STARSCAN

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Halton Arp at the 2005 Texas Star Party

Dennis Webb

We fans of Halton Arp's unconventional view of the universe had a festival of fun at the 2005 Texas Star Party. He was a last minute addition to the evening speaker's roster. It ended up a marvelous set of coincidences. But first a little history…

About a year and a half ago, I got an email asking for help. Jeff Kanipe, astronomy author and editor, was writing a book for Willmann-Bell on Halton Arp and the 1966 *Atlas of Peculiar Galaxies*. The publisher thought it was a good idea to include some amateur astrophotos of the 338 peculiar views of peculiar galaxies. Jeff and I had known of each other's interest in the Arps (he spoke at the JSCAS a couple years ago) and he approached me to see if I could gather some images and contribute to the book. I jumped at the chance to work with Jeff and Willmann-Bell, as my dream has been to have a book published and I know something about the Arps. This would be a gentle introduction to the business. Within a couple months we decided we might be able to get amateur images of all 338 and turn it into a recreation of the *Atlas*. By New Years, I was promoted to co-author and the game was on. The publisher asked us to keep the project quiet, to avoid declaring a book was coming out before we could see the end. I wanted to brag but kept quiet. As the work became bigger and bigger, it has taken over my astronomical life – I made no images between TSP2004 and TSP2005, and have made very few JSCAS meetings and events.

Through 2004, I recruited and negotiated a nearly complete set of great existing amateur astrophotos. Al Kelly (who led me into this imaging obsession) is contributing several, including some of his collaborations with Arne Henden of the USNO. Three imagers graciously agreed to shoot the remainder needed: Dick Miller, Chuck Shaw, and Paul Downing (FBAC, HAS, and NHAC). Barbara Wilson and Dave Tosteson are contributing visual observations. There are a lot of contributors (sometimes an overwhelming coordination task), and I have finally had to stop recruiting and make a book. I have reviewed about 1000 images. Both Paul and Dick have helped me manage the immense amount of data that will be presented – I thought my earlier researches were sufficient but we have had to research and validate the 800-odd galaxy references. At TSP 2004, publisher Perry Remaklus stopped by the JSCAS Harmony bunkhouse rustic reception area for a consultation and social with the gang. Still we had to keep the secret. The book is mostly done and we hope to have it out in the spring of '06. This book business is more complicated than it appears and finishing is an extended process.

Dick Miller, Jeff Kanipe, Dennis Webb, Larry Mitchell, Halton Arp, and Minnesota Dave Tosteson pose in front of the partial manuscript – photo by Alex Witze

Now the coincidences – Larry Mitchell was preparing his TSP2005 advanced observing list and since it was 10 years since Halton Arp appeared at the TSP, Larry thought it would be nice to feature a list of objects from the 1966 *Atlas.* I got an email from a guy who was helping Larry and he was seeking some updated Arp information relative to my stale website. I ran into Larry at Astronomy Day and followed up with a little more data. Larry had pestered Barbara Wilson to get Dr. Arp to come to the TSP but she had already booked speakers. I suggested that she call him for next

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Jim Cate, Ken Lester, Shane Ramotowki, and new friends from Albuquerque at the Fajita Feast – it was cold!
Image by Dennis Webb

Dick Miller, Scott Ewart, Don Halter, Jim Cate, around the TSP05 campfire
Image by Dennis Webb

year (TSP 2006), since the book would be out by then. She emailed Dr. Arp and by coincidence, he was going to be in the US during TSP2005 and said he would be delighted to stop by. Holy cow, was I excited. Publisher Perry gave Jeff Kanipe and me permission to announce the imminent book at the TSP – the secret can come out!

So, on the Saturday before TSP, Dick Miller and I load up and head west. We spent the night at Don Halter's ranch near Kerrville – very nice spread and the guesthouse is cozy. Len Casady was going to convoy (three truck convoy from Kerrville!) but had transmission problems and headed back in the morning. Oh, we missed you, Len, but you did not miss much sky. Sunday afternoon we wheeled expectantly into the Prude Ranch and settled into the bunkhouse and assembled telescopes on the traditional JSCAS location on the middle of the east side of the upper field. Gosh, it was great to be home with all the friends. The Ramotowskis hosted Monday evening fajitas (it was so cold we had to build a fire!) We got to meet several of the Albuquerque club folks who shared the meal.

Dr. Arp arrived Monday night in anticipation of his talk Tuesday night. Co-author Jeff and I introduced Dr. Arp's talk and announced our forthcoming book. Halton Arp was one of Edwin Hubble's students and a peer to Alan Sandage in the golden age of film astrophotography in the 1950's and 1960's. This group had access to the largest telescope of their day, the 200-inch Hale Telescope at the Carnegie Observatory on Mount Palomar, developed to discover the extent of the universe and the first to see many faint wonders. Arp was studying spiral galaxies with this instrument and became interested in the peculiar galaxies that seemed to thwart categorization. His 1966 *Atlas of Peculiar Galaxies* was an attempt to catalog and provide a structure to the range of peculiarity – indeed there are a lot of different things going on in these special galaxies and interacting groups. Arp is an observer and the things he saw led him to question the emerging theory of the expanding universe, now codified as the Standard Model, the big bang. The pursuit of these ideas led him further from mainstream cosmology and he eventually could not get observing time. Finally he left for Germany where there is more tolerance for diverse lines of research. Halton Arp is a controversial figure in astronomy and cosmology – in some astronomical crowds, discussing his ideas will stop conversation or generate strong emotion. Fortunately, this is Texas where we generally tolerate the renegade and sometimes celebrate him.

In his talk, Dr. Arp summarized a number of his observations and offered an emerging theory that I will try to summarize. The redshift that we observe, that forms the basis for the expanding universe (the Hubble expansion), is due in part to an intrinsic property of matter, a function of its age. Matter is created in the universe by energetic galaxies shooting new matter out. As evidence he points to numerous cases of active galaxies that curiously have pairs or groups of quasars equidistant from the galactic center. Many of the pairs of quasars have curiously similar redshifts. There are complexes of quasars arranged in apparent patterns that Arp relates to the morphology of the

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nearby galaxy. As in 1995, he discussed NGC 4319/Markarian 205 and the disputed optical bridge between the two galaxies of differing redshifts. He discussed NGC 1097 (Arp 77) and its pattern of quasars to the north. He spoke of the conflict of interpretation of images with wry humor. He spoke of the support he gets from amateur astronomers. He spoke with frustration of colleagues who are interested in participating in his work but afraid to have their students work on it because they will subsequently not be able to be employed in the US. He concluded with a unified hypothesis that relates all of these strange observations with a sense of unity. Like in 1995, the packed auditorium gave him a standing ovation.

I won't claim that I followed all of this but find the oddities that he selects as genuinely challenging to the orthodox view. A key underpinning to his theories is the statistical unlikelihood of these unusual physical relationships. After college statistics, I swore off the study of statistics (I did manage a B), so I leave this to others to assess. As an image processor and analyst, I understand the potential for image analysis to generate artifacts that create structure that may not really be there; again the rigorous analysis is beyond me. In Texas, I choose to celebrate the renegade and await the long deliberate arm of history to write the final judgment.

Halton Arp, Charlie McLeod, Alex Witze, Jeff Kanipe, Dick Miller enjoy the Tinned Mollusks and Libations
Image by Dennis Webb

On Wednesday afternoon, Larry Mitchell and I gave complementary talks on the Arp peculiar galaxies, with Dr. Arp in the audience – what an experience! Each of us could grapple with a notion and we could ask the guy himself what his thought was. After the talks, we had a modest reception for him – the Annual JSCAS Festival of Tinned Mollusks and Libations in the Harmony Bunkhouse Rustic Reception Area. Jeff Rowe, Jeff Kanipe and his wife Alex Witze, and Jim Cate had brought finer vintages (Dr. Arp is a wine aficionado). (By the way, Alex was the science editor for the Dallas Morning News and has a humongous footprint on the internet – very nice person as well). We had the usual gang and the other participants in the book along as well and many folks stopped by to chat with Dr. Arp. Jeff Rowe shot some artful portraits we hope to use in the book. Dr. Arp is a soft spoken charming fellow and he genuinely enjoyed the company of knowledgeable amateurs and the pleasant environment of the TSP.

Jeff Rowe, Becky Ramotowski, Halton Arp chatting at the reception Image by Dennis Webb

At the reception, our new friend Fred Miller took delivery of his new telescope, a Stellarview refractor with a bino-viewer. This was Fred's first TSP and he came alone from Portland, TX, staying in the next bunkhouse over so we adopted him into the JSCAS. He fit right in and we showed him the ropes of TSP-ing. The next day he got a visit from the owner of Stellarview who showed him how to adjust the subtleties of his new instrument.

