SIRIUS ASTRONOMER

www.ocastronomers.org

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The view from Palomar Mountain on the morning of the AstroImage tour of the observatory on August 13th. Read all about this photo and the tour in Alan Smallbone's feature article (page 6)

OCA CLUB MEETING

The free and open club meeting will be held Friday, September 8th at 7:30 PM in the Irvine Lecture Hall of the Hashinger Science Center at Chapman University in Orange. The featured speaker this month is former OCA member Albert DiCanzio, presenting 'Galileo's Message from the Stars' (details, page 10)

Next General Meeting: October 13th

STAR PARTIES

The Anza site will be open this month on September 23rd. The Black Star Canyon site will be open this month on September 16th. Members are encouraged to check the website calendar, for the latest updates on star parties and other events.

Please check the website calendar for the outreach events this month! Volunteers are always welcome!

You are also reminded to check the web site frequently for updates to the calendar of events and other club news.

COMING UP

The next session of the Beginners Class will be held on Friday, September 1st (and next month on October 6th) at the Centennial Heritage Museum at 3101 West Harvard Street in Santa Ana.
GOTO SIG: TBA (contact coordinator for details)
Astrophysics SIG: Sept. 15th, Oct. 20th
Astro-Imagers SIG: Sept. 19th, Oct. 17th
EOA SIG: Sept. 27th, Oct. 25th
Dark Sky SIG: TBA (contact coordinator for details)

President's Message

By Barbara Toy

September used to be the month when everybody started a new school year – I guess it still is for a lot of people, but there seem to be more students all the time who start their school year in August, and there are those year-round schools that have their school years starting in different months for different groups of students…for us old-timers, though, "September" and "start of the school year" are almost synonymous. And I seem to recall too many years when the start of the school year also coincided with a major heat spell. Given that we've had so much heat this summer, I'm sure I'm not the only one who won't feel deprived if we skip our usual heat spell in September or October – though my real wish is that we make up for all those cloudy skies during the summer monsoons by having clear, dark, mild nights for the next several months, at least around the new moon weekends.

We Really Do Need a Refreshment Person for the General Meetings…

As I said last month, Leonard Stein has asked for help with the refreshments for the general meetings each month. When he first talked to me about it, he mentioned that carrying the coffee urns when they were full of water from where he had to fill them was becoming too much for him physically. At that point, he thought he would be able to continue helping out regularly, but couldn't continue doing the entire job alone. Since then, however, he has found that he will have to bow out of the position of Refreshment Person more completely, much to his regret.

So, we now have an urgent need for a new Refreshment Person – someone to bring the donuts, soft drinks and ice, make the coffee, collect the money paid for donuts and drinks, monitor the refreshment area during the general meetings, and clean up afterwards. Whoever takes this on doesn't need to do it alone – it's perfectly acceptable to recruit help, and having a team deal with refreshments would make it easier to have backup when the primary person isn't available for a particular meeting. It's a great position for meeting fellow club members – almost everyone at the meetings makes it to the refreshment area at some point during the meeting.

Leonard has done a great job with the refreshments for the last few years, and we will truly miss him in that position. He'll be available to help whoever follows him learn the ropes and to make the transition a smooth one. Knowing his generous spirit, I expect he'll continue to help out to the extent his health allows.

If you're a regular at our general meetings, you know what an addition the refreshments are to the festivities. Please consider stepping forward so we can continue to have refreshments regularly available at the meetings – believe me, your fellow club members will be *very* grateful!

AstroImage 2006

For those who weren't able to come to our AstroImage 2006 conference in August, it was a great success. We had an unexpectedly large number of walk-in registrations, which brought our total number of registrants above 90 – with our sponsors/vendors, speakers and volunteers, I think we had around 120 people total. Everyone I talked to was very enthusiastic about the talks and said they learned a lot, and I saw a lot of animated discussions going on during all of the breaks

The major question for me as the event approached and we had a better idea of how many people were coming was – how much would all these people eat? Lunch and dinner on Saturday were pretty easy, as I just had to give the correct numbers to the caterer. But I also had to come up with appropriate food and drinks for the reception Friday night, for the early morning and midmorning breaks Saturday morning, and the break Saturday afternoon, and estimating the needs proved to be more of an art than a science. Coffee was a "must" and the club's coffee urns were in constant service during the entire conference (we had decaf, too, but most people wanted the "high octane" brew. I guess it wasn't just planning committee members who were short of sleep that weekend!). Water, it turned out, was also a "must," even though it was a lot cooler the weekend of the conference than it was two or three weeks earlier. Then there were soft drinks and snacks, including some reasonably healthy vegetables and fruit that proved to be refreshingly popular, though the cookies, donuts, crackers, cheese and nuts also vanished with reasonable speed.

