



COAL SACK

EDUCATING SOUTH FLORIDA SINCE 1922

JANUARY 2007

IN SEARCH OF DARK SKIES

Observatories Around the World

January Public Program

FRIDAY, JANUARY 19th, 8 pm, SCAS is proud to present our distinguished speaker, dear friend and renowned astronomer, DR. TERRY D. OSWALD, who will guide us "IN SEARCH OF DARK SKIES---Observatories Around the World". Join us for a unique tour of astronomical observatories that are sprouting up around the globe, some light pollution updates, and a visit to the new observatory at his Florida Institute of Technology campus, Melbourne. Is FIU next???

Free astronomy programs, hosted by the renowned FIU and Southern Cross Astros, are held in the large lecture hall, CP-145, in the FIU Chemistry-Physics Building, University Park, the "major science research campus of South Florida"

where you learn the latest astronomy news first!

DR. OSWALD, Director of the Dept. of Physics and Space Sciences, is Associate Provost for Research at Florida Institute of Technology. He received his

Ph.D in Astronomy at Ohio State University where he specialized in studies of binary star systems, stellar evolution, minor planets and comets.

Since arriving at Florida Tech in 1982, DR. OSWALD has taught astronomy and physics while continuing his primary research in collapsed stars, called white dwarfs. His research often takes him to ground-based observatories at Kitt Peak National Observatory, near Tucson, Arizona--Cerro Tololo Inter-American Observatory atop the Andes of N. Chile-- Mauna Kea Observatory in Hawaii--and space observatories: NASA's Hubble Space Telescope and the Far Ultraviolet Spectroscopic Explorer satellite.

DR. OSWALD is the founding Chairman of the Southeast Association for Research in Astronomy, a consortium of ten universities which operates an automated 0.9 meter telescope at Kitt Peak.

He is former director of the S.A.R.A. summer internship program, which brings undergraduate

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FOR SCAS/NASA NEWS
CALL THE 24-HOUR
HOTLINE:
305 661-1375
OR VISIT THE
NEW SCAS WEB SITE:
HTTP://WWW.SCAS.ORG



Mauna Kea Observatories, Hawaii. Photo from <http://www.ifa.hawaii.edu/tiko/>

The Coal Sack

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Change of Address: Please notify Managing Editor Barb Yager with change of address or other membership information.

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Check the larger SCAS STARGAZER now in the Thursday Miami Herald's Tropical Life section, by Barb Yager, now in its 23rd year!

CLASSIFIED

NEW SUPER SALE!

20" f/5 custom-built Dob with lots of bells and whistles, including Go-To and its own enclosed utility trailer. \$10,000. doo. It will be on display and can be picked up at the Winter Star Party. Contact Charles Perillo for details, photos or to check it out. cperillo@bellsouth.net 954-816-3654.

SUPER SALE!

8" Meade LX200 telescope. Excellent condition. For details call Jose: 305-951-2912.

10 ft/ DOME FOR SALE

A 10 ft. Technical Innovations fiberglass dome in excellent condition, with 2 motors, control system, computer with Sky6 and Dome control software included. Base ring to mount onto any flat surface. (about \$10,000. new) ONLY \$2500. mikepalemiti@bellsouth.net

THE ART OF COLLECTING METEORITES

A fantastic chronology based on true adventures by author Kevin Kuchinka, Ft. Myers, FL. His travels, friendships and search for specific rare meteorites in South America, advice for collecting and preserving the precious items and fraud prevention with dealers is crucial information to a meteorite hunter/collector. For only \$10. the 200 pg. journal contains ___ color photos to help you, or a friend, begin a new hobby. Great gift suggestion! Order now: SCAS HotLine: 305-661-1375.

2007 WINTER STAR PARTY TICKET NEEDED

I need a Winter Star Party ticket! Please contact SCAS member Jose M. Cardozo, Miami, FL 786-301-7461 ASAP!