Wednesday night was workable observing and we observed with passion. I was scheduled to drive Dr. Arp back to El Paso for his plane Thursday morning, but he decided to ride with a different NASA guy (Robert Mitchell of JPL, the Wednesday evening speaker about the Cassini spacecraft) instead

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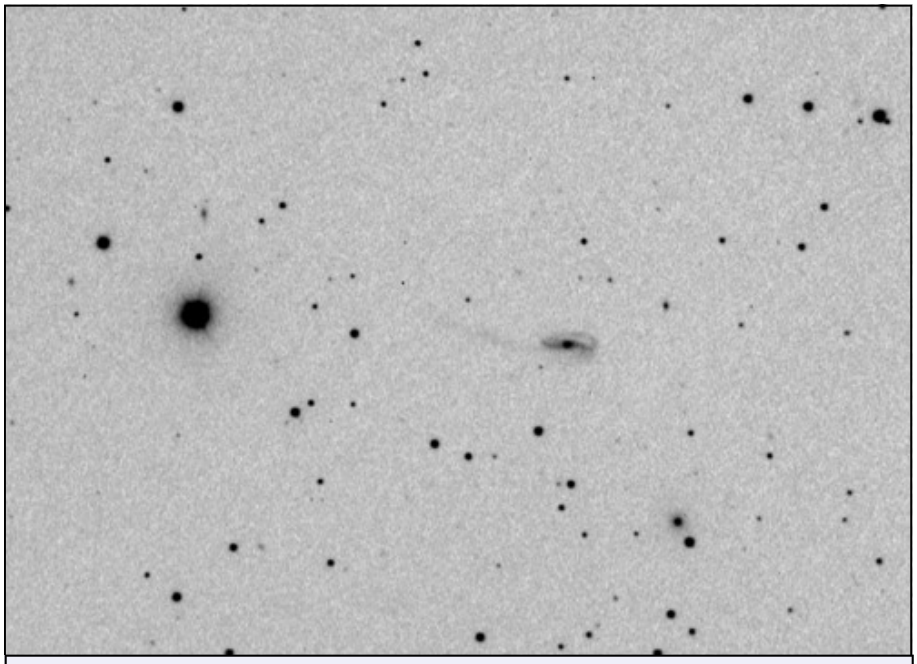
– a disappointment, but at least I got to observe a long night. Dr. Arp was observing with Larry Mitchell and I walked over to confirm the changed arrangements. When I got there, Dr. Arp was at the top of Larry's ladder looking at a really obscure object through the 36-inch telescope near the zenith – pretty good for a 78-year old guy. I am really nervous at the top of that ladder! I imaged Arp 188, the Tadpole, in iffy conditions but made the most of the sky.

Fred Miller, Barbara Wilson, Shane Ramotowski, and Albuquerque friends Gordon and Larry Cash examine Fred's new telescope. Image by Dennis Webb

Thursday night after all the Arp hubbub passed, was a different kind of night – ferocious thunderstorms were all around. The brave young people (Ramotowskis, Scott Ewart, Don Halter) sat under the metal shed below the bunkhouse to watch and photograph the lightning. We safety-oriented people hid in the image processing annex of the bunkhouse and whiled away the hours watching radar and satellite photos via the intermittent wireless internet. We checked periodically on the brave people via walkie talkie, with those ridiculous conversations you have as astronomers waiting for the sky to clear. We debated the merits of various weather websites. The satellite photo implied eventual clearing. Several of us napped for an hour or two – I awoke to Scott telling me that he could see the gegenschein and rolled out of bed for a few hours of imaging. The wireless internet worked really well on the upper field – of course when I am on the upper field, I am observing so I did less email than I planned. It is still a really neat thing.

Driving back on Saturday night, Dick and I observed that this was the best TSP ever, in spite of only parts of four clear nights of observing. Of course we, make this judgment every year. Can't wait until next year. Ya'll come!



Arp 188, Tadpole Galaxy: C8, starlight Xpress MX916 camera, 17 minutes ©Dennis Webb

Texas Star Party Revisited

Ken Lester

My trip to the this year's TSP started off very well. I took a leisurely ride down highway 90, which I consider the more scenic route. It had been several years since I traveled that route. It seemed that there was something new around every bend in the road. What struck me most about that ride was how fresh the desert seemed. The usual grays and browns were filled with greens and yellows and reds of lush grasses and wild flowers.

JSCAS members outside Harmony bunkhouse — image by Ken Lester

When I reached the high bridge over the Pecos I was shocked to see the river was once again a river and not the sand bar filled trickle of water of a few years ago.

I arrived at the Prude on Sunday about 10:00 am and pulled up behind the line of cars parked on the side of the road. They won't let you onto the ranch until noon, so I sent the time visiting with Shane and Becky Ramotowski and Marilyn, the book vendor. When noon came, I was surprised at how quickly the long line of cars, trucks and RVs moved through the check point at the main gate.

It didn't take long to set up camp at RV spot #12, my home for the week. I then drove to the upper observing site and staked a claim on the east side of the field near the center steps down to the road. All in all, it didn't take long to get set up, both at the observing field and at my popup.

Dennis Webb introduces Dr. Halton Arp—image by Ken Lester

The weather was certainly a mix this year. Cloudy, overcast skies and rain kept the nights quite cool. Someone said this was the coldest TSP ever. I disagreed, thinking the event at Leaky was colder. As a contrast, when the Sun was out during the day it was very hot. Of the seven nights, I was only able to view four times, once after the skies cleared after midnight. There was extreme moisture every night of viewing.

Because of the moisture, there seemed to be a lot of power problems. Although I didn't require power, those using CCD equipment and laptops kept loosing power, probably due to the heavy use of hair dryers to remove dew from corrector plates and eyepieces.

Shane and Becky provided their traditional fajita dinner on Monday evening. It weather was cold and everyone was huddled around the fire pits trying to catch some warmth.

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Left to right: Don Halter, Dr. Arp, Jeff Roe, Dennis Webb, Dick Miller Image by Ken Lester

This year's speaker list included Dr. Halton Arp. Dennis Webb helped introduce Dr. Arp at Tuesday night's lecture. His lecture was fascinating to say the least. Dr. Arp has some very different views on the universe. Dr. Arp was invited to the JSCAS Harmony bunkhouse for a reception on Wednesday afternoon. It was great to visit with such a distinguished guest.

Despite the clouds, cold, and heavy dew, I had a great time observing. With the exception of one object which was then behind the Sun, I finished up my Messier observations. It's funny how the best laid plans can change, I had intended to start the Herschel list after the Messiers but I just couldn't seem to get my heart into it. Feeling a little bit lost as to what I wanted to observe, I started looking at some old familiar objects. As soon as I looked at M-13, I knew what I wanted to observe this trip. I'm a sucker for globular clusters, you see. So I started looking for globulars. Even though most globulars outside the Messier list don't show the shinning jewels you see in M-13, I really enjoyed the challenge of finding those small dim fuzzy objects.

I didn't start my globular quest right away. There is an object very near M-13 that I have been trying to capture for quite sometime. No, it wasn't the spiral galaxy NGC 6207, I've seen that one many times. The object I've been pursuing is NGC 6196, a magnitude 13.9 galaxy lying in the opposite direction from NGC 6207. To my surprise, I finally was able to catch an averted vision glimpse of 6196. It was so dim, it lacked shape, or maybe I should say, the shape kept changing as the seeing changed. It was a thrill to have finally seen it. I wasn't sure my tired old eyes were up to the task.

The clouds illuminated by lightning. The sky cleared after midnight allowing some viewing. Image by Ken Lester

The trip was not without some problems for JSCAS members, however. Jim Cate went missing from the bunkhouse. When he finally checked in with us, we learned that he had become ill and was at the Alpine Medical Center. Fortunately, Jim felt well enough to return to the Prude on Saturday night where he won a door prize.

Fred and Joan Henderson had a frightening experience with a deer around 5 pm one evening. Unavoidably, a deer smashed into the front end of their 3 month old Expedition. Thankfully they weren't hurt. Their son had to rent a van to haul their equipment and camper back to the Clear Lake area. When I talked to them just before they left for home, they said that their SUV was going to have to be towed to Ft. Stockton for repair. Hopefully they will get their car back soon.

Several of our club members won door prizes at the Great Texas Give-a-way. Dennis Webb even won an award for best Mixed Media Astronomy Art.

The attendance was around 545 people this year. There were several RV spots that were unoccupied the entire week. I'm sure that the empty RV spots and low attendance was due to the high probability for bad weather. TSP was a lot of fun. I'm glad that I have decided to start attending again.

Reflections

David Haviland

It is difficult for me to come with anything about Eleta without the inclusion of Ed. It isn't that they were "joined at the hip", but because they shared a great many things including life, the stars, and each other. So in a way, my reflections of her are also of Ed, and a testament to both of them.

My story begins when my family was given a 6" reflector. I owned a telescope but I was in search of a home and guidance. I was pointed in the direction of JSCAS by a dear friend from work and when I asked why this particular group, the only reason he gave was "you have to get to know them… those folks are unique". With that advice in hand, a short time later I ended up in an email exchange with Becky Ramotowski.

Eleta Malewitz at Hyde Elementary Star Party — image by Ken Lester

It turns out the club was having a star party at Challenger park that night (I'd swear it was a Friday but I could be mistaken) and I certainly wasn't brave enough to bring my brand new scope about which I didn't know a thing. Sure, I've stared at a full moon a couple of times but I was so green that star-hopping was even out of the question. So my intent was to simply show up and see what could be seen and just listen to people. I ended up meeting Becky and then moved from scope to scope and then there was this very inviting couple with a refractor. It was Ed and Eleta. We talked and talked for nearly an hour and I continued talking with Eleta when Ed would guide the telescope for the crowd. We talked a lot about the telescope of which I knew nothing at the time and we also discussed a lot about film photography. Being an old B&W photographer myself Ed and I instantly connected in that area. I was very grateful for that evening at Challenger as I learned quite a bit and those discussions which helped me out when I started to do more and more viewing from my backyard.

