

Coal Sack

NEWSLETTER OF THE SOUTHERN CROSS ASTRONOMICAL SOCIETY, INC., MIAMI, FLORIDA

BRINGING ASTRONOMY TO YOU SINCE 1922

OCTOBER 2007

VOICES OF JUPITER SCAS October Public Program



Lester F. Shalloway

FRIDAY, OCTOBER 19th, 8 pm, SOUTHERN CROSS proudly welcomes a return engagement with professional musician/ FIU astronomy instructor FRANCISCO MULLER who will present VOICES OF JUPITER---a premier program revealing sounds from the King of the Planets---never heard before! Using his portable keyboard FRANCISCO will take us to the gigantic planet to listen to its `heartbeat' encased by bands of ferocious hurricanes plus Jupiter's relationship with the Sun!

A charming and creative inventor/scientist, FRANCISCO keeps a very busy schedule. He often teaches Physics at Miami-Dade College---and Astronomy at

FIU this semester. Last Spring he attended a national physics conference at the University of Connecticut where he presented his latest experiment of electromagnetic induction--obtaining induction and forces in a conductor totally isolated from the external magnetic field. Recently he attended a Cosmology Conference in Illinois.

Some may recall FRANCISCO's stunning FIU lecture last year that highlighted astronomy discoveries and inventions by religious leaders throughout the Renaissance, concluding with spellbinding musical highlights of Beethoven's soaring 9th Symphony `Ode to Joy.'

FRIDAY, OCTOBER 19th, bring friends to enjoy our very creative and delightful guest speaker FRANCISCO MULLER and learn the "sounds of our solar system" in the FIU Astronomy Center, CP-145, Physics Building, University Park.

Meet the "brightest stars in town" at our FREE astronomy programs include: prizes, food buffet, lively discussions and opportunity to meet our line up of distinguished speakers. Park on campus, SW 109th Ave./ SW 8th St. directly opposite the FIU Physics Building. 305-661-1375 or www.sca.org.

■ Coal Sack edition in color on our Website: www.scas.org. Membership and Coal Sack links have been corrected. For posting problems contact SCAS President or Editor. WINTER STAR PARTY REGISTRATION closes 11/15/07. Check the Winter Star Party link on our Website for late fees and Registrar contacts.

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THE COAL SACK

The Coal Sack is a monthly publication of
The Southern Cross Astronomical Society, Inc.
Miami, Florida

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Material for the Coal Sack must be submitted to the Editor by the 25th of the month prior to publication. Please use e-mail when possible.
Change of Address: Please notify Managing Editor Barb Yager with change of address or other membership information.

SOUTHERN CROSS STARGAZER

Check the larger SOUTHERN CROSS STARGAZER in the Sunday Tropical Life section M. 23rd year in the Miami Herald by Barb Yager.

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CLASSIFIEDS

GREAT EQUIPMENT SALES!

Super Opportunity for the family or novice astronomer! Meade ETX-70 with all standard equipment and some extras for only \$225. Also---Refractor -80mm short tube. \$100. Contact Charlie: cmperillo@bellsouth.net for details.

GREAT SALE!

C6-RGT and xt10 w/ solar filter. Contact Carlos: Cardil1947@yahoo.com

SUPER MEADE SALE!

Meade LX200 EMC 12" SCT in new condition with original equipment--used 3 times--always stored in A/C in Coral Gables home. Sale includes: handheld keypad Electronic Command Center w/digital display; PPEC Smart Drive; 7 speed drive control on both axes, Go To Controller; 64,340 objects onboard; celestial software library; power adapter; 2" diagonal mirror w/ 1.25" adapter; T-adapter; 8x50mm viewfinder; eye-pieces: Super Plossl 9.7mm series 4000, 12.4mm and 26mm; color filters and more! For more details or appointment, call Joe Perez: 305-979-8659 or budmic1@aol.com. **Reduced to \$3,000.00 O.B.O.**