Send in your classified ads to PegasusLM@earthlink.net or BarbYager@aol.com

MEMBERS IN THE NEWS

SELWYN & MARY MALIN, retired residents of Ramrod Key, members of FKAC and SCAS for many years, recently moved to their summer apartment in New York City. SELWYN donated his custom-made 12" Dob and astronomy items to the Florida Keys Astronomy Club....SERGIO FIGUERA, recording studio engineer, enjoyed a whirlwind 2-week vacation out west: after arriving at Los Angeles airport December 1st, he visited the newly renovated Griffith Observatory, next the Hale 200" telescope at the observatory atop Mount Palomar, then to Kitt Peak National Observatory near Tucson, AZ where he took photos of the S.A.R.A. telescope, on to Meteor Crater, Grand Canyon, Monument Valley, Lowell Observatory, Astronomers Inn at Benson, AZ, back to San Diego, then visited the Meade factory, the San Diego Zoo and Wild Animal Park....BILL WILLIAMS, M.D. will soon begin construction on his Chiefland "home-observatory"....Athletic Ace MOHAN SUNDARAM (enjoys kayaking and water-skiing) spent a week in December snow skiing near Seattle. He welcomed 2007 with a smashed knee and elbow from dirt-bike racing in Oleta State Park, N. Miami Beach.

Congratulations to Tippy and Patty D'Auria on their new home in Ocala. Hey, where's the 'scope?



Front House

UPCOMING EVENTS

12th- FIU WELCOME BACK STAR PARTY -8-11 pm, Telescope Deck or CP-145, University Park, SW 109th Ave./SW 8th St. Free.

19th- SCAS public program: "Searching for Dark Skies—Observatories Around the World" 8 pm, FIU Astronomy Center, CP-145, Physics Bldg. University Park. Free.

26th- Dr. James R. Webb will present BLACK HOLES PRIMER, 8 pm, in CP-145, FIU Physics Bldg. University Park. Free. Call FIU: 305-348-3964.

26th- SCAS Tropical Star Party & B.Y.O.Picnic, S W pavilion by the Bay, Cape Florida State Park, near Key Biscayne Lighthouse, 5-9 pm. (if weather permits) Admission: \$3. per/car 5-8 pm. Park gate closes at 8 pm.

Check SCAS/FIU/NASA Events on the SCAS 24-hr. HotLine: 305-661-1375 and SCAS Stargazer in Tropical Life of the Miami Herald, Thursdays.

DARK SKIES...

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students from around the U.S. to the S.A.R.A. Observatory to do astronomy research. He also served a two-year assignment at the National Science Foundation as Program Officer for Stellar Astronomy and Astrophysics, has authored over 100 scientific articles and is a national public lecturer for the prestigious American Astronomical Society.

Please meet our distinguished and brilliant speaker who will be delighted to answer your questions during the discussion period following his exciting astronomy program FRIDAY, JANUARY 19th. Our free SCAS astronomy programs include a food buffet, astronomy information, prizes, SCAS membership applications, lively discussions, and advice from friendly SCAS Astros re: astro-imaging, observing, equipment and software programs in the FIU Astronomy Center CP-145. SCAS members have access to the SCAS Library. Use the campus parking lot, SW 109th Ave./SW 8th St opposite the FIU Physics Bldg., University Park. Call SCAS HotLine: 305-661-1375 or access www.scas.org

JANUARY ALMANAC AT A GLANCE

FULL MOON Wednesday, 3rd 8:57 a.m.
 LAST QTR. Thursday, 11th 7:45 a.m.
 NEW MOON Thursday, 18th 11:01 p.m.
 FIRST QTR. Thursday, 25th 6:01 p.m.
 Latest sunrise: 7:22 a.m. January 5th.
 SUNRISE: 7:12 a.m. (mid-month) SUNSET: 6:00 p.m.