Eleta and Ed Malewitz set up their "Missile Launcher"

I attended my first JSCAS meeting which had David Wolfe as the featured speaker (June 1999). I entered the LPI auditorium just late enough that I didn't have to introduce myself! I still felt a bit out of place being a biologist amongst all these "NASA-types" but I kept coming and started feeling that the people of this group are here for the love of the stars and not what they do in their day job.

At the next Challenger star party, I mustered the courage to bring my scope and participate. I was fairly

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proud that I could find the moon, NGC457 (ET cluster), Jupiter, and a couple of other things. I looked back on the center section and there was my welcoming committee of Ed and Eleta setting up what could easily have been a guided missile launcher – it that huge Meade refractor. It seems like it took them forever to set that thing up!

Perhaps prematurely, I had gone ahead and remounted my 6" on an equatorial mount instead of leaving it on the original Dob mount. But as I was trying to work it, I knew something was wrong. It wasn't tracking right. Other than Jupiter, I was a bit too nervous to take it off NGC457 but I had to keep re-centering it. I soon realized why. In my back yard, I know exactly where Polaris is – out my patio door and to the left – out at Challenger, I hadn't a clue. What I thought was Polaris, was not. Silly me! I was way too green around the gills for my own good. I shyly approached Eleta, while Ed was still fiddling with their scope, and asked which one was Polaris. "With all this haze, I'm not a 100% sure but I think it is this one", she replied and pointed. It was of no consequence where she pointed, it wasn't the star that I aligned on. I sauntered back to my scope and started the alignment process all over. In the background, I started hearing some chatter between Ed and Eleta. The volume increased a bit and I could then understand what they were saying. "It's not tracking right.", Eleta said sternly. "Something isn't right", Ed replied. Their voices and frustration went up a notch or two in intensity as they too were realizing what the problem was.

Never did the discussion transcend to the personal, but their conclusion was only that "IT wasn't aligned correctly". My thoughts were stopped cold. Here were two seasoned veterans of star gazing who had probably seen every Messier five times over and they had just made the same alignment error that a newbie such as myself had done. After both our scopes had been realigned and the scopes were tracking better, Eleta caught me a few minutes later, winked and with a smile said "It happens to everyone now and then!". She knew what had happened with both our tele-scopes. With that, I knew I was among friends and that I had found my "home".

Ed and Eleta at the Haak Winery Star Party — image by Ken Lester

My feeling toward Ed and Eleta as well as the collective only grew with time. I have many memories of her and of both of them. Connie and I met up with them at Cracker Barrel in Kerrville one Sunday morning while coming back from the Fort. And with all the trips to the Fort, the meetings, parties, and star parties, the questions, the answers, the sights, the laughs, and now the tears – it was an honor to know them both, and a delight to have Eleta touch our lives as she had. I look forward to many encounters with Ed but I also know there will be something missing at the next Ft. McKavett star party. My friend was right: the people that make up JSCAS are unique and special.

Jeff Winship, NHAC, has been working on a project to create an animation sequence of the minor planets based on data from the Minor Planet Center. The AVI file is 3.9 mb. It is recommended that you right-click on the link, selecting the "Save Target As" option, and save the AVI file to your hard drive before playing. The URL is http://www.pixelgraphics.org/MPOrbits.html.

The Princess of Mars
A Profile

Ken Lester

In a couple of years, JSCAS will celebrate its 40 year anniversary. Our club is very unique. We really don't exist. By that I mean we don't have by-laws, we don't collect dues, we don't own property, we aren't affiliated with the Astronomical League and we don't have a membership roll. Our philosophy is that if you attend a meeting you are a member.

Like any club, JSCAS has seen its "ups" and "downs". There have been times that our members have nearly filled LPI's auditorium. There have been meetings that as few as 12 members showed up.

To keep a club "up" requires a core group of very special people. These individuals make a point of greeting new members and making them feel welcome. They also step forward and volunteer their time to support the club and its activities.

Astronomy Day 2004

Eleta Malewitz, the Princes of Mars, was one of those special individuals. Eleta was the first person I met 8 years ago when I walked into my first JSCAS meeting. She was sitting near the entrance, and not recognizing me, made a point to come over and say hello. I remember thinking to myself, these people are really nice. At the end of the meeting I came back to see Eleta to ask some questions about purchasing a telescope. Eleta and her husband Ed answered my questions and suggested I come out to one of the club's star parties to look through several different scopes. I was hooked!

During TSP, I mentioned that story to past president Becky Ramotowski. She too had a similar experience. According to Becky, "she was the first 'astro-chick' I met. Eleta really knew her stuff."

Over the years, I noticed that Eleta and Ed always sat on the first row, near the entrance, ready to jump up and welcome new members. Keep in mind that there is no club position of greeter. It was something that she did on her own, just to make people feel comfortable with the club.

Family Space Days at LPI Image by Matt Hommel

Eleta's service to the club wasn't just restricted to greeting new members. In 1990 she was the newsletter editor and the club's vice president. During the 1990 TSP time frame, the club president, Bill Williams, became very sick and had to resign. Eleta took over the reigns, becoming a one woman "do it all" administration. She also served as first lady during husband Ed's presidency, undoubtedly guiding Ed in the right direction.

As a former employee, Eleta's association with LPI

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made her the ideal person to establish a mutually benefiting relationship with LPI. To this end, JSCAS members support LPI's Family Space Days and other special events like the Mars star party and lunar eclipses. Eleta and Ed were active participants in all these events.

Houston Museum of Natural Science Sun Earth Day 2004

The Princess of Mars story doesn't stop there. One of JSCAS' guiding principles is to "share the heavens to all who are interested". To uphold that principle, JSCAS has a very active schedule of public star parties. Eleta and Ed were regular participants at these star parties.

Eleta worked the JSCAS booth during Astronomy Day at Brazos Bend State Park, handing out information, posters and stickers to the public.

She also was one of the JSCAS representatives at the Houston Museum of Natural Science's Sun Earth Day in 2004.

Eleta participated in the Lunar Eclipse party at LPI despite being hooked up to a chemo-therapy pump.

They attended the Ft. McKavett star parties as often as health and work would allow. At each of the Ft. McKavett star parties, JSCAS would present an astronomy program at an elementary school in one of the surrounding communities. Eleta's participation as a presenter helped make this program a success.

Eleta also ensured that JSCAS was the best dressed astronomy club in town. She took the initiative to find someone who would make our JSCAS shirts, took the orders, and distributed the shirts when they arrived.

Eleta's story wouldn't be complete without an explanation of how she became known as the Princess of Mars. Within the vast collection of books in the Malewitz library, is a science fiction novel by Alexi N. Tolstoy. This 1922 novel was called *Aelita*. It is a novel about a group of Russian cosmonauts that travel to Mars and meet Aelita, the Princess of Mars. During Ed's reign as President, he officially declare that Eleta, would henceforth be known as Eleta, the Princess of Mars.

Eleta Malewitz, the Princess of Mars, leaves behind a legacy of service, sharing, and love that will be truly missed by all who knew her.

In December 2000, Eleta received the Ft. McKavett October Messier Challenge award. The certificate reads, "for skillfully braving the drive, the weather, the outdoor shower, the port-a-potties, and the ghost of Fort McKavett to view and log the challenge list of Messier Objects"

Family Space Day

Family Space Day May 2005 concentrated on Constellations. Kids got to make constellations on huge sheets of paper using lots of Glitter. There was also pin the star on the sky done with Velcro darts. There was also a theater presentation of Native American Mythology about constellations. Attendance was good, and there is always room for more. Thanks to the folks at the LPI for once again letting us "Glitterize" their place of business.

Till Next Month,
Matt Hommel.

All Images by Matt Hommel

Historical Astronomy — Ft. Griffin Style

Kelley Knight

“It is a long and dusty ride up the old cattle trails. You stop for a spell and you’re figurin' this is where Doc Holiday mortally wounded his first man. You’re also wonder’n how the bad smell from the rendering of buffalo hides caused the horses to bolt . Then you run into “Crooked Nose” and “Bobcat” talkin' about buffalo huntin'. You’re not sure whether they are honorable or just plain ornery.

Over by the Lady's Area, you hear an educated merchant's daughter espousing how that if women ever want the right to vote that they need to educate themselves in astronomy, math and physics so men won't think them meek-minded. That our fine Navy trusts the work of the computers (official title of women who sat in rooms for hours doing the calculations) with US Naval Observatory in the production of astronomical tables. Or how Maria Mitchell is paid less than male astronomers for the same work. And that there is great concern that the Sun will burn out because Lord Kelvin thinks that the Sun will run out of fuel because the meteors that crash into the Sun and light it have not been seen lately in such great meteoric storms. “

Then once the flag is down and the corset is off, the educated lady comes back to the 21st century and starts zooming around the beautiful **dark** skies of Ft. Griffin.

