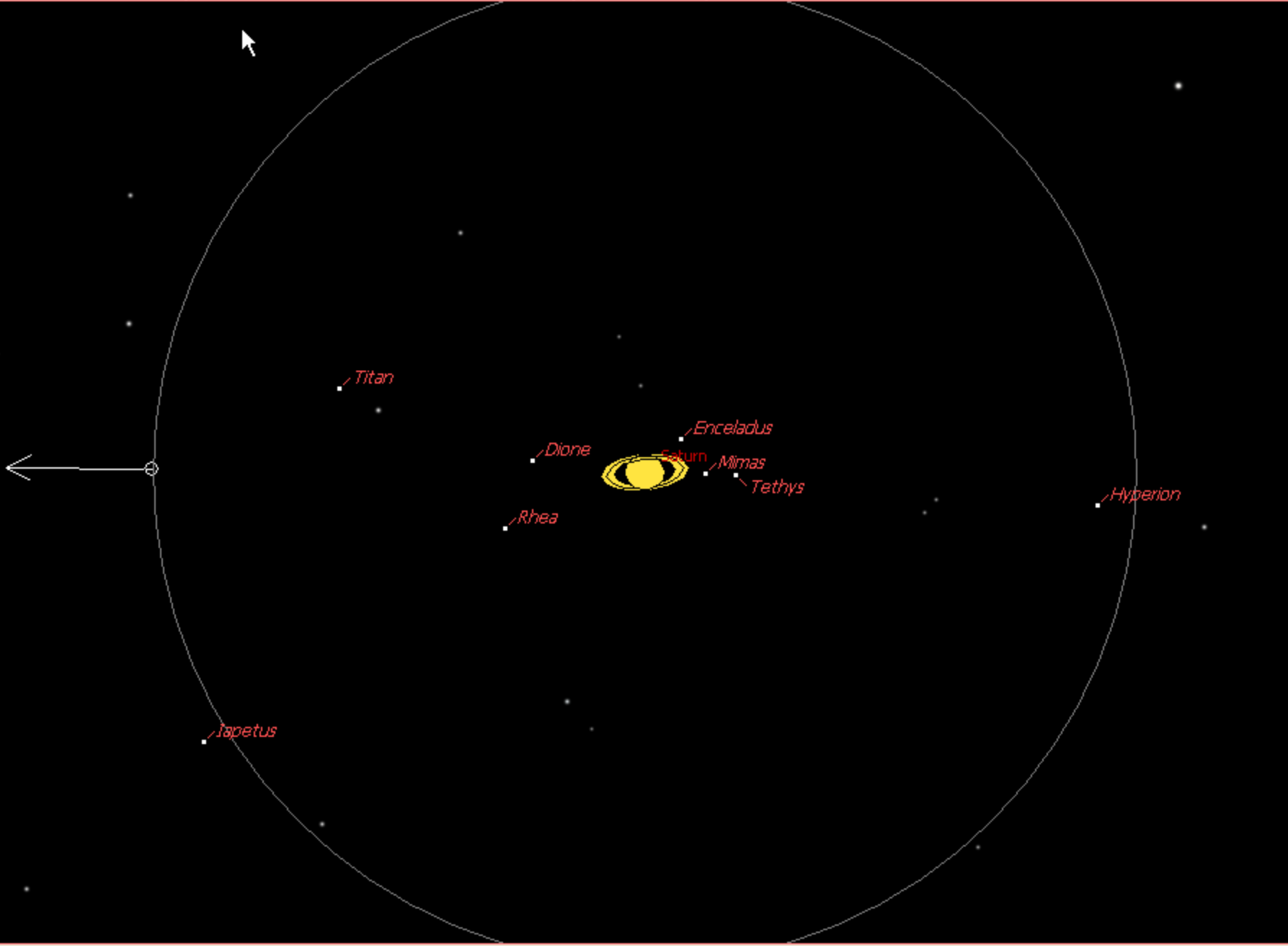
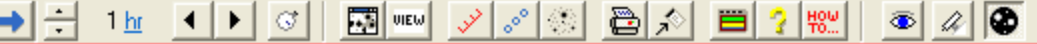


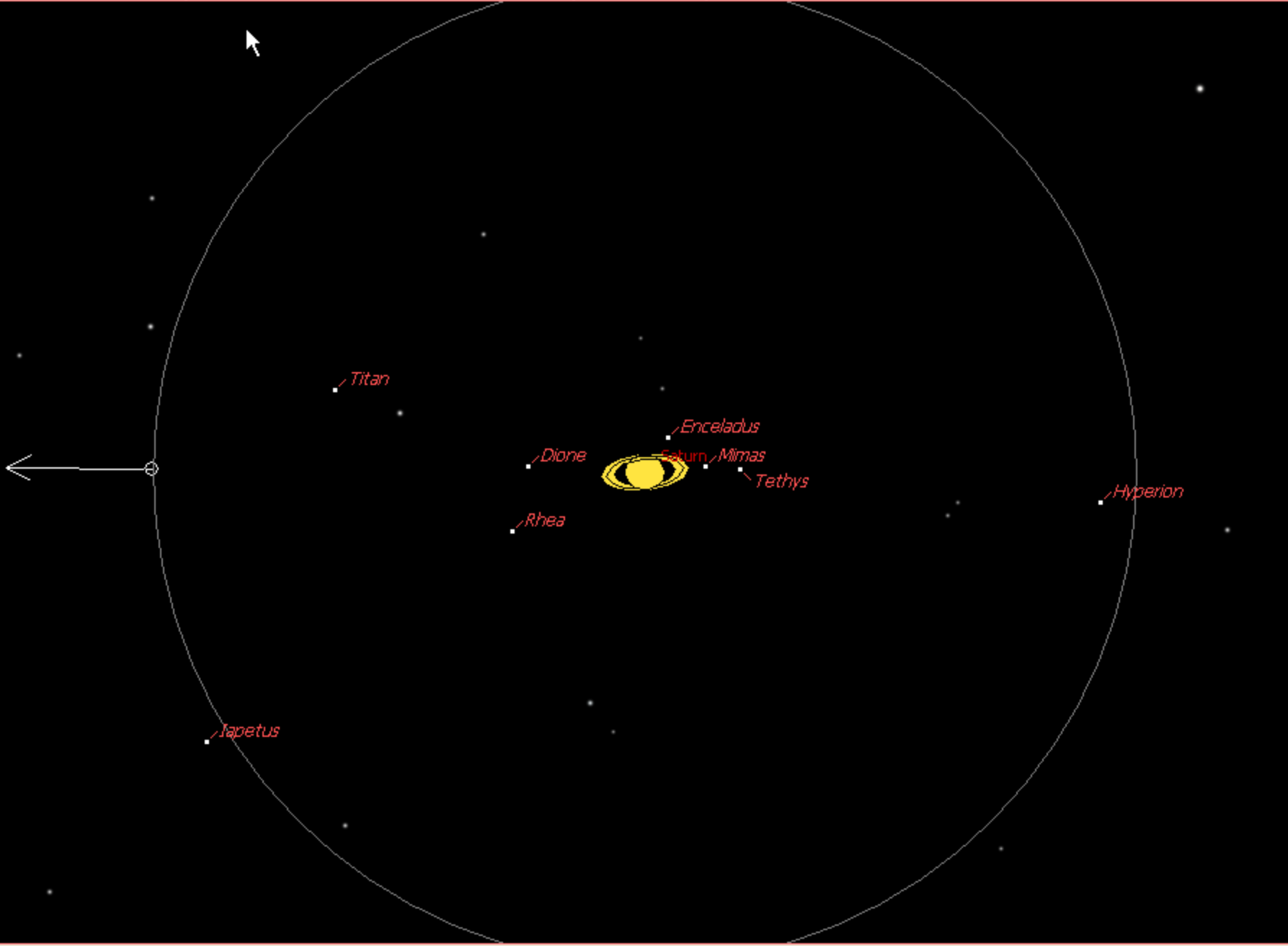
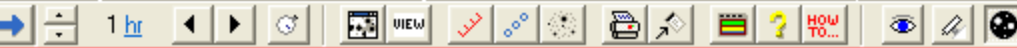