MORNING SKIES:

2-5th- QUADRANTID METEORS radiate from the north.
 4th- bright MOON meets the Gemini Twins
 6th- bright MOON meets SATURN.
 11th- waning MOON floats near Spica in the south.
 14th- the crescent MOON leads Scorpius higher in SE.
 15th- the MOON nudges Antares—red heart of Scorpius.
 16th- the old MOON rises to right of dim MARS in SE.
 Silver-ringed SATURN guides Leo the Lion westward.
 The Big Dipper hangs in the north.
 Bright Arcturus, Herdsman, sparkles overhead.
 The Gemini Twins: Castor & Pollux drift into NW.
 Procyon, Little Dog, lies in the west.
 Capella guides Auriga, the Charioteer, lower in NW.
 Corvus the Crow flies across the south, ahead of Spica, in Virgo, the Spring Maiden.
 Omega Centauri, a compact star cluster, shimmers low in the south.
 The stars of Libra float across the southeast.
 Bright JUPITER rises about 4 a.m. & escorts huge Scorpius higher in SE.
 Dim MARS rises about 6 a.m. to the lower left of JUPITER.
 Vega brings the Summer Triangle above the NE horizon.
 28th- MARS lies above M-22 cluster in Sagittarius in SE.

EVENING SKIES:

Billiant VENUS, Evening Star, rises above the SW horizon.
 19th- very young crescent MOON rises briefly beside MERCURY,
 on the western horizon.
 20th- The MOON floats above VENUS. Spectacular view in binoculars!
 Blue NEPTUNE, in Capricornus, descends lower in SW.
 Blue-green URANUS lies in Aquarius, above VENUS.
 The star Fomalhaut twinkles to the left of VENUS.
 Vega steers the Summer Triangle onto the NW horizon—and reappears
 in NE at dawn!
 Aries the Ram chases Winged Horse—Great Square of Pegasus—
 lower in the west.
 Queen Cassiopeia, King Cepheus & daughter Andromeda reign
 in the north, guarded by Perseus in NE.
 Seven Sisters (Pleiades star cluster) shimmer overhead.
 Brilliant winter constellations fill the eastern sky:

Taurus the Bull, Aldebaran sparkles in the Hyades cluster, Capella guides Auriga, Charioteer, across the NE.
 The Gemini Twins rise in NE.
 The dim Beehive star cluster shimmers below the Twins.
 Orion, Hunter, climbs higher in the east.
 Blazing blue Sirius sparkles from the collar of Orion's Big Dog in SE.
 About 8 pm, silver-ringed SATURN rises in the east in Leo the Lion.
 The Big Dipper clears the NE horizon Arcturus sparkles in NE.

Moon Set/Rise Table for JAN/FEB

Date (m/d)	Moon Rise	Moon Set
15/1/2007	3:59	14:27
16/1/2007	5:00	15:21
17/1/2007	5:58	16:23
18/1/2007	6:53	17:29
19/1/2007	7:42	18:36
20/1/2007	8:25	19:43
21/1/2007	9:04	20:48
22/1/2007	9:40	21:51
23/1/2007	10:14	22:53
24/1/2007	10:49	23:56
25/1/2007	11:26	—
26/1/2007	12:06	1:01
27/1/2007	12:51	2:06
28/1/2007	13:42	3:11
29/1/2007	14:39	4:15
30/1/2007	15:40	5:13
31/1/2007	16:41	6:04
1/2/2007	17:42	6:49
2/2/2007	18:40	7:27
3/2/2007	19:34	8:00
4/2/2007	20:27	8:30
5/2/2007	21:17	8:58
6/2/2007	22:08	9:26
7/2/2007	22:59	9:54
8/2/2007	23:52	10:23
9/2/2007	—	10:56
10/2/2007	0:47	11:33
11/2/2007	1:45	12:16
12/2/2007	2:44	13:06
13/2/2007	3:43	14:04
14/2/2007	4:39	15:07