If this sounds like a unique way to illustrate how much fun astronomy is or you just want to play cowboys, soldiers and frontier-people for the weekend, then Frontier Times at Fort Griffin State Park, October 14-16, 2005, is for you.

"I visited this place after a trip to Ft. McKavett in March, 2004. Then in September, 2005 I donned my underpinnings and costume and had a blast learning about how this little wide-spot in the road is so important in American history. And it is truly where the Wild West began," said Kelley Knight.

Kelley is looking for others to participate with her. But she also needs a few more brass telescopes or opera glasses in her stable. If you have any you'd like to loan or give her, she’ll use them with the 800 to 1000 school children expected to come through.
Contact her at kelleyknight@Yahoo.com

Image courtesy of Kelley Knight

Ft. McKavett Town Reunion — JSCAS Star Party

The fall trip to Ft. McKavett will be bustling with activity. Besides our star party, the staff at the fort is planning the second Fort McKavett Town Reunion. Included in the activities is a silent auction and BBQ dinner.

The silent auction helps raise funds for the various events at the fort. Kelley Knight advises us that astrophotos and other general interest astronomy toys and related items are big hits with the bidders. If you have items that you'd like to contribute for the auction, please contact Kelley at kelleyknight@yahoo.com.

Visual Observing — June 2005

Chris Randall

★**SSO**: (Solar System Objects) Summary for the 15 June 05

Object	Const	Mag	% Ill	Rise Time	Transit	Set Time
Sun	Tau	-26.7	100	06:20	13:20	20:21
Moon	Vir	----	60	13:57	20:05	01:43
Mercury	Gem	-0.9	83	07:22	14:26	21:33
Venus	Gem	-3.9	94	07:50	14:50	21:54
Mars	Psc	0.1	84	01:59	07:58	13:58
Jupiter	Vir	-2.1	99	14:22	20:22	02:18
Saturn	Gem	0.9	100	08:44	15:36	22:33
Uranus	Aqr	5.8	100	00:52	06:35	12:18
Neptune	Cap	7.9	100	23:40	05:05	10:30
Pluto	Ser	13.8	99	19:51	01:17	06:44
Tempel 9P	Vir	9.6	89	14:57	20:57	02:53

Highlighted times denote daylight events.

★**BSO**: (Bright Sky Objects)

NGC 6121 (M 4)– Globular Cluster in Scorpius, Magnitude 5.4, Size 30'.
NGC 6218 (M 12) – Globular Cluster in Ophiuchus, Magnitude 6.1 Size 16'.
NGC 6205 (M 13) – Globular cluster in Hercules, Magnitude 5.8, Size 20'.
Cr 316 – Open Cluster in Scorpius, Magnitude 3.4, Size 105'.

★**DSO**: (Dark Sky Objects)

NGC 5904 (M5) –Globular Cluster in Serpens. Magnitude 5.7, Size 23'.
NGC 4736 (M94) – Galaxy in Coma Venatici, Magnitude 9.0, Size 14.3' X 12.1'.
NGC 4736 (M 94) – Galaxy in Canes Venatici, Magnitude 9.0, Size 14.3' X 12.1'.
NGC 4258 (M 106) – Galaxy in Canes Venatici, Magnitude 9.1, Size 18.8' X 7.3'.

★**CDMP:** (Chris' Don't Miss Pick)

NGC 5194 (M51) – The Whirlpool Galaxy in Canes Venatici,
Magnitude 9.0, Size 10.3' X 8.1'.

M51 was one of Charles Messier's original discoveries: He discovered it on October 13, 1773, when observing a comet, and described it as a "very faint nebula, without stars" which is difficult to see. Its companion, NGC 5195, was discovered in 1781 by his friend, Pierre Méchain, so that it is mentioned in Messier's 1784 catalog: `It is double, each has a bright center, which are separated 4'35". The two "atmospheres" touch each other, the one is even fainter than the other.' NGC 5195 was assigned its own number by William Herschel: H I.186.

For the amateur, M51 is easy to locate and a showpiece if the sky is dark. However, it is quite sensitive to light pollution, the presence of which makes M51 fade into the background. Under very good conditions, even suggestions of its spiral arms can be glimpsed with telescopes starting from

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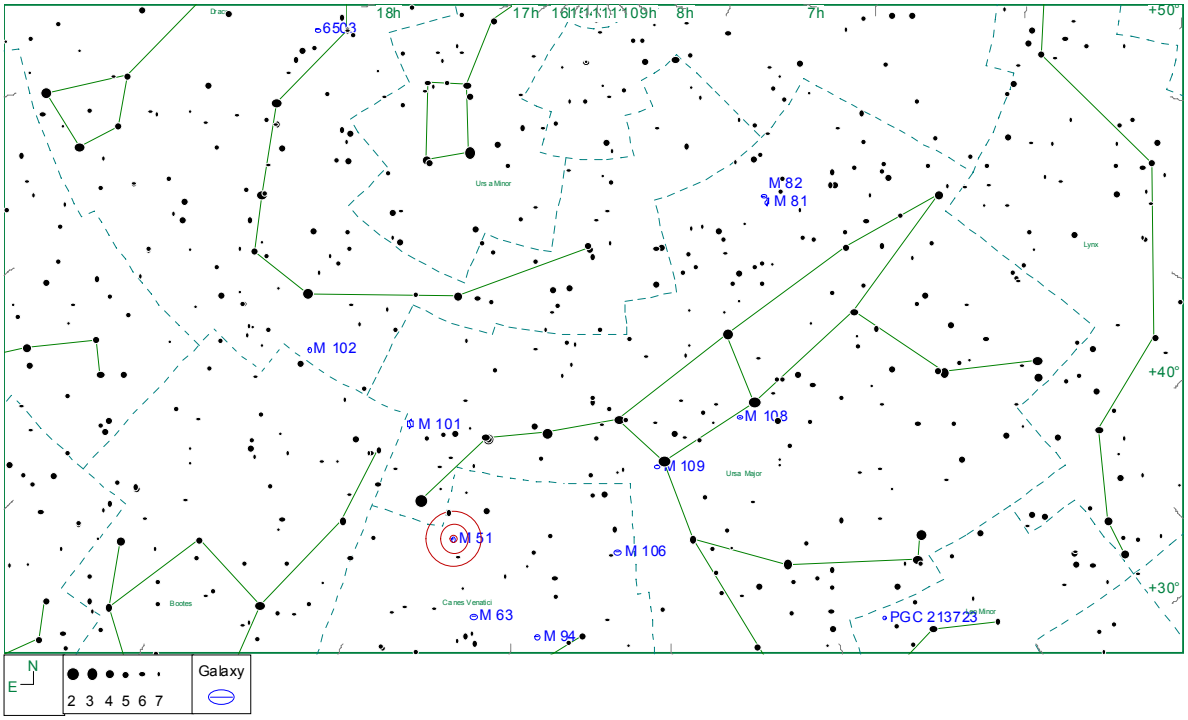
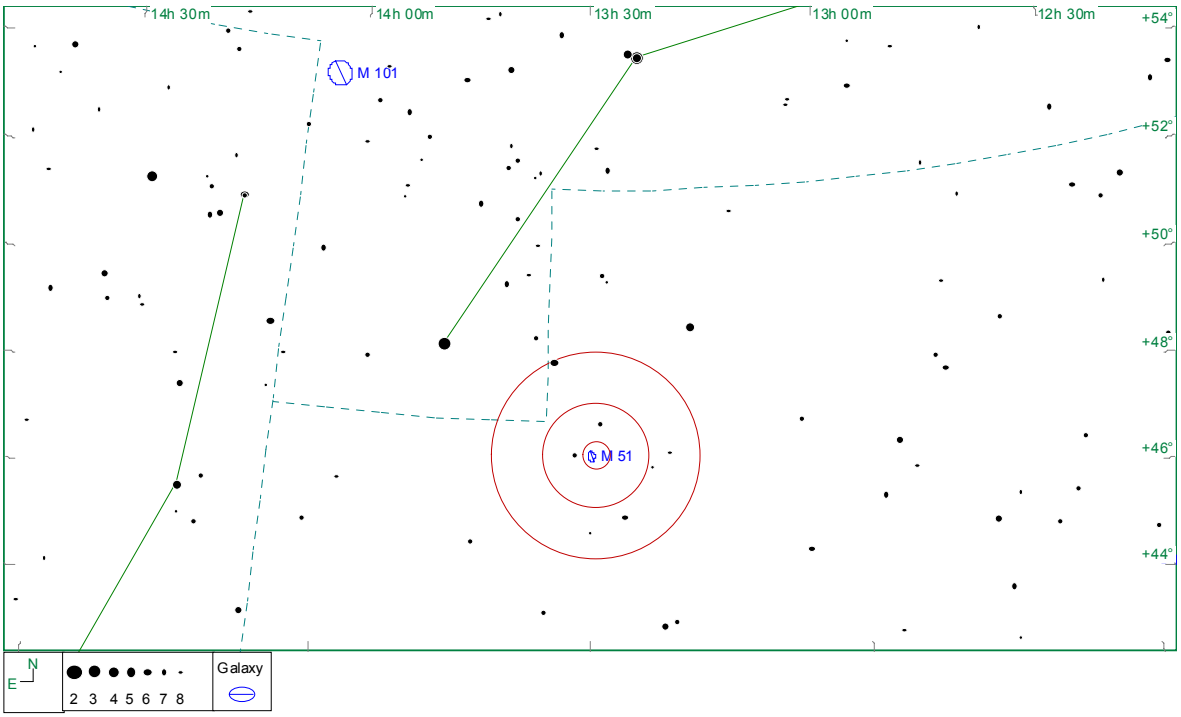
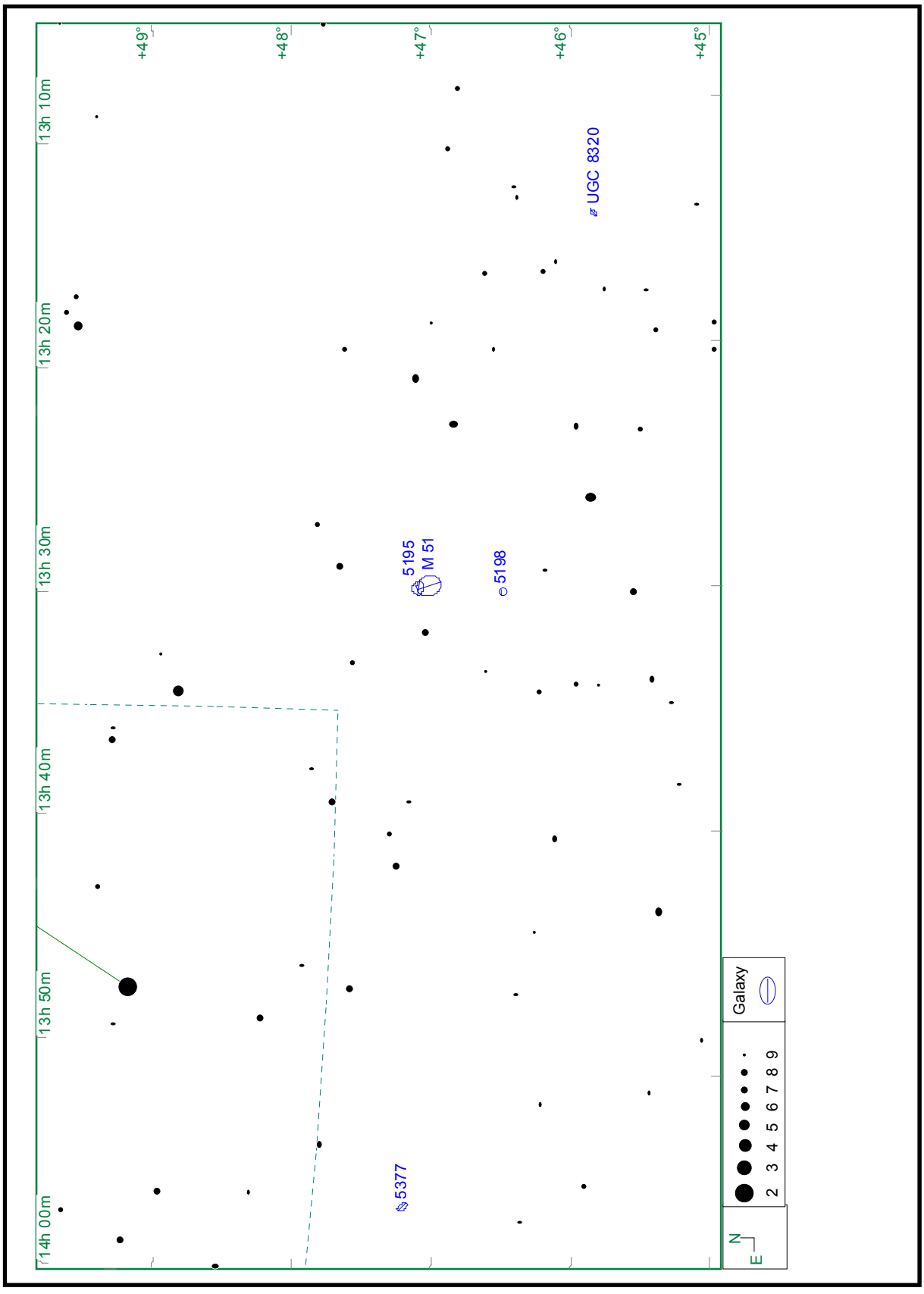
4-inch. Low magnification is best for viewing this pair.

