



COAL SACK

EDUCATING SOUTH FLORIDA SINCE 1922

JULY 2006

ANNUAL KEY WEST FEST FIU/SCAS July Public Program

-Barb Yager

FRIDAY, JULY 21st, 8 pm, Celebrate a Mid-Summer 's Eve and meet the 'Brightest Stars in Town' from FIU and SOUTHERN CROSS at the FIU ANNUAL KEY WEST FEST, FIU Astronomy Center, CP-145, Physics Building, University Park. Bring friends and family to enjoy FREE Key Lime Pies (Florida State Pie), beverages, entertaining astronomy updates news of the future FIU student observatory, Margaritaville music, and fun under the summer stars at the FIU Telescope deck nearby.

DR. JAMES R. WEBB, FIU research astronomer, popular professor, SCAS Honorary member, hosts the ANNUAL KEY WEST FEST assisted by faculty and students from the Dept. of Physics and SCAS. DR.

WEBB is the "campus dynamo" campaigning for the long overdue 4-floor student observatory. He also was instrumental in the FIU membership to the S.A.R.A. Consortium that now includes 7 universities in southeastern United States, and initiated the remote controlled 0.9 meter telescope and CCD camera facility at Kitt Peak National Observatory, Tucson, AZ that brings observing assignments in very dark skies into the FIU Dept. of Physics at University Park! He is focused on his research projects this summer.

SCAS is sincerely grateful for the liaison and genuine

friendship with our FIU "family" and continues into its 20th year that SCAS has been associated with the FIU Dept. of Physics at University Park—the expanding Science Research Campus of South Florida!

Please join us for the ANNUAL KEY WEST FEST with FIU and SCAS astronomers, 8 pm, FRIDAY, JULY 21st in the FIU Astronomy Center, CP-145 Physics Building. Park in the large campus lot opposite the Chemistry-Physics Building, SW 109th Ave./SW8th Street. FREE and accessible to the disabled. Call: 305-661-1375 or www.scas.org for astronomy events, celestial happenings and the Miami track of the International Space Station.

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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



The heralded alignment of wandering planets Saturn and Mars with the well-known Beehive Cluster took place on Saturday, June 17. Recorded in dark Arizona skies on that date, this view finds Mars above and right of Saturn - the brightest celestial beacons in the scene - with the Beehive cluster of stars (M44) at the lower right. The two planets appear in conjunction separated by just over half a degree. But about another half a degree along a line joining the two and continuing towards the lower left lies the third brightest object in the image, giant star *Asellus Australis*. Photo credit Chris Schurr. Photo from Astronomy Picture of the Day.

The Coal Sack

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

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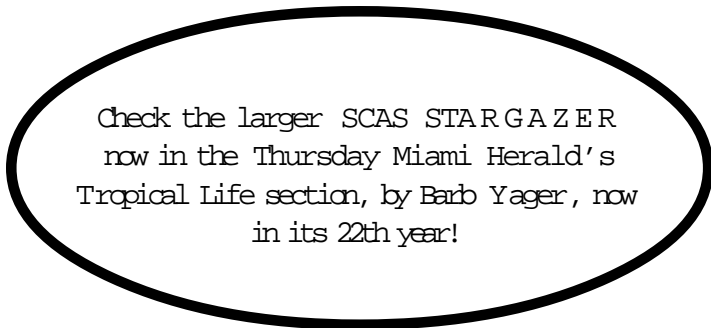
Material for the Coal Sack must be submitted to the Editor by the 25th of the month prior to publication. Please use e-mail when possible.
Change of Address: Please notify Managing Editor Barb Yager with change of address or other membership information.

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SCAS Public Program Aug. 18th

HOW TO OBSERVE & IMAGE CHEAP!

Dr. Mike Palemiti, speaker from Jupiter, FL will entertain you with the latest, economical ways to enhance your telescope and imaging procedures along with his gadgets & demos.
FTU Astronomy Center, 8 pm, CP-145, Physics Bldg. University Park. Free!

