

# SCAS COAL SACK

EDUCATING SOUTH FLORIDA SINCE 1922

OCTOBER 2006

## VISION FOR SPACE EXPLORATION October Public Program

-Barb Yager

FRIDAY, OCTOBER 20th, 8 pm, SCAS proudly presents premier guest speaker Russell Romanella, renowned NASA lecturer and Director of the International Space Station Payload Processing Directorate at Kennedy Space Center. He will reveal the latest goals and projects of NASA's VISION FOR SPACE EXPLORATION that will return human flight missions to the Moon and possibly on to Mars in years to come, commercial space transportation services, robotic probes and NASA's Constellation Program.

A Miami native, Mr. Romanella is a graduate of Southwest Miami Senior High School and received his Bachelor of Science degree in Computer Science at Florida State University while he was a co-op student

with NASA. His wide range of experience includes his responsibility for all ground processing of Space Shuttle elements in preparation for flight in the Space Shuttles, the

ISS, future NASA Exploration Program, etc. He has received the prestigious NASA Exceptional Service Medal and many other awards for his leadership and knowledge of the ISS program at KSC. Mr. Romanella has presented scientific lectures at FIU, University of North Florida, Miami Museum of Science and many other educational organizations.

His lovely wife Dr. Fiorella Tirenzi, an astrophysicist from Italy, has presented several astronomy programs at the FIU Dept. of Physics, Miami Museum of Science and is an instructor of astronomy and physics in the Brevard County schools.

Bring friends to our exciting FREE SCAS astronomy program October 20th for educational fun, prizes, food buffet in the FIU Astronomy Center, CP-145, Physics Building, University Park. Use the large campus parking lot at SW 109th Ave./SW 8th Street opposite the CP Building. Call: 305-661-1375 or access [www.scas.org](http://www.scas.org)

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International Space Station over planet Earth. photo from <http://iss-transit.sourceforge.net/>

# 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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Check the larger SCAS STARGAZER now in the Thursday Miami Herald's Tropical Life section, by Barb Yager, now in its 22th year!

## SATURDAY NIGHT LIVE

Barb Yager

Saturday evening 23rd, our SCAS Saturday Nite Live Team arrived at Sadowski Park, overjoyed at the first decent sky since early June! Although August 12th, a mostly clear summer sky was a rare surprise the night of the SCAS Perseid Meteorwatch when we hosted about 100 visitors until midnight. Fortunately most of the summer constellations and southern clusters were still visible to welcome the first Night of Autumn. Thick haze obscured the sliver of a very young Moon low in the west after sunset. Youngsters were excited to see a "red star" Antares in Scorpius, M-6 and M-7 clusters in my old 11x80s, and about two dozen

visitors were surprised to see the Ring Nebula (M-57)—outer planets blue Neptune, Uranus and golden Jupiter captured in hi-tech equipment of Manny Castro, Nick Stingone, Ashley Stevens, Sergio Figuero, Ximena Maureira, Paul Buscher, Armon Ahmadi and his Dad Gus, and Will Harden. The spouse of a Deering staff person and a Miami-Dade student from Kendall campus also joined us. A huge white cloud flashing with lightning quickly rose in the SE, and light mist caused a hasty exit by 9:30 pm. That same cloud was seen far to the east by SCAS Astros chortling at Monument Lake!

## CLASSIFIED

### ASTRONOMY CALENDAR SALE

Astronomy Magazine Calendars 2007 feature incredible images of deep-sky wonders and important astronomy information on each page. A great gift idea for the new astronomer and a reference to the amateur. ONLY \$8.00—leave your order (s) on the SCAS Hotline: 305-661-1375.

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

## SAFARI TO MONUMENT LAKE

-Charlie Perillo

The forecast was for clear skies ( for a long overdue SCAS members Star Party) the first day of Autumn, Saturday 23rd. And it was right on the money for those of us who made a trip to Monument Lake on Tamiami Trail, 42 miles west of Krome Avenue. My truck was packed early so I could leave by 3:30 or 4:00 pm.

