ANNOUNCEMENTS!

For those members out there looking for a little background material before starting that new painting, Don Davis has put together a fantastic resource CD with thousands of images on it. There are pictures of just about every object in the sky on it. If you are interested, e-mail Don Davis for the list of images and write or e-mail Jon Ramer to get put on the list of who gets the disk nest. There are two formats available, PC and MAC.

Web Surfin’ Sites to check out:
- http://www.geosociety.org/pubs/0399geo.htm/S10
- http://www2.keck.hawaii.edu:3636/republic/aolight.html
- http://www.bonestell.org
- http://www.projectfullmoon.com
- http://setiathome.ssl.berkeley.edu

It is a pleasure to announce the recent publication of “A CHESLEY BONESTELL SPACE ART CHRONOLOGY.” This book traces the history of Bonestell space art in books and magazines from 1944 to 1998. It is the definitive reference guide to where his space art appeared. The vast majority of the information in this book has never been published before. The book is now available and may be previewed and ordered on the Internet at:

www.upublish.com/books/schuetz.htm

Place your orders quick!

5 - 4 - 3 - Tw...
Uhh, anybody see where the orbiter went?

Just one of the many interesting sites seen at the 1999 IAAA KSC workshop. Details inside!
IN THIS PULSAR...

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Announcements

From the Editor -
Hi Gang. Here it is - the report from the KSC workshop! Everyone had a fun time there, so you should have a fun time reading about it too! Check out the binaries artwork along with KSC photographs. Next up will be "wanderers in the night..." Until then... Jon!

Reaching for the Stars ‘98
by Alan Bean
Actually this is Alan’s magnificent mural in the foyer of the Astronaut Hall of Fame. It seemed like a fitting place for a group photo - in front of a painting by a member of the IAAA! Photo - Paul Hoffman.

Astronomical Feature of the Month: BINARIES

Planet’s revolve around stars because of gravity. However, stars can revolve around stars as well, where they obey Kepler’s Laws of Planetary Motion just like planets do. In fact, 85% of the stars in the Milky Way galaxy are not single stars, like the Sun, but multiple star systems, binaries or triplets. If two stars orbit each other at large separations, they evolve independently and are called a "wide pair." If the two stars are close enough to transfer matter by tidal forces, then they are called a close or contact pair. Any two stars seen close to one another is a double star, the most famous being Mizar and Alcor in the Big Dipper.

Odds are, though, that a double star is probably a foreground and background star pair that only looks near each other. With the invention of the telescope may such pairs were found. Herschel, in 1780, measured the separation and orientations of over 700 double stars and found that only about 50 pairs changed orientation over 2 decades of observation. When two stars are close in separation it is possible for tidal forces to come into play. Since stars are made of gases, gravity can strip material and transfer it from one star to the other. Thus we say the binaries are in contact, even if their surfaces are not touching directly. Lines of potential exist around stars where the gravitational pull from one star exceeds that of another. The line where the forces balance is called the Roche lobe.

When the star’s radii exceed the Roche lobe, then gases are free to transfer from one star to the other, usually in the form of a tube or stream. In a particularly energetic binary pair, one star could be twisted and drawn out into spinning flattened disk. Wouldn’t that make a great picture?....

Source: zebu.uoregon.edu/~js/ast122/lectures/lec11.html

TMR-1 by John Whatmough
Here’s an image of what is suspected to be the first extrasolar planet to be seen in visible light (see Oct/Nov 98 Pulsar). The giant gas glows red with heat while the dust from the newly formed binaries blocks out all starlight.
Binary Bingo! Here’s a list of some interesting binary stars for those of you looking for something to check out with the telescope or paintbrush...

