

# ANNOUNCEMENTS!



## Book of the Month:

"Imagining Space : Achievements, Predictions, Possibilities : 1950-2050", by Roger D. Launius, Howard E. McCurdy, Chronicle Books; Aug 2001, 176 pages, ISBN: 0811831159

## Web Surfin' Sites to check out :

- <http://webdesign.about.com/library/weekly/aa062701b.htm>
- <http://www.novaspace.com/AUTO/Moonwalk/LOVELL/A8.html>
- <http://spaceflight.nasa.gov>
- <http://ksc.nasa.gov>
- <http://www.apolloarchive.com>
- [http://space.com/scienceastronomy/solarsystem/odyssey\\_mars\\_011023.html](http://space.com/scienceastronomy/solarsystem/odyssey_mars_011023.html)
- <http://stuartatkinson.nstemp.com/MARSART.html>
- <http://www.space.com/>
- [http://www.starlog.com/tpages/current\\_291.htm](http://www.starlog.com/tpages/current_291.htm)
- <http://www.jasc.com/products/vpainter/>
- <http://www.images.google.com>
- <http://3dmodelworld.com/brycemodels4.asp>
- <http://nmp.jpl.nasa.gov/ds1/images.html>
- <http://www.spaceart.net/varesi/>

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Welcome to **NEW** and rejoining members!

- Lionel Bret**
- John Stoke**
- Shigemi Numazawa**
- Devvy Wolff**
- Lillian Borno**
- Julie Rodriguez Jones**
- Ann Harwell**
- James Clint Lucas**
- Jaynie Martz**
- Claudine Varesi**
- Leland Long**
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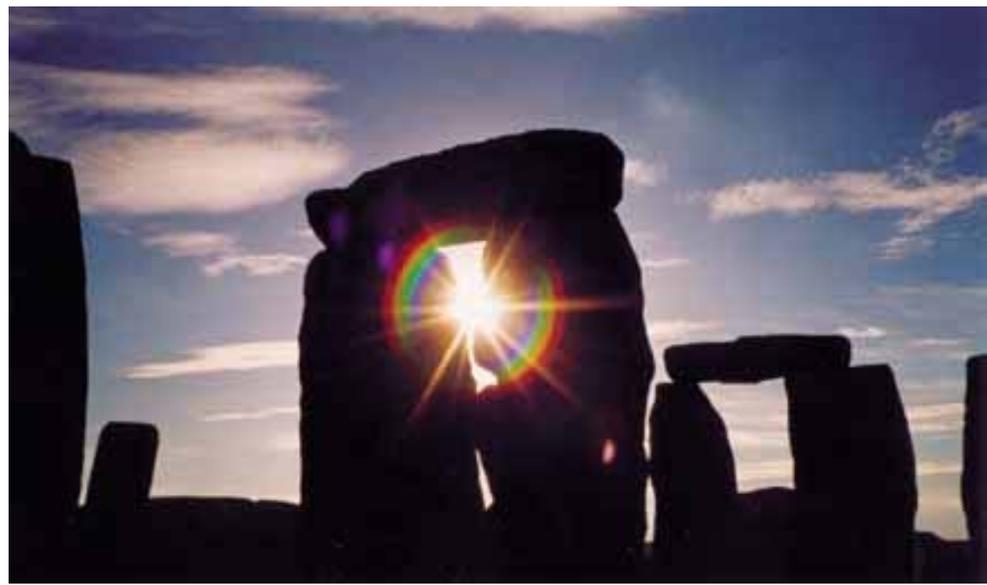
If you have not had your profile posted in an issue of the Pulsar, please send one to Jon Ramer, 314 Vandenberg Dr, Biloxi, MS, 39531 or [ramerj@worldnet.att.net](mailto:ramerj@worldnet.att.net)



**Oct / Nov 01**

The Official Newsletter of the  
  
International Association of  
**Astronomical Artists**

## A LIGHT SHINES ON A CLOUDY ISLE...



And another successful IAAA workshop goes into the history books! Read all about the Astrium Workshop in this issue....  
Photo Jackie Burns.