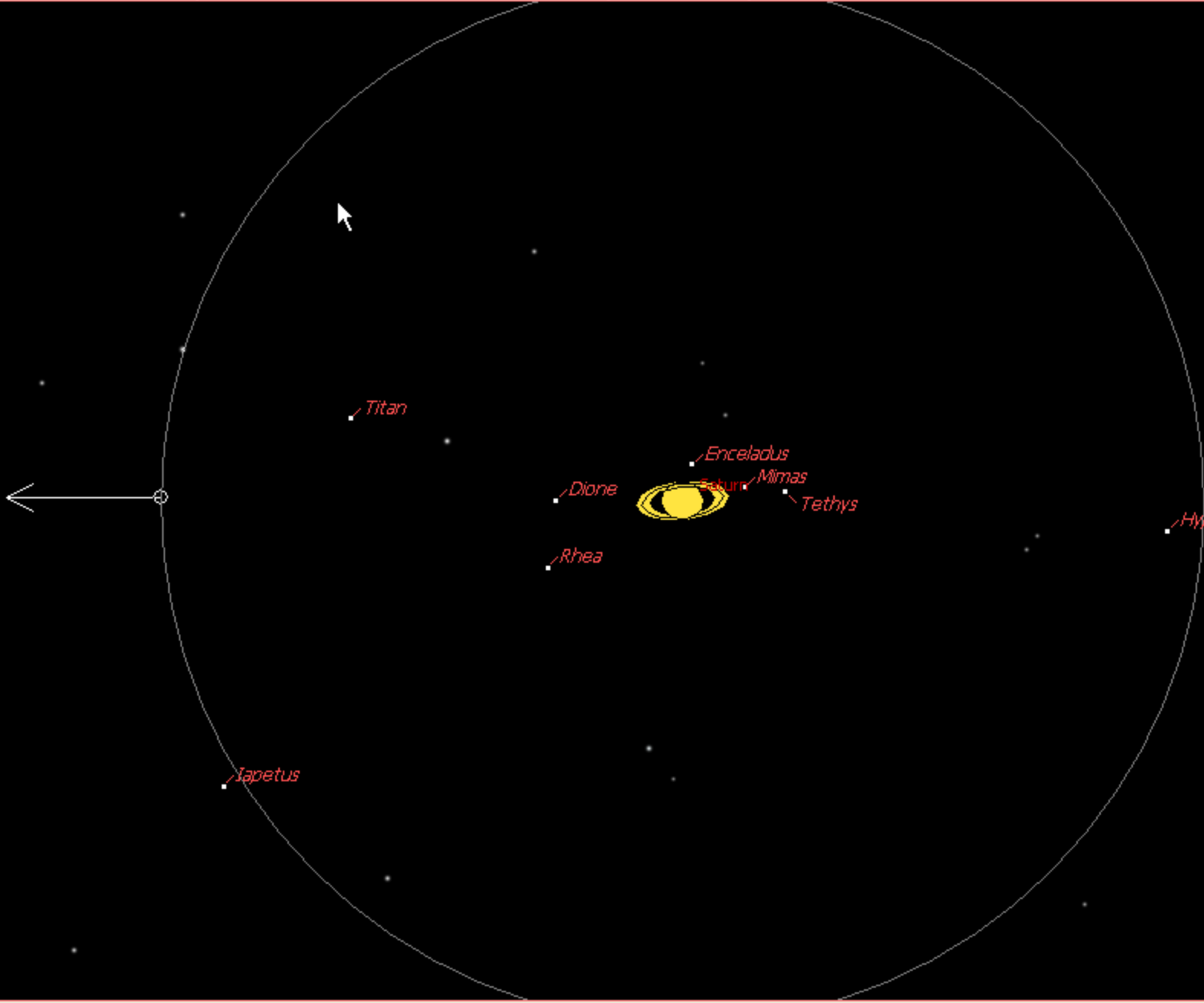


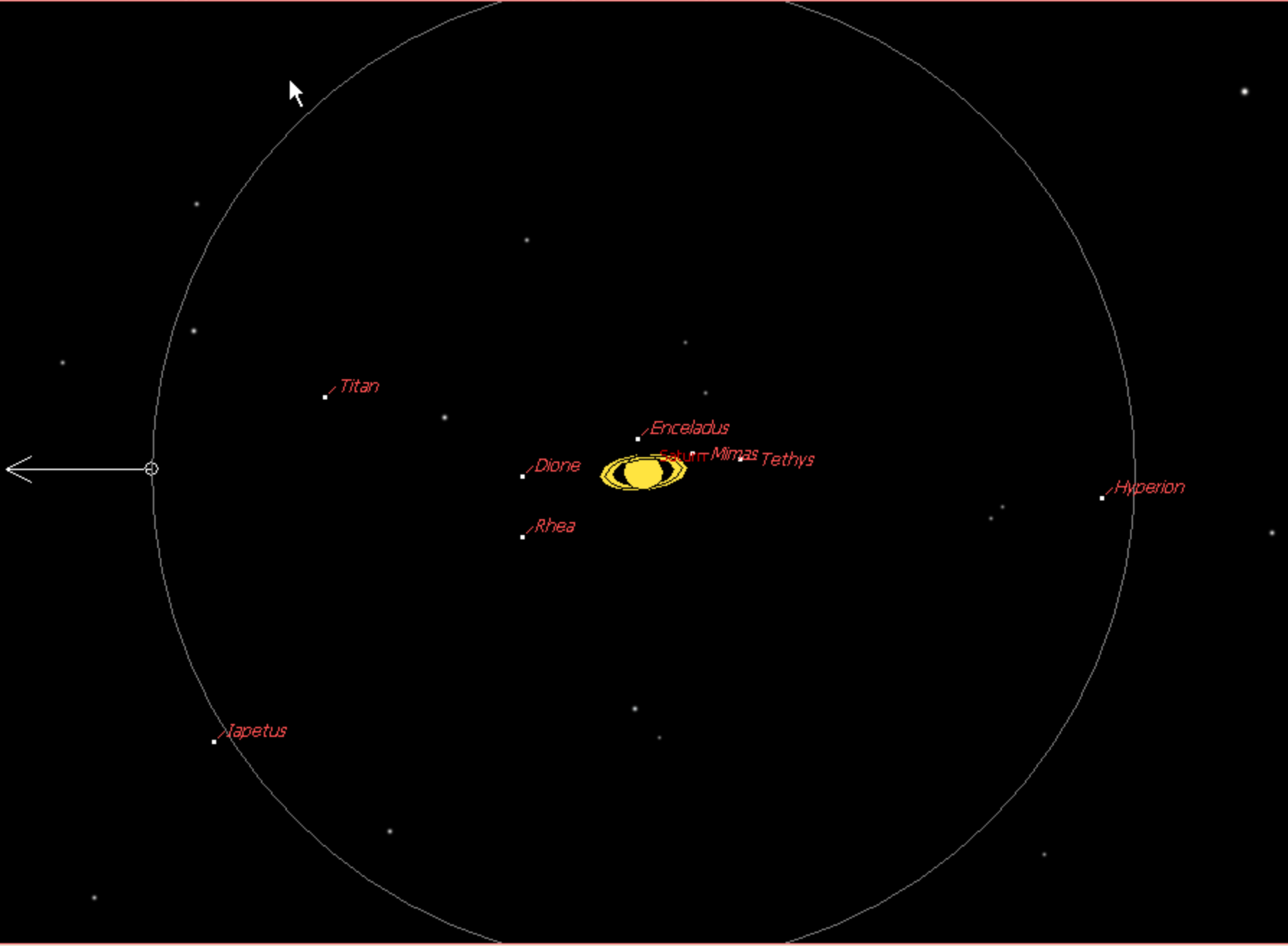


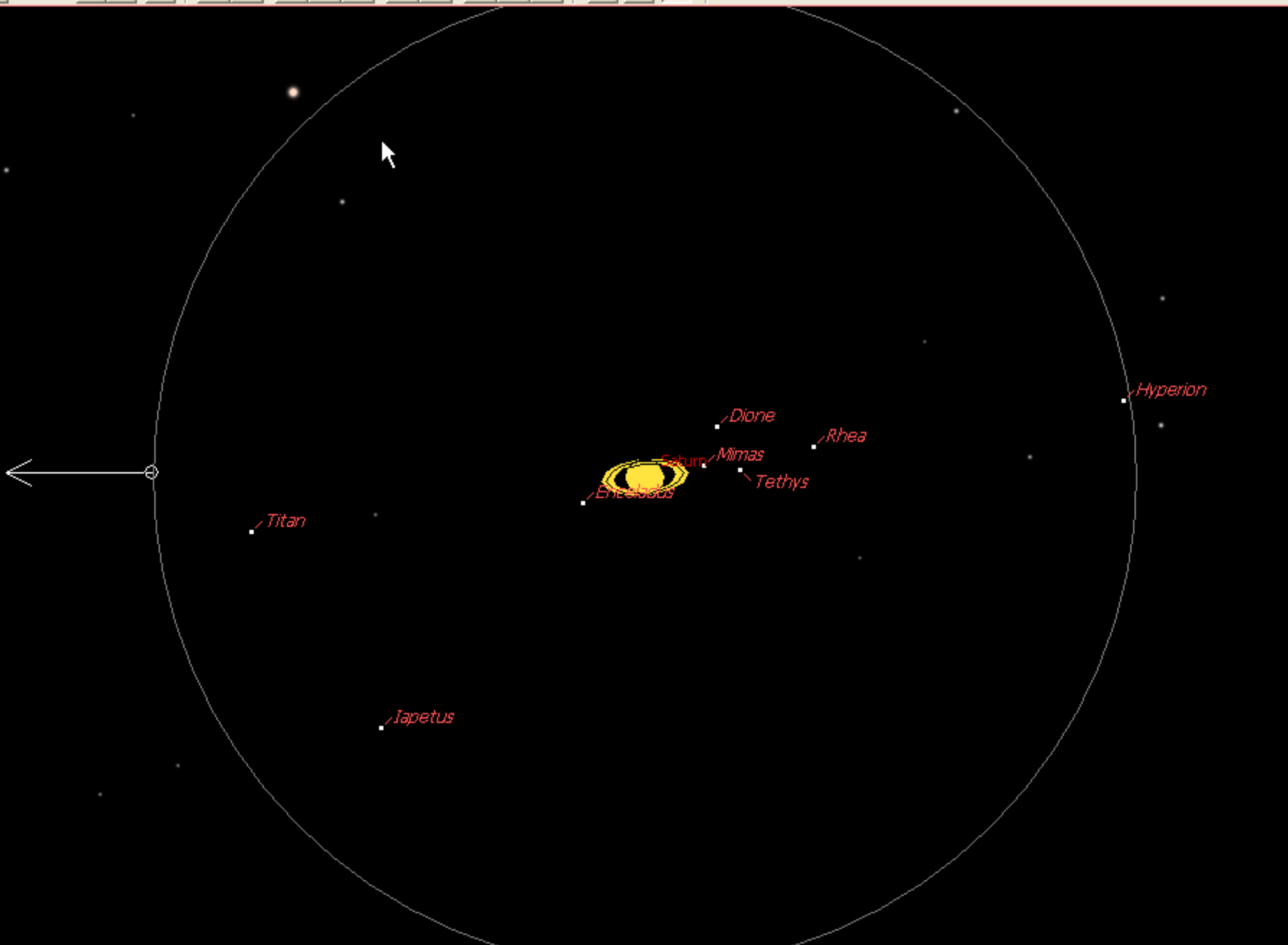


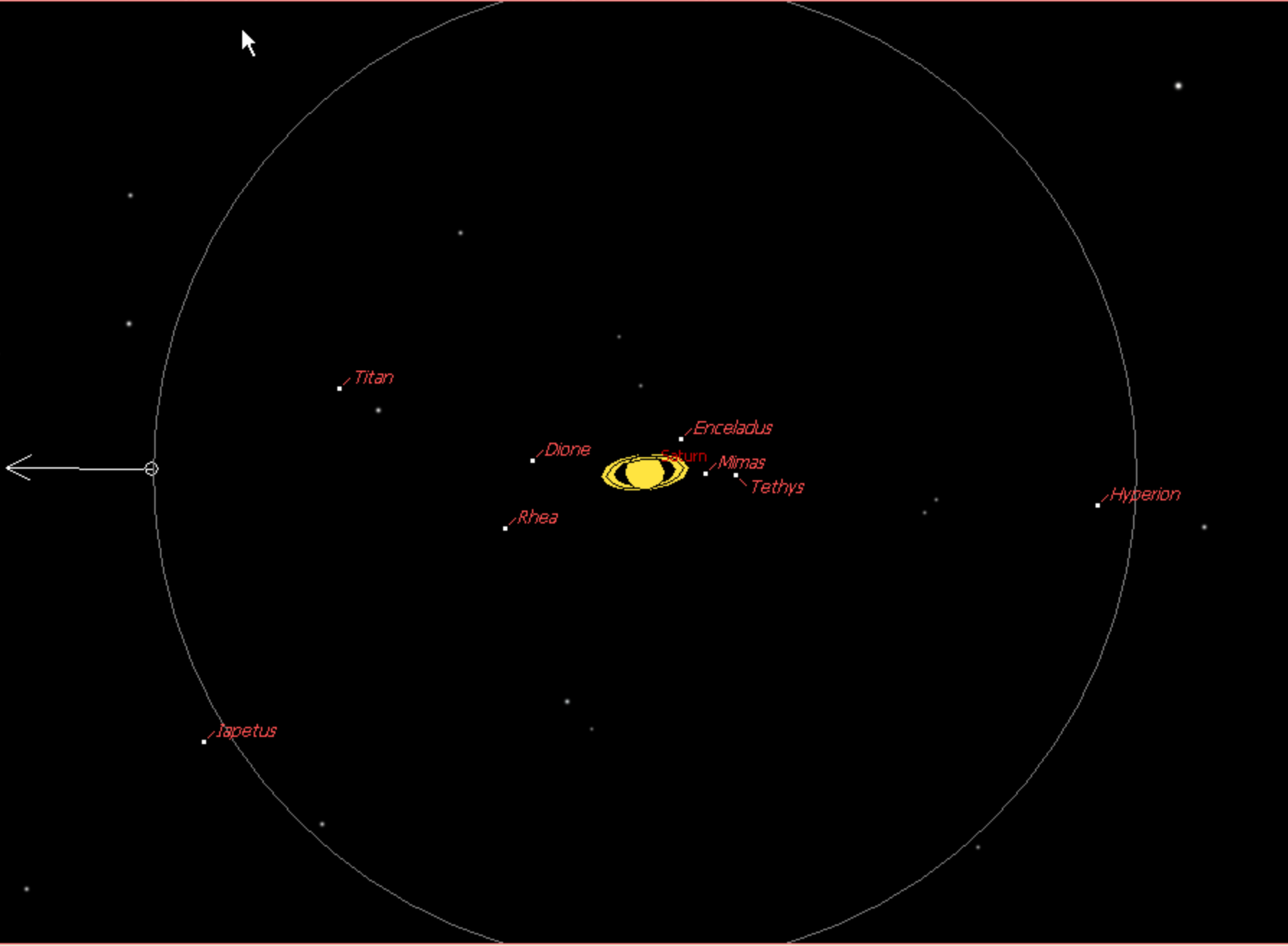


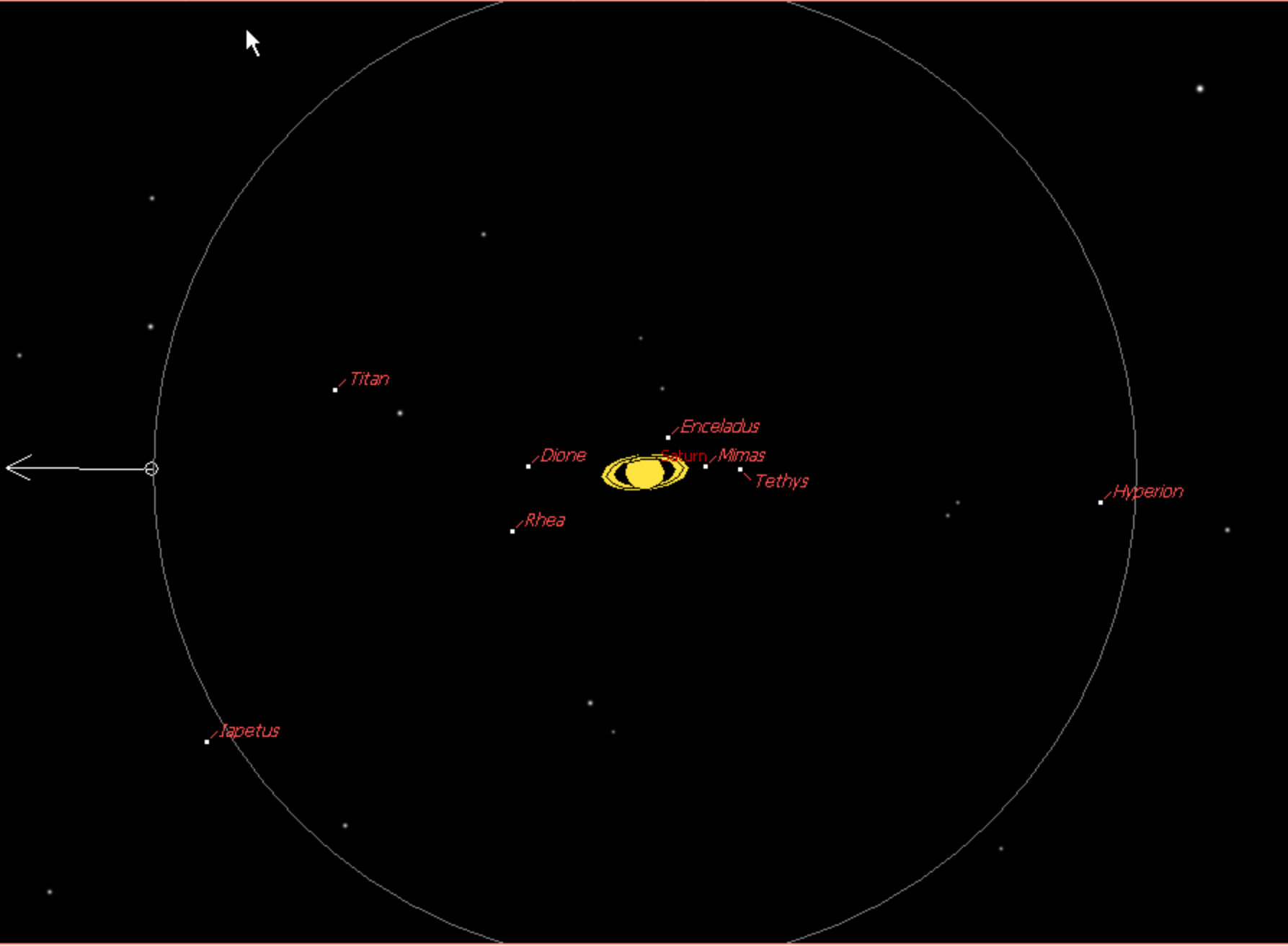






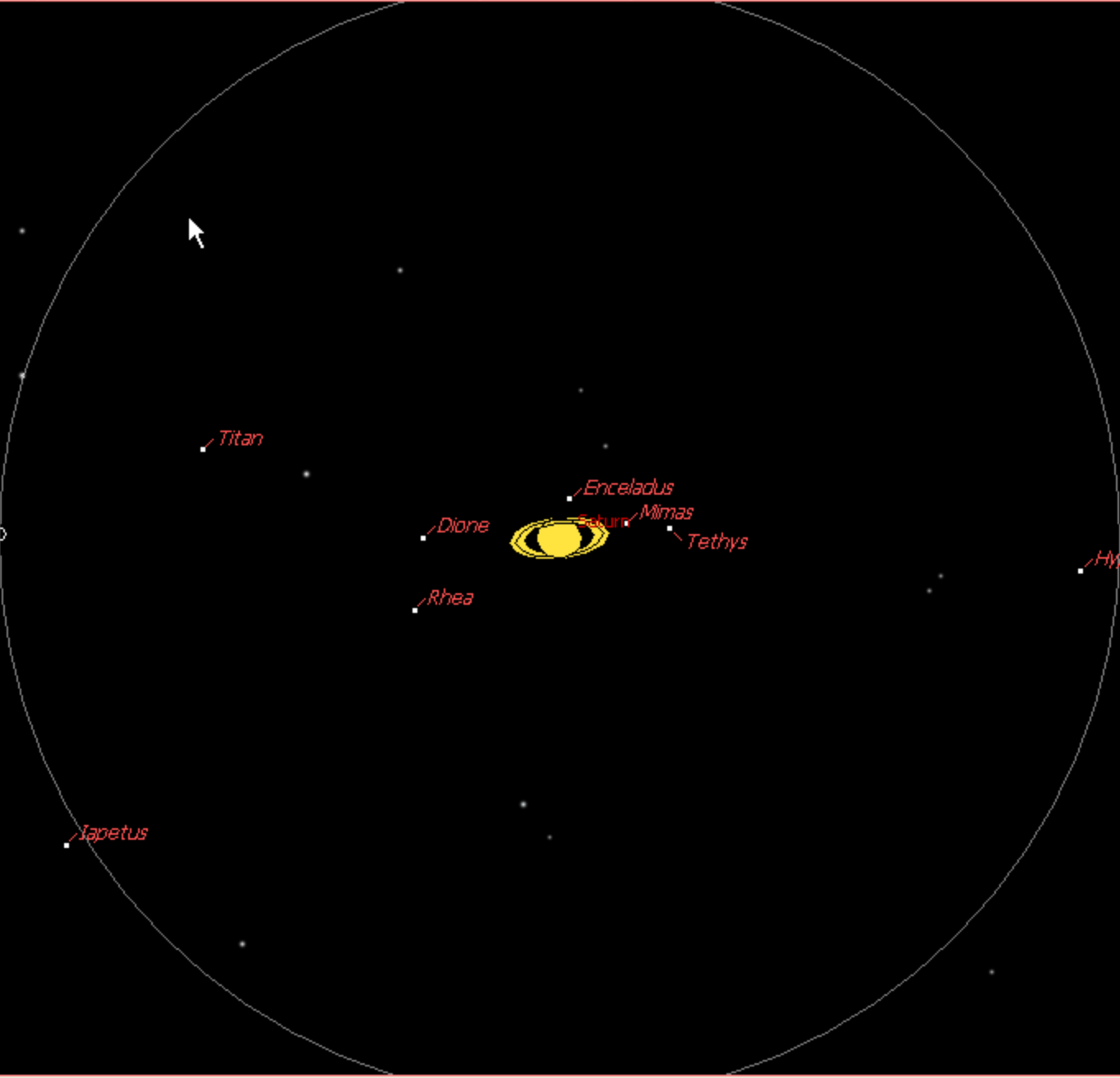


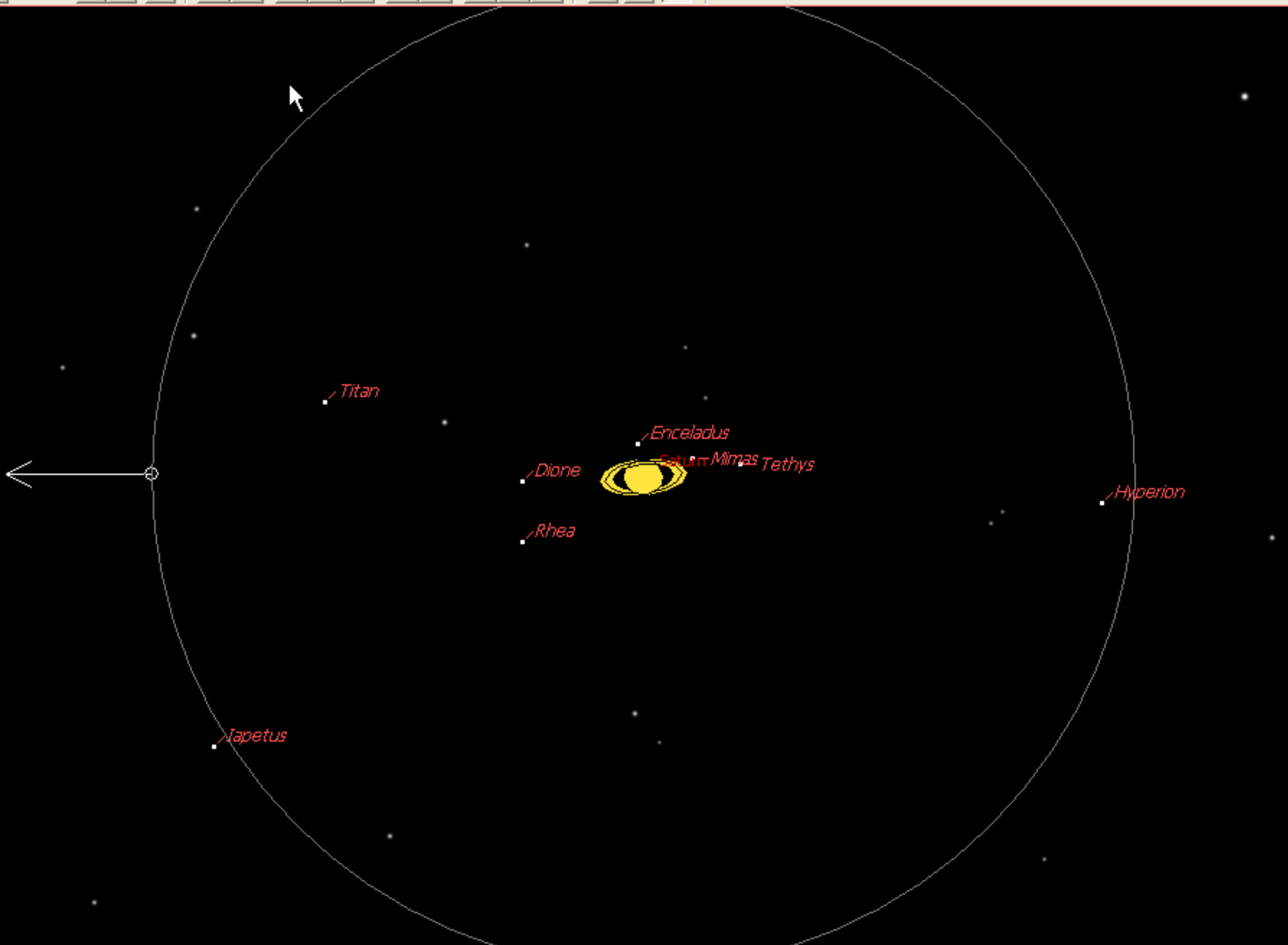






1 hr

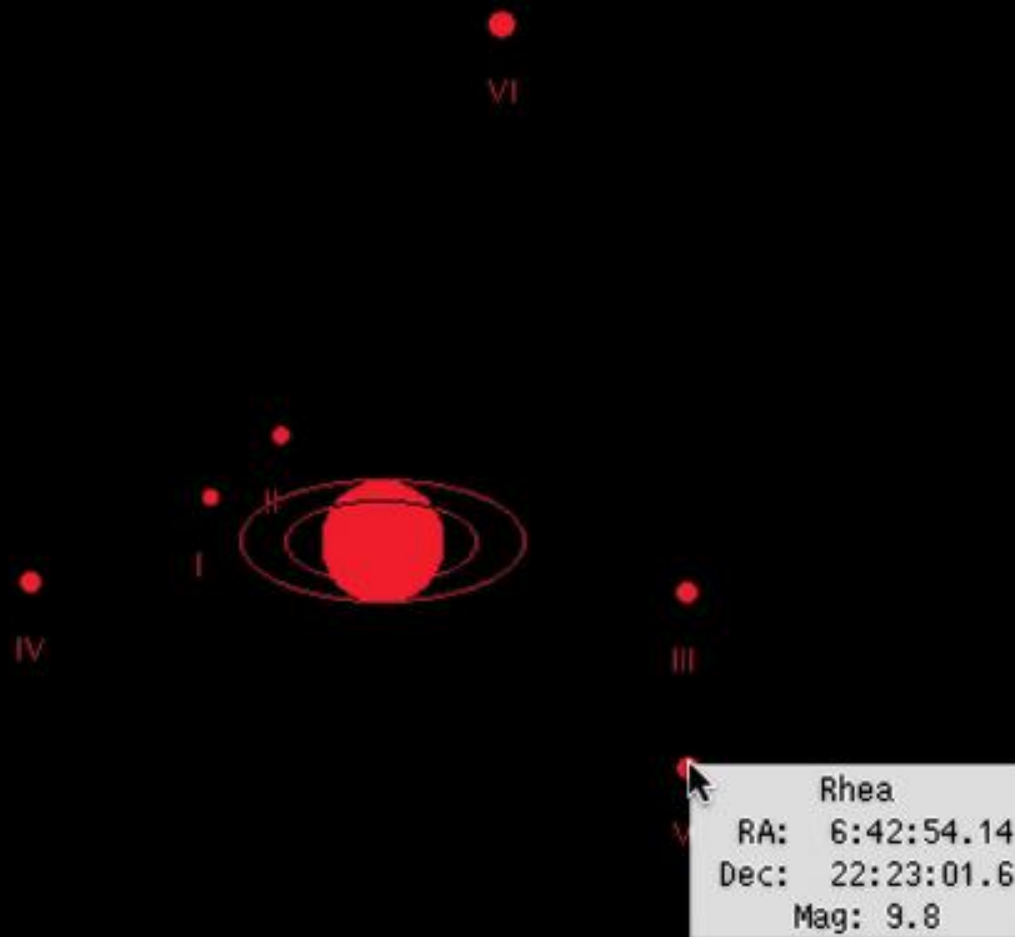






Identifying Saturn's Moons