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MEMBERS IN THE NEWS

SERGIO FIGUERA has been zipping around the country as usual: Costa Rica for 2 weeks in mid-August--a commercial photographer for a wedding at Disney World--a daytime Kiddie football game--a Sweet Sixteen Party that night--back to Disney--photographed a Dolphin's football game--works a 12-hr. shift at a Hialeah recording studio--and had a wild few hours when Police were trying to locate that criminal escapee in his neighborhood in S. Dade last month. **TONI DEVESON**, Co-Editor and web designer should open a Farmer's Market! Her family recently enlarged their vegetable garden on their 1/2 acre in S. Dade. Her crop is producing gorgeous watermelons and butternut squash. Tomatoes, beets, carrots and other produce will go into the ground early this month. No E.coli in that garden! They'll celebrate their Canadian Thanksgiving with grandparents in the far North this month. SCAS Librarian and entrepreneur **MOHAN SUNDARAM** was called by NASA's

Lockheed- Martin to Altameda, CA, to create solutions troubleshooting computer systems, order robotic spare parts, database, etc. He plans to tour JPL in nearby Pasadena during his trip. **JOSE CARDOZO** is the proud owner of a new CCD camera for his `scope (coached by SCAS member **DR. BILL WILLIAMS**) ready to go when he returns from Argentina. **BRETT & COLLEEN SHINN** are having overwhelming success with unadvertised SCAS public star parties in Biscayne Park, N. Miami where they set up in between weekend rainstorms! President **LESTER SHALLO-WAY** and **MIKE SMITH** have almost completed the stunning remodeled SCAS Information Booth & Photo Gallery opposite the waterfall at the MetroZoo entrance. The a/v segment connected to the TV is the final addition to complete the year-long project. Last year the booth was donated to SCAS by the Zoological Society.

-Barb Yager

SADOWSKI PARK

The Palmetto Bay Council held a public meeting at the Deering Visitors Center Monday evening October 1st. Sadowski Park Landscape Improvement was first on the agenda. Miami-Dade Parks Planning Mgr. Barbara Folsey presented her Power Point program illustrating future plants and 370 trees that will fill the lowland between the C-100 Canal and our SCAS Telescope Deck. Those include: Firebush, Pond Apple, Paurotis Palm, Sabal Palm and Oaks. She added that funding is now available for planting and maintenance of that area and future volunteer days will be scheduled by N.A.M. and E.E.L. I reminded Joe McGuire,

Mgr. of Natural Areas Management, a very dense foliage light barrier is needed north of our telescope deck to block light trespass from homes across the canal and the increasing Miami sky glow. The Parks Construction Dept. has already marked off the future 10 ft. concrete extensions, east and west sides of the deck, to allow `elbow and tripod room' for our 18" SCAS Dob and new 11" diameter telescopes added by our SCAS Saturday Nite Live Team. SCAS members **MARGARET MANNCHEN**, **IRENE STEVENS** and **BARB YAGER** attended.