**Editor: Jon Ramer**

**IAAA Website: <http://www.iaaa.org>**

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## Astronomical

## Feature of the Month : -- FALLING METEORS --

In honor of the Astrium workshop, this month's Feature is about falling meteors. Meteorites, fireballs, and bolides are fragments of extraterrestrial material that enter the Earth's atmosphere. A *meteoroid* is a pebble or stone in space. A *meteor* is the bright flash of light that a meteoroid produces as it streaks across the sky, and also refers to the stone while in the atmosphere. A *meteorite* is the rock that impacts the ground.

There are three major types of meteorites: stony, iron, and stony-iron. The classification is based on composition, and by far the most common is the stony meteorite though most people think of iron masses when the word "meteorite" is mentioned. Irons are alloys of iron and nickel. Stony-irons are meteorites that are mixtures of metallic iron/nickel and silicate rocky material. Stony meteorites very much resemble terrestrial igneous rocks (and thus, are hard to identify). Stonys are made primarily of silicate minerals, many of which are common in the Earth's crust.

A fireball is defined as any meteor whose brightness exceeds that of magnitude -3 (about the brightness of Venus at maximum brilliance). Fireballs and bolides are more massive than the objects that produce ordinary meteors. Meteors are the size of a grain of sand and weigh less than a gram. Fireballs range in size from as big as a pea and weigh several ounces to a foot across or more and weigh many pounds. Fireball light is generated by the heating of the body as it enters the atmosphere, ionizing the atmosphere up to 100 feet around the meteoroid. It is this atmospheric effect that you see from the ground. The colors are usually white near the start of the trail, and fade to red as the fireball has been slowed to low enough speeds where the efficiency of ionizing the atmosphere is small. The colors can tell something about the composition of the fireball: nickel produces a green color, sodium a yellow color and magnesium a blue-white color.

If a fireball exhibits an exploding characteristic it is termed a bolide. Bolides make dazzling displays dozens of miles above the planet. Fortunately, most explode into thousands of pieces or burn up entirely before they reach the surface. Bolides that strike ground are extremely destructive. A very large one created Meteor Crater in Arizona.

### *Bolides Over 51 Pegasi* By John Whatmough

Here's a nice Bryce image of a cluster of bolides falling on a hypothetical planet around 51 Pegasi. 11



### From the Editor-

Hi Gang! Okay, this isn't surrealism – but I figured the report from the Astrium Workshop would be even better! Check out the fun and photos, we'll get "weird" next time!

*You!*



*The IAAA invades Astrium UK! Left to right – Ashley Walker, Arthur Gilbert, Mark Garlick, Jackie Burns, Dave Hardy, Hilda Demsky, Betsy Smith, Carol Tonkin, Paul Hoffman*

**Profile: Claudine Varesi** It has been a dream of mine for many years to join the IAAA. Joining you is also in conjunction with my present residence in the USA, where I am since 2000, and intended on staying for longer than just a transit. I want you to know that I greatly admire all of you and your work, your fantastic visions and exemplary spirit of exploration have always been a source of inspiration to me. I live in Reston, Virginia, and am interested in meeting with anyone local. I am originally from Switzerland, but grew up in Mexico, and while being a student at the local "Modern American School" in the 60's, was terribly excited every time any film about space made it to my school. My Space Art participation has been mainly in Europe, a participant of the Ars and Astra Project carried out on Mir Station and organized by the OURS Foundation. There is where I also got to meet the admirable Ludek Pesek, one of my childhood heroes. I grew up devouring all National Geographics with his illustrations and was totally fascinated by his ability to project cosmic visions of that which had never been seen by the human eye. It was a true honor to have him as juror at the Ars ad Astra artwork selection. It was such an incredible rewarding experience for me to be one of 20 artists selected by Ludek in 1995 to be able to visit him and his wife at their lovely home and see his studio and work. Seeing his studio was a treat. At that time he was working on moon landscapes with roses and pilasters. I have been working a lot on nature paintings lately, but this is all only another part of the great cosmic picture I am trying to grasp. Especially maple trees and leaves and their incredible color cycles according to seasons. That has inspired me even more to explore on the subject of light and colors. The philosophical dimension of Space fascinates me.