Check Out Randy Brewer's Image in the Member's Gallery for an excellent image of M51.






+49°
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Voyager Spacecraft Enters Solar System's Final Frontier

News Release: 2005-084 May 24, 2005

NASA's Voyager 1 spacecraft has entered the solar system's final frontier. It is entering a vast, turbulent expanse, where the sun's influence ends and the solar wind crashes into the thin gas between stars.

"Voyager 1 has entered the final lap on its race to the edge of interstellar space," said Dr. Edward Stone, Voyager project scientist at the California Institute of Technology in Pasadena. Caltech manages NASA's Jet Propulsion Laboratory in Pasadena, which built and operates Voyager 1 and its twin, Voyager 2.

In November 2003, the Voyager team announced it was seeing events unlike any in the mission's then 26-year history. The team believed the unusual events indicated Voyager 1 was approaching a strange region of space, likely the beginning of this new frontier called the termination shock region. There was considerable controversy over whether Voyager 1 had indeed encountered the termination shock or was just getting close.

The termination shock is where the solar wind, a thin stream of electrically charged gas blowing continuously outward from the sun, is slowed by pressure from gas between the stars. At the termination shock, the solar wind slows abruptly from a speed that ranges from 700,000 to 1.5 million mph and becomes denser and hotter. The consensus of the team is Voyager 1, at approximately 8.7 billion miles from the sun, has at last entered the heliosheath, the region beyond the termination shock.

Predicting the location of the termination shock was hard, because the precise conditions in interstellar space are unknown. Also, changes in the speed and pressure of the solar wind cause the termination shock to expand, contract and ripple.

The most persuasive evidence that Voyager 1 crossed the termination shock is its measurement of a sudden increase in the strength of the magnetic field carried by the solar wind, combined with an inferred decrease in its speed. This happens whenever the solar wind slows down.

In December 2004, the Voyager 1 dual magnetometers observed the magnetic field strength suddenly increasing by a factor of approximately 2 1/2, as expected when the solar wind slows down. The magnetic field has remained at these high levels since December. NASA's Goddard Space Flight Center, Greenbelt, Md., built the magnetometers.

Voyager 1 also observed an increase in the number of high-speed electrically charged electrons and ions and a burst of plasma wave noise before the shock. This would be expected if Voyager 1 passed the termination shock. The shock naturally accelerates electrically charged particles that bounce back and forth between the fast and slow winds on opposite sides of the shock, and these particles can generate plasma waves.

"Voyager's observations over the past few years show the termination shock is far more complicated than anyone thought," said Dr. Eric Christian, Discipline Scientist for the Sun-Solar System Connection research program at NASA Headquarters, Washington.

The result is being presented today at a press conference in the Morial Convention Center, New Orleans, during the 2005 Joint Assembly meeting of Earth and space science organizations.

For more information about Voyager visit:
http://www.nasa.gov/vision/universe/solarsystem/voyager_agu.html

NASA's Next Mars Spacecraft Arrives in Florida for Final Checkout

News Release: 2005-069 May 2, 2005

Artist rendition of Mars Reconnaissance Orbiter credit NASA

A large spacecraft destined to be Earth's next robotic emissary to Mars has completed the first leg of its journey, a cargo-plane ride from Colorado to Florida in preparation for an August launch. NASA's Mars Reconnaissance Orbiter is an important next step in fulfilling NASA's vision of space exploration and ultimately sending human explorers to Mars and beyond.

The spacecraft's prime mission will run through 2010. During this period, the project will study Mars' composition and structure, from atmosphere to underground, in much greater detail than any previous orbiter. It will also evaluate possible sites for future Martian landings and will serve as a high-data-rate communications relay for surface missions.

"Great work by a talented team has brought Mars Reconnaissance Orbiter to this milestone in our progress toward a successful mission," said Jim Graf of NASA's Jet Propulsion Laboratory, Pasadena, Calif., project manager for the mission.

The spacecraft arrived at Kennedy Space Center's Shuttle Landing Facility on April 30 aboard a C-17 cargo plane and was taken to the Payload Hazardous Servicing Facility to begin processing. It was built near Denver by Lockheed Martin Space Systems. Launch is scheduled for Aug. 10 at 7:53:58 a.m. EDT (4:53:58 a.m. PDT), at the opening of a two-hour launch window.

The spacecraft will undergo multiple mechanical assembly operations and electrical tests to verify its readiness for launch. A test this month will verify the spacecraft's ability to communicate through NASA's Deep Space Network tracking stations. A June test will check the deployment of the spacecraft's high gain communications antenna. Another major deployment test will check out the spacecraft's large solar arrays.