B - Bootis Xi, attractive binary set discovered by Sir William Herschel in 1780, only 22 light years distant, one star is yellowish (mag 4.7), the other reddish-violet (mag 6.8) and orbit each other at an average of 33 AU, RA/DEC: 14491n1918

I - Indus Theta, a nice binary pair of A4 class stars with magnitudes of 4.5 and 7, nice to look at, RA/DEC: 21163s5340

N - Norma Delta 190, an optical pair of different colored stars, RA/DEC: 15390s5758

G - Gemini Alpha, more commonly known as Castor A, the first object beyond our own solar system in which the force of gravity was shown to be working. Two stars twice the size of the Sun orbit each other in just over 9 days. RA/DEC: 07314n3200

O - Orionis Delta, named Mintaka, westernmost star of the three forming Orion’s belt, Mintaka was the first star discovered to show stationary spectral lines (calcium) proving the existence of interstellar matter, an eclipsing binary pair of magnitude 2, orbital period of 5.7 days, the primary star is just 5 million miles from the center of gravity, RA/DEC: 05294s0020

**Epsilon** by Marcus Underwood

A beautiful image of twin suns shown from an icy world. Done in brilliant shades of blue and white. Be sure to check out the e-Pulsar to see the full color version.

TO BOLDLY GO... AND CURSE MOTHER NATURE!

Well, it’s all over and done with now. The KSC Workshop is now part of the “legend and lore” of the IAAA. All in all, a good time was had by all, despite the event starting with the announcement that the Shuttle launch had been delayed and we would not get to see it go (see above!).

The adventures began (or ‘misadventures’ depending upon your view point) on Saturday with the arrival and meeting of Betsy Smith, Jon Ramer, Paul Hoffman, Jackie Burns & husband Terry. We had some minor fun getting to and into the condo on the beach, but everything worked out okay, even getting Joe Tucciarone to drop Malcolm Currie at the condo.

On Sunday the crew drove over to the Radisson Hotel in Orlando to visit the OASIS science fiction convention and meet up with Bob Eggleton and Walt Barrows. Walt got called away for work before anyone arrived, and didn’t show. Bob was a card and a half as usual. The workshop folks got to sit in on some panel discussions with Bob and Vincent DiFate about science fiction movies and astronomical art. The most interesting comment on art was the talk about JPL’s recent copyright maneuverings. Vincent said someone needs to say “to heck” with JPL, paint whatever they want, and draw a lawsuit intentionally just to test the case. Now, I’m not saying who might be willing to give it a go, but I will say that a maniacal grin crossed Bob’s face when Vince said this! Things that make you go, hmmm. 😊 The discussion rolled around to how NASA treats artists (not good) and where the genre of astronomical art is heading (are we fine artists or illustrators?) before we ran out of time. We zipped over to the convention art show for a quick peek, then on to the airport to meet Dave Hardy and Robin Hart. After driving back to Jon’s house, we met up with Kara Szathmary, then piled everyone into two vehicles to head over to the condo for a group dinner. Joe Tucciarone, being the local guy, volunteered to lead us to a restaurant and proceeded to give the group a wonderful tour of the parking lots of Cocoa Beach. Most notably, the Wendy’s on A1A. (cont’d on page 6)
Profile: Lynn Perkins
I've been interested in astronomy since I was a teenager, when I started to read every science fiction book I could get my hands on. I even sold my piano -- to my parents dismay -- in order to get an eight-inch Cave-Astrola reflecting telescope (very much like the Meade reflectors sold today). My astronomical paintings are my relaxing hobby -- most of my professional output right now is fantasy line drawings and acrylic paintings of fantasy creatures. I've had work shown in four or five galleries on the East and West coasts, and currently have stuff in some New Age stores (who also like astronomicals!). Right now I'm doing a series of mermaid line drawings as advertising for a dive supply company, while trying to find time to do a big oil painting of Jupiter as seen from Europa, and a painting of a brown dwarf above a planet (yes, I get Astronomy Magazine). I'm also a member of ASFA, the Association of Science Fiction and Fantasy Artists, and a long-time member of the Society For Creative Anachronism, a medieval/Renaissance recreation group. I also do volunteer work for my local Home and School. It's inconvenient that I need to sleep every night! I enjoyed being a member -- the IAAA has an intelligent and friendly member base (talented too!).

