

*Santa Monica Amateur
Astronomy Club*



Sept, 2017

The Observer

Upcoming club meeting:
Friday, Sept 8, 7:00 pm



Topic:
OUR CLUB'S ECLIPSE!
Join us as our club members
share their eclipse experiences!



INSIDE THIS ISSUE

Solar eclipse stories!
Venus rover???
Saturn Cassini finale!

OUR MEETING SITE

Wildwood School
11811 Olympic Blvd.
Los Angeles, CA 90064
Free parking:
Garage, SE corner of Mississippi
& Westgate.

IMAGE AT LEFT:

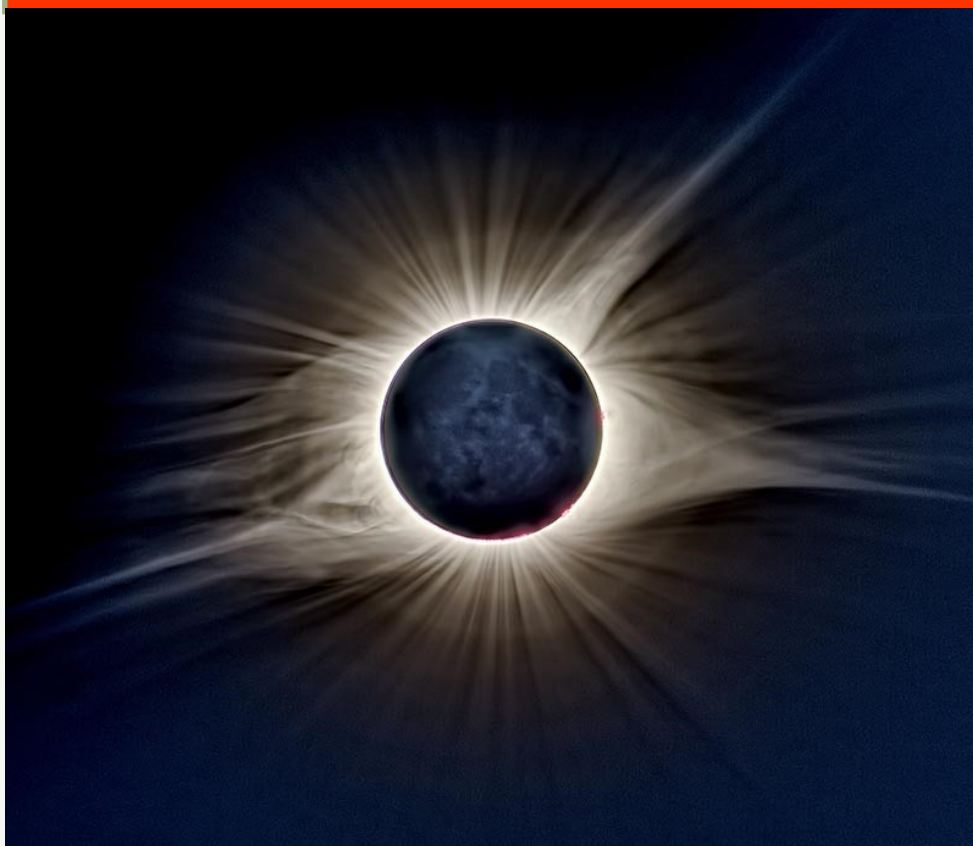
Solar corona. See Sky & Telescope website for details and credits

SEPTEMBER MEETING:

Club Eclipse Adventures

OCTOBER MEETING:

Dr. Therese Hansen:
"Chemical Evolution of Our
Galaxy"



High definition of the sun's corona during the August 21 eclipse! Whether you ventured to totality, or watched the sun get bitten from L.A., we'd like to hear your story...

UPCOMING EVENTS:

Note—all events subject to change! Always check first!

Sept 1—8

Asteroid Florence passes by Earth. See “Sky and Telescope” website

Sept 8 (Friday): SMAAC Astronomy Club meeting, Wildwood School, 7pm
Eclipse Adventures of our club members!

Sept 10 (Sunday): Concert in the 100” dome, Mt. Wilson

Fundraiser; \$50

Mozart and madrigals with a string and flute quartet!

Concerts are at 3pm and 5pm

mtwilson.edu

Sept 12 (Tuesday): Sky event!

Waning moon occults Aldebaran

Visible from Western U.S.

Sept 14 (Thursday): Cassini’s final communications link begins

Final image taken at Saturn: 12:58 pm PDT (arrives at Earth ~83 min later)

Continuous communications link begins: 1:22 pm PDT (arrives ~83 min later)

Sept 15 (Friday): Cassini’s Grand Finale! Splashdown on Saturn!

Atmospheric entry at Saturn: 3: 31 am PDT

Loss of Signal at Saturn: 3:32 PDT

Atmospheric entry, Earth-received time: 4:54 am PDT

Loss of Signal, Earth-received time: 4:55 am PDT

Sept 18 (Monday): Caltech event!

Destined to Crash: Cassini’s Grand Finale

Beckman Auditorium, Caltech; 7:30 pm

Free, but tickets are required (it’s easy, but don’t delay!)

