



Monthly Notices of the Everglades Astronomical Society



Naples, FL
April 2009

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Presidents Message

April is here and this could be the last of the clear nights. May can go either way but June starts the afternoon thunder storms. Then it can be tough to get clear skies before midnight. So don't miss Saturday nights at the Fakahatchee, on April 18th and the 25th.

Thursday night April 23rd, Carol Stewart will drive from Fort Myers to speak with us about the Kepler Project. I think you will find this very interesting.

On Saturday April 18th we will celebrate Earth Day, along with our club celebration of Astronomy Day. I have not received our confirmation yet but we will set up a table and solar scopes at the Conservancy. Those wishing to help should be there at 8:00am.

I hope to see you at the Norris Center on the corner of 8th & 8th at 7:00pm on Thursday April 23rd.

Good skies – clean glass.
Co-President
Rick Piper

Astronomical Trivia Question of the Month

The star α Librae is one of a couple of hundred stars that actually has a name. It is known as:

- Alphard
- Zubenelgenubi
- Rasalgethi
- Thuban

Answer on next page.

Next Meeting

April 23, 2009
Time 7:00 – 9 pm
At the Norris Center

Sky Events

Apr 17 – 3rd Quarter Moon
Apr 22 – Lyrid Meteor Shower peaks
Apr 25 – New Moon
Apr 26 – Mercury at greatest eastern elongation
May 1 – 1st Quarter Moon
May 4 – Eta Aquarid meteor shower peaks
May 9 – Full Moon
May 17 – 3rd Quarter Moon

Dates for the “Fack”

Usually the best times to go out to the Fakahatchee Strand viewing site are moonless nights. Below is a list of upcoming Saturday nights that you will often find fellow club members out there enjoying the skies with you (weather permitting).

Date	Moonrise	Moonset
April 19	3:59 AM	
April 24		7:43PM

The Greek Alphabet

Let's face it; anyone who is really interested in Astronomy sooner or later needs to learn the Greek Alphabet. During early modern times when the first really through mapping of the heavens was begun, a way was needed to identify one star from all the others. Since there were relatively few actual star names compared with the number that needed to be mapped, Johann Bayer decided to designate each star by a letter of the Greek alphabet followed by the constellation it resided in. Bayer called the brightest star in each constellation alpha. Thus the brightest star in the constellation Centaurus became “Alpha of Centaurus” or since Bayer preferred Latin instead of English, the constellation name takes the genitive case and we have Alpha Centauri or in shorthand α Cen. If you are uncertain how to turn a constellation name into the genitive case, you should consult a table, (maybe an idea for another article someday,) but typically if the constellation ends with a

“us” an “i” is substituted and if it ends in a vowel an “ae” is used. For example- β Andromedae.

α	alpha	ι	iota	ρ	rho
β	beta	κ	kappa	σ	sigma
γ	gamma	λ	lambda	τ	tau
δ	delta	μ	mu	υ	upsilon
ε	epsilon	ν	nu	φ	phi
ζ	zeta	ξ	xi	χ	chi
η	eta	ο	omicron	ψ	psi
θ	theta	π	pi	ω	omega

The Greek Alphabet (Small Letters)

Bayer followed no consistent pattern with the other stars in the constellation; often he ordered them from brightest to dimmest, sometimes in order of increasing right ascension, other times no obvious pattern at all.



Apollo Upgrade

The flight computer onboard the Lunar Excursion Module, which landed on the Moon during the Apollo program, had a whopping 4 kilobytes of RAM and a 74-kilobyte “hard drive.” In places, the craft’s outer skin was as thin as two sheets of aluminum foil. It worked well enough for Apollo. Back then, astronauts needed to stay on the Moon for only a few days at a time. But when NASA once again sends people to the Moon starting around 2020, the plan will be much more ambitious—and the hardware is going to need a major upgrade. “Doing all the things we want to do using systems from Apollo would be very risky and perhaps not even possible,” says Frank Peri, director of NASA’s Exploration Technology Development Program. So the program is designing new, more capable hardware and software to meet the demands of NASA’s plan to return humans to the moon. Instead of staying for just a few days, astronauts will be living on the Moon’s surface for months on end. Protecting astronauts from harsh radiation at the Moon’s surface for such a long time will require much better radiation shielding than just a few layers of foil. And rather than relying on food and water brought from Earth and jettisoning urine and other wastes, new life support systems will be needed that can recycle as much water as possible, scrub carbon dioxide from the air without depending on disposable filters, and perhaps grow a steady supply of food—far more than Apollo life-support systems could handle. Next-generation lunar explorers will perform a much wider variety of scientific research, so they’ll need vehicles that can carry them farther across the lunar surface. ETDP is building a new lunar rover that outclasses the Apollo-era moon buggy by carrying two astronauts in a pressurized cabin. “This vehicle is like our SUV for the Moon,” Peri says. The Exploration Technology Development Program is also designing robots to help astronauts maintain their lunar outpost and perform science reconnaissance. Making the robots smart enough to take simple verbal orders from the astronauts and carry out their tasks semi-autonomously requires vastly more powerful

computer brains than those on Apollo; four kilobytes of RAM just won’t cut it. The list goes on: New rockets to carry a larger lunar lander, spacesuits that can cope with abrasive moon dust, techniques for converting lunar soil into building materials or breathable oxygen. NASA’s ambitions for the Moon have been upgraded. By tapping into 21st century technology, this program will ensure that astronauts have the tools they need to turn those ambitions into reality.

Learn more about the Exploration Technology Development Program at www.nasa.gov/directorates/esmd/aboutesmd/acd/technology_dev.html. Kids can build their own Moon habitat at spaceplace.nasa.gov/en/kids/exploration/habitat.

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



The Chariot Lunar Truck is one idea for a vehicle equal to the lunar terrain. Each of the six wheels pivot in any direction, and two turrets allow the astronauts to rotate 360°.

Answer to Trivia Question

The answer is b, Zubenelgenubi. The name is a corruption of Arabic and means “Southern Claw of the Scorpion” In ancient times Scorpius was considered much larger and Libra formed the claws. At some later point in time Libra was split off into its own constellation. The other stars listed do exist: Alphard is α Hya, Rasalgethi is α Her, and Thuban is α Dra.

While we are on the subject of names please be aware there are scams out there which would have you believe you can name a star for yourself. Don’t believe it! By international agreement only the International Astronomical Union can name celestial objects – and they do not name stars after individuals.