Not that I mean imply that the most important aspect of the conference was the food. There was a lot going on Friday night and all of Saturday, as we had the reception and two classes Friday night, talks all day Saturday along with vendor displays, the print gallery, the electronic image gallery, exemplar equipment displays, a nice, very tasty catered dinner in the evening for those who signed up for it in advance, and the keynote talk by Tony Hallas Saturday night, ending with the raffle for the door prizes. Fortunately, we were able to break up responsibility for various areas between planning committee members, which

was why my particular part of the conference was focused on the refreshments and related matters. Dave Kodama was the person mainly responsible for the speakers and the electronic gallery (along with the conference pages on the club website, the conference programs, and the Proceedings CD), Garth Buckles worked with the sponsors and moderated events in the theater, Jim Windlinger took care of the print gallery and the astrowear, and Tom Kucharski helped Liam Kennedy and the other video volunteers with the videotaping and web streaming of the conference and was our liaison with Palomar for the Palomar tour on Sunday as well as one of the docents who assisted with the tour. Charlie Oostdyk, the club treasurer, was essentially an ex officio member of the planning committee, and handled registration, production of the nametags, sales of the extra shirts and other astrowear, and other financial and administrative aspects of the event.

I'm told that the talks all were excellent – unfortunately, I wasn't able to attend many of them myself, though I did make it to Chris Butler's entire talk, which provided a nice finish to the series of talks during the day. As always, he was entertaining and informative, and he made a lot of good points about the artistic aspects of what photographers, including astroimagers, do in producing their images. I was only able to see parts of some of the other talks – I'm really looking forward to seeing them on the video CD when it's available!

Speaking of which – if you have any interest in imaging at all, especially if you weren't able to attend the conference in person, you should order a copy of the video CD and the CD of the proceedings, both of which should be available shortly (and the copies may already have been delivered to Charlie by the time you see this). The Proceedings CD will have all of the notes and other information provided by the speakers, and the video CD will have video of all of the Saturday talks, including the keynote talk Saturday night on preparing images for printing, Alan Smallbone's beginners' session from Friday night (which covered the basics and included using DSLR cameras and lower-cost cameras such as Meade's DSI, the Orion Starshoot, and others), and (I believe) the advanced Photoshop session with Tony Hallas from Friday night. Besides Tony Hallas and Chris Butler, our speakers were John Laborde on creating mosaics from multiple images, Ron Dantowitz on video astrophotography, Rob Gendler on hybrid imaging (such as combining images taken at different focal lengths or with different telescopes), Robert Reeves on webcam imaging (which, from the portion I saw, included some very interesting sequences that demonstrated the capabilities of the technology even if they weren't strictly astronomical), and Chuck Vaughn on going digital from the perspective of a film photographer – as you can see, it was quite a varied program that provided a lot of good information, and I think you'll find the two CDs are a worthwhile investment.

You can order the two conference CDs for 2006 (as well as the conference CDs from 2004 and 2002) through our website, though orders received after August 31, 2006, will be limited to stock on hand. The URL for the webpage for orders is: http://www.ocastronomers.org/astroimage/2006/reg/index.asp.

Our Sponsors

Not too surprisingly, the costs to do this conference went up since 2004, and we had some new costs this time, such as the cost of the second room we needed Friday night so we could have two presentations simultaneously, one for beginners and one for more advanced imagers. Although the increased costs meant that we had to raise the registration fees this year, we were able to keep them significantly lower than other comparable events (such as the one that was going on the same weekend back east), thanks to our sponsors.

Due to the efforts of Garth and others, we had some new sponsors this year (Quantum Scientific Imaging, Yankee Robotics and Diffraction Limited), and we were also glad to welcome back our past sponsors (Hutech Astronomical Products, Oceanside Photo and Telescope, Advanced Telescope Systems, SoCalAstro and Western Amateur Astronomers). I noticed that those who had booths at this conference were kept very busy during all of the breaks, and there were even people who took a few minutes out from one of the talks to visit the sponsor booths when they wouldn't have to contend with crowds of other people.

I'd like to introduce you to our 2006 sponsors, and I hope you'll help show our club's appreciation for their help by looking into their products whenever you're thinking of buying something in their area:

Universal Sponsor:

- **Quantum Scientific Imaging** (QSI) [website: http://www.qsimaging.com/]. QSI is a new company, but it has people with many years of experience working with CCD technology who want to use that expertise to build high quality CCD cameras for astronomical use; to quote from their website: "The QSI 500 Series is a new generation of medium format, thermo electrically cooled CCD cameras designed to produce high quality images with extremely wide dynamic range, excellent linearity and very low noise. Five different models are available employing a comprehensive range of scientific grade CCDs." We are delighted that they chose our conference to debut their new line of cameras, especially as QSI is centered in Orange County, and they definitely attracted a lot of attention from the conference attendees! If

(continued on page 8)

WHY MY MOTHER HATES ME

by Thomas Wm. Hamilton, Middle Atlantic Planetarium Society

Mother's Day. An annual problem. What to get her? Let's see, her house was paid off thirty years ago, so there is surely nothing she needs for the home. Every time I've ever sent her a food gift she's found something wrong with it—too fattening, not her taste, wrong brand, tasted "weird", spoiled, whatever. But that radio ad—yes! The Intergalactic Stellar Directory will name a star for her. Wow! It will shine forever, how could she criticize that?