Phoenix by Paul Hoffman
One of Paul’s digital pieces inspired by the workshop. A truly moving work of the Pad 34 Apollo 1 complex. According to Paul, “I thought that it was a great opportunity for me to use the "2x2 Stitching" mode built into my digital camera, to get a great "wide-angle" view. The idea of "the past into the future" (the shuttle blasting off into the nucleae) came pretty soon as I was working on the image. I also knew I wanted to work the "Abandon In Place" lettering in somewhere. I didn't come up with the idea for the images of Grissom, White and Chaffee and the mission patch until after I had completed everything else and realized that the image did not stand on its own - it needed too much explanation.”

As the evening wore down, everyone made plans for the weekend. The next morning, everyone said goodbye to newfound friends, piled into the van for drop off at hotels, theme parks, and the airport. Despite NASA trying it's best to rain on our parade, the IAAA rose above them and had a thoroughly successful workshop.

So, who’s up for arranging the next one? 😊
gorgeous clouds behind. I know some great photos were shot this day - Robin said so! Rumor has it she's doing an image launching the lighthouse into orbit! The afternoon was free for beach lounging, painting, and relaxing.

Thursday didn't start with the bang we hoped it would (a Shuttle launch), so we spent the morning just relaxing and being artistic. After a nice lunch at the excellent deli mere yards from the condo, we headed over to the Astronaut Hall of Fame and Space Camp, where we were greeted quite joyously. Again we set up to paint and talk with visitors. We also got tours of the Space Camp areas where we got to see kids having a ball. The Hall displays were quite interesting too, as were the hands-on experiments for folks to try out. Dave gave the Shuttle landing simulator a whirl and proceeded to drill a new hole in the Florida landscape! (Pull up! Pull up! You're not supposed to land nose first sideways in the parking lot!) Of course our pilot Betsy had to give it a try too - can you spell "great-big-crash-pile-on-the-runway"? Paul wrapped the day with some great group digital photos of the awesome Alan Bean mural in the Hall of Fame entranceway (see page 2). Dinner was at TACO CITY where everyone except Malcolm had a great meal (according to Malcolm, “That stuff is too spicy!” And your point is?.... 😊)

Friday was a day everyone had been eagerly waiting for - we had tickets to see Star Wars: The Phantom Menace! Unfortunately, Kara and Walt had to bug out first, so everyone said their farewells, then hyperjumped to the movie theater! Overall, everyone agreed it was a fun movie with great special effects, but the story line was a bit thin. Of course you should expect that when you know what's going to happen, but still, it was a good movie. Dave described it as, “Zip! Pow! Ping! Boom!” After the movie, we all headed over to Jon's house for a nice group picnic with Joe and family joining in. We had a great time chatting about art and showing works. Paul even passed around his laptop to show everyone what digital works he had done during the workshop.

Robin gets her shot! Photomontage by Paul Hoffmann.

Kudos Korner
-Kudos to Don Dixon, Don Davis and Michael Carroll for their images in the latest “Planetary Report”
- Lynette Cook did a Pluto and Charon picture for the cover of the July Astronomy
- Mike Caroll had some nice paintings in National Geographic
- Kudos to BJ Johnson for his great cover and interior piece in Sky & Telescope
- “Meteorologica”, Erik Viktor's painting on the cover of Dec98/Jan99 Pulsar has been bought by Germany's Daimler Chrysler Aerospace. The 2.0 m x 1.5 m original hangs in the chief PR manager's office, and the picture will be used on the cover of "Wings in Time", the company history book, plus the company website
- Andy Chaikin did a story about his flight on NASA's Weightless Wonder, aka the Vomit Comet, on NPR's Morning Edition
- There's a sizzling quasar picture by Don Dixon on the cover of the May Sky &Tel
- Great job to Ed Faughn for his nice image of a double star system in Sky & Tel
- The Explora Science Center and Children's Museum of Albuquerque will host a space art show from April 23rd through the end of May. The artists involved were Chris Butler, Lynette Cook, Michael Carroll, Don Dixon, Anil Rao, Pat Rawlings, Ron Miller, Joe Tucciarone, Armand Cabrera, and Dale Darby.