Software: **Starry Night Pro**
running under Mac OS X.
Time: 28 Dec 2003, 21:48 EST.
Illustration: David Illig

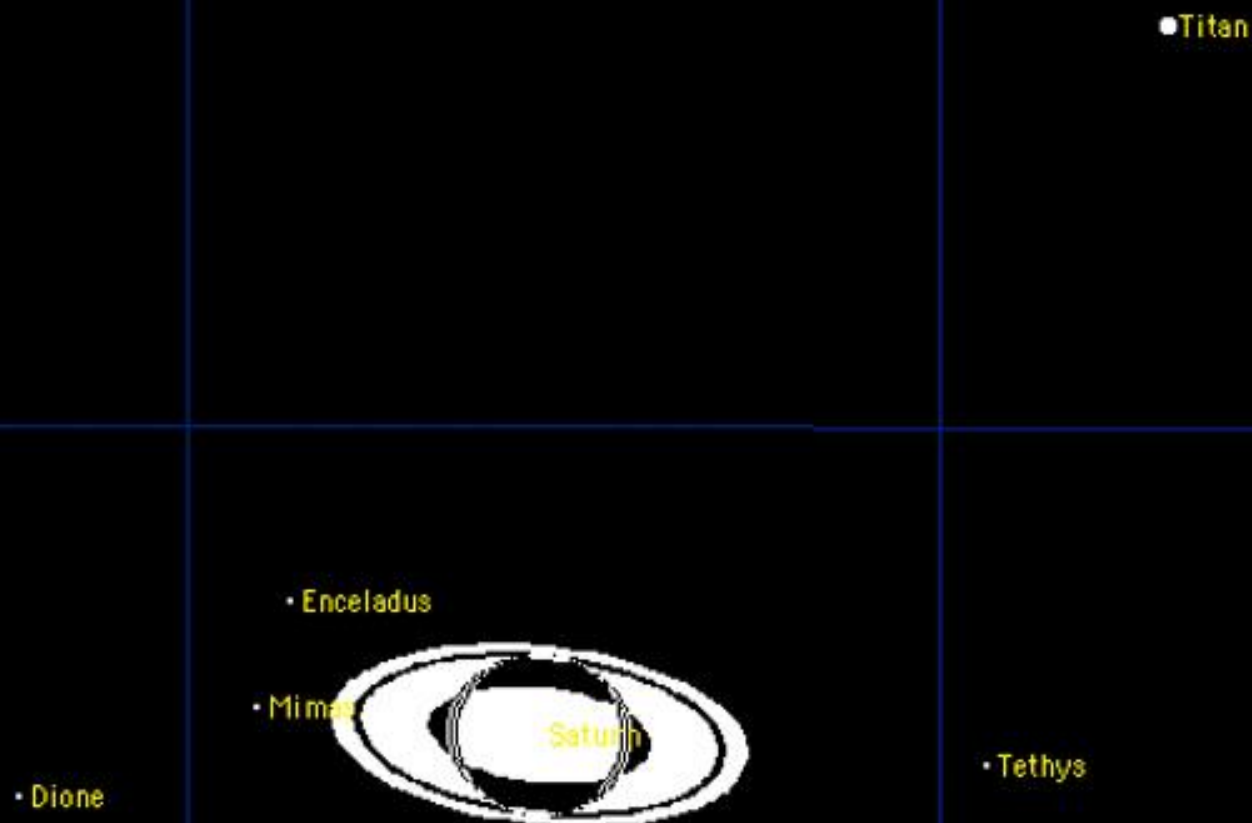


Identifying Saturn's Moons

Software: XEphem (Unix) running
under Mac OS X (i.e., BSD Unix)

Time: 28 Dec 2003, 21:48 EST

Illustration: David Illig



Identifying Saturn's Moons • Rhea

Software: **The Sky** running
under Mac OS 9.