I was the first one to arrive at Dade Corners and waited for the others. I knew Tim, Herm and Lester were going so I watched for them when Lester drove in, took a quick look around, and headed out to Monument Lake. I tried to get his attention, but he was too fast and too focused on getting out there. Right after that, Capt. Juan Martinez came to my truck and introduced himself. We talked for a few moments until I spotted Herm at the gas pumps. As I walked over to Herm, Tim



Nice turnout. Photo by Vicki Van Ryn.

pulled in. As soon as Herm gassed up we left for the lake site and arrived to find Steve Van Ryn & Family had been camped there since Friday. They got in an extra night!

Ed Puntervold was parked across the lake finishing his dinner before joining us where we set up along the North side. Chad Cantrell arrived and so did Russ Brick. We were also joined by Todd from the Everglades Club. Not including the Van Ryn and Brick family members, there were nine of us for this dark sky outing.

We were set up before dark and had an opportunity to visit with two Park Rangers who seemed interested in what we were doing. Later, another Park Ranger stopped in on his way home to look through the scopes. They are always welcome to stop by, and in fact, we encourage it.

As it became dark, we found our alignment stars and started off the night with a quick look at Jupiter which was getting low in the west. We shared the views of a host of Messier and NGC objects, one double star (thanks Herm) and some sporadic meteors. Some of the others worked on their imaging and polar alignment. Seeing so many of those great summer objects was a real treat since our summers are usually not so good for observing. I didn't keep a log; I just had a great time under the clear late



Tim Khan and scope. Photo by Vicki Van Ryn.

summer skies with a nice group of fellow SCAS members. Mosquitoes were not too bad in the beginning, but seemed to come in waves. I had a couple of coils burning and only used my repellent once. The alligators didn't bother us either; I think they were afraid of Ed!

Lester left just before midnight and I left just after midnight. Ed was the last to leave after checking out a number of galaxies in Cetus and ending on a nice planetary around 2 a.m. I would like to have stayed longer, but I needed to be awake for the long drive home. I remember those days, a long time ago, when we would drive west to the dark sky site before sunset and drive home at sunrise...after observing all night!



Gator George at home in Monument Lake contemplating either Ed's dinner or Lester! Photo by Lester Shalloway

# OCTOBER ALMANAC AT A GLANCE

Full HARVEST MOON Friday, 6th 11:13 p.m.  
 Last Qtr. MOON Friday, 13th 8:26 p.m.  
 NEW MOON Sunday 22nd 1:14 a.m.  
 First Qtr. MOON Sunday 29th 4:25 p.m.

SUNRISE: 7:25 am (mid-month) SUNSET: 6:53 pm  
 MORNING SKIES-

Silver-ringed SATURN rises in the east around 2:30 a.m.  
 The 'lone' morning planet leads Leo the Lion higher in the east in the predawn.

The Big Dipper rises "bowl first" NE.  
 The brilliant winter constellations arch overhead, led by westbound Pleiades cluster:

Taurus the Bull---V-shaped Hyades with bright Aldebaran--- Orion strides across the south--- blazing blue Sirius sparkles in the collar of Orion's Big Dog---Procyon, Little Dog, twinkles in the east---the Gemini Twins rise in the northeast, followed by the dim Beehive star cluster in Cancer the Crab---bright Capella guides Auriga, Charioteer, across the north. Queen Cassiopeia and Andromeda swing into the NW.

Aries the Ram chases the Winged Horse (Great Square of Pegasus) lower in the west.  
 Descending VENUS clings briefly to the eastern horizon by Sunrise.

Spica in Virgo rises in SE at dawn end of October.  
 VENUS will emerge above the western horizon late Dec.  
 21st- ORIONID METEOR SHOWER will become most visible after midnight possibly reach 20/hr. before dawn from a moonless, dark sky site.  
 ORION rises in the east soon after midnight.

EVENING SKIES-  
 Bright golden JUPITER and its Moon System glow in SW and set early.  
 Tiny MERCURY rises to lower right of JUPITER as the month begins;  
 MERCURY rises to the lower left of JUPITER, by the end of the month.

8th- DRACONID METEORS- radiate from Draco the Dragon in the north before midnight.  
 The dim, slow DRACONIDS, remnants from Comet Giacobini-Zinner, may be visible before Moonrise. DRACO is located NW of the Summer Triangle.