-Barb Yager

October Evening Skies

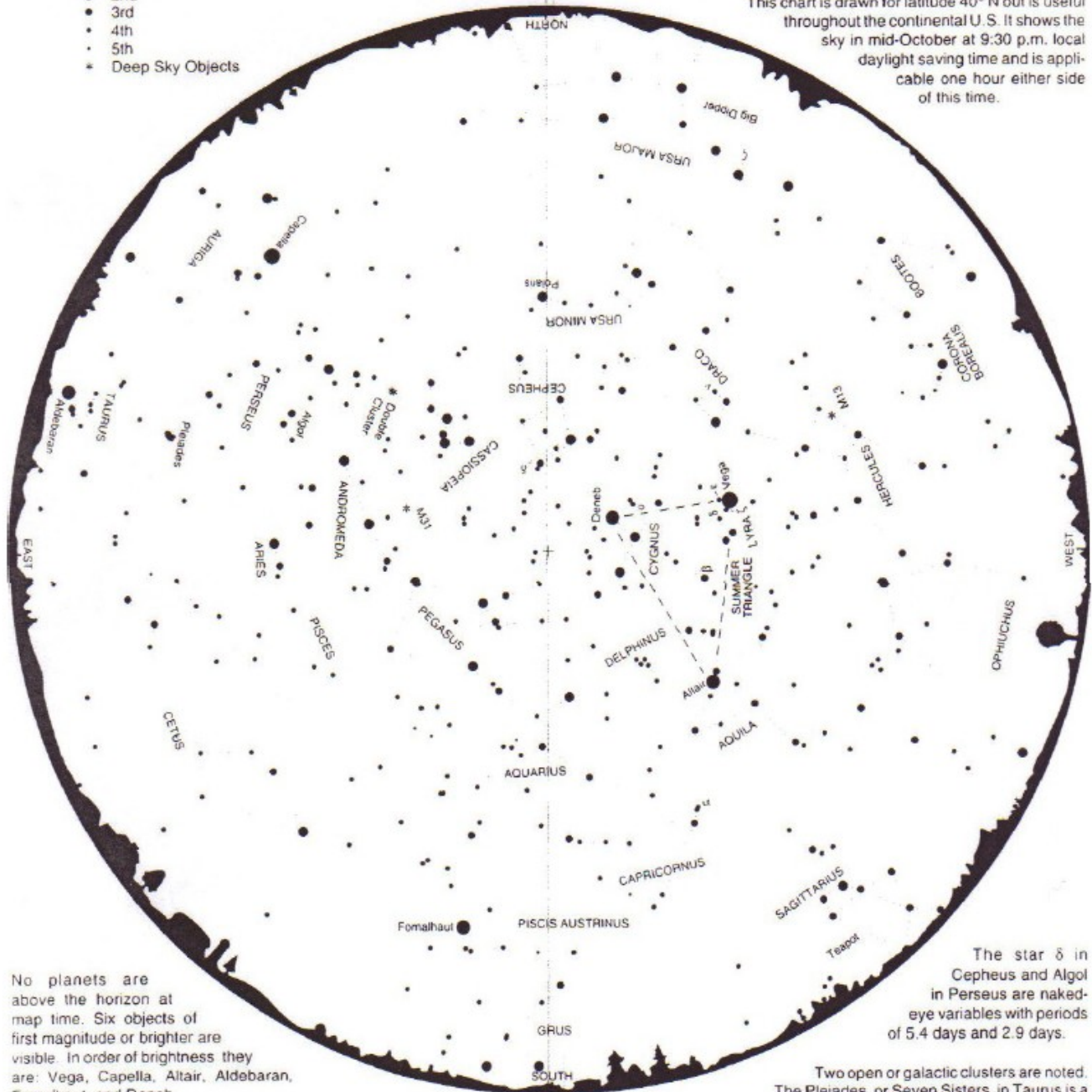
LEGEND
Star Magnitudes

- Zero or brighter
- 1st
- 2nd
- 3rd
- 4th
- 5th
- * Deep Sky Objects

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Subscription: \$11.00 per year, from *Sky Calendar*, Abrams Planetarium, Michigan State University, East Lansing, MI 48824-1324.

This chart is drawn for latitude 40° N but is useful throughout the continental U.S. It shows the sky in mid-October at 9:30 p.m. local daylight saving time and is applicable one hour either side of this time.



No planets are above the horizon at map time. Six objects of first magnitude or brighter are visible. In order of brightness they are: Vega, Capella, Altair, Aldebaran, Fomalhaut, and Deneb.

Our usual monthly maps are designed for stargazers just beginning to find their way around the sky. This month's map is useful for serious stargazing from dark locations. It contains many more stars, inclusive to magnitude 4.5, plus some fainter stars as needed to complete patterns or assist in locating special objects.

A selection of double stars (labeled with Greek letters) and "deep sky objects" is also plotted. Most are visible to the unaided eye or binoculars.

The double stars, in order of decreasing angular separation, are ζ UMa, δ Lyr, α Cap, ο Cyg, ε Lyr, ν Dra, ζ Lyr, β Cyg

The star δ in Cepheus and Algol in Perseus are naked-eye variables with periods of 5.4 days and 2.9 days.

Two open or galactic clusters are noted. The Pleiades, or Seven Sisters, in Taurus is a treat for unaided eye and binoculars. The Double Cluster in Perseus is a fine object if the sky is dark.

M 31 is the famous Andromeda Galaxy, a collection of 300 billion stars located 2 million light years from Earth. It is barely visible to the unaided eye as a smudge of light. Binoculars in a dark location reveal an impressive oval.

OCTOBER ALMANAC AT A GLANCE

LAST QTR. MOON	Wednesday 3rd	6:06 a.m.
NEW MOON	Thursday 11th	1:01 a.m.
FIRST QTR. MOON	Friday 19th	4:33 a.m.
FULL HUNTER'S MOON	Friday 26th	12:52 a.m.