Time: 28 Dec 2003, 21:48 EST.

Illustration: David Illig

www.physics.sfasu.edu/astro/saturn.html

Saturn Events - Dan Bruton - Microsoft Internet Explorer provided by Comcast

File Edit View Favorites Tools Help

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Address http://www.physics.sfasu.edu/astro/satsat_current.html Go Links Weather Bluebird Observatory Clear Sky Clock

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[[Current Positions](#) | [No Labels](#) | [Animate](#) | [Download Software](#) | [Author](#)]
Scroll down to see more information.

Hyperion

Rhea

Tethys

Dione

Enceladus

Mimas

Titan

start ZoneAlarm Pro Yahoo! Messenger Saturn Events - Dan ... Internet 2:09 PM

The Planets (Version 2.02)

FREE at www.cpac.freeseerve.co.uk/docs/solar.htm

CPAC: Our Solar System - Microsoft Internet Explorer provided by Comcast

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Address <http://www.cpac.freeseerve.co.uk/docs/solar.htm> Go Search Web etv Radio Music Games Sports News Movies HotStuff

Save your default settings

[Please be Patient](#) Java Application Loading.

Because of all the new features and enhancements, my Java application is getting quite large! I appreciate your patience in waiting for it to appear (it could be 30 seconds if you have a slow modem). I encourage you to **download** it and use it locally. This will speed up the loading time.

Local Time: Sun 11 Jan 2004 14:16 Summertime Baltimore, Md. - Usa

GMT (UT): Sun 11 Jan 2004 19:16 Local Settings View: SATURN ABOUT

Track Real Time NOW

STOP

<<	<	Min	>	>>
<<	<	10	>	>>
<<	<	Hour	>	>>
<<	<	Day	>	>>
<<	<	Week	>	>>
<<	<	Month	>	>>
<<	<	Year	>	>>

Automatic Event Control

Sun Rise/Set

NEXT EVENT

PREVIOUS EVENT

Names

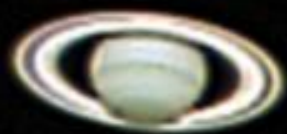
Pointers

Flip N / S

Flip E / W

Zoom In

Zoom Out



Saturn and Five Moons

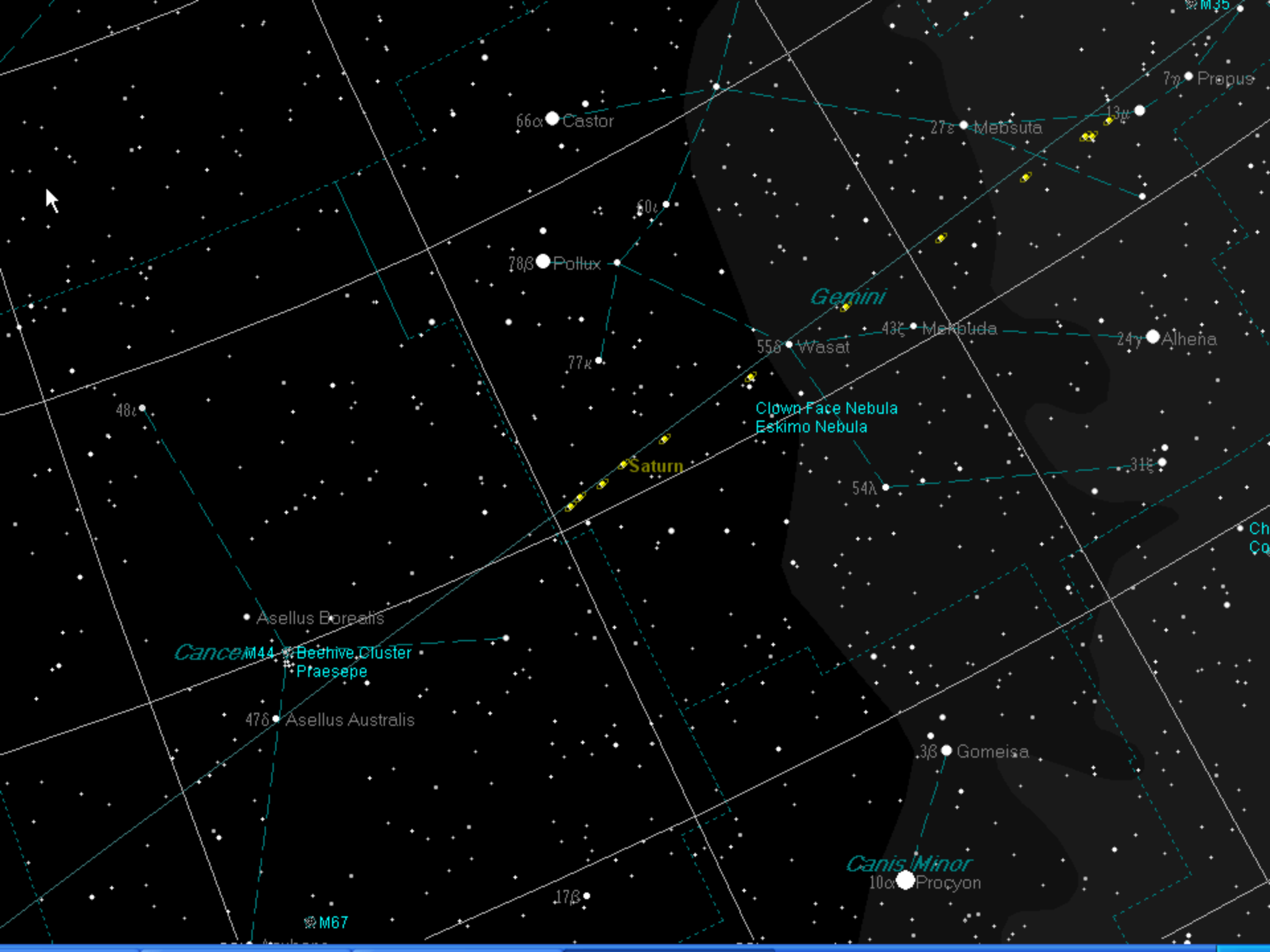
Clockwise from top:

Titan, Tethys, Rhea, Dione, Enceladus

Captured with a Meade Lunar and Planetary Imager
on an 8" LX200 GPS. Software: Meade Autostar Suite & Registax
on a Sony laptop; Photoshop on a Mac.

Captured at Gambrills, Maryland

December 28, 2003, 21:48 EST by David Illig.