<http://www.caltech.edu/content/destined-crash-cassinis-grand-finale>

Sept 18 (Monday): Sky event!

Venus, crescent Moon, Mars, Mercury, Regulus close at dawn!

Sept 21 (Thursday): JPL Von Karman talk, 7pm

“Volcano Bot”

See jpl.nasa.gov

Sept 22 (Friday): Autumnal Equinox, 1:02 pm PDT

Sept 22 (Friday): Caltech, Cahill Astronomy Center, 8pm

“Real Time Machines”

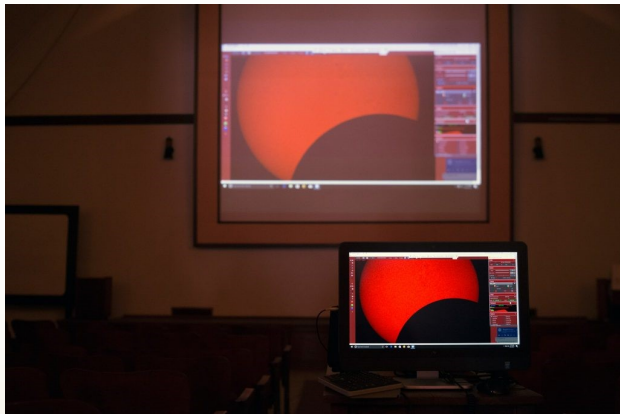
Sept 30 (Saturday): Fall Astronomy Day (Sky & Telescope)

Again...be sure to check for yourself. Events can change.
Please report any changes to me. —ed.

The (Partial) Eclipse From Mt. Wilson



Observatory Asst. Superintendent Maggie Moran shows visitors the 17" diameter image of the partially eclipsed sun at the 150-foot Solar Tower, where much of what we've learned about the sun was discovered.



Over 1,000 visitors (wherever did they all park?) showed up to see the white-light sun (above) and the Ha sun (left).



Above: Lots of glasses were handed out!

Left: Leaves formed pinhole cameras!

Right: Line at the Solar Tower.





This Diamond Ring Still Shines!

Diamond ring effect at the end of totality, as the photosphere breaks through again.

September meeting:

Eclipse stories! Our club members will share their adventures!

October meeting:

Speaker: Dr. Therese Hansen, Carnegie Observatories

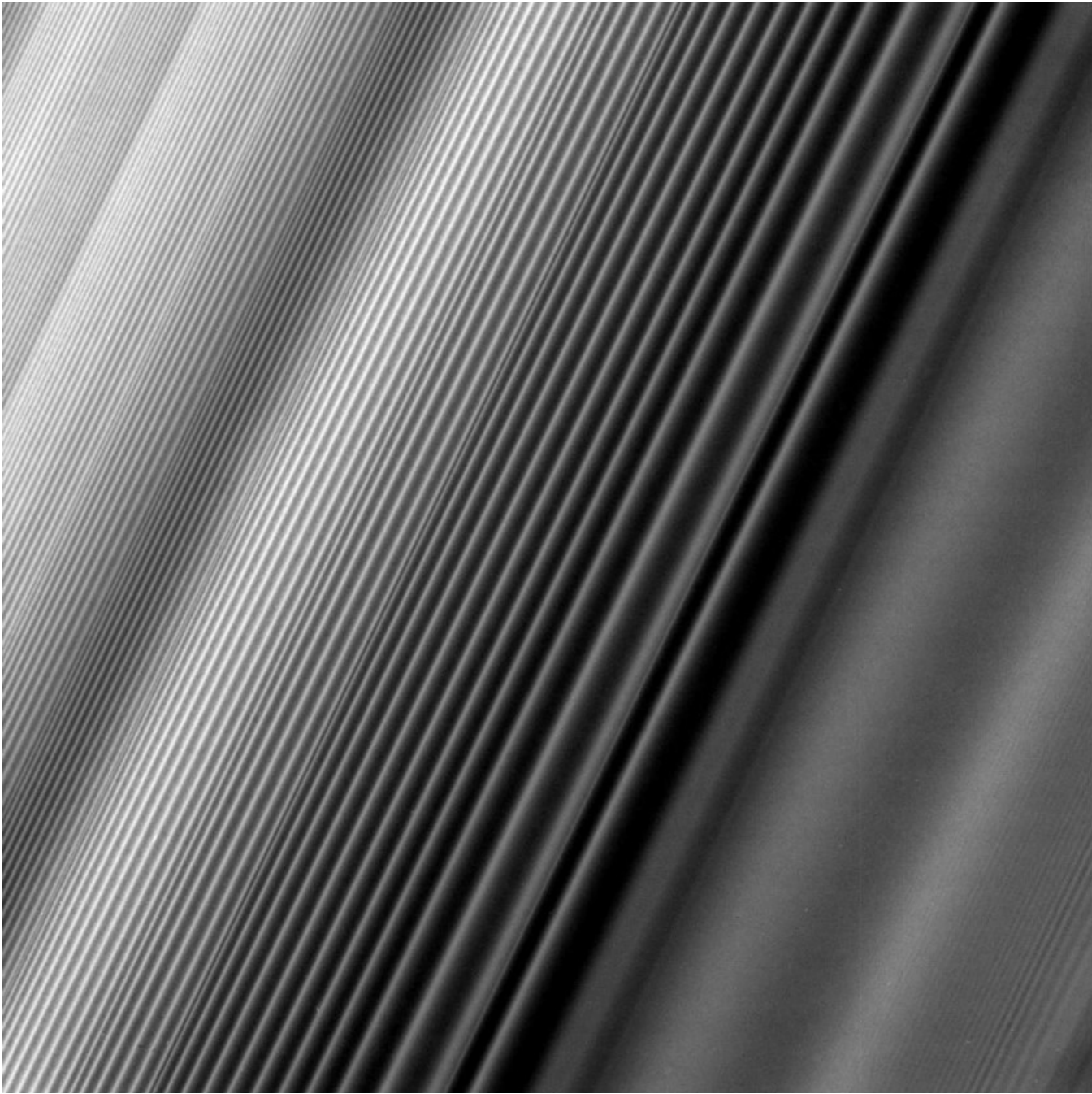
Topic: “Nucleosynthesis and the Early Chemical Evolution of the Milky Way galaxy”