Okay, I download their order form, fill it out. Gee, they allow me to pick from five choices. I'll find a really nice star for her.

Thank you for your interest in the Intergalactic Stellar Directory. We offer only the finest in stars to be named after that special person of your choice. Here is a selection of five wonderful stars anyone would be proud to have named after themselves:

Current Designation	*Spectral Class*	*Apparent Magnitude*	*Absolute Magnitude*	*Distance (L-Y)*	*Constellation*
HD23302	*B5p*	*8.9*	*-2.8*	*1100*	*Taurus*
HD206936	*M0*	*9.2*	*-2.9*	*1250*	*Cassiopeia*
M4-wd-17	*wd*	*21.5*	*+7.9*	*7200*	*Scorpius*
	A8	*17.2*	*-1.2*	*12,000*	*Camelopardalis*
HD 6521	*G5V*	*7.98*	*+4.8*	*118*	*Carina*

Oh, dear, I can see some problems. HD23302 would never be acceptable. Mother would not accept having a peculiar star named for her.

HD206936 is certainly impossible. It's a supergiant, and Mother would think I was making some sort of statement on her weight. That would never do!

M4-wd-17 is a white dwarf. Much too unimpressive, and Mother just might take offence at having a very old star named for her. The fourth star is in a constellation that (a) mother never heard of, (b) can't spell, and (c) can't even pronounce. Absolutely out of the question.

The last star is in a constellation whose name sounds too much like Karyn. Mother would certainly resent a star in a constellation that sounds like a member of her bridge group. Pity the closest sounding constellation to mother's name is Lacerta the Lizard. I must contact the Intergalactic Stellar Directory again and ask for a better selection of stars to choose from.

Dear Sir:
We here at the Intergalactic Stellar Directory very much regret that you were unable to find a suitable star among the initial selection we offered. However, we have many, many stars yearning to be freed from the anonymity of catalogue numbers, and hoping to burst into a world of joy in which they share the celebration of some wonderful person's name. We hope you will find what you are looking for in the following list. Remember, the name you choose will remain with that star. Once you choose, we will never change the name.

Current Designation	*Spectral Class*	*Apparent Magnitude*	*Absolute Magnitude*	*Distance (L-Y)*	*Constellation*
HD216770	*K1V*	*8.10*	*+5.1*	*123.5*	*Pisces Austrinus*
SAO241334	*N*	*10.5*	*+9.9*	*40*	*Centaurus*
HD24912	*Oe5*	*12.1*	*-5*	*18,000*	*Perseus*

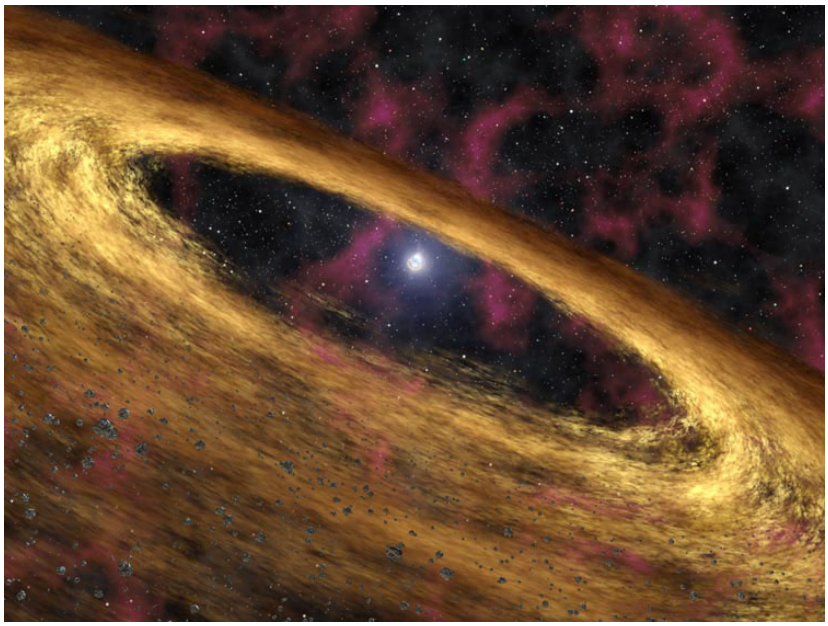
Well, the first one seems like a pretty ordinary star. The second one is clearly inappropriate. An N star for heaven's sake! Small and dim would be an insult for Mother. The third star seems like an excellent choice. Very hot and bright. Yes, I shall tell the Intergalactic Stellar Directory to name that one after Mother. Now just to write out a check for a hundred dollars and send it off.