66α Castor

27ε Mebsuta

13μ

7η Proopus

60α

78β Pollux

Gemini

77κ

55δ Wasat

43ζ Mebluda

24γ Alheina

48α

Clown Face Nebula
Eskimo Nebula

Saturn

54λ

31ε

Asellus Borealis

Cancer M44 Beehive Cluster
Praesepe

47δ Asellus Australis

38 Gomeisa

Canis Minor

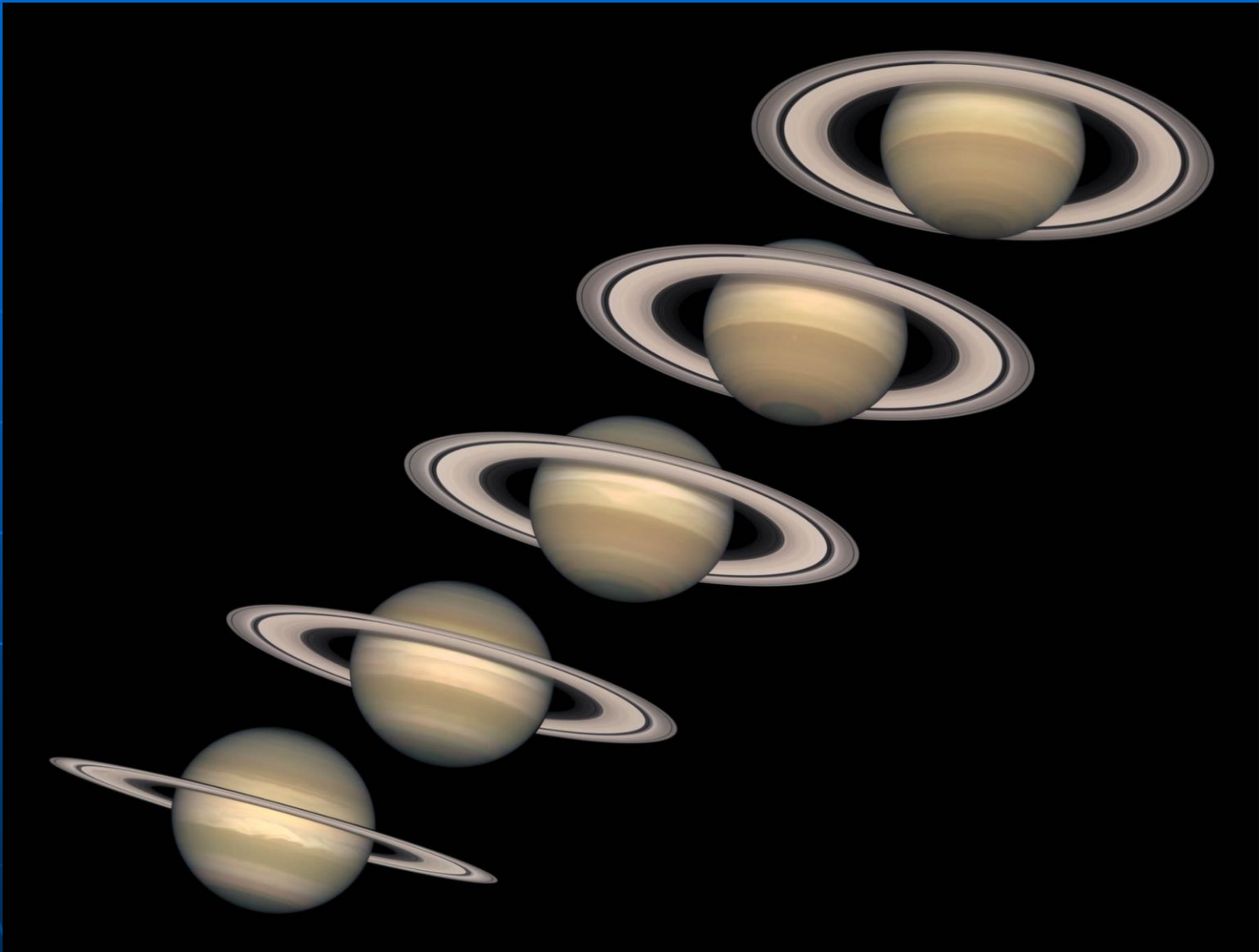
10α Procyon

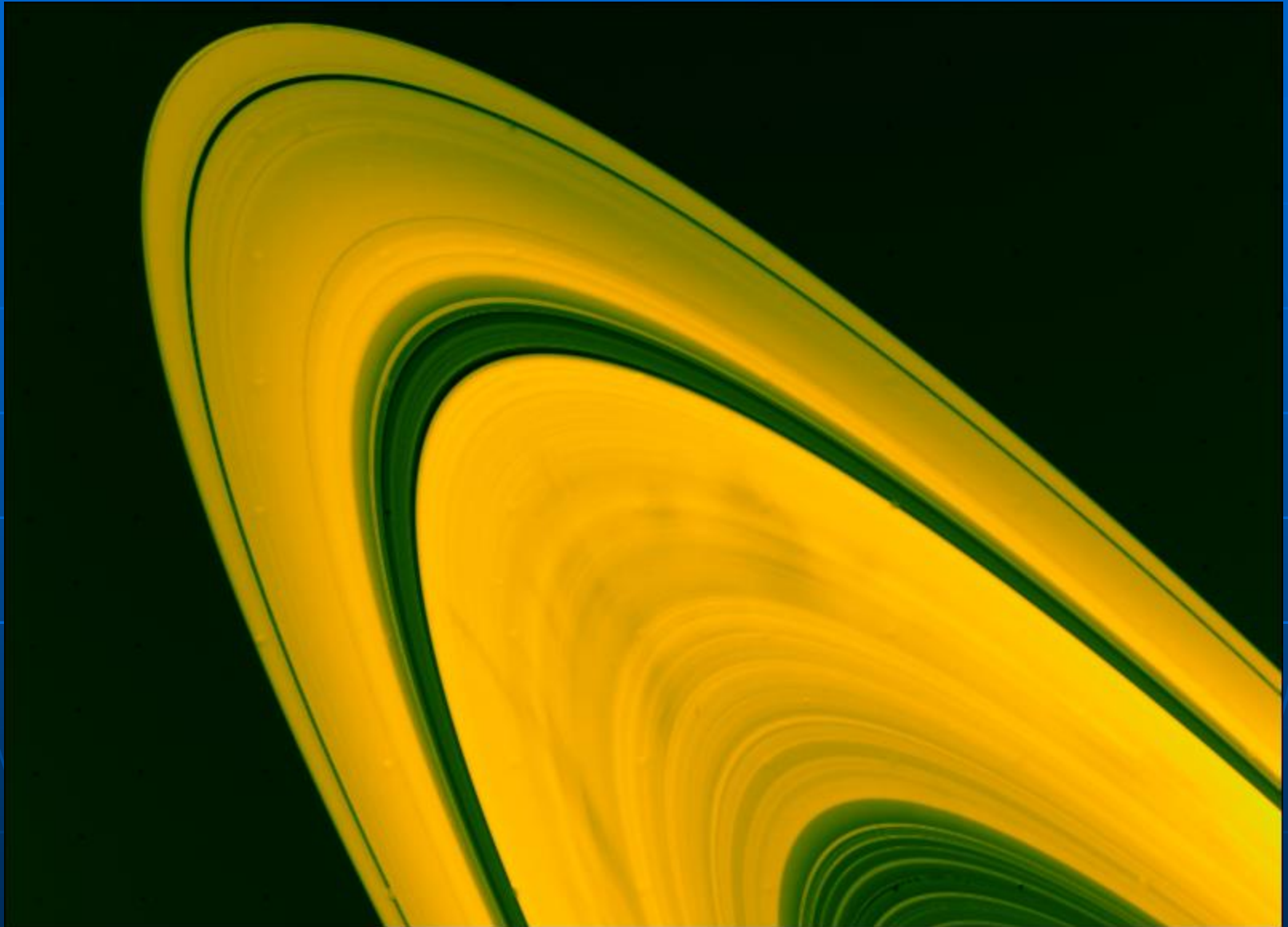
17β

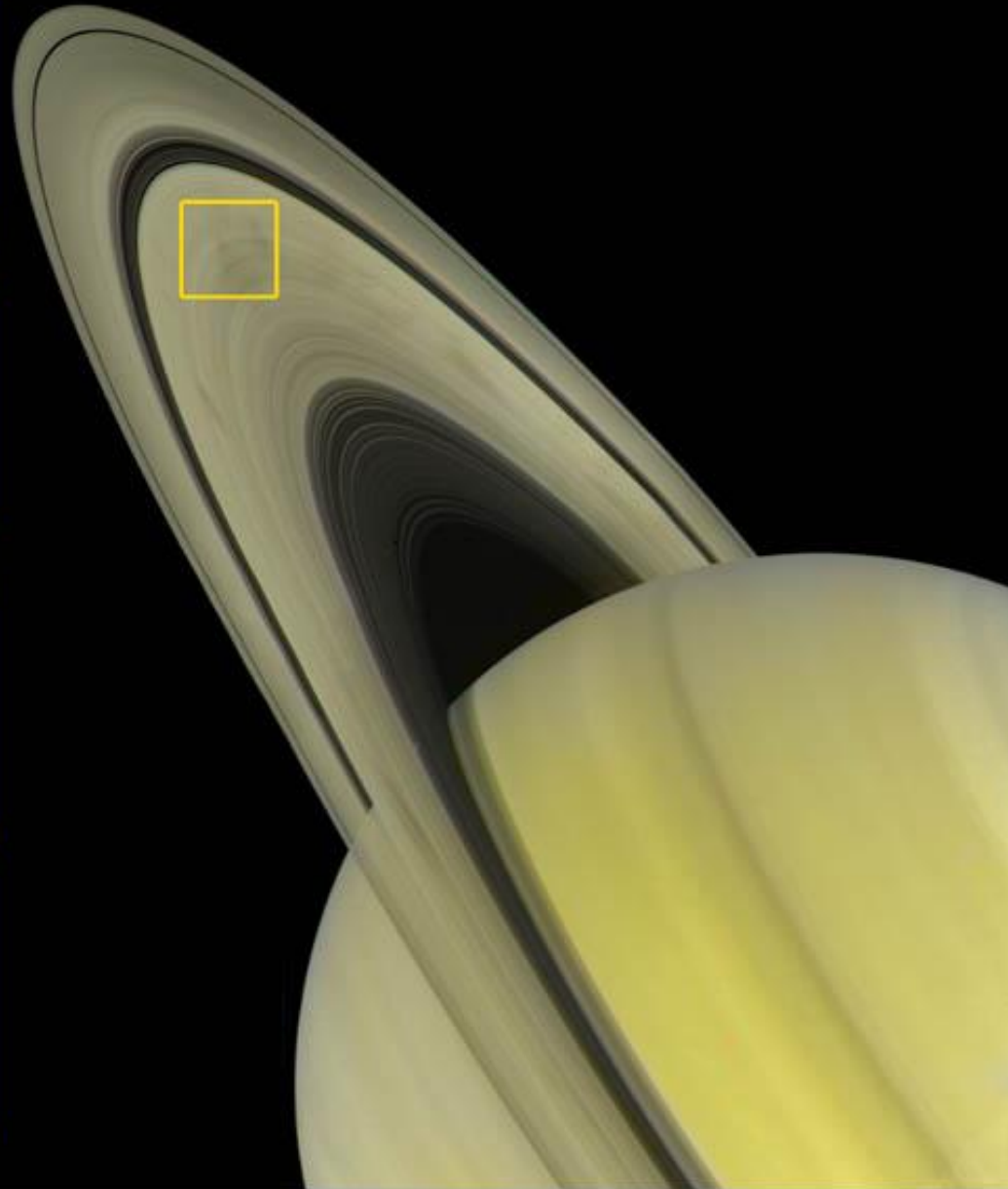
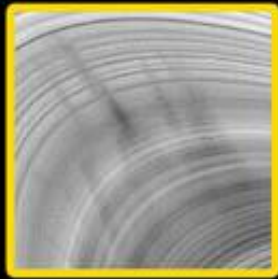
M67

The Ring System

Knowing your A, B, C's...







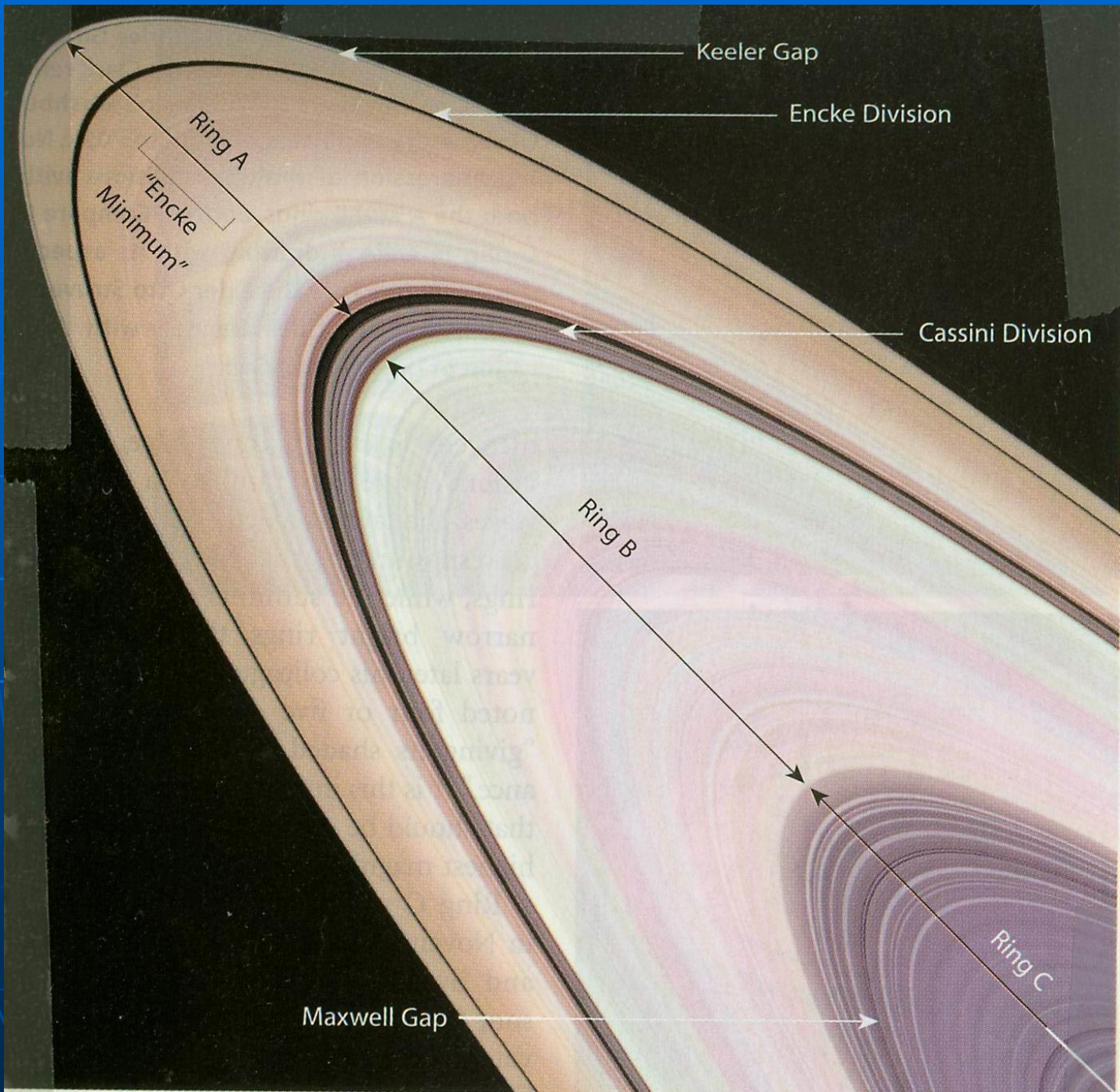
Spokes in Saturn's B-Ring



Saturn · August 1995

HST · WFPC2

PRC95-31 · ST ScI OPO · August 11, 1995 · P. Nicholson (Cornell University), NASA



Keeler Gap

Encke Division

Cassini Division

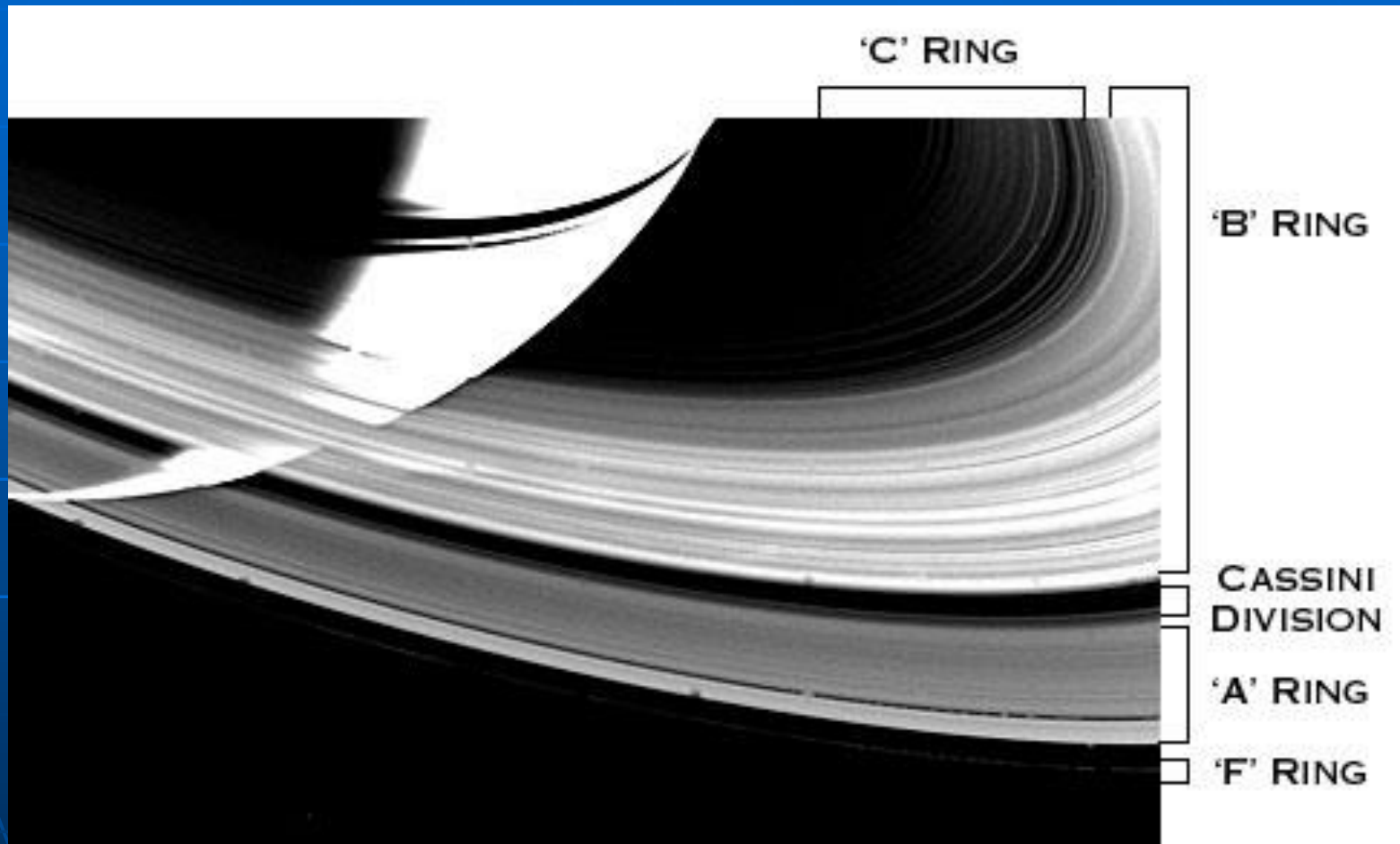
Ring B

Ring C

Maxwell Gap

Ring A

"Encke Minimum"