CLASSIFIED

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NEW EYE-PIECE SALE! University Optics MK-70, 2" 40mm eye-piece. \$150. Vixen Lanthanum 2" or 1 1/4" 17mm eye-piece, 65 degree field. \$150. Call Chris: 305-776-1559 anytime.

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THE ART OF COLLECTING METEORITES, an in-depth 232-pg. entertaining guide-book with color photos and references by astronomer/explorer Kevin Kitchinka who describes this exciting and educational hobby based on his adventures in the Andes and his friendships with renowned scientists and collectors. Only \$10.00 ! Call: 305-661-1375.

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SUPER IMAGING OFFER!

Do you have top-quality solar/celestial images & photos? SCAS member LARRY APPLE, President, Associated Photo & Imaging, 19 SW 6th Street (near Miami River) has offered to enlarge your color graphics to any size (including large wall murals) FREE! Pls contact LARRY: larrya@apimaging.com or 305-373-4774/ 305-495-7709 (cel).

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

MEMBERS IN THE NEWS

-Barb Yager

SCOTT & LOU IRELAND recently returned from exploring the Galapagos Islands. They enjoyed cruising and photographing the unusual and distinct birds and wildlife on land, and doing underwater photography of sea lions, seals, marine iguanas, etc. In mid-August, SCOTT will lecture and present an Imaging Workshop at Starfest in Toronto, Canada. His book: Photoshop Astronomy published by Willmann-Bell, is selling extremely well....DR. WALTER VAN HAMME, Chairman of the FIU Dept. of Physics, attended the June American Astronomy Meeting in Calgary, Alberta, Canada. He enjoyed attending the presentations : great research with small telescopes, double pulsar, the Gaia Mission, pulsating and exotic objects At the AAS Meeting he ran into former SCAS Board Member and former Science Editor of the Miami Herald, Dave Finley, who is the VLA Education and PIO. Dave says "hi" to all of us in SCAS!...WSP Director TIM KHAN and MUNNEZZAH spent a couple weeks exploring the Rocky Mts...DR. DON PARKER, Executive Director of the Association of Lunar & Planetary Observers, will present a Mars paper at their July Meeting in Atlanta...NICK STINGONE & STEVE VAN RYN brought the large storage trailer filled with electrical supplies, etc., from the Winter Star Party site, Camp W esunke, in the Florida Keys to Miami as a hurricane precaution...RON & BONNIE POLLER, Ramrod Key, recently returned from a 2-week vacation in the cool hills of SW Jamaica, enjoying stargazing under very dark skies...TERRY RIPINGILL reports his bike ride last May to Key Largo for MS was very successful. He spent a week in Hawaii visiting his son. They stayed on the Kileuea volcano, on the Big Island under spectacular skies and watched the hot lava pour into ocean at night...CONGRATULATIONS to MYRIAM & BOB TORRES! A phone call from an excited Dad at the hospital, the stork had just delivered their 6 lb. 4 oz. MARSELLA at 3:46 p.m. July 7th. Their 2nd daughter....and our youngest SCAS astronomer!

Moon Set/Rise Table for JUL/AUG

Date (m/d)	Moon Rise	Moon Set
15/7/2006	23:50	11:22
16/7/2006	—	12:24
17/7/2006	0:25	13:26
18/7/2006	1:00	14:29
19/7/2006	1:38	15:32
20/7/2006	2:21	16:36
21/7/2006	3:09	17:38
22/7/2006	4:02	18:36
23/7/2006	5:00	19:27
24/7/2006	5:59	20:13
25/7/2006	6:58	20:52
26/7/2006	7:54	21:26
27/7/2006	8:49	21:56
28/7/2006	9:40	22:25
29/7/2006	10:31	22:52
30/7/2006	11:21	23:19
31/7/2006	12:12	23:48
1/8/2006	13:04	—
2/8/2006	14:00	0:19
3/8/2006	14:59	0:55
4/8/2006	16:01	1:37
5/8/2006	17:03	2:27
6/8/2006	18:04	3:25
7/8/2006	18:59	4:30
8/8/2006	19:49	5:40
9/8/2006	20:33	6:51
10/8/2006	21:12	8:00
11/8/2006	21:49	9:07
12/8/2006	22:24	10:12
13/8/2006	23:00	11:17
14/8/2006	23:38	12:21