(closest Full Moon of the year - 221, 676 miles from Earth)

SUNRISE: 7:17 a.m. (mid-month) SUNSET: 7 p.m.



EVENING SKIES:

Tiny MERCURY descends onto the western horizon. Golden JUPITER glows above huge Scorpius sinking low in the SW. Bright Antares (heart of Scorpius) sparkles below JUPITER. The tilted Sagittarian Teapot 'pours' onto the Scorpion's stinger tail in the south. They set in SW by mid-evening. Dim blue NEPTUNE, in Capricornus, sails across the south. Blue-green URANUS, in Aquarius, drifts across the SE. The star Fomalhaut sparkles below URANUS. Great Square of Pegasus rises higher in the east. By late evening, Aries the Ram leads the Seven Sisters (Pleiades star cluster) above the eastern horizon. Queen Cassiopeia, King Cepheus and Andromeda reign in the north. Vega leads the Summer Triangle into NW. Cygnus the Swan becomes the Northern Cross within the Triangle. The Big Dipper lies near the NW horizon. Arcturus, Herdsman, sparkles in the west. Before midnight- winter constellations rise in the east. Bright Capella guides Auriga,

Charioteer, into the NE. Taurus the Bull climbs higher in the east. Bright Aldebaran lies in the V-shaped Hyades cluster. The Gemini Twins bring ruddy MARS higher in NE.

2nd—Before Midnight, the MOON floats near MARS in east.

9th—Slow DRACONID METEORS- radiate from Draco the Dragon in the north.

12th—At dusk, young MOON rises briefly below MERCURY in west.

17th—The MOON drifts across the Sagittarian Teapot.

20th—Early ORIONID METEORS may be visible.

27th—At dusk, the bright past-full MOON nudges the Seven Sisters in NE.

MORNING SKIES:

Blazing VENUS rises in the east by 5 a.m. Silver-ringed SATURN lies close to VENUS. The star Regulus, in Leo the Lion, stays above the planets all month.

2nd—At dawn, the MOON floats

near MARS overhead.

4th—The waning MOON drifts below the Gemini Twins.

5th—The MOON lies near the Beehive star cluster in Cancer.

7th—The MOON meets SATURN & VENUS in the east.

14th—By 6 a.m. VENUS glows about 3 degrees from SATURN.

21/ 22—ORIONID METEORS radiate from Orion in the south.

Glittering debris from Comet Halley produce fast, bright ORIONIDS.

30th—MOON floats between MARS and the Gemini Twins.

31st—At dawn, MERCURY rises in the east beside Spica in Virgo.

Winter constellations arch overhead: westbound Seven Sisters cluster Taurus the Bull-Hyades cluster Gemini Twins overhead Orion and his Big Dog in the south. Procyon, Little Dog in high in SE. Leo the Lion in east. Big Dipper rises in NE. Capella in Auriga, Charioteer, in the north.

STAR LIGHT STAR BRIGHT

By Barb Yager

Past President and Life Member of the world-renowned Southern Cross Astronomical Society, SCOTT IRELAND is rapidly rising to blazing heights of fame as a very talented astro imager, photographer, author, lecturer, seminar director and astronomer. Our soft-spoken SCAS leader often guides our Board of Directors in and out of business transactions and coordinates imaging projects of deep sky objects with SCAS President LES-TER SHALLOWAY, DR. DON PARKER and V.P. TIM KHAN to produce professional images of magazine quality.

SCOTT authored the reference book *PHOTOSHOP Astronomy* by publishers Willmann-Bell, Inc. 2006, the bible for many astrophotographers. Using the Adobe Photoshop CS-3 software for processing, SCOTT produces incredible photos of erupting volcanoes, wildlife, solar eclipses, galaxies, comets, asteroids, planets and birds! His stellar and asteroid occultations have been published in *Icarus--The International Journal of Solar System Studies*, his stunning photos often grace the pages of national magazines and books: *Sky & Tele-*

scope, *Odyssey*, *Mercury*, *Peterson Field Guide to Stars & Planets*, *Introduction to Observing and Photographing the Solar System* and the *Guide to Amateur Astronomy*.