## **UK SPACE ART EXHIBITION...**

From Jackie Burns

Cranleigh Arts Centre, in Surrey, is inviting the UK members to participate in a two week exhibition to coincide with Science Week. The start date of the exhibition will be 4th March 2002, to finish on 16th March 2002.

Artwork can be for sale or not. The gallery charges 30% commission plus VAT (very important that you remember this when you work out your sale figures). Transportation costs are still being negotiated, but I don't think I'm going to be able to swing much of a package. I am personally resigned to transporting my own work and asking for expenses, but if I can do better than this you can be sure that I will do my utmost.

The gallery can take up to 50 pieces of 2D art. I am expecting to receive a copy of the gallery layout + measurements and that will give me a better idea of what the gallery can take. What I would like from any UK member who is interested is a list of pieces that they would like to offer, plus low rez jpgs of those pieces (this is for the Arts Centre's information only). Once I know who wants in, with what and how many (including sizes), I can work out what can actually be hung - and I intend to do that as fairly as possible.

All replies should be done privately. If you want further information, please do not hesitate to ask, either by email to [artist@jackieburns.co.uk](mailto:artist@jackieburns.co.uk) or by phone (in UK): (44) 1268 551308. BTW, Dave Hardy will be giving a lecture

10 one evening at the Arts Centre during Science Week.

## **A thought considering world events...**

### **Carl Sagan commented on a Voyager image of Earth:**

"We succeeded in taking that picture [from deep space], and, if you look at it, you see a dot. That's here. That's home. That's us. On it, everyone you ever heard of, every human being who ever lived, lived out their lives. The aggregate of all our joys and sufferings, thousands of confident religions, ideologies and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilizations, every king and peasant, every young couple in love, every hopeful child, every mother and father, every inventor and explorer, every teacher of morals, every corrupt politician, every superstar, every supreme leader, every saint and sinner in the history of our species, lived there on a mote of dust, suspended in a sunbeam.

"The earth is a very small stage in a vast cosmic arena. Think of the rivers of blood spilled by all those generals and emperors so that in glory and in triumph they could become the momentary masters of a fraction of a dot. Think of the endless cruelties visited by the inhabitants of one corner of the dot on scarcely distinguishable inhabitants of some other corner of the dot. How frequent their misunderstandings, how eager they are to kill one another, how fervent their hatreds. Our posturings, our imagined self-importance, the delusion that we have some privileged position in the universe, are challenged by this point of pale light.

"Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity -- in all this vastness -- there is no hint that help will come from elsewhere to save us from ourselves. It is up to us. It's been said that astronomy is a humbling, and I might add, a character-building experience. To my mind, there is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world. To me, it underscores our responsibility to deal more kindly and compassionately with one another and to preserve and cherish that pale blue dot, the only home we've ever known."



# ASTRIUM WORKSHOP!!



*Paul Hoffman and Mark Garlick contemplate digital art while Jackie Burns and Art Gilbert watch on in one of the clean rooms at Astrium.*

## From Jackie Burns

It all over now - the IAAA's first ever UK workshop, 1 to 8 September, 2001 – three years in the nurturing and then a week of dizzying fun and activity. I must have been nuts! But tiring as it was, it was also one of the most rewarding events I've ever organized. From picking up Paul Hoffman (and his wife Pam) and Betsy Smith from Heathrow Airport on the first day, to taking Hilda

Demsky (and her husband Sy) to my preferred art supplier in London for some 'serious' shopping on the last day. What an amazing experience. I absolutely love these workshops. Not only do we get to go to wonderful places and see amazing things, but we also get to meet new and old friends. And this year was no exception. Thank you to everyone, for helping to make this first UK workshop such an enjoyable success.

Credit must also go to Ashley Walker for his invaluable help as my counter-part at Astrium UK. Not only is he an IAAA member, but he is also the in-house graphic designer for Astrium. Without his enthusiasm and help the main core of the workshop at Astrium would not have happened.