In July, the spacecraft will be filled with hydrazine fuel for the "Mars orbit insertion" engine burn, which will be used to reduce the velocity of the spacecraft and place it in orbit around Mars. The fuel also will be used for attitude-control propellant. On July 26 the Mars Reconnaissance Orbiter will be encapsulated in the Atlas V fairing prior to being moved to its launch site on Cape Canaveral Air Force Station.

The Lockheed Martin Atlas V arrived at Cape Canaveral Air Force Station aboard an Antonov cargo plane on March 31 and was taken to the high bay at the Atlas Spaceflight Operations Center. The Atlas booster will be transported in May to the Vertical Integration Facility at Space Launch Complex 41 to be erected. The Centaur upper stage will be transported to that facility for hoisting atop the booster in June.

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Prelaunch preparations will include a "wet dress rehearsal" in July, during which the Atlas V will be rolled from the Vertical Integration Facility to the launch pad on its mobile launch platform. The vehicle will be fully fueled with RP-1, liquid hydrogen and liquid oxygen, and the team will perform a simulated countdown. The Atlas V will then be rolled back into the Vertical Integration Facility for final launch preparations.

The Mars Reconnaissance Orbiter will be transported from the Payload Hazardous Servicing Facility at Kennedy Space Center to the Vertical Integration Facility on July 29. It will be hoisted atop the launch vehicle to join the Atlas V for the final phase of launch preparations. The spacecraft is scheduled to undergo a functional test on August 1, followed by a final week of launch vehicle and spacecraft closeouts.

The Mars Reconnaissance Orbiter mission is managed by JPL, a division of the California Institute of Technology, Pasadena, for the NASA Science Mission Directorate, Washington. Lockheed Martin Space Systems is the prime contractor for the project. International Launch Services, a Lockheed Martin joint venture, and Lockheed Martin Space Systems are providing launch services for the mission.

Information about Mars Reconnaissance Orbiter is available online at http://marsprogram.jpl.nasa.gov/mro.

Odd Spot on Titan Baffles Scientists

News Release: 2005-086 May 25, 2005

Saturn's moon Titan shows an unusual bright spot that has scientists mystified. The spot, approximately the size and shape of West Virginia, is just southeast of the bright region called Xanadu and is visible to multiple instruments on the Cassini spacecraft.

The 483-kilometer-wide (300-mile) region may be a "hot" spot -- an area possibly warmed by a recent asteroid impact or by a mixture of water ice and ammonia from a warm interior, oozing out of an ice volcano onto colder surrounding terrain. Other possibilities for the unusual bright spot include landscape features holding clouds in place or unusual materials on the surface.

"At first glance, I thought the feature looked strange, almost out of place," said Dr. Robert H. Brown, team leader of the Cassini visual and infrared mapping spectrometer and professor at the Lunar and Planetary Laboratory, University of Arizona, Tucson. "After thinking a bit, I speculated that it was a hot spot. In retrospect, that might not be the best hypothesis. But the spot is no less intriguing."

The Cassini spacecraft flew by Titan on March 31 and April 16. Its visual and infrared mapping spectrometer, using the longest, reddest wavelengths that the spectrometer sees, observed the spot, the brightest area ever observed on Titan.

Cassini's imaging cameras saw a bright, 550-kilometer-wide (345-mile) semi-circle at visible wavelengths at this same location on Cassini's December 2004 and February 2005 Titan flybys. "It seems clear that both instruments are detecting the same basic feature on or controlled by Titan's surface," said Dr. Alfred S. McEwen, Cassini imaging team scientist, also of the University of Arizona. "This bright patch may be due to an impact event, landslide, cryovolcanism or atmospheric processes. Its distinct color and brightness suggest that it may have formed relatively recently."

Other bright spots have been seen on Titan, but all have been transient features that move or

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disappear within hours, and have different spectral (color) properties than this feature. This spot is persistent in both its color and location. "It's possible that the visual and infrared spectrometer is seeing a cloud that is topographically controlled by something on the surface, and that this weird, semi-circular feature is causing this cloud," said Dr. Elizabeth Turtle, Cassini imaging team associate, also from the Lunar and Planetary Laboratory.

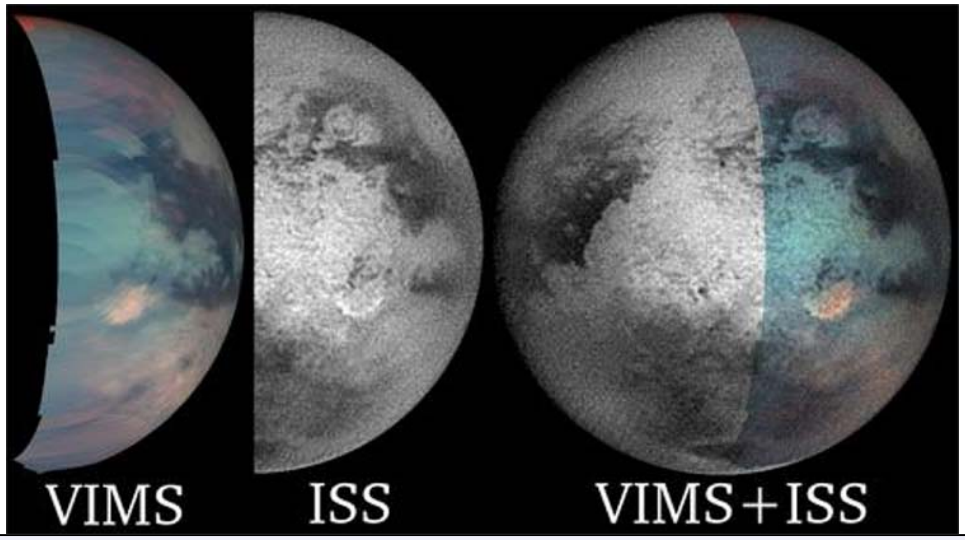
“If the spot is a cloud, then its longevity and stability imply that it is controlled by the surface. Such a cloud might result from airflow across low mountains or outgassing caused by geologic activity,” said Jason Barnes, a postdoctoral researcher working with the visual and infrared mapping spectrometer team at the University of Arizona.

The spot could be reflected light from a patch of terrain made up of some exotic surface material. "Titan's surface seems to be mostly dirty ice. The bright spot might be a region with different surface composition, or maybe a thin surface deposit of non-icy material," Barnes added.

Scientists have also considered that the spot might be mountains. If so, they'd have to be much higher than the 100-meter-high (300-foot) hills Cassini's radar altimeter has seen so far. Scientists doubt that Titan's crust could support such high mountains.

The visual and infrared mapping spectrometer team will be able to test the hot spot hypothesis on the July 2, 2006, Titan flyby, when they take nighttime images of the same area. If the spot glows at night, researchers will know it's hot.

For more information about the Cassini-Huygens mission visit http://saturn.jpl.nasa.gov and http://www.nasa.gov/cassini. For additional images visit the visual and infrared mapping spectrometer page at http://wwwvims.lpl.arizona.edu and the Cassini imaging team homepage http://ciclops.org.



This montage shows the spot in infrared wavelengths from the visual and infrared mapping spectrometer on the left, from the imaging science subsystem in the center, and a combination of both data sets on the right.

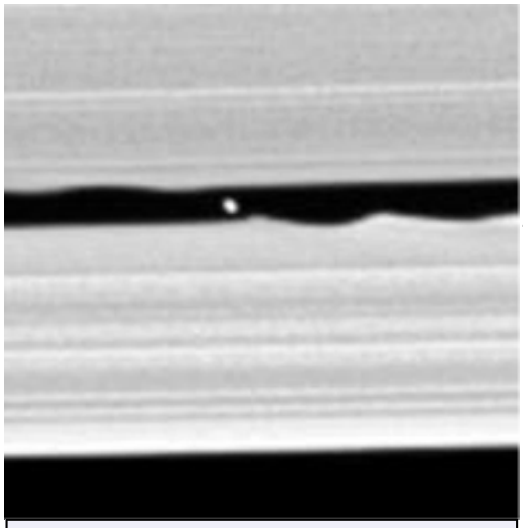
The false-color image on the left was created using images taken at 1.7 microns (represented by blue), 2.0 microns (green), and 5.0 microns (red). The images that comprise this view were taken by the visual and infrared mapping spectrometer instrument on the April 16, 2005, Titan flyby.

The center image was taken by the narrow-angle camera on December 10, 2004, using a spectral filter centered at 0.938 microns (938 nanometers). The image is centered on 8 degrees south latitude, 112 degrees west longitude. This image has been contrast enhanced and sharpened to improve surface feature visibility. Credit: NASA/JPL/University of Arizona/Space Science Institute

Cassini Finds New Saturn Moon That Makes Waves

News Release: 2005-074 May 10, 2005

In a spectacular kick-off to its first season of prime ring viewing, which began last month, the Cassini spacecraft has confirmed earlier suspicions of an unseen moon hidden in a gap in Saturn's outer A ring. A new image and movie show the new moon and the waves it raises in the surrounding ring material.



Credit: NASA/JPL/Space Science Institute

The moon, provisionally named S/2005 S1, was first seen in a time-lapse sequence of images taken on May 1, 2005, as Cassini began its climb to higher inclinations in orbit around Saturn. A day later, an even closer view was obtained, which has allowed a measure of the moon's size and brightness.