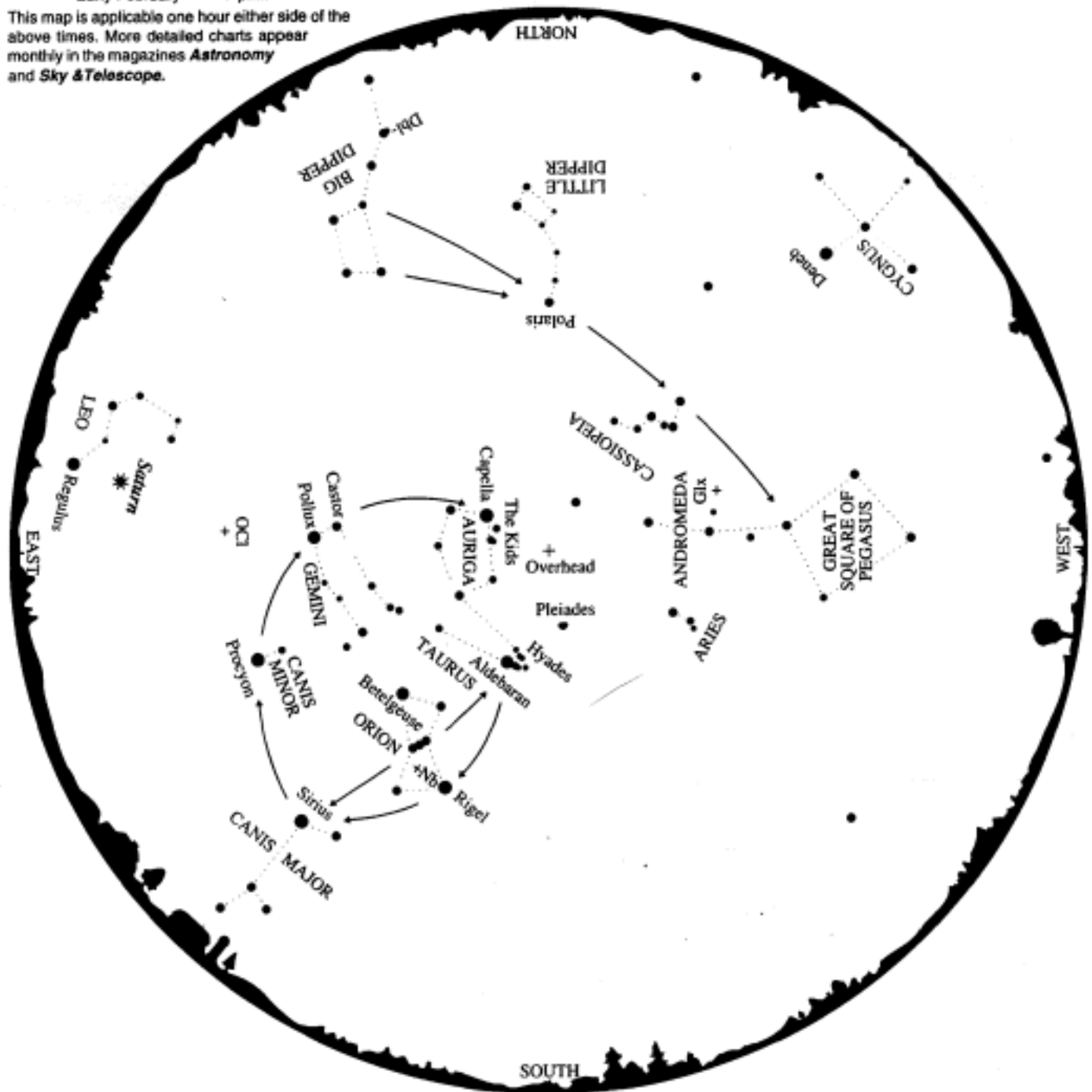
January Evening Skies

This chart is drawn for latitude 40° north, but should be useful to stargazers throughout the continental United States. It represents the sky at the following local standard times:

Late December	10 p.m.
Early January	9 p.m.
Late January	8 p.m.
Early February	7 p.m.