JUNE EVENT

-Barb Yager

Summer Solstice-

Wednesday evening June 21st, Culture in the City organization invited SCAS to Celebrate the Summer Solstice at the Kampong by the Bay in Coconut Grove, the original home of botanist David Fairchild. It was our first visit to the Kampong, a narrow 7-acres of lush landscaping that extends into Biscayne Bay, bordered by two boat lagoons. Parking spaces are scarce. Somehow more than 100 visitors arrived for the wine and cheese buffet in the house, then drifted down to the tennis courts where Judy Elkins, Mike Smith and I had arranged equipment under mostly cloudy skies. Jupiter and Antares were the best targets. I was focused on the Key Biscayne Lighthouse at Cape Florida! The event included a presentation orchestrated by the Wicca Circle of Isis to welcome Summer. Why not—we were in groovy Coconut Grove! It was great fun, and it didn't rain on our parade.

JULY ALMANAC AT A GLANCE

FIRST QTR. MOON	Monday, 3 rd	12:37 p.m.
FULL THUNDER MOON	Monday, 10 th	11:02 p.m.
LAST QTR. MOON	Monday, 17 th	3:13 p.m.
NEW MOON	Tuesday, 25 th	12:31 a.m.

SUNRISE: 6:40 a.m. (mid-month) SUNSET: 8:15 p.m.
Sunday 2nd- MID-POINT of 2006

Monday 3rd- EARTH at aphelion-greatest distance from the Sun by 94.5 million miles at 7 pm. SUNSPOT #898, 25,000 miles in diam. (large enough to swallow Neptune) located about center of the Sun this week. Lester had it in our solarscope, July 1st at MetroZoo!

EVENING SKIES:

1st- celestial line-up low in the west: descending MERCURY hugs the NW horizon- SATURN & Beehive cluster in Cancer, lie to upper left of MERCURY-dim MARS lies upper left of SATURN-the star Regulus in Leo the Lion lies to the upper left of MARS!

3rd- ASTEROID 2004 XP14 cruised closest to EARTH by 268,624 miles at 12:25 a.m. At 39,000 mph it ripped across Perseus and Cassiopeia 7-8 degrees per hour.

5th- In the SW, the MOON floats below golden JUPITER in Libra, and sets about midnight.

7th- Tonight the MOON leads huge Scorpius across the S

9th- The bright MOON glides across the Sagittarian Teapot in the SE.

Leo the Lion crawls toward the western horizon.

The Big Dipper hangs in the NW-its 'bowl' always faces Polaris, North Star.

Corvus the Crow lands on the SW horizon, followed by Spica in Virgo.

Huge Scorpius slinks across the south, followed by the Sagittarian Teapot.

Blue NEPTUNE sails higher in the SE in Capricornus, the Sea Goat.

Turquoise-colored URANUS in Aquarius rises in the SE by midnight.

The Great Square of Pegasus (Winged Horse) climbs higher in the east.

Hercules leads Vega and the big Summer Triangle from the NE to the Zenith.

Cygnus, Flying Swan, soars within the Triangle.

The SUMMER MILKY WAY (River of Stars) arches from the Teapot to the Triangle.

By midnight, Queen Cassiopeia and her daughter Andromeda arrive in the northeast.

18-23rd- MARS meets Regulus in Leo low in the west.

21st- MARS and Regulus are 1 degree apart.

22nd- SATURN hugs the NW horizon and disappears into the sunset by month's end.

16-22nd, 1994- 26 flaming chunks of COMET SHOE-MAKER-LEVY-9 pulled by the great magnetic field of JUPITER, plunged into the planet's gaseous atmosphere.

26th-Young MOON rises briefly in the NW near MARS and Regulus.

26th- SATURN & MARS set in the NW by nightfall.