The new images can be seen at http://saturn.jpl.nasa.gov, http://www.nasa.gov/cassini and http://ciclops.org .

The images show the tiny object in the center of the Keeler gap and the wavy patterns in the gap edges that are generated by the moon's gravitational influence. The Keeler gap is located about 250 kilometers (155 miles) inside the outer edge of the A ring, which is also the outer edge of the bright main rings. The new object is about 7 kilometers (4 miles) across and reflects about half the light falling on it -- a brightness that is typical of the particles in the nearby rings.

"It's too early to make out the shape of the orbit, but what we've seen so far of its motion suggests that it is very near the exact center of the gap, just as we had surmised," said Dr. Joseph Spitale, imaging team associate and planetary scientist at the Space Science Institute in Boulder, Colo. The new moonlet orbits approximately 136,505 kilometers (84,820 miles) from the center of Saturn. More Cassini observations will be needed to determine whether the moon's orbit around Saturn is circular or eccentric.

S/2005 S1 is the second known moon to exist within Saturn's rings. The other is Pan, 25 kilometers (16 miles) across, which orbits in the Encke gap. Atlas and other moons exist outside the main ring system, as do the two F ring shepherd moons, Prometheus and Pandora.

Imaging scientists had predicted the new moon's presence and its orbital distance from Saturn after last July's sighting of a set of peculiar spiky and wispy features in the Keeler gap's outer edge. The similarities of the Keeler gap features to those noted in Saturn's F ring and the Encke gap led imaging scientists to conclude that a small body, a few kilometers across, was lurking in the center of the Keeler gap, awaiting discovery.

"The obvious effect of this moon on the surrounding ring material will allow us to determine its mass and test our understanding of how rings and moons affect one another," said Dr. Carl Murray, imaging team member from Queen Mary, University of London. An estimate of the moon's mass, along with a measure of its size, yields information on its physical makeup. For instance, the new moonlet might be quite porous, like an orbiting icy rubble pile. Other moons near the outer edge of Saturn's rings – like Atlas, Prometheus and Pandora – are also porous. Whether a moon is porous

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(Continued from page 22)
or dense says something about how it was formed and its subsequent collision history.

The Keeler gap edges also bear similarities to the scalloped edges of the 322-kilometer-wide (200-mile) Encke gap, where the small moon Pan (25 kilometers, or 16 miles across) resides. From the size of the waves seen in the Encke gap, imaging scientists were able to estimate the mass of Pan. They expect to do the same eventually with this new moon.

“Some of the most illuminating dynamical systems we might hope to study with Cassini are those involving moons embedded in gaps,” said Dr. Carolyn Porco, imaging team leader at the Space Science Institute. “By examining how such a body interacts with its companion ring material, we can learn something about how the planets in our solar system might have formed out of the nebula of material that surrounded the Sun long ago. We anticipate that many of the gaps in Saturn’s rings have embedded moons, and we’ll be in search of them from here on.”

Additional closer observations of the new body may take place in the next several months, as Cassini continues its intensive survey of Saturn's beautiful and mysterious rings.

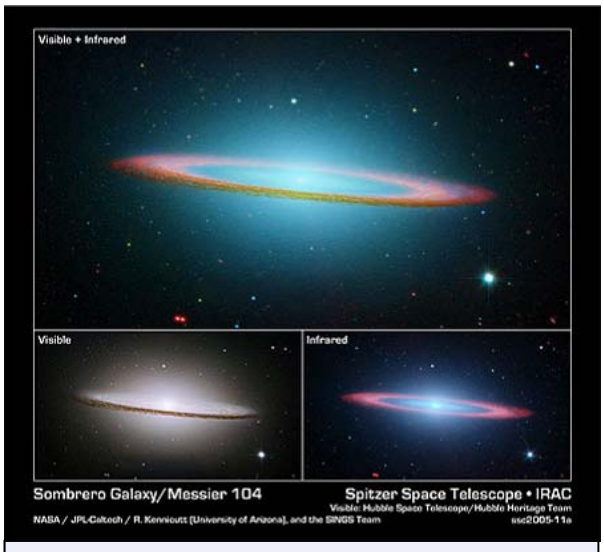
Hats Off to Space Day From NASA’s Spitzer Space Telescope

Image Advisory: 2005-070 May 4, 2005

NASA salutes Space Day, observed this year on May 5, with a new dramatic image of the Sombrero galaxy. Space Day, held the first Thursday each May, is designed to inspire the next generation of explorers.

The galaxy, called Messier 104, is commonly known as the Sombrero galaxy because in visible light it resembles a broad-brimmed Mexican hat called a sombrero. The new Sombrero picture combines a recent infrared observation from NASA's Spitzer Space Telescope with a well-known visible light image from NASA's Hubble Space Telescope.

Spitzer adds new detail to the galaxy's bright, bulbous core and its thick, outer dust lanes. Infrared light traces the dust and makes the dark, murky ring glow brilliantly. The clumpy dust ring also becomes transparent in infrared. This allows a clear view of the inner disk of stars within the dust ring.



Credit: Infrared: NASA/JPL-Caltech/R. Kennicutt (University of Arizona), and the SINGS Team Visible: Hubble Space Telescope/ Hubble Heritage Team

The Sombrero is one of the most massive objects at the southern edge of the Virgo cluster of galaxies. It is equal in size to 800 billion suns. This spiral galaxy is located 28 million light-years away and is 50,000 light-years across. Viewed from Earth, it is just six degrees away from its equatorial plane.

The Hubble images were taken by the Hubble Heritage Team in May through June 2003, with the telescope's advanced camera for surveys. Spitzer's images were taken in June 2004 and January 2005 as part of the Spitzer Infrared Nearby Galaxies Survey, using the telescope's infrared array camera.

Scientists Discover Pluto Kin is a Member of Saturn Family

Press Release: 2005-071 May 6, 2005

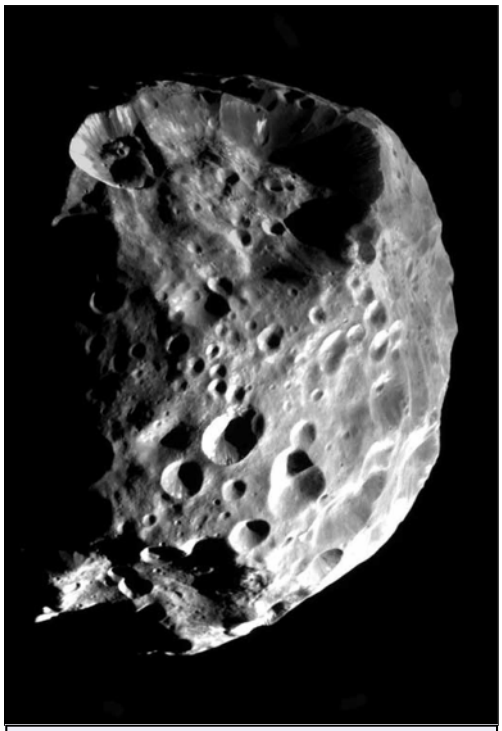


Image Credit: NASA/JPL/Space Science Institute

Saturn's battered little moon Phoebe is an interloper to the Saturn system from the deep outer solar system, scientists have concluded. The new findings appear in the May 5 issue of the journal Nature.

"Phoebe was left behind from the solar nebula, the cloud of interstellar gas and dust from which the planets formed," said Dr. Torrence Johnson, Cassini imaging team member at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "It did not form at Saturn. It was captured by Saturn's gravitational field and has been waiting eons for Cassini to come along."

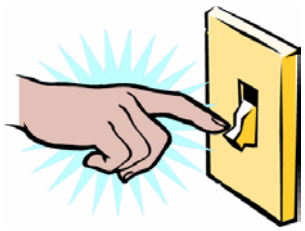
Cassini flew by Phoebe on its way to Saturn on June 11, 2004. Little was known about Phoebe at that time. During the encounter, scientists got the first detailed look at Phoebe, which allowed them to determine its makeup and mass. With the new information they have concluded that it has an outer solar system origin, akin to Pluto and other members of the Kuiper Belt.

"Cassini is showing us that Phoebe is quite different from Saturn's other icy satellites, not just in its orbit but in the relative proportions of rock and ice. It resembles Pluto in this regard much more than it does the other Saturnian satellites," said Dr. Jonathan Lunine, Cassini interdisciplinary scientist from the University of Arizona, Tucson.

Phoebe has a density consistent with that of the only Kuiper Belt objects for which densities are known. Phoebe's mass, combined with an accurate volume estimate from images, yields a density of about 1.6 grams per cubic centimeter (100 pounds per cubic foot), much lighter than most rocks but heavier than pure ice, which is about 0.93 grams per cubic centimeter (58 pounds per cubic foot). This suggests a composition of ice and rock similar to that of Pluto and Neptune's moon Triton. Whether the dark material on other moons of Saturn is the same primordial material as on Phoebe remains to be seen.

Help turn off the lights...

Join the
International Dark-Sky Association (IDA)
http://www.darksky.org
"To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting."



Star Party News

Ken Lester

Our next scheduled star party isn't until August 13th.