Following are personal reports from some of the members who attended:

**Paul Hoffman** - "Overall, a marvelous experience - it's hard to get a group like this together and NOT have a good time. Stonehenge was glorious! Inspiring, and awe-inspiring. I had read all the astronomical alignment research, but instead of trying to see what it might have looked like sighting from station stone to station stone, I marveled at the majesty of those silent witnesses to the ingenuity of humankind. I did two sketches, one quick and one unfinished, along with a lot of digital photos. Monica Grady's visit with us was an eye-opener. I was particularly intrigued by the iron meteorite slice she passed around, and her description of the heating process that creates this type of meteorite being so similar to the forging of steel. The piece we hefted and examined did look and feel like steel! The excitement I will always remember was when all of us were in the large assembly room, observing, sketching and taking pictures, when an "evacuate the building" alarm went off. There I was, sitting with my laptop running, sketching over a digital image of a worker trimming wiring on a satellite. Thank goodness for "sleep" mode switches! I simply grabbed everything and carried it out in my arms without packing it up." ([cont'd on page 6](#))



## HOW THE HECK DID HE DO THAT?!

In honor of the year, I've located a great source with the secrets of how Stanley Kubrick filmed his masterpiece, "2001: A Space Odyssey." If you've ever wondered how some of those incredible shots were made, each issue this year will detail a little of the magic behind the camera.

### How did Dave make it back in through the emergency airlock?

Strings, hanging actors, and false perspective. To have Dave burst out of the pod and fly into the airlock, the camera was pointed directly upwards into a vertical set. Dave was trussed to a point in the "ceiling" and *dropped* towards the camera over 20 feet then bounced up and down a bit. Once more, we cannot accept the shot as being anything other than horizontal, with Dave apparently flying backwards and forwards as if in zero gravity. Of course, Dave's own body hid any sign of the "strings", but with him being hoisted aloft, the shot demanded that Dave (Keir Dullea) was trussed up for real instead of taking a break while a stunt double filled in for him.

## Kudos Korner

- Lynette Cook has a new painting on "astronomy.com". It illustrates the discovery by Californian astronomers that 47 Uma has another planet in a circular orbit. 47 Uma will likely be a prime target for interferometric spacecraft to look for the pale blue dot depicted in Lynette's panorama.
- Andrew Stewart had the cool depiction of a galaxy's central black hole, accretion disc and jet on the cover of the October "Astronomy"
- The November "Astronomy" features five pictures by Lynette Cook, all reproduced to a decent size, illustrating an article called "Celebrating the Galactic Millennium" One of these paintings is also featured on the cover
- This December's "Sky and Telescope" has lots of IAAA members in it:
  - Bill Hartmann reviews Ron and Fred's "The Art of Chesley Bonestell" on pages 72-73 in an article titled "A Stellar Visionary. Over the page "Hardyware" gets a brief mention along with two other recent books.
  - Stuart Goldman's computing section (pages 66-67) is called "The Inspiration of Imagined Places" about space art. There are pictures from the Web sites of Joe Bergeron, B.E. Johnson, and Bill Hartmann.
  - Finally, in the news section Ron Miller has a picture of a star rise seen high above a planet illustrating the latest discovery of the Berkeley extrasolar-planet team in the 47 Uma system. Lynette lost the monopoly!
- The November issue of "Astronomy Now" features three IAAA members: Richard Bizley for a nice image of the formation of the Solar System showing impacting material between Mars and Jupiter. Dave Hardy for a review on 'The Art of Chelsey Bonestell' and Jackie Burns (under her married name of 'Twine') for a photo of Stonehenge and lens flare in the Picture Gallery
- The latest issue of POPULAR ASTRONOMY (only available to members of the Society for Popular Astronomy, SPA) has Dave Hardy's Zambia eclipse as a cover, a 1-page article about his work, and a review of HARDYWARE

helping to design the satellites of the future. We also saw some of the work being done towards the forthcoming Beagle 2 project, which is less than two years away from delivery to the European Space Agency's Mars Express. Currently the Beagle 2 lander is undergoing the final stages of construction and endless testing. We wish them luck on their mission to Mars!

During our time at Astrium we had a very informative lecture from Alistair Scott, whose enthusiasm for the satellite industry really knew no bounds! We also had a great lecture from Dr Monica Grady, Head of the UK National Collection of Meteors, followed by a lively question and answer session.