28th- SOUTHERN DELTA AQUARID METEORS reach

their max, radiating from the SE.

MORNING SKIES:

Before dawn, blazing VENUS, Morning Star, lies in the NE against the rising winter stars. The delicate Seven Sisters (Pleiades cluster) lead Taurus the Bull higher in the east, above Aldebaran (red eye of the Bull) winking from the V-shaped Hyades cluster (Bull's face).

Bright Capella guides Auriga, Charioteer higher in the NE, above the Gemini Twins.

Orion, Hunter reclines on the E. horizon.

Bright Fomalhaut shines in the south, below Aquarius.

Queen Cassiopeia and her daughter Andromeda reign in the north.

Aries the Ram chases Pegasus (Winged Horse) across the Zenith.

Vega leads the Summer Triangle into the NW.

12th- The MOON lies 3 degrees below blue NEPTUNE in the SW.

20th- Waning MOON nudges the Seven Sisters in the east.

21st- The MOON lies to the left of the Hyades cluster.

23rd- The MOON glides lower left of VENUS in the NE. (the planet's northernmost point)

24th- 40 minutes before sunrise, the thin MOON rises below the Gemini Twins, NE.

30th- At dawn, MERCURY rises directly below VENUS.

AUGUST PREVIEW

9th- NEPTUNE 3 degrees above the full MOON.

10-11th- Before dawn, MERCURY & VENUS rise 2 degrees apart, NE.

11th- NEPTUNE lies opposite the SUN tonight and rises in the SE at sunset.

12-14th - PERSEID METEOR SHOWER

SUMMER METEORS

Summer good and summer not! Depending on your clear sky location, here's a brief preview:

PEGASIDS- July 9th max-radiating from the Great Square of Pegasus rising mid-evening in the east producing 3 per/hr.

SAGITTARIDS- until mid-July radiating from the Sagittarian Teapot (SE) producing about 5/hr. with possible fireballs.

PISCES AUSTRINIDS- July 28th max-radiating from (SE) near the bright star Fomalhaut producing about 5/hr. after midnight.

SOUTHERN DELTA AQUARIDS- July 28th max- from Aquarius in SE about 20/hr.

ALPHA CAPRICORNIDS - July 30th max- radiating from Capricornus in the south, by late evening producing 4/hr.

PERSEIDS- begin late July with August 12th max- about 100/hr competing with full Moon!