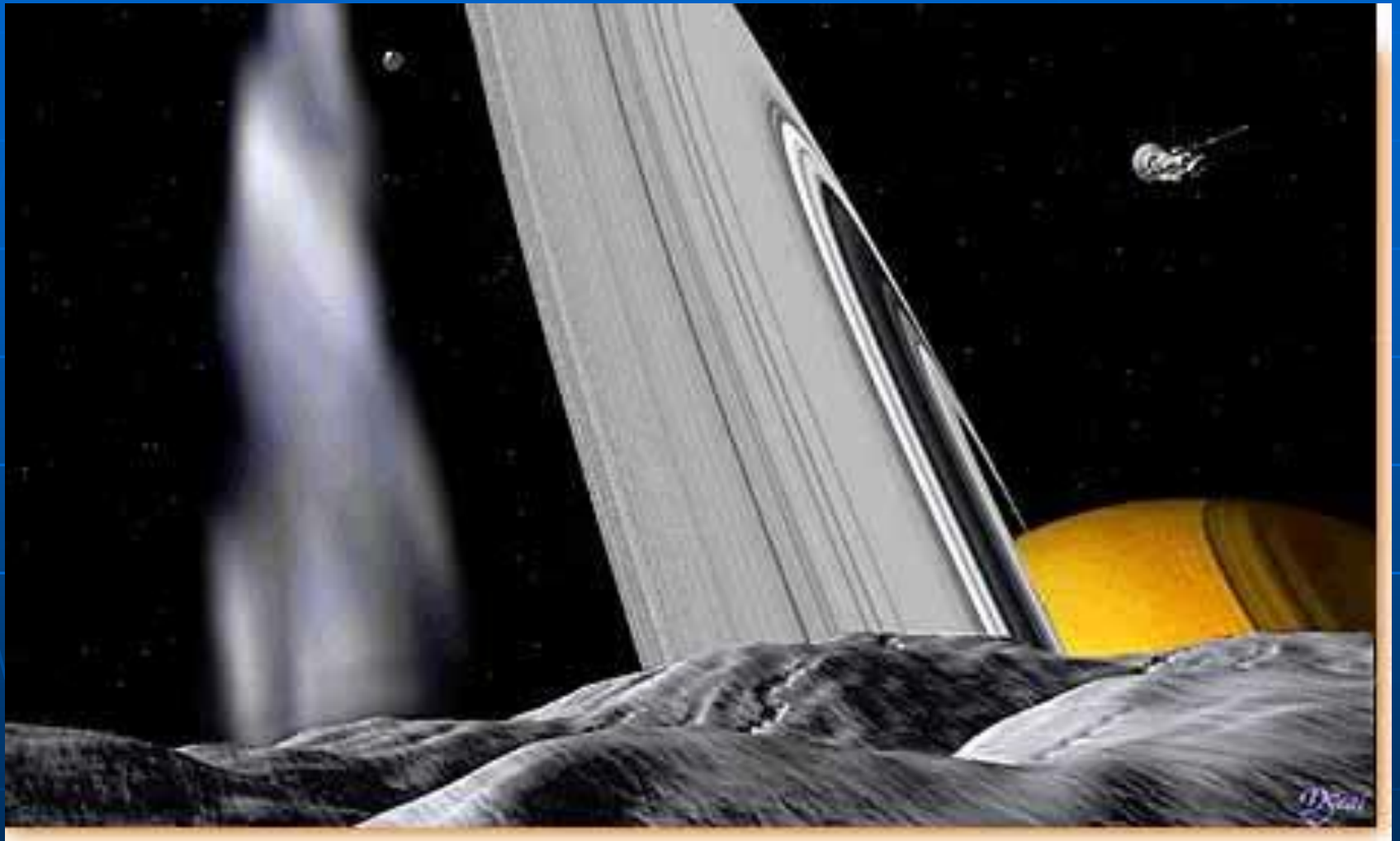
Looking down on Cassini
12 Jan 2004 06:00 GMT

*Cassini

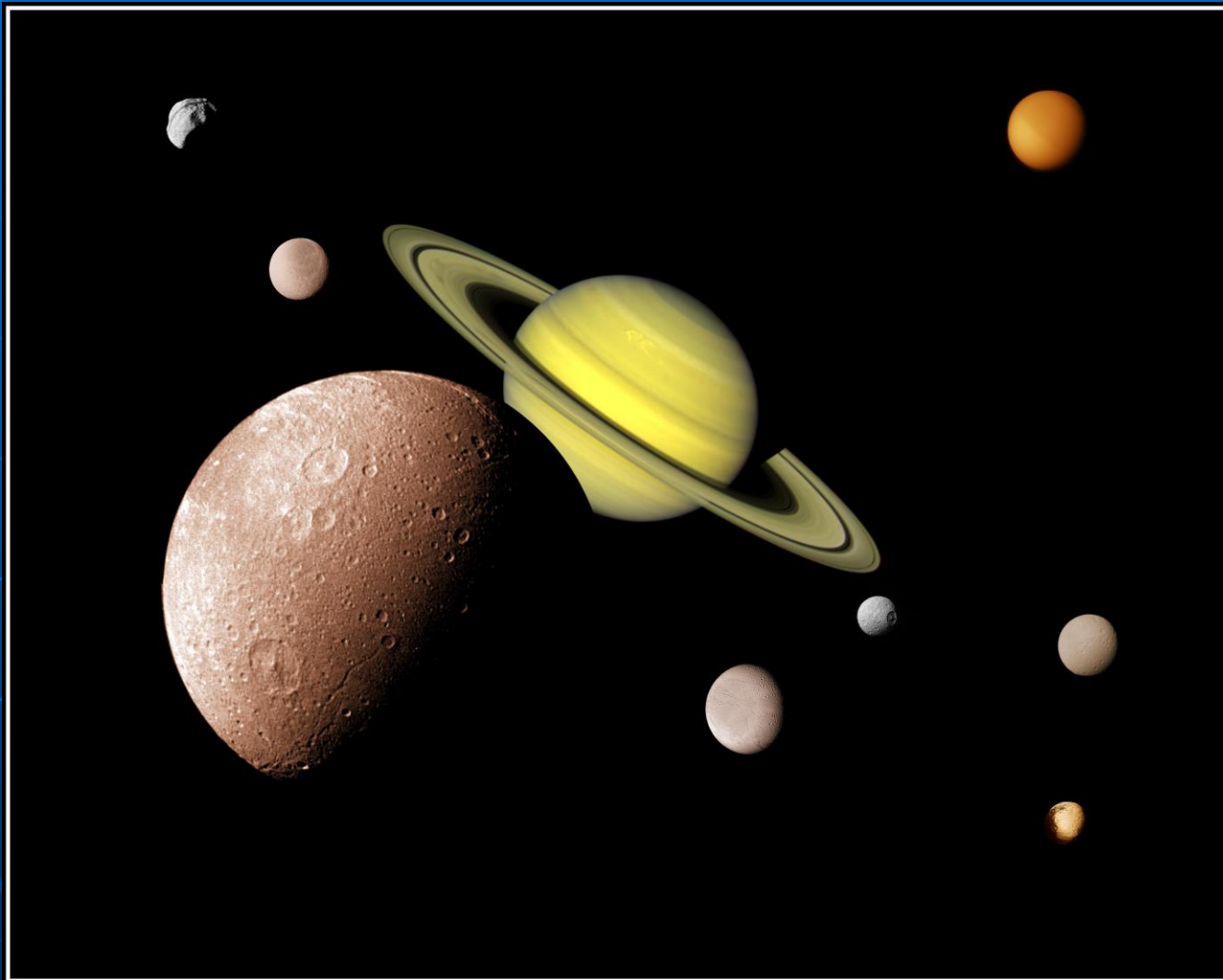
Saturn

Solar System Simulator

Speed: 21,568 kph
Distance travelled: 3.392 bil km



Saturn's Satellites



The Saturn System

© Copyright 1998 by Calvin J. Hamilton

- 30 named satellites plus one discovered in 2003 and not yet named
- Of those moons for which rotation rates are known, all but Phoebe and Hyperion rotate synchronously

- The three pairs Mimas-Tethys, Enceladus-Dione and Titan-Hyperion interact gravitationally in such a way as to maintain stable relationships between their orbits: the period of Mimas' orbit is exactly half that of Tethys, they are thus said to be in a 1:2 resonance; Enceladus-Dione are also 1:2; Titan-Hyperion are in a 3:4 resonance.

Distance Satellite	Radius (000 km)	Mass (km)	(kg)	Discoverer	Date
-----	-----	-----	-----	-----	-----
Pan	134	10	?	Showalter	1990
Atlas	138	14	?	Terrile	1980
Prometheus	139	46	2.70e17	Collins	1980
Pandora	142	46	2.20e17	Collins	1980
Epimetheus	151	57	5.60e17	Walker	1980
Janus	151	89	2.01e18	Dollfus	1966
Mimas	186	196	3.80e19	Herschel	1789
Enceladus	238	260	8.40e19	Herschel	1789
Tethys	295	530	7.55e20	Cassini	1684
Telesto	295	15	?	Reitsema	1980
Calypso	295	13	?	Pascu	1980
Dione	377	560	1.05e21	Cassini	1684
Helene	377	16	?	Laques	1980
Rhea	527	765	2.49e21	Cassini	1672
Titan	1222	2575	1.35e23	Huygens	1655
Hyperion	1481	143	1.77e19	Bond	1848
Iapetus	3561	730	1.88e21	Cassini	1671
Phoebe	12952	110	4.00e18	Pickering	1898

Mimas ("My mas")



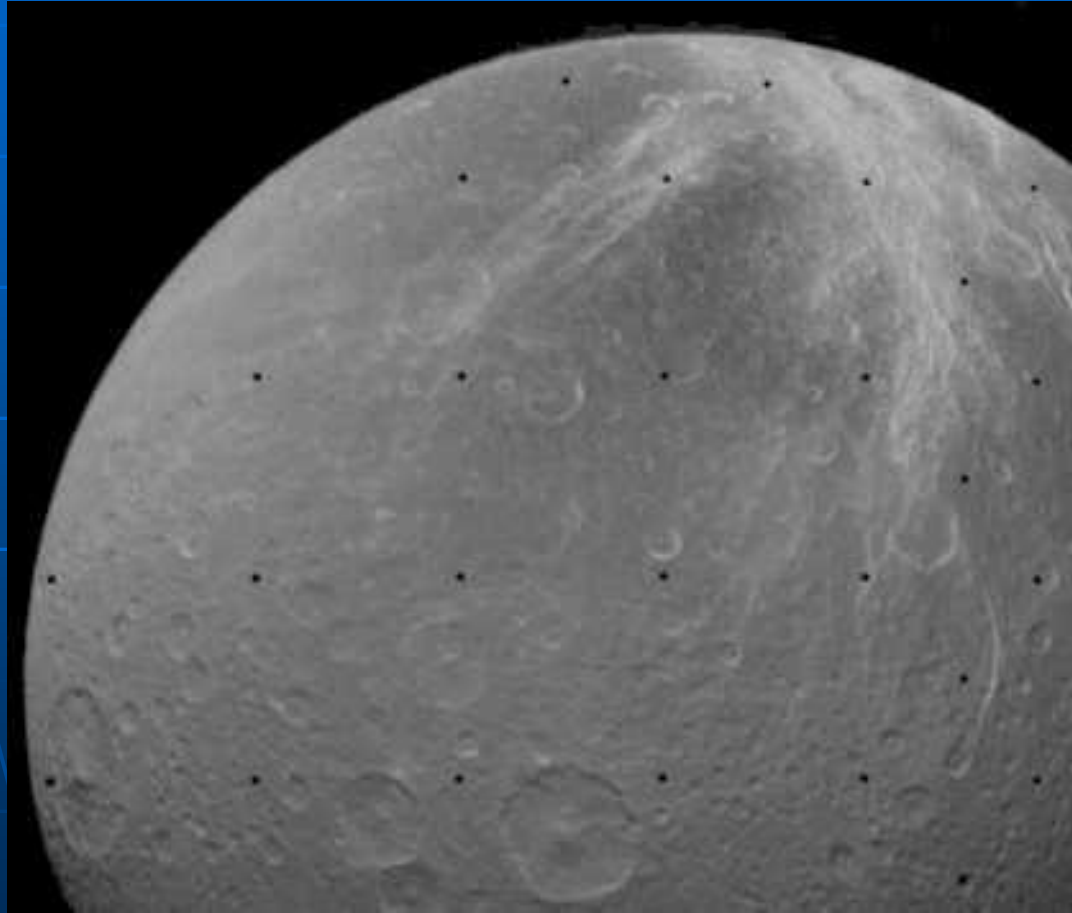
Enceladus (“en SEL a dus”)