While we were at Astrium, most of us had time to produce some sketches and even finished work, thanks to a fine collection of photographs, which Ashley very kindly shared amongst us. In many cases this is merely preparatory work, which will be enhanced with information from the many photographs, which we ourselves took, along with huge amounts of data gleaned from leaflets, brochures and our own memories. The IAAA will have an opportunity to show any related work, at an exhibition be held at the Boxfield Gallery in Stevenage Leisure Center in summer of next year.

After the trip to Astrium some of us had further adventures in London, and of course we must not forget spending a wonderful evening at Ashley and Susan's home where we had a short art critique, and then enjoyed much food, wine and conversation. I am very thankful to the IAAA for giving me the opportunity to attend this workshop. I myself want to thank everyone who gave me lots of advice and encouragement with my own space art. I shall end by mentioning that I have now experienced the traditional "orange food" had by most IAAA workshop participants and survived to tell the tale! Another successful workshop under our belts!

To round of this report, I would mention that this workshop may have ended, but it isn't altogether finished as Astrium UK have booked a local gallery to host an exhibition of the work which, hopefully, will result from what we have all experienced at Astrium (oh yes, I shall be reminding all the attendees of this, from time to time). I'm sure that all our members will be looking forward to seeing digital images of this exhibition on the IAAA website in June 2002. See you at the next workshop!!!

## ***DIGITAL ART WINNERS!*** From Pat Rawlings

And a BIG congratulations to the IAAA members who entered the the TAACCL's 3rd Annual Science & Technology Digital Art Competition! Competition in the OPEN Stills Categories was especially stiff this year with almost every entry being of prize-winning quality. Congratulations to the following IAAA Members that fared well in this years competition:

### Open Technology Division

- 2nd Place - "Headin' Home!" by B.E. Johnson, Carmel, CA
- 3rd Place - "Jovian Flyby" by Dr. Mark Garlick, Brighton, UK
- HM - "Io Volcano" by Phil Saunders (Space Channel), France

### Combined Science & Technology Division

- 8 2nd Place - "Lifetime" by B.E. Johnson and Joy Day, Carmel, CA

*Hilda Demsky, Jackie Burns, and Ashley Walker confer on the status of their "patient"... (Psst, is he going to make it? Nah, let's go get some orange food...)*



## **ART TIP**

Here's a tip about painting en plein air from Garry Harwood: "Here's an art tip that might be of use to those painting en

plein air, or anyone concerned about tonality in painting. Yes, it's a trip down memory lane with the Romantics and 'Claude's glass': "Where on earth do you start?" just has to be the one question I've been asked more than any other both by non-painters and novices over the years. The answer I usually give is "Simplify, and then simplify some more." This is often easier said than done though. One method employed by Corot in the 19th century, and which may have been used by the French 17th century landscape painter Claude Lorraine, involved the use of a small black convex glass, for reflecting landscapes in miniature so as to show their broad tonal values, without distracting detail or color.

Now called 'Claude's glass', its use was widespread in the 17th and 18th centuries, and not only with artists -- the poet Gray carried one with him in his travels round Britain in search of the 'Picturesque' -- that aesthetic concept applied onto scenes somewhere in the mid-ground between the ideal landscapes of Classicism and the sublime landscapes of Romanticism. You can make a simple variant yourself by coating one side of a plain, unslivered flat rectangular glass panel with a coat of black acrylic paint. Something easily stored and around the size of a make-up compact mirror will do the job. When thoroughly dry apply a second coat at right angles to seal any holes. Once any pin pricks in the finish have been dealt with and the paint is dry, thin acetate, cardboard or some other resilient surface can be cut to size and glued carefully in place to protect the delicate finish from scratching while traveling. Such a device compresses the tonal values present in the scene so it's somewhat easier to distinguish tonal relationships, and their portrayal becomes a little less fraught. Of course, if you can find a \*convex\* piece of glass and treat it the same way you will get the full effect -- not only compression of tonality but interesting and pleasing perspective distortion of the landscape, sky or ocean as well, on demand! And thanks to the loss of light within the glass, even 'everyday' sky effects, clouds, desert landscapes etc can take on a refreshing new appearance. Try it and a tool in use 250 years ago might even inspire the odd bit of space art..... Regards, Garry