© 2007 Abrams Planetarium
 Subscription: \$11.00 per year, from *Sky Calendar*,
 Abrams Planetarium, Michigan State University,
 East Lansing, MI 48824-1324.

This map is applicable one hour either side of the above times. More detailed charts appear monthly in the magazines *Astronomy* and *Sky & Telescope*.



The planet Saturn is plotted for mid-January 2007. At chart time 10 objects of first magnitude or brighter are visible. In order of brightness they are: Sirius, Capella, Saturn, Rigel, Procyon, Betelgeuse, Aldebaran, Pollux, Deneb, and Regulus. In addition to stars, other objects that should be visible to the unaided eye are labeled on the map. The double star (Dbl) at the bend of the handle of the Big Dipper should be detectable. The famous Orion Nebula,

a cloud of gas and dust out of which stars are forming, is marked (Nb) in that constellation. The open or galactic star cluster (OC) known as the "Beehive" can be located between the Gemini twins and Leo. The position of an external star system, called the Andromeda Galaxy after the constellation in which it appears, is also indicated (Glx). Try to observe these objects with unaided eye and binoculars.

—D. David Batch

DECEMBER EVENTS

-Barb Yager-

December 9th-

An evening sky was partly covered with clouds, as our SCAS Saturday Night Live Astros were busy locating the few visible constellations to 25+ visitors. As the radio methodically gave the final countdown for the NASA Discovery launch up at Kennedy Space Center, the telescope deck became silent. Suddenly at 8:43 pm, a wide band of red flame and smoke rose out of the north and curved toward the Atlantic for about 12 seconds before it vanished into a low band of thick, dark clouds. Cheers and applause erupted. Nick Stingone tried to capture the launch on camera.

At Shark Valley, dozens of members of the Everglades Park Trust enjoyed their night tram tour and hike to the top of the Observation Tower, followed by a huge food buffet. Tim and Munnezzah Khan, Steve and Viki Van Ryn brought their heavy-duty scopes to show the group the blazing winter stars in a very dark sky. Soon the clouds arrived obliterating the stars, and everyone departed by 8:30 pm. But they did watch the shuttle launch from the Tamiami Trail.

December 10th-

It was a miracle...but I did it! Out of bed at 5:15 a.m., dressed, and 30 minutes later drove next door to the soccer field behind the Miami-Dade Kendall campus. Before 6 a.m., perched on the hood of the car, I watched visually and with my 11x80 binoculars the triple planetary cluster low in the southeast. Mercury at the top, Mars on the right and bright Jupiter closest to the horizon, in the head of rising Scorpius. Small dark clouds sailed across the planets against the first glow of dawn. The planets seemed to be about 1 degree apart, not in a tight cluster as indicated on charts and maps. It was a very pleasant and serene hour in the cool twilight, as joggers and campus maintenance workers passed by, while a rooster crowed in the distance. Despite coffee, by 9 a.m. I was ready for a snooze but happy to witness the rare group, as the next re-occurrence will be November 25, 2053 !!

Did any one else see the triple planets? Send us your report

SCAS SCHOLARSHIP WINNER

Congratulations to DIANE ALVAREZ, a very grateful and excited winner of our SCAS 2007 Astronomy Scholarship, selected by the Scholarship Committee of FIU astronomers: Drs. Simpson, van Hamme and Webb. She shares her story with you.....

"I graduated from the School for Advanced Studies, a small dual-enrollment high school located at Miami-Dade College, in June 2002, where I completed 60 credits of college work and finished by last two high school years simultaneously.

Then I moved on to Florida International University where I quickly realized that physics and astronomy were my main interest. On my second day of freshman orientation at one of the college 'fairs' I was attracted to a poster promoting the FIU Astronomy Club (astronomy has always appealed to me ever since I was a child and saw the movie Contact). Then I immediately met Dr. Joerg Reinhold at that booth who informed me of the Physics Dept. and how to contact Dr. Caroline Simpson. I actually met her that same afternoon! Thanks to my 'lucky stars' I ran into this poster, Dr. Reinhold and Dr. Simpson, because that very same day I decided to major in physics with an academic interest in astronomy.

