



Club News

October, 2003

John Kocijanski, Editor

Jim McKeegan,	President
John Kocijanski,	Vice President
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An observation session was held on September 20th at Walnut Mountain. The sky conditions were good but seeing was hampered by the wind. Six people attended. Three planets were observed that evening. Mars was still large and bright in the southeastern sky. The south polar caps could still be seen easily as well as darker surface areas. It had diminished in apparent diameter since August. Uranus was seen as a small blue disk. It was found just above Mars in the southeastern sky. Neptune was seen as well. John Barbarite found it with his go to Meade twelve inch SCT. It appeared as a pale blue-green disk. We also observed the globular clusters M15 and M2. The small galaxy NGC 7331 was observed. It looked like a small version of the Andromeda Galaxy. Both the Dumbbell nebula (M27) and the Little Dumbbell nebula (M76) were observed. Both are the remains of sun sized stars. The twin lobes of M76 were easily seen.

The September 27th observation session was canceled due to poor weather.

The October club observation sessions are on the 18th and 25th.

Anyone interested in submitting an astronomical observation or photograph for the newsletter, please contact John at kocis@verizon.net.

Each month the photo section of our newsletter will highlight the telescopes and equipment of club members. If you have a photo of your scope or equipment and a brief description of it that you would like to contribute please send it to John at kocis@verizon.net.

The club has selection of astronomy books, a Macintosh computer with astronomy software, and a Meade eight inch reflector for members to borrow. Please contact John at 791-5240 or kocis@verizon.net if you are interested in borrowing any of these.

Astronomy News:

Here are some articles from various NASA sources that might be of interest.

Sick of Mars? Try Saturn
NASA Science News
September 17, 2003

Saturn is fast becoming an eye-catching sight in the morning sky. Jupiter's not bad either. September 17, 2003: It's the brightest thing in the night sky. It's historically close to Earth. It's a wonder to behold through a telescope. It's ... Mars.

If you've been listening to the news for the past two months you've undoubtedly heard a lot about Mars. Mars. Mars. Mars. And just maybe, you're getting sick of Mars. Good news: There are eight other planets in the solar system. And this week you can see the two biggest ones.

First, try Saturn.

You'll have to wake up early to do it, about 5 o'clock in the morning, but that's not much earlier than usual on a school day. Look high in the eastern sky. Saturn sits in the middle of the constellation Gemini. The planet is about three and a half times brighter than Castor and Pollux, Gemini's brightest stars, so it's easy to pick out.

When observing Saturn, a telescope is recommended. Not because Saturn is dim. It's because you'll want to see the planet's magnificent rings. They're almost twice as wide as Mars, an easy target for small telescopes.

While you're looking at Saturn's rings, consider this: they're a mystery. Astronomers aren't sure where they came from or how old they are. Some evidence suggests they formed only

a few hundred million years ago—a time when dinosaurs roamed the Earth. Before then Saturn might have been a ring-less planet. You can find out more by reading [Science@NASA's](#) “The Real Lord of the Rings.”

Next, look for Jupiter.

From Saturn, trace an imaginary line down toward the horizon. That leads you to Jupiter—a bright “star” shining through the rosy glow of sunrise. Jupiter has spent the past two months hiding behind the sun, but now it’s emerging from the glare.

Jupiter is five times brighter than Saturn—really eye-catching. Jupiter’s cloud belts are easy to see through a telescope, as are its four largest moons: Io, Europa, Ganymede and Callisto. Together they look like a miniature solar system.

Jupiter will be in the news this week because NASA plans to crash a spacecraft into the planet on Sept. 21st. The Galileo probe has been orbiting and studying Jupiter since December 1995. The craft has had some amazing adventures—dipping into volcanic plumes on Io, flying through Jupiter’s dark rings and radiation belts. But now its thrusters are nearly exhausted, and while ground controllers still have some control they’re going to send Galileo plunging into Jupiter where it will burn up like a meteor.

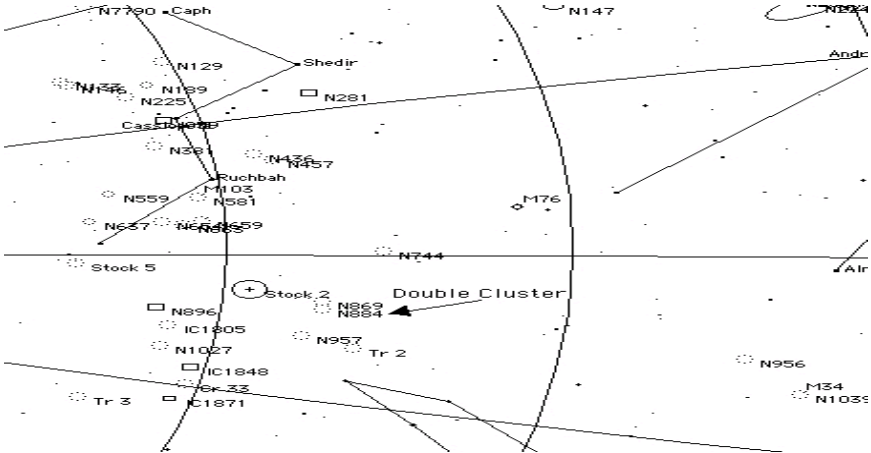
The move is designed to protect possible life on Jupiter’s moon Europa from terrestrial contamination. If Galileo is reduced to atoms in Jupiter’s atmosphere, it will never accidentally crash-land on Europa. No one on Earth will be able to see the impact, but it’s something to think about while you’re watching the giant planet this week.