9/10th- MOON ECLIPSES SEVEN SISTERS (Pleiades cluster) rising in the east, 11 pm.  
 16th- MERCURY shimmers directly below JUPITER, SW, and reaches its highest altitude in evening dusk.  
 21st- ORIONID METEOR SHOWER: early ORIONIDS may be visible radiating from the east by mid-evening, before Orion rises.

23rd- Young MOON rises briefly directly below JUPITER and MERCURY.  
 24th- The crescent MOON leads huge Scorpius lower into the SW.

The 'tilted' Sagittarian Teapot 'pours' onto the stinger tail of the Scorpion in SW.  
 OUTER PLANETS: dim, blue NEPTUNE sails across the

south in Capricornus, Sea Goat. Blue-green URANUS lied in Aquarius, above the star Fomalhaut in SE.

Aries the Ram chases the Winged Horse (Great Square of Pegasus) higher in the east. Queen Cassiopeia, daughter Andromeda and King Cepheus reign in the north, guarded by Perseus the Hero.

Hercules leads Vega & Summer Triangle into the NW.  
 Cygnus the Swan becomes the Northern Cross within the Triangle.

\*\*\*\*\*  
 MERCURY TRANSIT of the setting SUN, Wednesday, November 8th.

## Moon Set/Rise Table for OCT/NOV

Date (m/d)	Moon Rise	Moon Set
15/10/2006	1:36	15:30
16/10/2006	2:32	16:03
17/10/2006	3:26	16:33
18/10/2006	4:17	17:01
19/10/2006	5:08	17:28
20/10/2006	5:58	17:56
21/10/2006	6:49	18:25
22/10/2006	7:42	18:56
23/10/2006	8:37	19:32
24/10/2006	9:34	20:12
25/10/2006	10:34	20:59
26/10/2006	11:33	21:53
27/10/2006	12:29	22:52
28/10/2006	13:21	23:55
29/10/2006	13:08	—
30/10/2006	13:49	0:00
31/10/2006	14:27	1:04
1/11/2006	15:03	2:08
2/11/2006	15:39	3:12
3/11/2006	16:15	4:17
4/11/2006	16:54	5:24
5/11/2006	17:38	6:32
6/11/2006	18:27	7:43
7/11/2006	19:22	8:52
8/11/2006	20:22	9:57
9/11/2006	21:24	10:55
10/11/2006	22:25	11:45
11/11/2006	23:24	12:27
12/11/2006	—	13:03
13/11/2006	0:19	13:35
14/11/2006	1:11	14:03