Since then, I have been working to complete my Bachelor's degree in physics with a minor in mathematical science, enriching my experience by taking many extra electives: (pretty much all of the available undergrad electives for astronomy) Astrophysics, Solar System, Stellar Observing, as well as two independent studies with Drs. Simpson & Webb. I have had the honor of being taught by professors: Drs. Walter Van Hamme, Chair. of the FIU Dept. of Physics, James Webb, Caroline Simpson, Richard Bone, Laird Kramer, and Pete Markowitz. Currently I'm working with Dr. Jiandi Zhang in Quantum Mechanics and with Dr. Bernard Gerstman in Biophysics. Also I work with Dr. Webb doing image reduction for his research and as TA (teacher asst.) responsible for the Solar System lab component of this course.

In Spring 2007 I will graduate and continue my education in graduate school at FIU. I am shooting for a Ph.D in Physics, but with so many exciting branches, I'm undecided on a specific discipline. Every day I discover new and interesting things in the field of physics,.....an intriguing trip toward my destination, wherever it may be."

ON CAMPUS

FIU 2007 FREE PROGRAMS

Dept. of Physics

University Park

Fridays, 8 pm sharp

CP-145/ telescope deck

JANUARY 12th- WELCOME BACK STAR PARTY when FIU astronomers invite the public, students and faculty for an evening of food, music and fun under the winter stars at their telescope deck near the Physics Building. FIU hi-tech equipment will be aimed at the winter stars, Andromeda, Pleiades and Saturn. If weather is a problem, join us in CP-145. Park in the campus lot, SW 109th Avenue & SW 8th Street, opposite the FIU Chem.-Physics building.

JANUARY 26th- BLACK HOLE PRIMER, FIU research astronomer Dr. James R. Webb

FEBRUARY 9th- GRAVITATIONAL WAVES, Dr. James R. Webb

MARCH 9th- ACOUSTIC ASTRONOMY, Dr. Fiorella Firenzi, Brevard Comm. College

MARCH 30th- ASTRONOMY IN PICTURES, Dr. James R. Webb

APRIL 13th- FIU SPRING STAR PARTY, 8-11 pm, telescope deck or CP-145.

-Dr. James R. Webb, Dept. of Physics 305-348-3964

SPACE NEWS

SOLAR BURST-

December 13th- a very large solar eruption #930 sent a CME (coronal mass ejection) from an X-3 solar flare screaming at thousands of miles per second toward Earth, followed by another burst of atomic particles December 14th, imaged by SOHO (Solar & Heliospheric Observatory) that continually orbits around the Sun to record solar activity. This led to a solar radiation storm that sent global ground controllers into a sudden flurry of activity.

STS-116 Astronauts aboard the International Space Station were unharmed, protected by special walls in the ISS (and in the shuttles) and by the Earth's magnetic field which converts radiation into dazzling and colorful Auroras at our north and south poles. Brilliant displays world-wide were photographed and posted on Spaceweather.com that weekend.

European Space Agency (ESA) reported at least three of their spacecraft had been affected by solar radiation. Radio signals transmitted from deep space missions to ground flight control teams who noticed an increase in higher-than-normal interference in signals since December 5th. Scientists claim "We are still in a period of very high solar activity" .

Spaceweather.com 12/13/06 - ESA 1/02/07

FLORIDA KEYS ASTRONOMY CLUB

FKAC President George Tegzes reports that he and Dr. David Heeschen, Marathon, (both SCAS members) recently presented a night astronomy program, using two telescopes, at a local school. "The kids loved it. We also did an astronomy program at the Crane Point Museum for a civic group. David, retired renowned radio astronomer, organizes the local astronomy programs and has safe solar programs for the public and private organizations during the winter, weather permitting, but it has been lousy lately.