If you don’t feel like waking up at 5 a.m. to see Saturn and

Jupiter, there's always Mars. It really is bright and wonderful—a joy to behold through a telescope. And you can behold it before bedtime. Convenient.

Just remember... it's not the only planet in the solar system.

<http://neo.jpl.nasa.gov/neo/report.html>



Observations and Photographs

This is a new section of our newsletter for members to submit their own observations and photographs. If you are interested in submitting an observation or photograph please contact John at kocis@catskill.net.

The following image shows the first crescent moon setting behind Walnut Mountain taken by John Kocijanski. It was taken with a Olympus D-550 digital camera through a 30mm eyepiece on a Stellarvue AT1010 78mm refractor.



BARLOW BOB'S CORNER

Barlow Bob is a member of the Rockland Astronomy Club.

These pictures for your newsletter / web page were taken by Rolando Chavez in Powder Springs, GA.

Subject: Mars & Saturn on 2003-09-13

Hello Bob, Thanks so much for the Rockland News Letter. I truly enjoyed seeing my image published.

Here's my latest with an 8" f/7 Edmund reflector from the 1960's. I only have an RA drive on this old scope and no "motofocus" so it's difficult to capture well focused images. patience is virtue though, and you need it for kind of task!

Thanks again for the Rockland News!
Sincerely, Rolando Chavez



NASA Space Place

(un)Fasten your Seatbelts

by Patrick Barry and Tony Phillips

The “fasten seatbelts” light turns off, and you get up to ask the stewardess for a pillow; it’s going to be a long flight. Only a kilometer ahead in the cloudless sky, a downward draft of sheering winds looms. When the plane hits these winds, the “turbulence” will shake the cabin violently and you could be seriously hurt.

You don’t know about those winds, of course, and neither does the pilot. Today’s weather satellites can’t see winds in clear skies: they rely on the motion of clouds to infer which way the winds are blowing.

”Believe it or not, their best indication of wind sheer right now is warnings from aircraft that have gone through it ahead of them,” says Bill Smith of NASA’s Langley Research Center.

But a new satellite technology being pioneered by NASA and NOAA could improve this shaky situation. It’s called GIFTS, short for Geosynchronous Imaging Fourier Transform Spectrometer. GIFTS is an infra-red sensor that can detect winds in cloudless skies by watching the motions of atmospheric water vapor. Water vapor is mostly invisible to the human eye, but it reveals itself to GIFTS by the infra-red radiation it absorbs.

Smith is the lead scientist for EO-3, a satellite designed to test out this new technology. Slated for launch in 2005 or 2006, EO-3 will carry GIFTS to Earth orbit where it can produce 3-dimensional movies of winds in the atmosphere below.

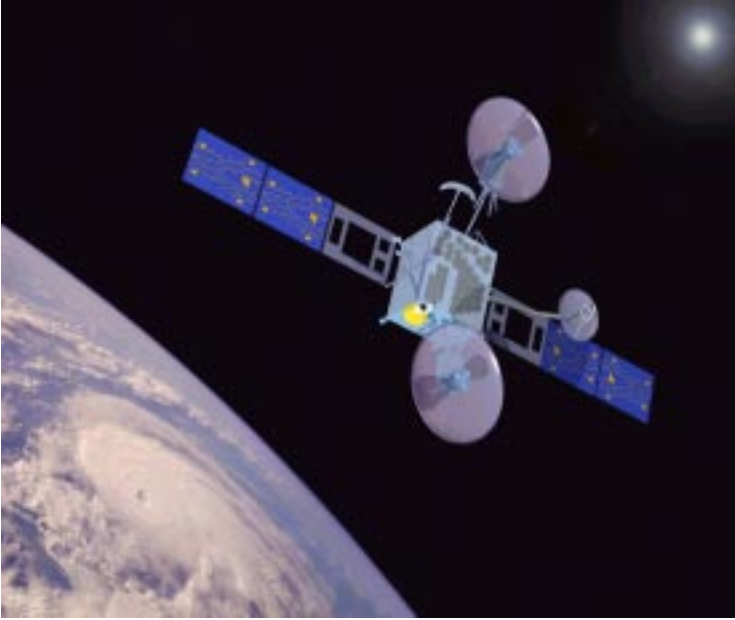
These wind data will not only improve safety, but also help the airlines save money. Knowing the winds along a flight route allows airlines to adjust the plane’s fuel load accordingly, thus reducing the weight that the engines must lift. Saved fuel means saved money and less pollution.

GIFTS can help planes avoid another potentially lethal problem, too: Ice forming on their wings. If a cloud contains “supercooled” water droplets whose temperature is below freezing, those droplets will form ice on the wings of planes that pass through it. By looking at about 1700 different frequencies of the light coming from clouds, GIFTS can measure the temperature of the cloud top and determine whether it contains water droplets that could cause aircraft icing. With information from GIFTS in hand, pilots can simply avoid clouds that appear dangerous.

Once EO-3 demonstrates the accuracy of GIFTS, airlines will be able to capitalize on this potential to make flying a cheaper and safer experience.

Learn more about the GIFTS instrument and other advanced technologies being tested on the EO-3 mission at nmp.jpl.nasa.gov/eo3. Kids can go to The Space Place to play a data compression game related to EO-3 at spaceplace.nasa.gov/eo3_compression.htm .

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Note to

editors: Image caption:

EO-3, carrying the GIFTS instrument, will be in a geosynchronous orbit for extended monitoring of large regions of our planet and enabling observation of weather patterns at higher resolution than possible with existing geostationary satellites.

This image is available at http://spaceplace.nasa.gov/astro_clubs/EO3_rendering.jpg

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Bud Wertheim, Treasurer

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