Way to go IAAA!

-A note to everyone: If you know/see any work that should get a “kudos” (even your own) please send a note about it in, Dale Darby, who used to get all those subscriptions, so please fill in for him and let everyone know what you’re doing!

ART TIPS
This month: Applying acrylic varnish - from Bill Hartmann.

I've discovered (by working in both in Ron Miller's studio in muggy Virginia and my studio in arid Arizona) that properties of acrylic varnish during application are very sensitive to humidity. Under high humidity, you can brush it on and brush it back and forth several ways (left-right, then up-down, etc) to get uniform coverage. In low humidity (around 10% or less) it dries very fast, and this is risky, because (as the label warns you) it can get cloudy if you brush it when it starts to dry. This is a danger for space paintings! If it starts to get cloudy on your black sky area, you may ruin a painting. But if you try to apply it too fast, you can miss areas and get non-uniform coverage. One solution for me is to wait for rainy days to varnish my work. Does anyone else have tips about this? What are the best techniques to get a mirror like smooth finish on gloss varnish? Sometimes I like to use matte varnish and even work in brush strokes, but, in the other direction, I've never achieved what I see in some other artists works -- a smooth, mirror-like gloss finish, which can be effective on some pieces. Suggestions anyone?
escort drove us right up next to it so we could take pictures (see cover photo). I’d imagine that not many folks have photos of an ET and SRBs without an orbiter attached! Dinner was raucous fun back at the harbor in a restaurant where the serving girls wore skimpy tight clothing, to which Jackie loudly proclaimed that the guys should be wearing tight shorts too! (And just why did she give our male waiter such a big tip???)

Tuesday started off with a bang - literally! The “troops” lined up and gave Jon a “21 paint brush salute” (ATTEN-HUT!) to everyone’s enjoyment. Tuesday at the Cape was pretty much a repeat of Monday, except the we also had Gordon there regaling everyone with stories of how the NASA PAO folks had promised him all sorts of support, only to find out they had changed their minds at the last minute. No one was surprised to learn that the person giving Gordon the run around was the same person that gave Jon the run around. We ended the day with a group visit to the IMAX Theater and a walk through the NASA Art Galley. On display were a couple of Bob McCalls, one Bill Hartman, and work from several other artists, but overall, not very many pieces. Kind of makes you wonder where all the artwork is. We wrapped the day with dinner at a great pizza place near the condo. Kara, like every other evening, walked in, ordered a beer, then picked up the menu to see what was for dinner! (What else Kara? More beer!)

Wednesday was a treat and a half and considered by most to be the highlight of the workshop. After leisurely rising and breakfasting, the group drove over to Cape Canaveral Air Force Station and got a super deluxe tour of the Air Force Space Museum, with loads of rockets and missile and old gantries in the area. The block-house next to the Mercury Redstone launch pad was filled with the original equipment, lots of film was shot there. We moved on to tours of the active and derelict launch pads, getting to walk up the ramp to where John Glenn took his first ride. We also got to hike around an old out of service gantry and made a very poignant stop at Complex 34 where the three Apollo 1 astronauts died (see Paul’s piece on page 4). The last stop on the tour was the famous Cape Canaveral Lighthouse, which was brilliantly sunlight with the rusting Mercury gantry. Photo - Paul Hoffmann.

TO BOLDLY CONTINUE... which we drove around no less than three times! (Thanks Joe!) At dinner at a seafood place in the Port Canaveral harbor, Jon broke out the orange food (cheeze poofs!) and officially welcomed everyone to the workshop.