The Sun's Crown: How is the corona heated to million-degree temperatures? Observations of very fine structure, taken during the August 21 solar eclipse, may help us find out. There are regions of the inner corona, visible during an eclipse, that even the satellites can't see. Specialized equipment, and very large cameras, can also give us data that is not captured with space satellites.

Not a Lot: The corona is so tenuous that a box, 100 miles on each side, would enclose just 1 pound of material! That's why, despite the multi-million degree temperatures, the total heat and energy density of the corona is no match for the sun's photospheric "surface".

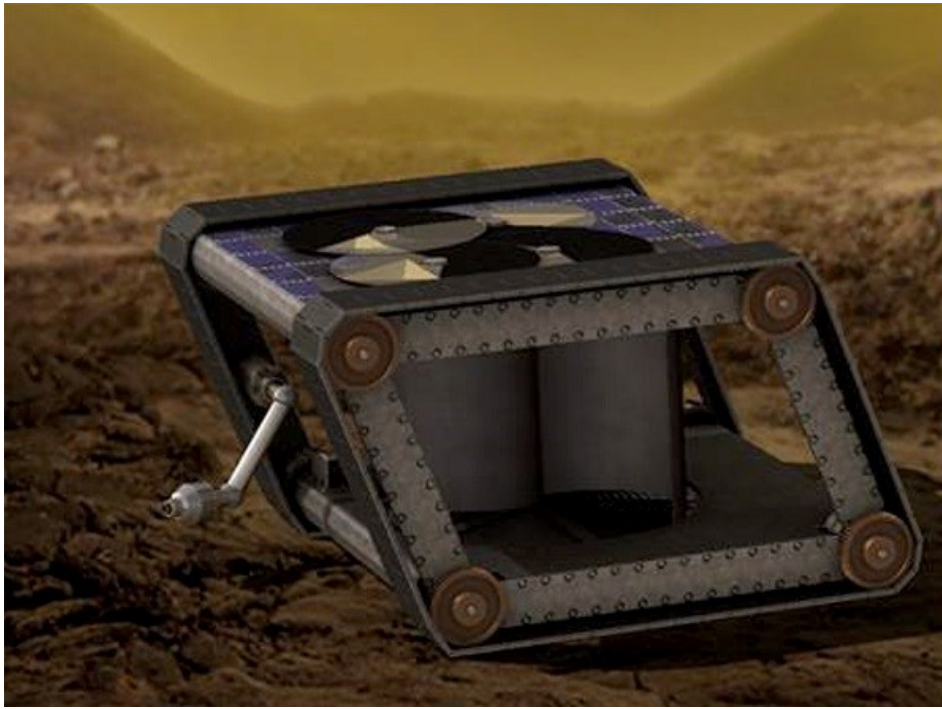




An Unfamiliar Ring To It: Cassini is passing between the planet and the inner edge of the rings on its final orbits. Look at this astounding view of the rings from inside! Great websites for an overview of Cassini's accomplishments and timings:

<https://saturn.jpl.nasa.gov/the-journey/timeline>

<https://saturn.jpl.nasa.gov/mission/grand-finale/cassini-end-of-mission-timeline/>



Roving Venus:

Whoever heard of a rover on Venus? Temperatures run to at least 864°F, pressures can exceed 95 atmospheres and there's a concentrated sulfuric acid cloud deck. A rover should melt, corrode and implode before it gets anywhere!

The Soviets were able to eventually get a few hardened, refrigerated, landers to survive for an hour or so. That has inspired JPL to look into a rover, of all things.

The design secret: Retro! Old fashioned springs and coils might just work where more modern electronics would fail—at least for a short while! See [Sky and Telescope](#) for more about this actual proposal.

Parting Shot (below):

This owl was watching the August 21 eclipse—or perhaps something nearby! Can you see it?