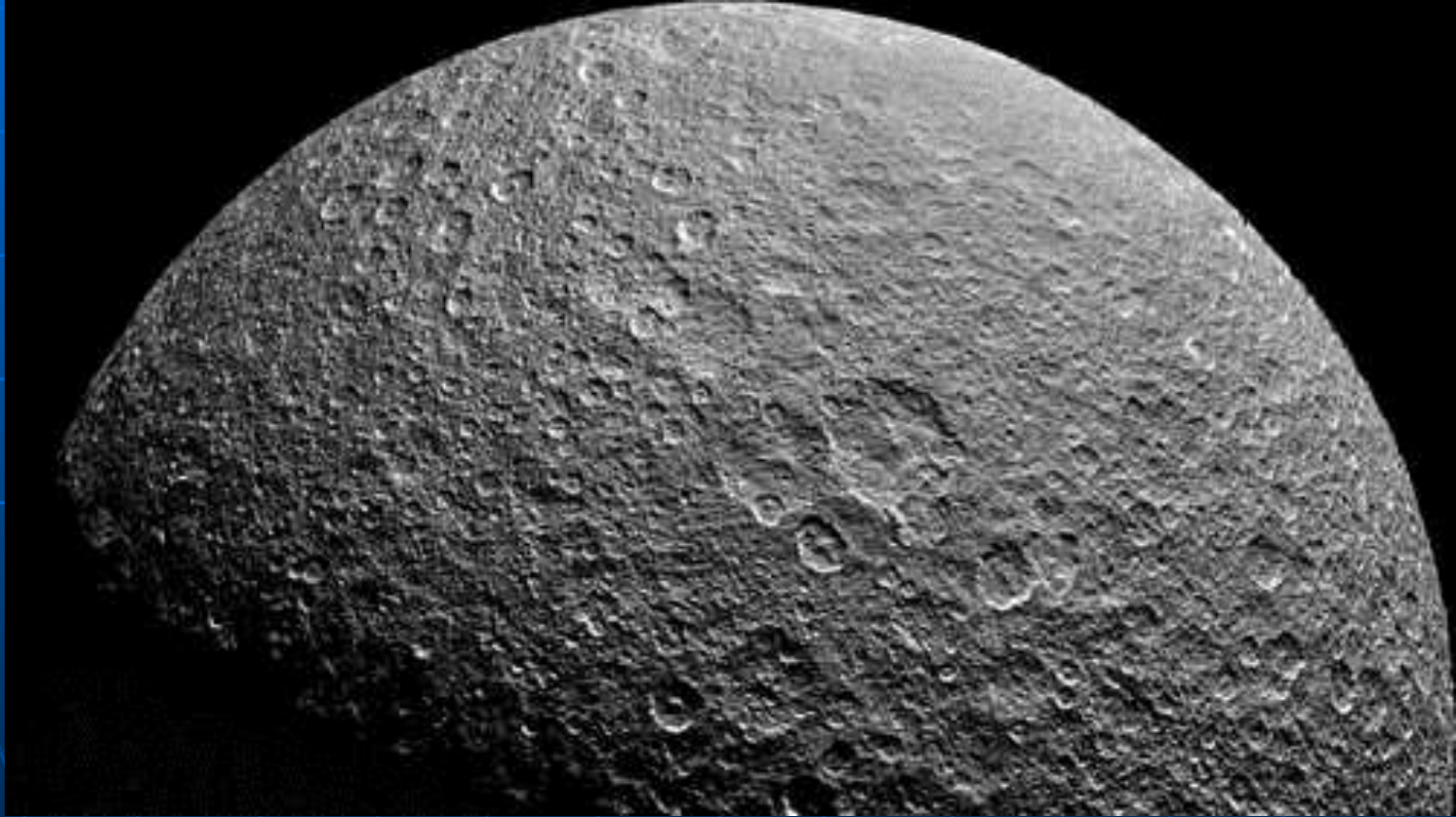
Tethys (“TEE this”)



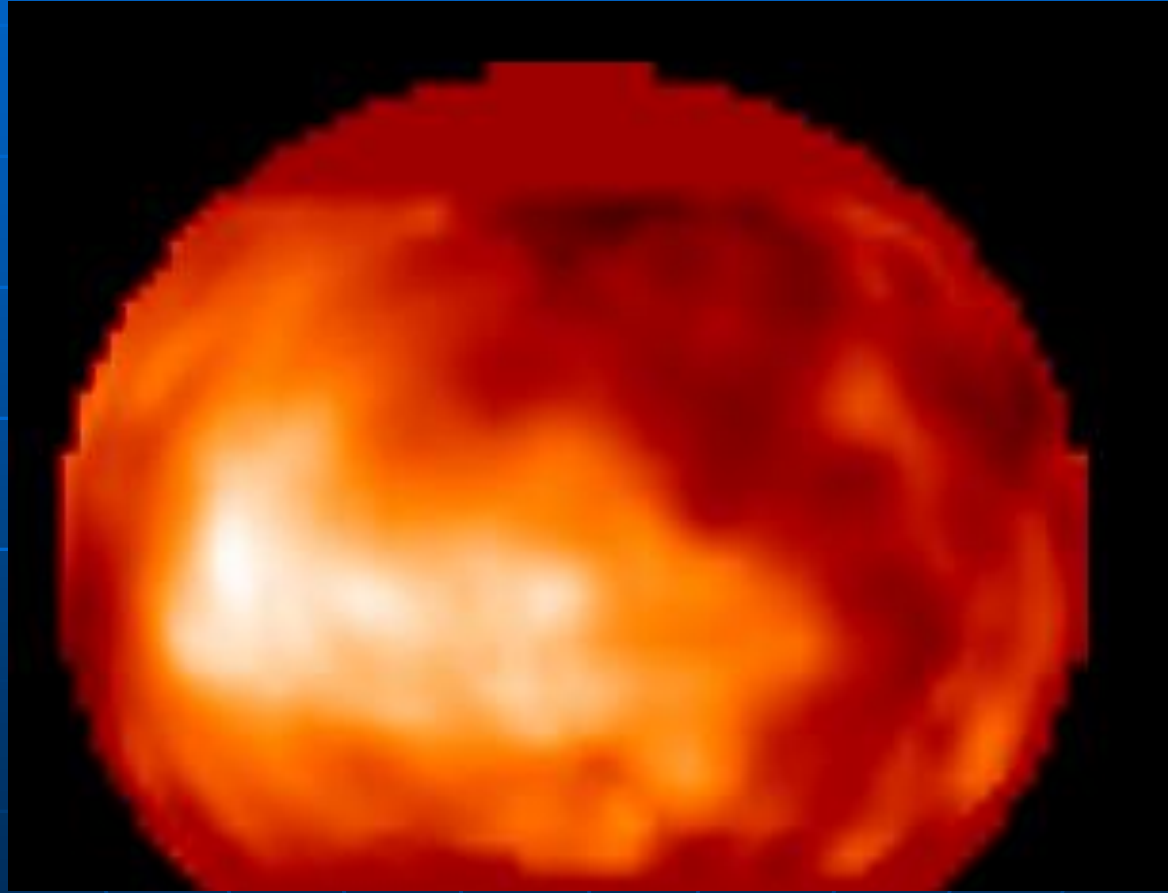
Dione (“dy OH nee”)



Rhea ("REE a")



Titan

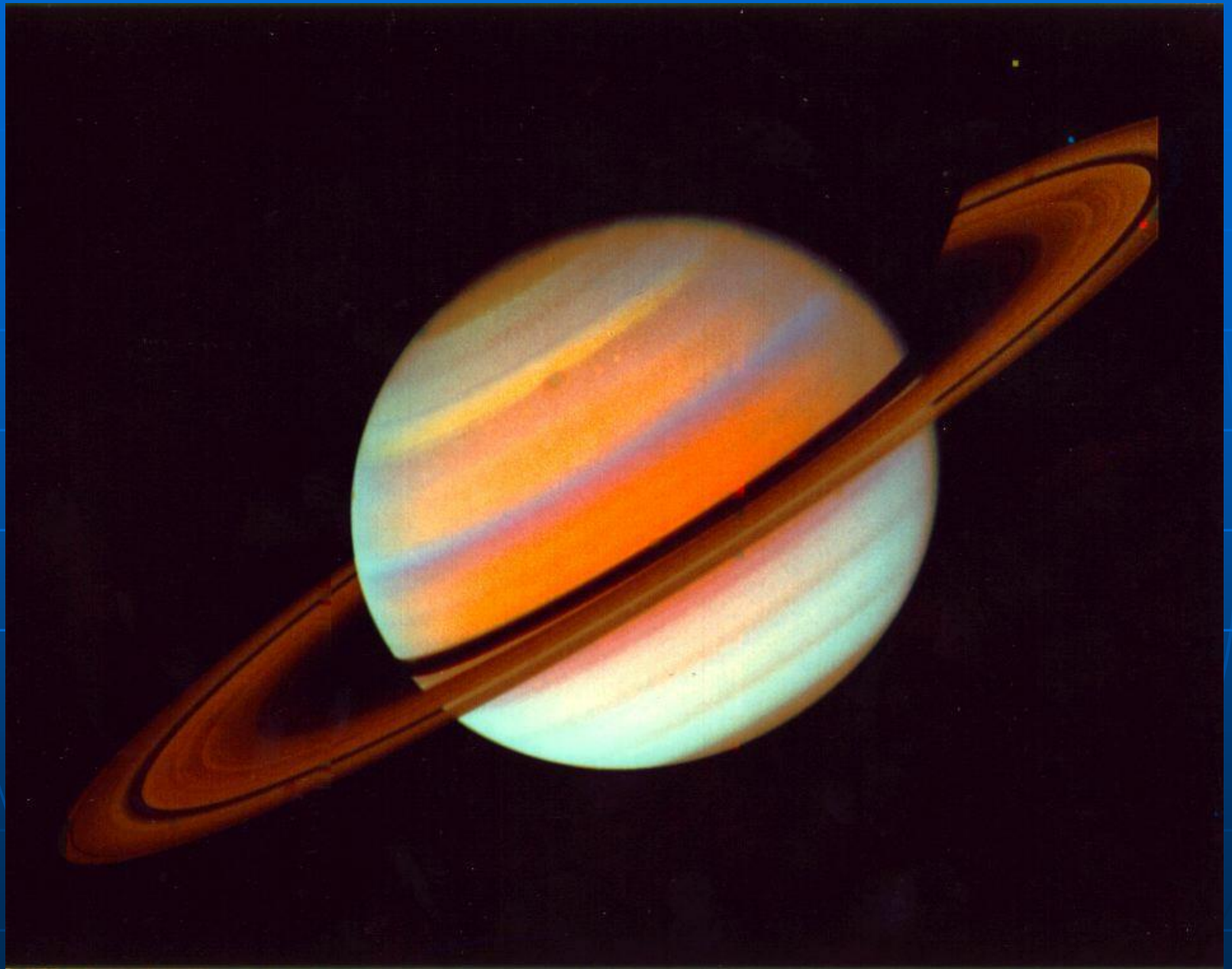


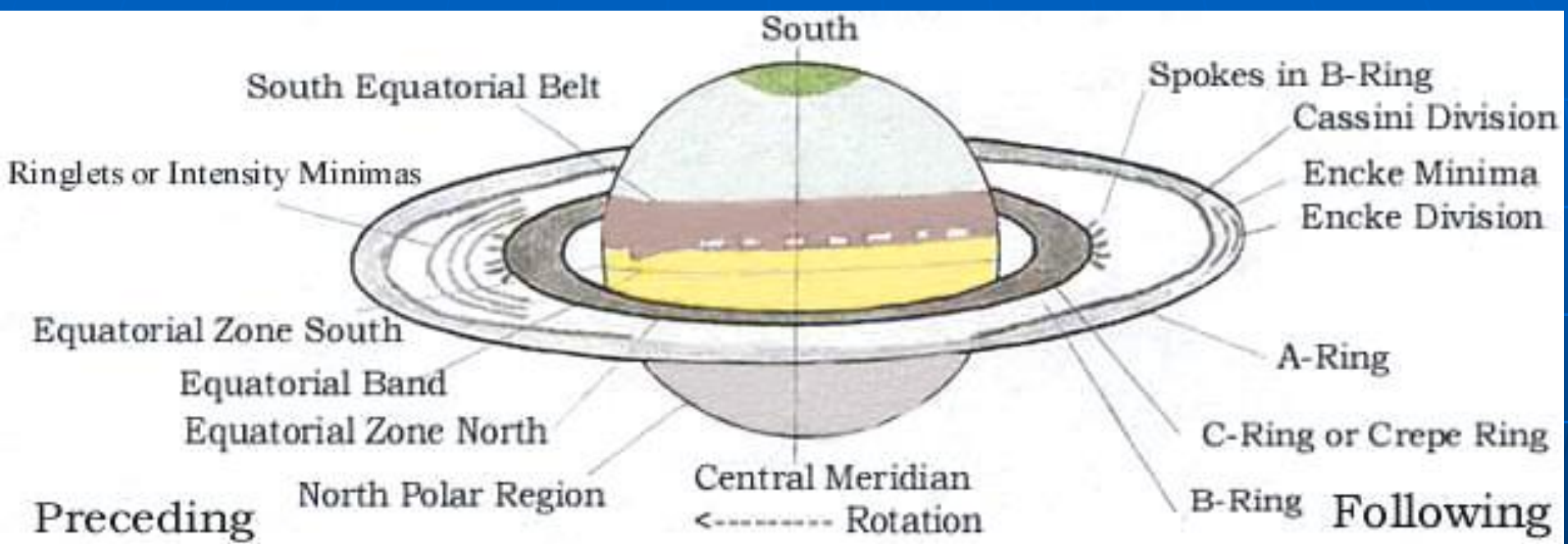
Iapetus (“eye AP i tus”)