We are currently negotiating with the Haak Winery to have 3 star parties at the vineyards in 2006. The Haak Winery is our best public star party site in the Houston-Galveston area. It has also become one of the best attended star parties.

A decision has not yet been made concerning the lack of attendance and the unshielded parking lot lights at Challenger 7 Park. Attendance at the Challenger 7 star parties has drastically declined over the years while light pollution has increased at an alarming rate. Star Party Chairperson, Lisa Lester, will be discussing the attendance and lighting issues with the park staff soon.

There is a possibility that JSCAS will be invited to do a star party for LPI, possibly at and area school. More details will be provided as they become available.

Event	Date	Sun Set	Moon			Jupiter		Saturn		Mars		Venus	
			Illum.	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set
2005													
Moody Gardens	Aug 13	20:22	60	15:00	00:31	11:18	23:01	05:43	19:29	00:11	13:12	09:50	22:08
Challenger 7	Sep 10	19:50	45	13:56	23:57	09:51	21:25	04:08	17:47	22:56	12:14	10:34	21:44
Fort McKavett	Sep 29 to Oct 2	19:25	11	04:01	17:47	08:55	20:21	03:03	16:38	21:50	11:14	11:04	21:32
Haak Winery	Nov 5	19:18	7	09:41	20:33	08:37	20:01	02:41	16:16	21:25	10:51	11:14	21:30
Moody Gardens	Nov 12	17:48	89	15:19	02:56	04:48	16:47	23:29	11:53	17:14	05:40	09:33	21:05

Sky & Telescope and now Astronomy Magazine Subscriptions – Don't Forget about the Club Discount!

Sky & Telescope offers a "Club Discount" on subscriptions. You can subscribe to Sky and Telescope for $10 off the normal price ($32.95 with the club discount). Astronomy magazine is also offering a club discount. JSCAS members can subscribe to Astronomy for $29 a year. We need to have a minimum of five subscribers to take advantage of the discount. I need **four** more people to sign up. If you are a current subscriber, *please* contact me so I can put you on the list for the club discount when your subscription is due for renewal!

Contact me by the email listed on the JSCAS web site, catch me at a meeting, or send your check and renewal form to my home address: 2407 Elkton Ct., Pearland, TX, 77584. I'll put your renewal in the mail within 48 hours after I receive it.

David Haviland
Vice-president and Secretary

Houston Area Astronomy Clubs

Brazosport Astronomy Club
Meets the Third Tuesday of the month, 7:45 p.m.
At the Planetarium
400 College Drive
Clute, Texas
For more information, contact Judi James at the Planetarium
979-265-3376

Fort Bend Astronomy Club http://www.fbac.org/
Meets the third Friday of the month, 7:00 p.m.
First Colony Conference Center
3232 Austin Pkwy
Sugar Land, Texas

Houston Astronomical Society http://spacibm.rice.edu/~has/
Meets the first Friday of the month, 8:00 p.m.
University of Houston, University Park
Science and Research Building, room 117

North Houston Astronomy Club http://www.astronomyclub.org/
Meets the fourth Friday of the month, 7:30 p.m.
In the Teaching Theater at Kingwood College
20000 Kingwood Drive
Kingwood, Texas

Member Recognition

Those members who have attended the JSCAS star parties at Ft. McKavett, know the magic of the image on page 129 of the July issue of *Sky & Telescope*. **Becky Ramotowski** captures the spirit of the fort and astronomy in this great image.

David and Connie Haviland are very proud to announce that their son and fellow JSCAS member, **John Cavouti,** has obtained the rank of Eagle Scout. Congratulations John!

Upcoming Events

ArkLaTex Star Party: The Red River Astronomy Club (RRAC) will host the first ArkLaTex Star Party from September 1st through Labor Day, September 5th near Nashville, Arkansas. In a message from Roy Clingan of RRAC, Roy stated: "Armed with new technology, amateurs are contributing vast amounts of data and research to the scientific community. Hear what you can do in the fields of spectroscopy, cataclysmic variables, NEO and super nova searches. There are also presentations on collimation, imaging and a history of amateur contributions."

The ArkLaTex Star Party will supply dark skies, plenty of camping space, a vendor (Rex's Astro Stuff), presentations by professional and amateur astronomers, meals, T-shirts, swap meet, showers, electricity, door prizes, movies on a 72 inch screen and broad band internet access on the field via wireless connection. There are also many interesting, beautiful and historic sites surround Nashville, including a diamond mine, an Indian village and canoeing.

For more information, please visit: http://www.rrac.org.

MEMBER'S GALLERY

NGC-5566
©Randy Brewer

The center galaxy is NGC-5566. To the right is NGC-5569 and on top is NGC-5560. They are in the constellation Virgo. Taken with a 14.5" RC at f/9 using an SBIG ST-10XME camera and Don Goldman's LRGB Filters. Exposure LRGB = 120:15:15:15 minutes. The image was taken April 5th, 2005 at Ft. Davis, Texas.

M 13
©Chris Wells

This image of M13 was taken from League City, Texas on May 2nd, 2005 using a 10" LX200 (@ F6) equatorially mounted. Images were processed with AIP4WIN and Photoshop from (LRGB) 10 clear ,4 red, 4 green and 4 blue images. All images at 15seconds in duration.

Storms Over TSP
©Randy Brewer

Taken near Ft Davis Texas on May 5th, 2005. In the background is the McDonald 82" & 107" on the left mountain and the Hobby-Eberly on the right.

M-51
©Charlie McLeod

This is Charlie's very first deep sky CCD image. It has not been processed since those tasks are still being learned.

The image was taken during TSP at the Prude Ranch, through some clouds which limited longer exposure.

42 x 15 seconds using a Meade DSI color CCD and Meade LX90 8" SCT at f3.3.

For Sale

Celestron C-8 and astrophotography equipment: I recently contracted cancer and my health is rapidly failing. I have a Celestron C-8 SCT with all accessories for astrophotography. I would like to sell the equipment to one who would use it to its potential. This equipment would be an excellent way for someone wishing a quality astronomical/astrophotography system at a reasonable cost.

Revised

I am willing to un-bundle the astronomy equipment from the photo equipment. Any reasonable offer will be considered.

Equipment included…
- Celestron C-8 SCT with carrying case
- Wedge
- Deluxe tripod
- Full complement of Celestron eyepieces
- Two full aperture solar filters
- Variable speed drive corrector for sidereal, lunar and solar rates
- Electronic star tracker interfaced to above drive – absolute necessity for astrophotography
- Guide scope – 72mm, f/8 refractor
- Full cable set and current inverters for rural operation from a car battery
- Lumicon Hydrogen-alpha/beta/Oxygen III transmission and Sodium rejection filters
- Custom carry case for accessories
- Revised NGC catalog, Sky Publishing Atlas of the Heavens, various books on astrophotography, astrophotometry, telescope making, etc.
- Olympus OM-1 camera body
- 50mm, 100mm and 200mm Zuiko lenses
- Telemore focal length doubler
- Olympus 7mm, 14mm and 25mm macro extension tubes
- Olympus right angle viewer
- Remote cable release
- Olympus interchangeable focusing screens
- Various filters, accessories, gadgets, etc.

Any reasonable offer will be considered.

J. H. (Jay) Van Velkinburgh
6914 Cherry Hills Rd
Houston, TX 77069
281.397.9211 (Home)

New

17.5" Homemade Telescope with Coulter optics: Includes a drive platform copied from Al Kelly and over$1000 in two inch eyepieces. $1000 buys everything. Contact Joe Parker at: jhp49@hotmail.com or 979-964-3999 in Brazoria Texas.

Johnson Space Center Astronomical Society

An association of amateur astronomers dedicated to the study and enjoyment of astronomy. Membership is open to anyone wishing to learn about astronomy.

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June Meeting Agenda

June 10th, 7:30 p.m., Center for Advanced Space Studies/ Lunar Planetary Institute, 3600 Bay Area Blvd. (at Middlebrook Drive).

- Welcome!!!
- Guest Speaker: Richard Nugent — "New Developments in the field of Asteroid Occultations"
- Break
- SIG reports, Star Party News
- Astronomical Oddities — Hernan Contreras
- Last Words, Door Prizes

Any unfinished discussions can be continued over food and beverages at a location to be announced at the end of the meeting.

Starscan Submission Procedures

Original articles of astronomical interest will be accepted up to 6 P.M. June 25th.

The most convenient way to submit articles or a Calendar of Events is by electronic mail, however computer diskettes or CDs will also be accepted. All articles should include author's name and phone number. Also include any picture credits. The recommended format is Microsoft Word. Text files will also be accepted.

Submitter bears all responsibility for the publishing of any e-mail addresses in the article on the World Wide Web.

Editor's electronic address is: lesteke@swbell.net. Be sure to include the word Starscan in the subject line for proper routing of your message.

Starscan Staff

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Cover Image
NGC 300
NASA, JPL, Caltech, R. Hurt (Spitzer Science Center)

NGC 300 combines the visible-light pictures from Carnegie Institution of Washington's 100-inch telescope at Las Campanas Observatory (colored red and yellow), with ultraviolet views from NASA's Galaxy Evolution Explorer. Galaxy Evolution Explorer detectors image far ultraviolet light (colored blue).