Son:
I have received a notice from the Intergalactic Stellar Directory that they have named a star, chosen by you, after me. I am very disappointed that you think I am too hot, emit dangerous amounts of radiation, and will soon disappear by exploding as a supernova. I guess I must have raised you badly, or you have long harbored some terrible resentment. I tried my best to be a good mother, and don't feel I deserve to be stuck out at the far end of the Orion arm, totally removed from Earth and the rest of the human race. Perhaps some day you will understand how you have broken a mother's heart, perhaps if you ever have ungrateful children of your own.

Your Mother

Deadly Planets

By Patrick L. Barry and Dr. Tony Phillips



Artist's concept of a pulsar and surrounding disk of rubble called a "fallback" disk, out of which new planets could form.

About 900 light years from here, there's a rocky planet not much bigger than Earth. It goes around its star once every hundred days, a trifle fast, but not too different from a standard Earth-year. At least two and possibly three other planets circle the same star, forming a complete solar system. Interested? Don't be. Going there would be the last thing you ever do.

The star is a pulsar, PSR 1257+12, the seething-hot core of a supernova that exploded millions of years ago. Its planets are bathed not in gentle, life-giving sunshine but instead a blistering torrent of X-rays and high-energy particles.

"It would be like trying to live next to Chernobyl," says Charles Beichman, a scientist at JPL and director of the Michelson Science Center at Caltech.

Our own sun emits small amounts of pulsar-like X-rays and high energy particles, but the amount of such radiation coming from a pulsar is "orders of magnitude more," he says. Even for a planet orbiting as far out as the Earth, this radiation could blow away the planet's atmosphere, and even vaporize sand right off the planet's surface.

Astronomer Alex Wolszczan discovered planets around PSR 1257+12 in the 1990s using Puerto Rico's giant Arecibo radio telescope. At first, no one believed worlds could form around pulsars—it was too bizarre. Supernovas were supposed to destroy planets, not create them. Where did these worlds come from?

NASA's Spitzer Space Telescope may have found the solution. Last year, a group of astronomers led by Deepto Chakrabarty of MIT pointed the infrared telescope toward pulsar 4U 0142+61. Data revealed a disk of gas and dust surrounding the central star, probably wreckage from the supernova. It was just the sort of disk that could coalesce to form planets!

As deadly as pulsar planets are, they might also be hauntingly beautiful. The vaporized matter rising from the planets' surfaces could be ionized by the incoming radiation, creating colorful auroras across the sky. And though the pulsar would only appear as a tiny dot in the sky (the pulsar itself is only 20-40 km across), it would be enshrouded in a hazy glow of light emitted by radiation particles as they curve in the pulsar's strong magnetic field. Wasted beauty? Maybe. Beichman points out the positive: "It's an awful place to try and form planets, but if you can do it there, you can do it anywhere."

More news and images from Spitzer can be found at http://www.spitzer.caltech.edu/ . In addition, The Space Place Web site features a cartoon talk show episode starring Michelle Thaller, a scientist on Spitzer. Go to http://spaceplace.nasa.gov/en/kids/live/ for a great place to introduce kids to infrared and the joys of astronomy.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Now That's a Scope!!!!!

By Alan Smallbone

Suddenly my 10 inch just seems so…..inadequate! Do you know what I mean? Well, if you don't then you were not there on the behind the scenes imaging-related special tour of the Mt. Palomar Observatory that was part of the AstroImage Conference this year. We had an exceptional conference, lots of great speakers, lots of fellow imagers to shoot the breeze with, well organized, great food, fantastic gallery of images, what more could you ask for? Well, how about a behind-the-scenes tour of Mt. Palomar? The tour was optional and reservations had to be made in advance. So, about 45 of us lucky souls sojourned up the mountain Sunday morning to meet the Scope of Scopes.

The morning started out with a few rounds of alarm clock roulette. You know the routine, slam the snooze button to make that awful racket subside, again and again, until you slowly drag your creaking carcass out of bed and look at the clock and "HOLY MOLY we have to leave in 10 minutes to make it there on time!", and you wonder who the bright spot was that decided an early morning tour was the right thing to do. So, 10 minutes later, after ramming some cereal down our gullets, we hit the road, running even. Overcast skies on the coast didn't deter us, and we boldly made it to the base of the mountain after a drive and me doing my bobble head doll imitation. We started climbing and climbing, knuckles white from gripping any convenient handhold as we screeched around corner after corner, rising out of the mist into a glorious, sunny, clear day.