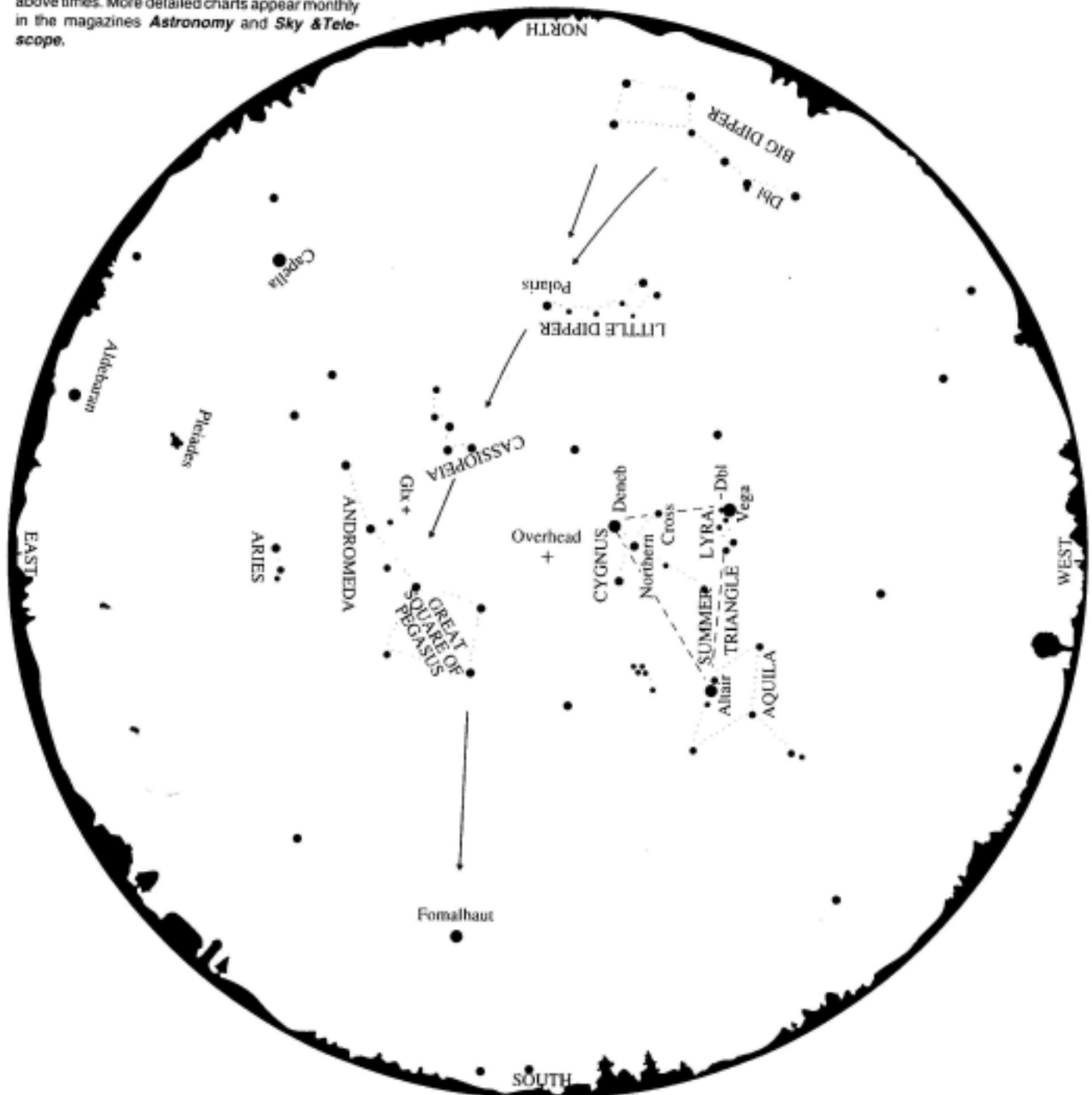
# October Evening Skies

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 saving times:

- Late September 11 p.m.
- Early October 10 p.m.
- Late October 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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 East Lansing, MI 48824-1324.



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. 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. Much more

difficult is the double star near Vega in Lyra. Low in the east-northeast, the Pleiades is a very attractive open or galactic star cluster. 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

# SPACE NEWS

## STAGGERING DISTANCES-

Tonight when the Sun sets and the twilight fades to night, go outside and look southwest. There's mighty JUPITER gleaming brightly. It looks so near, yet JUPITER is 830 million km away. Sunlight takes 43 minutes to reach the giant planet, and the EARTH's fastest spaceship, NEW HORIZONS, it is a trip of 13 months!

That's nothing.

Not far to the left of JUPITER is PLUTO. You won't be able to see it. Tiny PLUTO is almost 5 billion km away from us. Sunlight takes more than 4 hours to get there, and NEW HORIZONS would take 9 years! Looking from PLUTO, the Sun is merely the brightest star in a cold, jet-black sky.

That's nothing.

A smidgen to the right of PLUTO, among the stars of the constellation Ophiuchus, is Voyager 1. Launched from Kennedy Space Center, Florida 29 years ago, the spacecraft is a staggering 15 billion km away. It has traveled beyond all the known planets, beyond the warmth of the Sun, almost beyond the edge of our Solar System.

Now that's something.

"August 15, 2006, Voyager 1 reached the 100 AU mark--in other words, it is 100 times farther from the Sun than the EARTH" said Ed Stone, Voyager project scientist and former Director of NASA's Jet Propulsion Lab. "This is an important milestone in our exploration of the Solar System. No other spacecraft has gone so far".

At 100 AU (astronomical units) Voyager 1 is in a strange realm--"the heliosheath".