**David A. Hardy** - "The names of all attendees were forwarded to Site Security for clearance, and the serial numbers of all digital and conventional camera equipment had to be submitted in advance. No pastels, chalks or other dusty materials were allowed in the clean rooms, where the artists wore the usual white overalls, hats and overshoes. On arrival, the members were greeted by Alistair Scott, who gave an enthusiastic video presentation on the workings of Astrium, and both answered and asked questions. (He appeared somewhat taken aback to discover that the first illustration he used, of Sputnik 1, had been painted by myself back in 1965!) They were then taken on a guided tour of the facility, including a vibration chamber, a large anechoic chamber which, its interior covered in black cones, offered great graphic potential. Under construction, the group saw the propulsion module of METOP, and many other satellites such as Envisat. Much amusement was afforded by a model of a Martian landscape from which the Beagle 2 lander was missing, replaced by teddy bears and deckchairs. Also of much interest was the range of silver and gold mylar used for temperature control, the skins of satellites, and for wrapping components. A large room with several long tables was allocated to the group to be used for sketching, looking at photographic references (supplied in abundance by Ashley), and general discussion on their return from the various locations. Lunch was supplied each day in the Staff Restaurant, courtesy of the management, which was much appreciated."

**Betsy Smith** - "What initially grabbed my imagination about the workshop was the opportunity to visit Stonehenge and to actually walk and sketch among the stones. We marveled at what might have moved those ancient people to build such a site, as well as how they moved those huge stones!

A day later we were at Astrium, walking among our modern-day "monoliths", those technological marvels designed to travel through space and expand our understanding of the universe. I'm reminded of the idea that the universe, by continually evolving through infinite creativity, has begun to contemplate itself through us.

Our last evening in Hitchin was spent enjoying a fantastic dinner whipped

up by Susan and Ashley, complete with "orange food" appetizers. I think there were at least two well-deserved standing ovations. It was so great to see old friends and to meet so many new ones. Plus I left with a signed copy of "Hardyware" in my pack! Thanks to the tireless efforts of Jackie and Ashley, this was a truly unique and inspiring workshop."

*Jackie Burns and Dr. Monica Grady pose with a bunch of meteorites... or is it Monica and Jackie?*



*Dave Hardy contemplates the strange apparition staring at him from the "other side."*

days there; I'm sure we caused him a few headaches! But there were no worries really, once we got into the swing of things, we quickly found the places that appealed to us individually, making notes to re-visit laboratories or rooms which we wanted to sketch or photograph for future 'creations'!"

One disappointment which I think was felt by all, was the fact that we were unable to see a satellite fully "made up" complete with all antennae, solar panels, and such. It would have been very spectacular, but we learned that only certain components of the craft were made at Astrium with the final assembly being done elsewhere. However, we soon found that there were interesting places to be seen if you looked, one of these being the amazing testing chamber where the ceiling and walls were covered in super-absorbent long black cones, which reflect neither electromagnetic nor acoustic waves. This room was used to simulate conditions in space. Others were the "clean rooms" where precisely engineered components were made in near sterile conditions. We watched workers painstakingly trace shapes around curves, raised areas and holes on side panels, where reflective material would be glued at a later date. It was interesting to see the computer staff working with 3D programs, (cont'd on page 9)

*And the "other side" contemplates the strange apparition of Dave Hardy!*

London was wonderful; an exquisite high tea at a luxurious hotel, visits to art galleries and the breath-taking Natural History museum, and tickets to the play "Art" and "Swan Lake". It was especially moving the following week to watch on TV as the royal guard played the Star Spangled Banner at the gates of the palace, where I had stood only days before. Great Britain will always be a special friend."

**Carol Tonkin** - "I joined the workshop on Monday 3rd September, with the first of our visits to Astrium. I heard (with envy) about the previous days, which had been spent at Stonehenge, with opportunities to sketch and paint the monuments and their surroundings. At Astrium we were welcomed by Ashley Walker who did a sterling job looking after us during our three