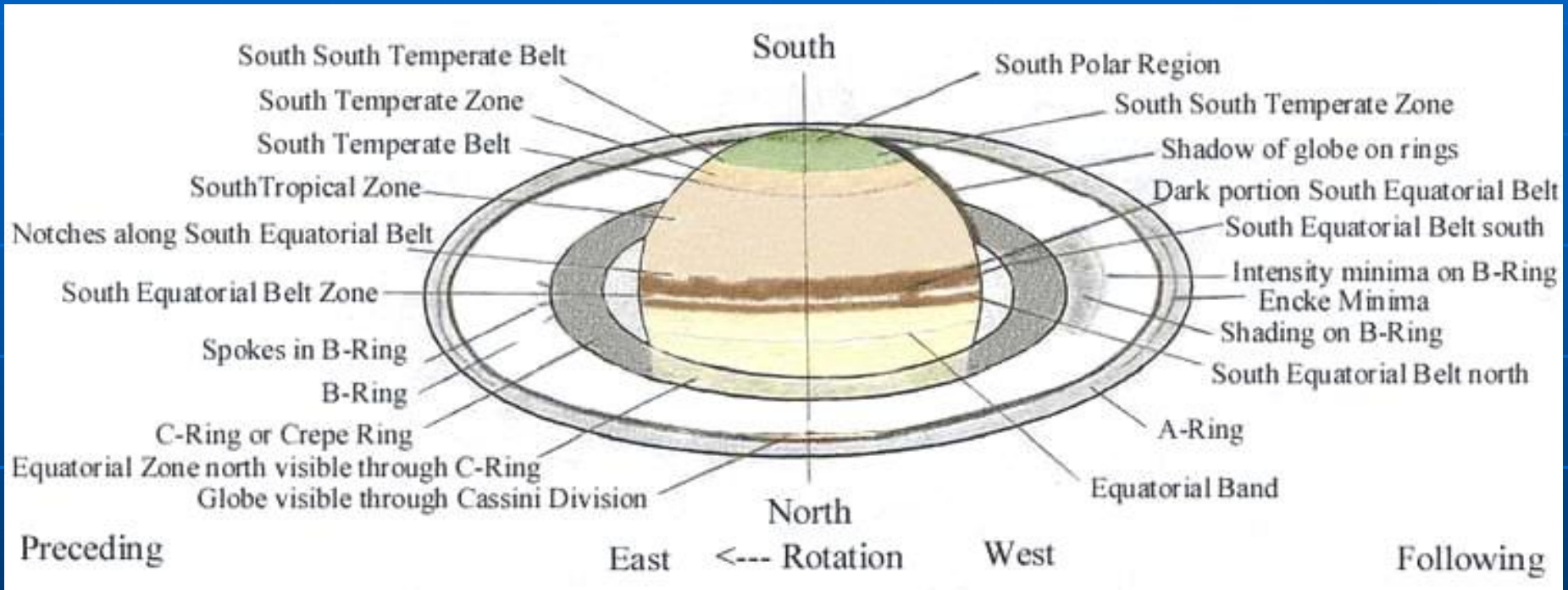


Belts, Zones, and Storm Systems

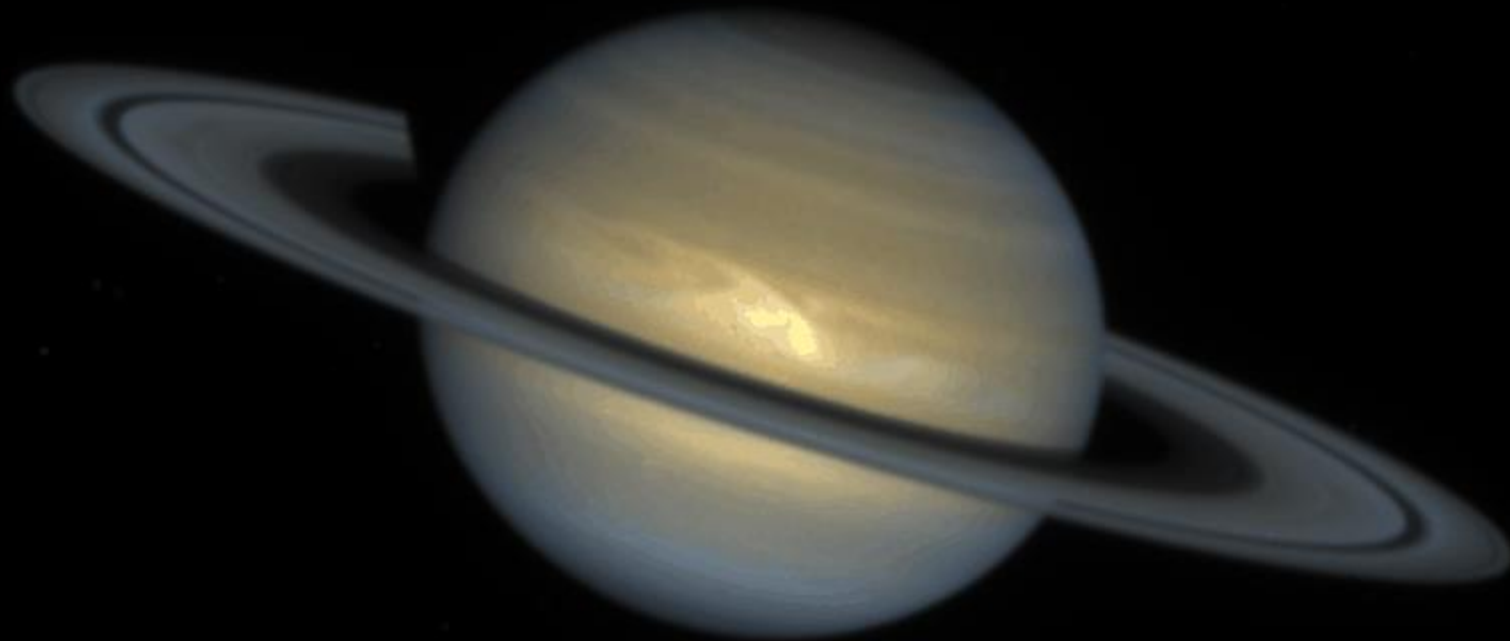
Saturn's Surface Features:
Sound Familiar?







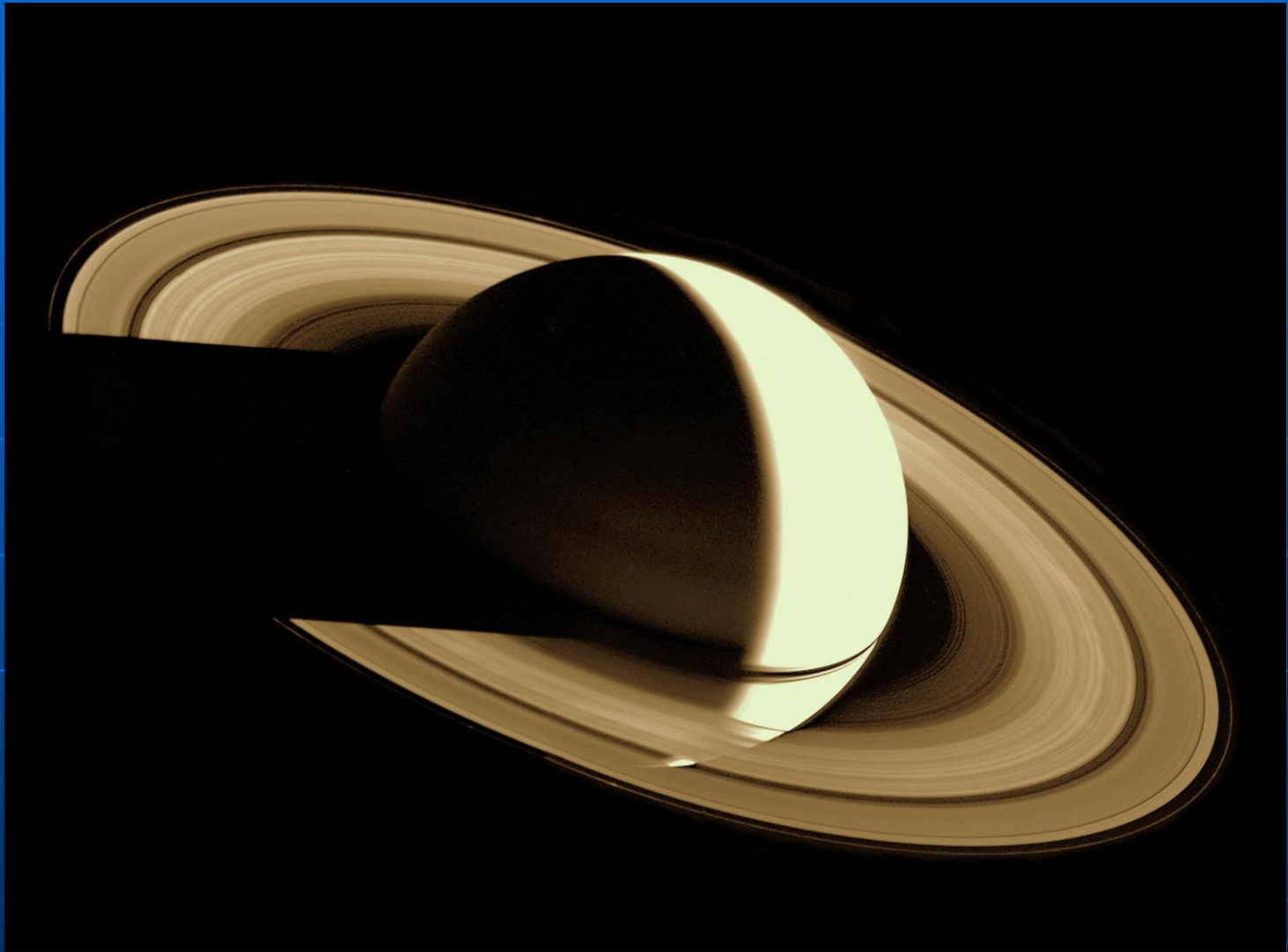
Saturn



HST • WFPC2
December 1, 1994

PR94-53 • ST ScI OPO • December 1994 • R. Beebe (NMSU), NASA

12/13/94 zgl



Last View of Saturn

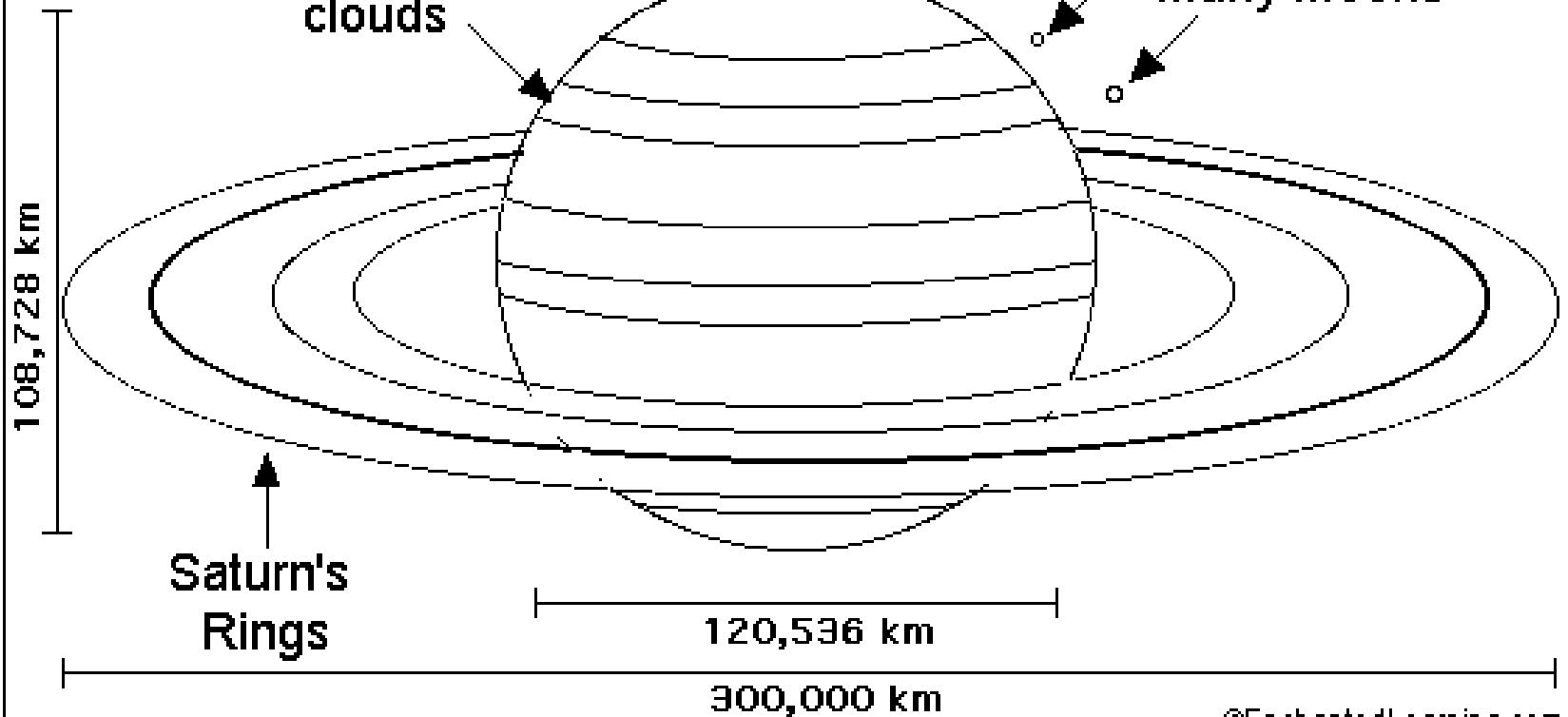
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Saturn

Bands of clouds

Two of Saturn's many moons



Saturn

Saturn's Rings

Inside Saturn