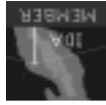
The 12" Dob, donated to FKAC by member Selwyn Malin, drowned in two recent hurricanes. It needed fasteners and base replaced. We drilled out and retapped the fasteners due to salt water corrosion. But now it's better than new! The original wood finish had to be painted over to cover water stains. SCAS member Ed Potokar made a replacement base and sent it down from his home in New York. We are getting good at reviving 'drowned' scopes. We probably should add a flotation collar!"

FKAC Star Parties at Bahia Honda State Park are held in the dark of the Moon. Weather permitting, blazing winter stars, constellations, Saturn and Venus are visible in dark skies down to the southern horizon, seen from the Florida Keys. January 12/13th and 19/20th.

Contact George: 1-305-872-9848 or gtegzes@bellsouth.net

SAVE SCAS MONEY! GO PDF

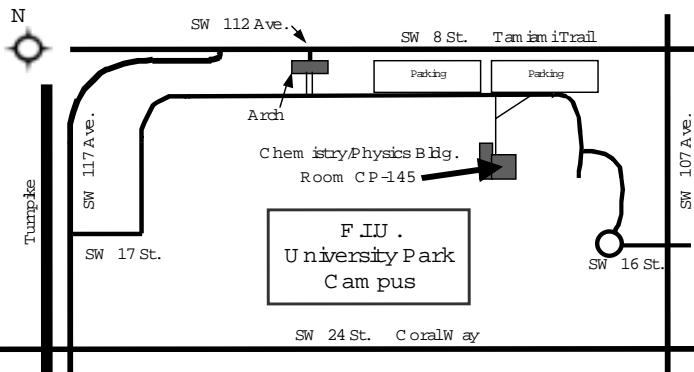
SCAS is a member of
The Astronomical League and
The International Dark Sky Association



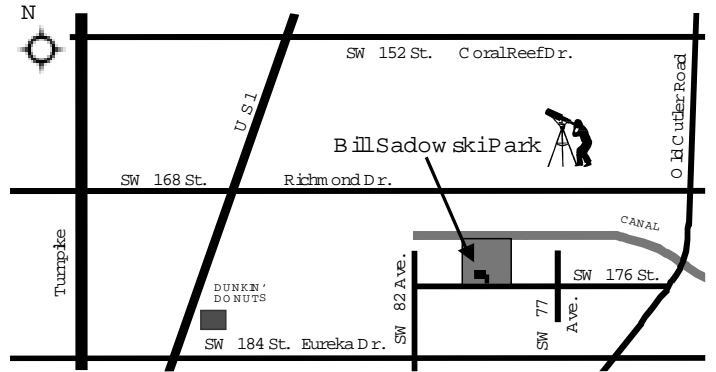
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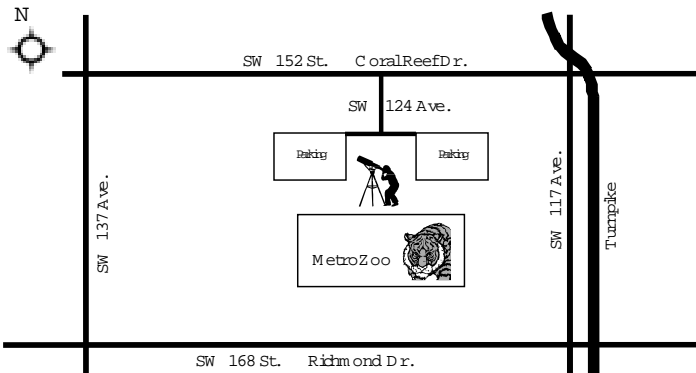
SCAS General Meetings - Third Friday of every Month



SCAS Star Gazing - Every Saturday Night 8-10pm



Saturday Solar Viewing - 10am - 12noon



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305-661-1375

Or Visit the NEW SCAS website:
<http://www.scas.org>

SCAS annual dues: \$25 adults/\$10 full-time students