We were a little early – did I mention that the tour was set at 9:00? – and I noticed a turnout up ahead that afforded a great view of the valley below and of the retreating marine layer. After stumbling out of the vehicle, camera in hand, I zoomed out with the wide angle lens and snapped a couple of pics. The moon was still high in the sky and I nodded with confidence after checking the back of the camera that yes, it was indeed in the image. However, it was bloody small and barely noticeable. Then the revelation hit, Chris Butler's words from his talk the previous day echoed around in that hollow cavity on top of my shoulders – the moon, I had to do something about the moon. Look at the picture on the front page, a nice shot of the overlook, and look at that moon, just like it should look, right? Well, look again, it's all Chris Butler's fault, I just had to have a comfortably sized moon – yes, folks I took the liberty of switching to my telephoto lens and snapping a pic of the moon, then gleefully looked on the back of the camera and, yup, that was the moon my picture needed, a nice big, fat, comfortably sized moon that satisfied my artistic muse, all it took was a little bit of Photoshop… Looking at the bright side, at least I have someone else to blame! Thanks, Chris! Muhahahahahahah. Doh!

Getting back to the tour, we continued our journey to the top of the mountain where we found some other OCA tour members parked out in front of the gate waiting for it to be opened. We milled around as others joined the waiting crew, a few griped about the lack of a Starbucks within elbow radius, but soon enough the gate was opened and we poured into the parking lot. Our group was soon together and we were greeted by Scott Kardel, and several docents, Tom Kucharski, Mike Bertin and Ed Rydzinski. We trundled off behind Scott and our tour guides, all of us with cameras in hand, snapping at anything and everything, sheesh, talk about documentation!

We toured the 200 inch, and if you have not seen it, you should – take the tour, it will not be as good as our special tour but take it anyway. You want to

talk about aperture envy – now that is a BIG telescope! Try and justify getting something like that to your spouse, if she thought you were a few bricks shy before hand, she will think you left all your oars behind with this crazy notion. We got a first class tour complete with all the trivia and facts you would want to know. For instance, do you know how long it takes for to coat the mirror? Just a flash, it turns out, but it is all the prep work of getting it in and out of position and cleaning it for the coating that takes the time! I have included a few shots that I took of the 200-inch using my fisheye lens (that is why there is some distortion, your eyes are not that bad, yet) and a flash. Check out that Hartmann Mask, all those holes! Must make for an interesting star pattern! After about 2 hours of walking around the scope, including the catwalk around the outside of the observatory, and learning all we could about it, we all headed outside for another special treat.

Our next stop was the Test Bed Interferometer. If you have noticed the building with the three sheds close by the 200-inch, connected by foil wrapped tubes, that's it! Kevin, the operator, guru, technical guy for the interferometer and otherwise outstanding person was there to give us the full treatment and answer all our questions. Our group was too large for the control room, so we split into two, one group saw the scope in one of the three outbuildings and how the images are gathered while Kevin explained the inner workings to the other group in the control room, then we switched. Kevin was nice enough to come in on his day off for this. The Interferometer's an amazing piece of work, and all done with mirrors! Lots and lots and lots of mirrors, and few lasers. Enough mirrors that, at the end of it all, 97% of the light is lost, so they are pretty much limited to the brighter stars when they are gathering data. Kevin gave us all a fascinating account of how the light is gathered, the mirrors tweaked, the light delayed and finally splashed on to a ccd sensor and the data is recorded. And from that they can tell the shapes of stars and how they're moving, all from a flash of a light and few lasers and mirrors!

Well, that concluded our behind-the-scenes tour. It was a wonderful tour and I would like to thank Scott and Kevin for both coming in on their day off, and also the docents who volunteered their time for this. It had been a number of years since I last saw the big scope, and this was the first real tour of the observatory that I've been on – it is something I will remember a long time!

Some of the images I took on the trip can be viewed here: http://www.pbase.com/snowlep/palomar

Hmmmmm, bigger is better, yes it is, I must have more…… doh!

(continued from page 3)
all goes as planned, they will be able to start shipping their cameras around October – we're all looking forward to seeing what kinds of images people will get from these new cameras!

Galactic Sponsors:

- **Hutech Astronomical Products** (Astro Hutech) [website: http://www.sciencecenter.net/hutech/]. Ted and Mia Ishikawa of Astro Hutech have been long-time supporters of our club's imaging conferences and other activities, and many regulars at Anza are familiar with Ted's setup in the Lower Pad area and use the fact that he's out there as a chance to see some of Hutech's equipment in action. If you see club members with Borg telescopes and associated equipment, chances are excellent that they came from Hutech. I'm told by those who have them that one unique aspect of the Borg telescopes is the many connectors and other parts available that allow them to be easily adapted for use with a lot of different cameras and other equipment. The company has a lot of other interesting products, as you can see by cruising its website. Besides being a Galactic sponsor, Hutech generously donated a 77ED OTA as the grand prize among the door prizes for the conference – it was won by Alan Smallbone, who, as I write this, has already tried it out in a successful imaging session at Anza and is looking forward to using it again at the second August star party.