As Stone explains, our entire solar system--planets and all--sit inside a giant bubble of gas called the

heliosphere. The Sun is responsible: it blows the bubble by means of the solar wind. Voyager 1 has traveled all the way from the bubble's heart to its outer edge, a gassy membrane dividing the solar system from interstellar space. This "membrane" is the heliosheath.

Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like--"Many of our predictions were wrong" says Stone. Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things--and we're not yet out of the Solar System.

Voyager 1 reports new developments almost daily to EARTH, and at the speed of light, the message takes 14 hours to arrive. Voyager 1 carries a disk recording of images and sounds of EARTH. For updates, access: <http://voyager.jpl.nasa.gov>

-Dr. Tony Phillips, Science@NASA 9/2006

## NEW RING AROUND SATURN

The CASSINI Spacecraft has identified a faint, previously unknown ring encircling Saturn. It appears to be composed of material blasted off the surface of two small Saturnian Moons--Janus and Epimetheus, by meteoroid impacts. These tiny Moons are unable to hold on to the dust debris kicked out by these impacts, therefore it blows into space and spreads out into another ring.

CASSINI also took an image of EARTH 930 million miles from the spacecraft that revealed our Moon near our blue 'earthly' globe!

-BBC News, London UK 9/24/06

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## FLORIDA KEYS ASTRONOMY CLUB

- George Tegzes, President

FKAC members celebrated the Autumnal Equinox September 22/23 at Bahia Honda State Park under clear, dark skies. Among the many visitors, a family with three smart boys, Home Schooled by their Mom, have become intrigued with the neat objects found in the FKAC hi-tech telescopes, astronomy material, and make frequent trips to the Star Parties.

FKAC Star Parties, Bahia Honda State Park: October 13/14, 20/21st; November 17/18, 24/25.

FKAC Officers Ron Poller, John Cunningham, Chris Adair and I will attend the Annual Birding & Wildlife Fest, Marathon, to set up safe solarviewing, and celestial. Looking forward to visiting with the Miami group of S. Cross Astros at this great event.

## UPCOMING EVENTS

- Barb Yager

### FAIRCHILD MOONLIGHT GARDEN TOUR-

Wednesday, October 4th, SCAS Astros will arrange hi-tech equipment near the Fairchild Garden Visitors Center, Old Cutler Road, to focus on the bright Harvest Moon (full Moon closest to the Autumnal Equinox Sept. 23rd) for Fairchild members and their guests

### HARVEST MOON STAR PARTY-

Friday, October 6th, 7-10 pm, SCAS Astros will have hi-tech equipment set up near the 'mound' under dark skies in the back of the Fruit & Spice Park, 24801 SW 187th Ave., Homestead. The rising Autumn constellations in the east, golden Jupiter in the southwest, and late Summer stars in the south will be visible at Family Fun Night. The Park will offer Moonlight Tram Tours and refreshments Admission: Adults- \$10. / kids FREE under 12 yrs. Call: 305-247-5727 or 305- 661-1375.

### HALLOWE'EN METROBOO-

Saturday, 28th- SCAS Safe Solarviewing will extend observing hours from 10 a.m.-2 p.m. near the admission gates at MetroZoo, 12400 SW 152nd Street. Meet SCAS Goblins and see the powerful explosions erupt off the solar surface.

## ORION METEORWATCH

-Barb Yager

SATURDAY, OCTOBER 21st, SCAS Saturday Nite Live Astro Team will schedule a public ORION METEORWATCH, 9 pm-Midnight, weather permitting, Bill Sadowski Park & Nature Center, SW 176th St/ SW 79th Avenue, when the peak of the meteor shower occurs. The ORIONIDS may produce 20/hr between 2 a.m. and dawn Sunday 22nd. Bring snacks, friends, chairs, blankets, equipment, bug cream and dress appropriately. NO LIGHTS, litter, alcohol, pets or loud noise in the Nature Preserve. Call SCAS: 305-661-1375.

New Moon occurs Sunday 22nd (see Almanac) allowing dark sky for observations. The dim

ORIONIDS radiate from an area between Orion and Gemini that rises in the east before midnight. Stray Orionids may be visible from October 2- November 7th.