Scott was a member of National Geographic's film crew in Costa Rica that produced a documentary: *Volcano Hunters*. His photos were among the winners of an international competition published in the annual *Nature's Best Magazine* and displayed at the Smithsonian Museum in 2005. For scientific use, SCOTT was recognized by University College in London for his magnificent photos of the Souffriere Hills volcano erupting in Montserrat and by the Smithsonian Global Volcanism Program for his images of the Mt. St. Helens eruptions in 2004. From his imaging lab in his home at Plantation, Florida SCOTT sends a beacon of knowledge and incredible beauty to governments, universities and his friends in SCAS.

Excerpts from Natural Wonders of R. Scott Ireland, Adobe Systems, Inc.

ORIONID METEOR WATCH

SATURDAY, OCTOBER 20th, WEATHER PERMITTING, SCAS Saturday Nite Live Team will hold a public ORIONID METEORWATCH, 8-11 pm, Miami-Dade Bill Sadowski Park & Nature Center, SW 176th St./SW 79 Ave., 1/2 west of Old Cutler Road. FREE. Early ORIONIDS may be visible late evening as the radiant Orion rises in the east. The max activity will occur about 3 a.m. until dawn when Orion is highest in the south. Glittering debris from long-gone Comet Halley zip at 41 miles per/second with long, colorful trains. About 25 ORIONIDS per/ hour may be

visible from a clear, dark sky site.

Enjoy a serene, natural ambience, bring friends, folding chairs, blankets, snacks, bug cream, jacket and hot beverage. Alcohol, pets, car lights/ white flashlights/ lasers, litter and loud noises are PROHIBITED from the Nature Center. SCAS hi-tech equipment will focus on the First Quarter Moon, Jupiter, Mars, Neptune, Uranus, beautiful star clusters in the south, Andromeda Galaxy in NE, Ring Nebula and double stars in NW. For details: SCAS Hotline: 305-661-1375.

SPACE NEWS

NEW STAR CLUSTER

Buried in the Carina spiral arm of our Galaxy, the Hubble Space Telescope spotted a new massive star cluster 20,000 light years from Earth. Embedded in a 'stellar nursery' NGC- 3603, astronomers believe that nebula has enough gas and dust to form 400,000 massive hot stars similar to our Sun. Measurements taken by the HST and the VLT in Chile reveal the heaviest star in the center is as massive as 114 Suns. Possibly two stars overlap which create a blurring of light in the high tech views of this massive globular star cluster.

-Space.newscientist.com 10/03/07

EARTH-II

Astronomers using NASA's infra red Spitzer Space Telescope may be observing another Earth in the making! The distant young star, only 10 million years old, is the right age to produce orbiting rocky planets. HD 113766 is a star, slightly larger than our Sun, wearing a dust belt around its middle that is expected to pro-

duce satellites from its terrestrial habital zone. Enough material exists in its dust belt to form a planet estimated at least the size of Mars. An immature star would contain mostly gas and produce gas filled planets like Jupiter and Saturn; an aging central star disk would have rocky planets formed long ago.

-Space.com 10/03/07

A LOST TAIL

Comet Encke cruised too close to the Sun--inside Mercury's orbit! NASA's STEREO spacecraft recorded a gigantic coronal mass ejection (CME) blasting off the Sun's surface 4/20/07. A huge cloud of charged particles blasted off the Sun at supersonic speed and zapped the tail off Comet Encke passing nearby! Sun grazers and large comets with long tails often get their icy tails melted by the Sun's heat (Halley's comet closest to Earth 4/ 86) Astronomers recently observed that CME had actually chopped off Comet Encke's tail--the first time a collision was observed of a CME destroying a comet's tail !

-Space.newscientist.com 10/03/07

EARTH FROM ABOVE



Arenal Volcano at Sunset. *Scott Ireland*

FRIDAY, NOVEMBER 16th, 8 pm, SCAS Past President SCOTT IRELAND, renowned astro-imager, lecturer, research astronomer, workshop direc-

tor, volcanologist and super friend of many many years, will present EARTH FROM ABOVE--a collection of incredible views from space--his images of erupting volcanoes in Costa Rica last summer--and latest Mars images from Dr. Don Parker premiering the Mars close encounter in December 2007. The FREE astronomy public program, hosted by SCAS Astros include prizes, food buffet, lively Q & A in the FIU Astronomy Center, CP-145, Physics Building, University Park, SW 109th Ave./SW 8th St. Park on campus opposite the FIU Physics Building. 305-661-1375.