- **Oceanside Photo & Telescope** (OPT) [website: http://www.optcorp.com/]. OPT, supplier of a full range of telescopes and other astronomical gear from a lot of different manufacturers, is another long-time supporter of our club's activities, and we really appreciate their regular participation in these events. A lot of us have spent many happy hours over the years browsing through the stock in OPT's store (both the old, extremely overcrowded store and their great new facility), at such places as RTMC, and at our AstroImaging conferences, and talking to the very helpful people on their staff. Besides product information, their website has a lot of useful general information on using and caring for equipment and other topics of interest to amateur astronomers, and is well worth visiting. I'm told that what they brought to the conference this year included a good stock of books by several of our speakers, and that those pretty much sold out – I'm sure that there were a lot of conference attendees who were very happy to get one of those books while what that author had to say was fresh in their minds and at a time they could also get it autographed, making it a winning situation for all concerned.

Solar Sponsor:

- **Yankee Robotics** [website: http://www.yankeerobotics.com/]. Yankee Robotics is the maker of the Trifid line of digital cameras – you can see their cameras and a number of images taken with different models of their cameras on their website. This is the first time that Yankee Robotics participated in our conference, and I think it was the first time many of the attendees had a chance to see the company's cameras. This is another local company, and it's nice to see the level of talent we have here in Orange County. From what I could see, a lot of people at the conference were pleased to have a chance to see Yankee Robotics' products in person and to talk to people from the company face-to-face – that's a major benefit of these kinds of conferences for both sides. I'm looking forward to seeing what club members who get these cameras can do with them – the pictures on Yankee Robotics' website certainly look promising!

Lunar Sponsors:

- **Advanced Telescope Systems** (ATS) [website: http://www.advancedtelescope.com/]. ATS, maker of portable and permanent piers, is another long-standing supporter of our club and its activities, and one particular pleasure of having them involved in AstroImage 2006 was having the chance to visit with Stephen Eubanks, who handled the ATS booth at the conference. Besides making very stable portable piers (one of which was included in the Yankee Robotics display), Steve was an OCA Board member for several years and was a very active Anza House Coordinator who left Anza House in much better repair than it was when he took on that position. Over the last year or more, he's been kept so busy with his company that we haven't seen much of him at club events – I'm glad to know first-hand that he's doing well, and we're all very grateful for the continued support he and his company provides to the club.

- **SocalAstro** [website: http://www.socalastro.com/]. For those who may not know him, Leon Aslan, the owner of SocalAstro, has been an active imager with the club for several years, was co-chair of our AstroImage SIG for a couple years, is a member of the club's Board of Trustees this year, and is one of the "regulars" out at Anza. SocalAstro produces various accessories that are particularly useful for imaging, and you may have seen his rings, dovetail plates and other devices advertised on AstroMart or showing up on the equipment of fellow club members. We are very grateful for his continuing support of our AstroImage conferences, especially as he wasn't able to attend it in person this year.

- **Diffraction Limited** [website: http://www.cyanogen.com/]. Those who were involved with the Imaging Boot Camp a few months back may recall that the class was able to use a program free of charge for the duration of the class to capture images and do at least basic processing – that program was MaxDSLR, and the class was allowed to use it courtesy of Diffraction Limited and its president, Doug George. We were therefore doubly happy when Mr. George said that Diffraction Limited was willing to be a sponsor for AstroImage 2006 – the company's other programs include Maxim DL, which is used by a lot of our imagers, and MaxPoint, which increases the pointing accuracy of a "goto" type telescope, and we knew there would be a lot of interest in the company's products at the conference. Unfortunately, Mr. George wound up with a conflict, and wasn't able to attend our conference himself after all, so we didn't have a chance to see the programs demonstrated as we'd hoped. We have hopes for better luck next time – and, in the meantime, you can visit Diffraction Limited's website to get a better idea of what their programs do and of their other products.

Special Sponsors:

- **ImageBeam** [website: http://www.imagebeam.com/]. ImageBeam is the company that Liam Kennedy has been building over the last few years, doing a variety of video work for different companies and organizations, including web streaming. For those who may not be familiar with him, Liam is one of our past presidents, he was the webmaster who built our current website, and he was responsible for getting us Internet access from Anza, among his many accomplishments with the club. He worked out a way to web stream the proceedings at AstroImage 2002, but we didn't have the necessary Internet access for that in 2004. Brea upgraded the system in the Curtis Theatre in time for the 2006 conference, and Liam was able to web stream the conference again for several people who weren't able to attend in person. He has also handled taking and editing the video for the conferences in 2002, 2004 and 2006 – with his company, he now has professional-grade equipment that he generously made available for the conference as well as ever-increasing expertise in this kind of work, and we really appreciate his contributions to our conference.

- **Western Amateur Astronomers** (WAA) [website: http://www.waa.av.org/]. WAA is a regional organization of local astronomy clubs, which has hosted conferences and other events itself in the past, and we are delighted that they feel that our AstroImage conferences are worthy of their support. This is the second time WAA has been a sponsor for our conference, and I was pleased to see a number of people at the conference stop by the table where they had information about the organization available. WAA is probably best known these days for its annual G. Bruce Blair Award, given in recognition of extraordinary contributions or achievements by amateur astronomers. Our own Chris Butler was the recipient of the 2006 G. Bruce Blair Award, recognizing the variety and extent of his work in making astronomical subjects understandable to the general public, which includes his artwork, his work at Griffith Observatory and other planetariums, and his talks in many different venues on astronomical topics. Although OCA has been a long-standing member of WAA, we can't claim any special influence in the decision on who should get this award – Chris won that well-deserved recognition by his own efforts!