As Earth makes its annual cruise through the dust tail of long-gone Comet Halley, glittering debris incinerate into Earth's atmosphere at 41 miles per second.

About 50% ORIONIDS leave long colorful trails of ionized gas created by burning meteoric dust. Some ORIONIDS may be visible before the constellations rise.

The first known ORIONID METEOR SHOWER was recorded by the Chinese in 288 A.D. when "stars fell like rain". Its radiant was recognized in 1864.

### Eye on the Sky

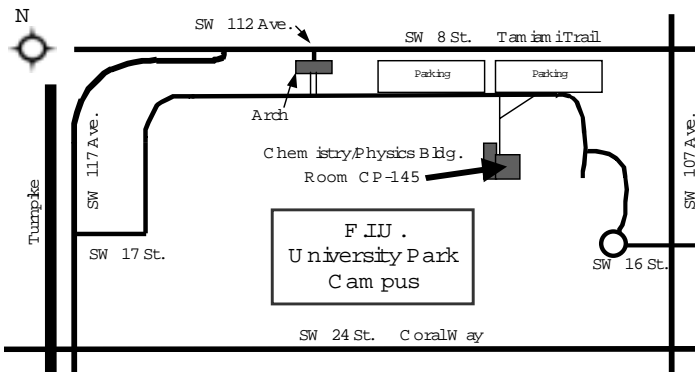
SUNDAY 8th- the slow DRACONID METEORS radiate from DRACO, the Dragon, remnants from Comet Giacobini-Zinner, high in the northwest. Look for the big SUMMER TRIANGLE in the NW, DRACO lies north of the Triangle. The shower may occur early evening, 8th, when the radiant is highest, before the bright Moon rises mid-evening to wash out meteors.

MONDAY, 9th - LUNAR OCCULTATION of PLEIADES: the waning Moon drifts across the shimmering Seven Sisters (Pleiades M-45) as they rise in the east before midnight.

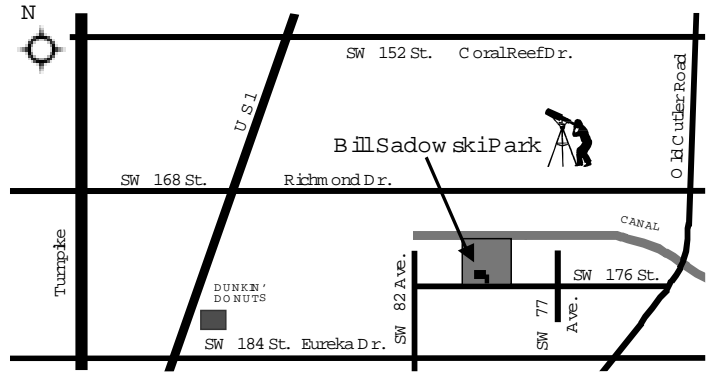
WEDNESDAY, NOVEMBER 8th- tiny MERCURY cruises across the setting Sun from the east coast if weather permits! The next opportunity will occur May 9, 2016. Check the SCAS Website for details:

[www.scas.org](http://www.scas.org)

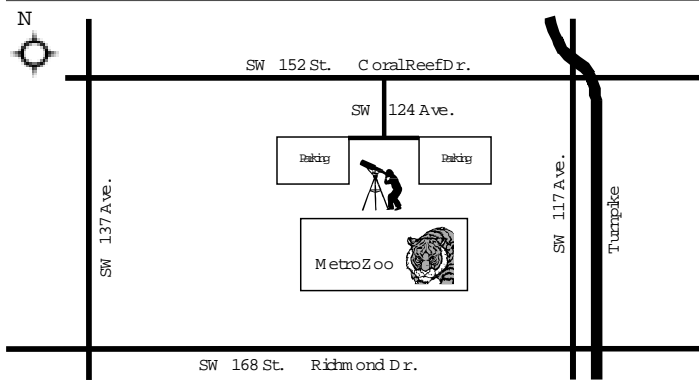
SCAS General Meetings - Third Friday of every Month



SCAS Star Gazing - Every Saturday Night 8-10pm



Saturday Solar Viewing - 10am - 12noon



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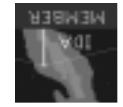
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<http://www.scas.org>

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



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