- North American Meteor Network July 2006

www.imo.net/calendar/2006/summer

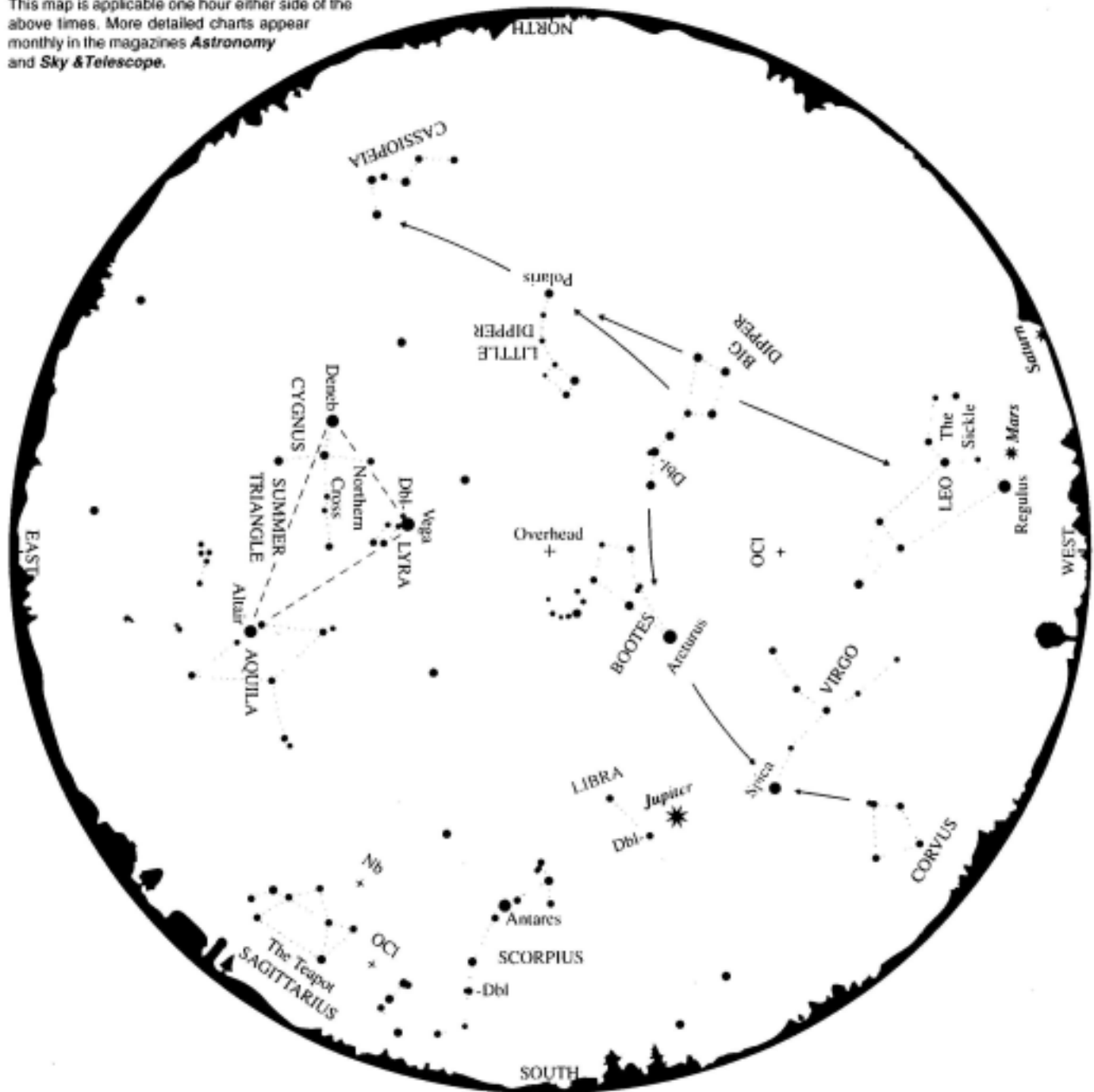
July Evening Skies

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 daylight times:

Late June	11 p.m.
Early July	10 p.m.
Late July	9 p.m.

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

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 Subscription: \$11.00 per year, from *Sky Calendar*,
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 East Lansing, MI 48824-1324.



The planets Mars, Jupiter, and Saturn are plotted for mid-July 2006. Nine objects of first magnitude or brighter are visible. In order of brightness they are: Jupiter, Arcturus, Vega, Saturn, Altair, Antares, Spica, 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 is easily detected. The double star in Scorpius is somewhat harder. Much more difficult is the double star near Vega in Lyra.

The open or galactic star cluster (OCI) known as Coma Berenices, "The Hair of Berenice," is located between Leo and Bootes. A more compact open cluster is located between Sagittarius and the "tail" of Scorpius. Nearby, marked (Nb) above the "spout" of the "teapot," is the Lagoon Nebula, a cloud of gas and dust out of which stars are forming. Try to observe these objects with unaided eye and binoculars.

—D. David Batch

SCAS PROJECT AT THE PARK

-photos by Barb Yager

June 3, 2006 SCAS members Steve Van Ryn and Nick Stingone worked morning and evening to replace the old telescope mount at the SCAS outdoor observatory in Miami-Dade Bill Sadowski Park. Previous years, Nick had sand-blasted and painted the mount for a temporary face lift, but the rust kept breaking through from the inside. In May, Steve and SCAS member Russell Brick removed the old mount. Sincere thanks to Russell, Nick and the Van Ryn's who worked on this long overdue mount replacement.



Steve Van Ryn (L) and Nick Stingone (R) measure rebar for the base of the mount.



Nick (L) and Steve (R) cut rebar to the correct length.