In Closing

I am finishing this up just after our first Anza star party in August, which was the clearest, darkest, and had the best seeing of any Anza star party so far this summer. I am happy to report that the Kuhn telescope was running very well, and we had a lot of visitors in the observatory over the course of the evening, looking at all of the available planets (Jupiter, Neptune and Uranus; nobody seriously suggested trying for Pluto), star clusters, various nebulae and galaxies — it was great evening, and I think everyone was sorry to waste any of it sleeping, though almost all of us did go to bed before sunrise. Hopefully, we'll have a lot more clear, dark nights like that through autumn and as we head into winter!

Pad License for sale: 10x10 pad with a cabinet at its western end, 3 outlets and a pier with a mount plate for an 8" Meade Schmidt Cassegrian. It is on the level directly below the club's observatory.it is the pad nearest the large cargo container, which we have a share of. That share will go along with the pad. There is also a level parking spot delineated by slightly burnt railroad ties, near the pad. Contact Sylvia & Dick Sligar ssligar@att.net or (714) 538-3327

FOR SALE: Meade 14"LX200GPS with UHTC Coatings; Series 4000 Super Plossl 12mm & 26mm Eyepieces; Speed Zero Image Shift Microfocuser; 8 x 50 Viewfinder; 2" diagonal mirror with 1.25" Adapter; Variable-Height Giant Field Tripod; Vibration Isolation Pads; JMI Telescope Carrying Case for Meade 14"LX200; Meade Superwedge; Losmandy dovetail plate for 14" LX200; #777 Off-axis guider; Scope Stuff Balance System; AC adapter for 12 VDC Power from 120 VAC; 12 VDC Power Cord; EZ Balance On-Axis Counterweight; Ergonomic Handles One Pair. Equipment in excellent condition. Complete system $4,900. Contact Rick Brown 714-418-0872

Galileo's "Message from the Stars"

A proposed talk by Albert DiCanzio to the Orange County Astronomers at the September Public Meeting

About the Talk

On Friday, September 8, Albert DiCanzio is scheduled to address the OCA concerning Galileo's "Message from the Stars", an intentional ambiguity on the speaker's part. The title of Galileo's book announcing his astronomical discoveries can be translated "Message from the Stars", and so Albert intends to discuss some of the highlights of Galileo's work in astronomy in the context of his discoveries in the science of dynamics, of which Galileo was the founder. Going beyond the literal "message from the stars" and touching on selected episodes in the whole history of Galileo's trials and retrials, his conflict with the Inquisition and the four-century old ongoing controversy about it, Albert intends to illustrate how Galileo's story reflects the power of earthbound individuals to overcome intellectual tyranny and reach for the stars. Finally, he will address the very recent trend of historians to extend an emphasis on Galileo studies begun by Albert when he wrote a book exploring Galileo's significance for the future; more specifically, he will discuss recent claims by other authors such as the nomination of this astronomer as the "Person of the Millenium" —the most influential human being in the recorded history of the last thousand years.

About the Speaker

Albert DiCanzio is a past member of OCA who now resides out of state and has been the main speaker at OCA twice in the past. Author of *Galileo: His Science and His Significance for the Future of Man*, one of the most recent English-language scientific biographies of Galileo, a work which has garnered an enthusiastic reception by reviewers in *The Journal for the History of Astronomy, the journal "Physics Teacher", and the journal "Perspectives" of the American Scientific Affiliation*, Albert has appeared on radio and television programs concerning the life and science of Galileo. His was the first dissenting voice in the literature on Galileo as listed in time-order of publication by science-historian Maurice Finocchiaro, author of the 2005 book *Retrying Galileo,* to have expressed disappointment or dissatisfaction "with the process or the ending of Pope John Paul II's rehabilitation of Galileo in 1979-1992". Since Albert's book was published, at least four other literary contributors have expressed similar disappointment, notably including the Director of the Vatican Observatory, who himself served as scientific representative on John Paul II's commission which re-examined the Galileo controversy during 1979-1992. Albert also contributed to the literature on Galileo certain new explanations such as the relationship of the Galilean transformation to the Lorentz transformation, his derivation of Galileo's estimate of the size of the universe, and how that differed from those of his contemporaries. ■

Magazine Subscriptions

Subscriptions to the Astronomy magazines are now due for renewal, if you subscribed for one year or would like to subscribe at the club rate. You may also extend an existing subscription that does not end in December for one year at the club rate. Bring your check made out to the OCA to the meeting or mail it to:

Charlie Oostdyk, Orange County Astronomers, PO Box 1762, Costa Mesa, CA 92628. ***Checks made out to the magazine publishers cannot be processed and will be returned to you***. If you already subscribe, please provide the mailing label or the billing invoice with your check. One-year rates are as follows:

	Club Rate	Regular Rate
Sky & Telescope	**$33.00**	$42.95
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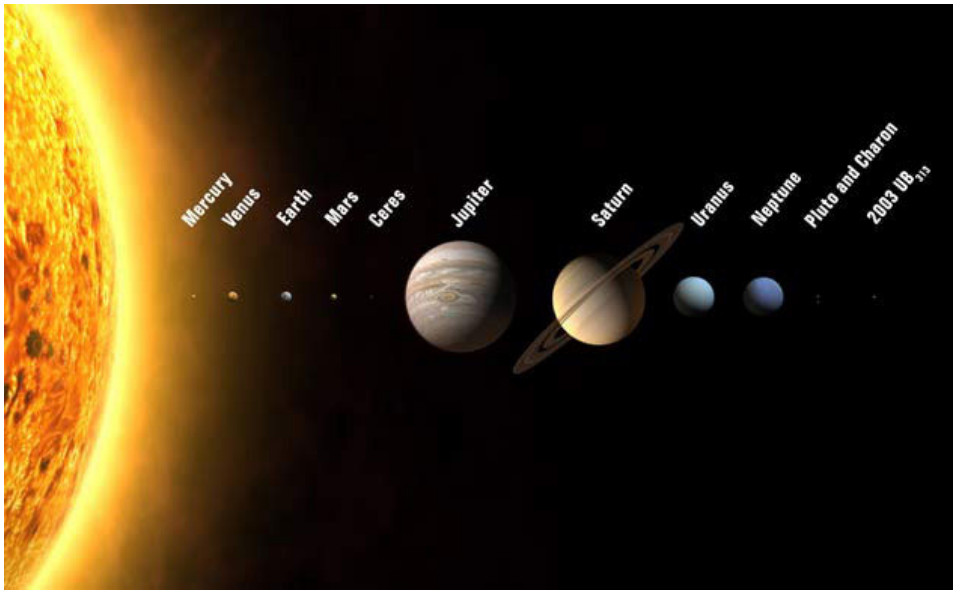
A Planet By Any Other Name...

Editorial by Steve Condrey



The IAU's formal definition for a planet:

A planet is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit. A dwarf planet is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, (c) has not cleared the neighbourhood around its orbit, and (d) is not a satellite. All other objects orbiting the Sun shall be referred to collectively as "Small Solar System Bodies".

As all of you have probably heard by now, Pluto has been demoted from its status as a planet to a 'dwarf planet'. This category also includes the former asteroid 1 Ceres (itself considered a true planet after its discovery in 1800) and the object 2003 UB313, nicknamed 'Xena' by its discoverer. So now we have a solar system with eight 'classical' planets (Mercury through Neptune) and three 'dwarf' planets.

In a way the name 'dwarf planet' seems unfortunate, especially since the main criterion distinguising a 'dwarf' planet from a 'classical' planet is the nature of its orbit rather than its size. Thus, an object the size of Mars or Mercury in the Kuiper Belt would be considered a 'dwarf' planet if its orbit crossed those of other KBO's. The nomenclature seems to be in need of some help. The IAU, upon the urging from the geological community, rejected the name 'pluton' for these objects as 'pluton' is a specific geologic term referring to a rock formed within the Earth's mantle that subsequently migrates to the surface. As one commentator put it, 'What happens when we find a pluton on a pluton?' A repeat of the 'gravity wave' confusion between meteorology and physics is not to be desired.

While the IAU is and remains the authority on these matters, science does not proceed without dissent. A binomial notation similar to what is used in the biological sciences would make more sense: one classification referring to the planet's mass; the other to its orbit. An object such as Pluto could be referred to as a 'dwarf eccentric' planet while Earth would be referred to as a 'classical non-eccentric planet'. The line between 'eccentric' and 'non-eccentric' could be defined as whether or not a planet crosses another body's orbit. This leaves the door open for 'dwarf non-eccentric' and 'classical eccentric' planets, thus covering all cases. A cutoff for mass for the line between 'dwarf' and 'classical' would still need to be defined. Ultimately we need to evolve toward something similar to the H-R diagram to describe planets. While such a diagram, unlike the H-R diagram, may not suggest anything about planetary lifespans, it might go a great way toward explaining and categorizing planetary origins.

These are just some thoughts, of course. At least the 'dwarf' designation expands the naming ideas for planets...bodies named 'Doc', 'Happy', 'Sneezy', 'Sleepy', 'Grumpy', 'Bashful', and 'Dopey' are obvious especially following up on Pluto. Perhaps the IAU could charge Disney for naming rights just as sports teams charge for stadium naming rights? And then there's Tolkien...do we dare drill too deeply for core samples once we reach the dwarf planet 'Moria'? ■

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