Steve (L) and Nick (R) make adjustments for the correct angles.



Steve adds water to his 'cement batter' in his portable mixer.



After pouring the cement into the wooden form, Nick measures accurately for the return of the SCAS metal plaque as Steve adjusts the form to due north.



Nick and Vickie Van Ryn get ready to remove the wooden form around the concrete telescope mount.

SPACE NEWS

Florida's Future In Space

An important conference, hosted by the University of Florida's Dept. of Astronomy, was recently concluded at the historic Biltmore Hotel, Coral Gables. SCAS members/research astronomers Dr. James R. W ebb, FIU, and Noah Rashkind U. F., had hoped to attend the GIC Conference despite their tight schedules last week. We look forward to their reports

The University of Florida has a 5% partnership with two Mexican institutes, and Spain funding the rest, toward the GTC-Gran Telescopio Canarias—a \$160 million dollar telescope with a 34.1 ft. mirror now under construction in the Canary Islands. It is expected to be completed in 2008 as the world's largest. It could cost \$30,000. per night to operate for celestial observing, giving UF astronomers at least 12 nights annually to peer far into deep space.

The University of California is a partner with the W .M. Keck Observatory in Hawaii, currently the largest telescope in use in the world. NASA's JPL, the leader in space probe exploration is affiliated with CalTech in Pasadena. UF, Gainesville, has the largest astronomy department in the state and the largest telescope. Florida has many qualified astronomers on campuses throughout the state. Kennedy Space Center, the national "launch pad" to the ISS, the Moon and the Solar system offer a natural alignment with space exploration and astronomical research in Florida. The Governor's Commission on the Future of Space and Aeronautics in Florida concluded its final report January 2006— "Florida's competition in space and aeronautics increasingly depends on its intellectual talent—the State must enhance its workforce, education and research capabilities." Florida should follow a similar path as California by creating a state-wide university telescope program focusing on education and research, working to snare federal and foundation money for astronomy programs to interested high school students to advocating access to the world's largest telescopes for future research investigations.

Florida should be a launch pad not only for astronauts, but also for astronomers!

-Stan Demott, Chair, professor, UF Dept. of Astronomy- Miami Herald excerpts 7/01/06

Ed. note:

A reply to Stan Demott, UF, was published in the Miami Herald Readers Forum July 5th...excerpts from reply: "The FIU Dept.of Physics and its active ongoing astronomy research by 3 FIU astronomers is a member of the S.A.R.A. Consortium of 8 universities that operate a research-class remote-controlled telescope at Kitt Peak National Observatory, near Tucson, AZ.and is in negotiation for a very large telescope at the Cerro Tololo InterAmerican Observatory, La Serena, Chile. We are engaged in a

fundraiser for our new college observatory at University Park- FIU's hub for astronomy-related research, teaching and outreach".

-Dr.Walter Van Hamme, Chair. FIU Dept. of Physics, Miami, Florida

Pre-Columbian Observatories

Archeoastronomy is an exciting, fascinating but very time-consuming hobby, and with our hi-tech satellite cameras, lasers & space telescopes, the lowly pick and shovel continues to unearth treasures from ancient cultures. Over the centuries, explorers have discovered primitive "observatories" in the Inca, Maya, Aztec and American Indian regions in the western hemisphere, as well as in the Oriental, Sumerian, Babylonian, Egyptian, Greek and Roman civilizations in the eastern countries—all fascinated by the seasonal skies.

Last year archaeologists got involved when geologists and geographers did an area survey by foot and helicopter and noticed a unique circular structure on top of a hill near the village of Calcoene, just north of the Equator in Amapa state in far northern Brazil perhaps inhabited by ancestors of the Palikur Indians of the early rain forests. On a grassy hilltop, 127 large granite blocks, some 9 ft tall were spaced at regular intervals like a crown 100 ft. in diameter. On Dec. 21st—the 'winter solstice' the shadow of one of the blocks disappears when the Sun is directly overhead.

Archaeologists will return in August, when the rainy season ends, to carry out carbon dating and new excavations.

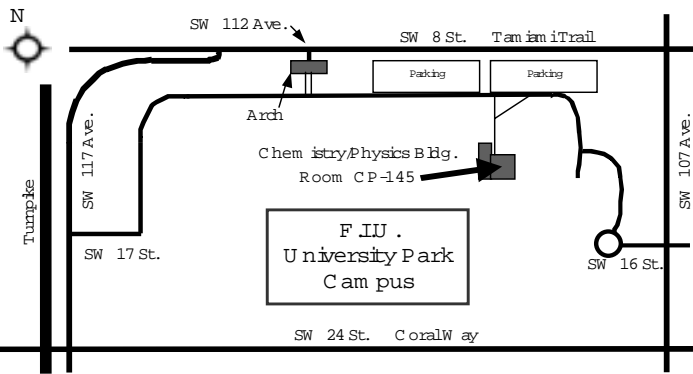
Last May, archaeologists working on a hillside north of Lima, Peru, announced a discovery of the oldest astronomical observatory in the Western hemisphere—giant stone carvings, apparently 4,200 years old, that align with sunrise and sunset on Dec. 21st.



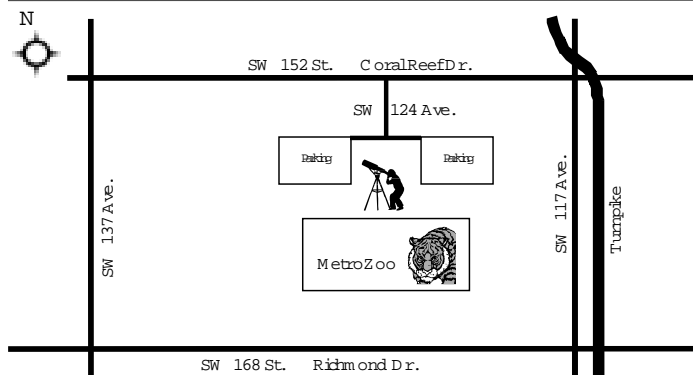
FLORIDA KEYS ASTROS

- Members of the Florida Keys Astronomy Club
- (FKAC) will host public observing at the Bahia
- Honda State Park at dusk: July 21/22nd and 28/
- 29th; August 18/19th and 25/26th, to view bright
- Jupiter & its Moon System, fabulous summer
- constellations low in the south: huge Scorpius,
- Sagittarius, Neptune in Capricornus, meteors,
- nebulas in very dark skies.
- For additional information, please call FKAC
- President George Tegzes: 305-872-9848 or
- Sec'y Bonnie Poller: 305-872-3616.
- www.fkac.com Bring friends, bug cream and
- chairs!

SCAS General Meetings - Third Friday of every Month



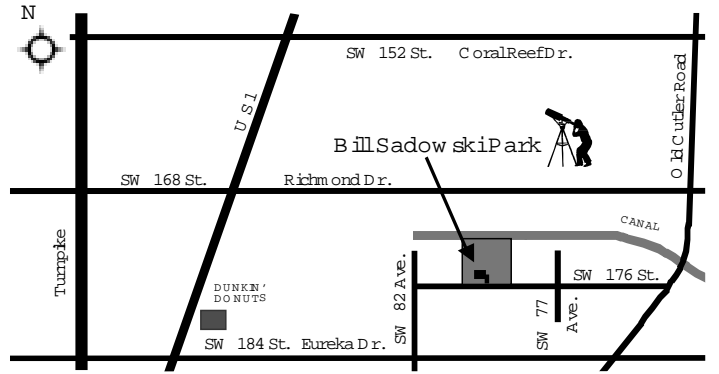
Saturday Solar Viewing - 10am - 12noon



Southern Cross Astronomical Society, Inc.
 c/o 10221 SW 116 Avenue
 Miami, FL 33176
 A 501(c)(3) Non-Profit Organization
 Address corrections requested



SCAS Star Gazing - Every Saturday Night 8-10pm



For SCAS/NASA News Call
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Or Visit the NEW SCAS website:

<http://www.scas.org>

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