

# ANNOUNCEMENTS!



**Book of the Month #1:** "Information Arts: Intersections of Art, Science, and Technology", by Stephen Wilson, MIT Press, 1000 pages

If you have not visited the IAAA home page recently, you definitely need to go there now! BJ Johnson has done an amazing job upgrading and revamping the entire site. New graphics, new code, new look. Check it out!! [www.iaaa.org](http://www.iaaa.org)

## Web Surfin' Sites to check out :

- <http://www.arapress.com>
- <http://spaceflightnow.com/news/n0201/02esoeagle/>
- <http://www.solarguard.com/sglib2.htm>
- [http://leonid.arc.nasa.gov/recent\\_updates6.html](http://leonid.arc.nasa.gov/recent_updates6.html)
- <http://webgis.wr.usgs.gov/>
- <http://www.astrosurf.com/planete-mars/goursac/marineris.html>
- <http://www.treeswallow.com/macdem/>
- <http://homepage.mac.com/joebergeron/spacehard.html>
- <http://spaceflight.nasa.gov/realdata/nasatv/index.html>
- <http://www.hq.nasa.gov/office/pao/History/alsj/frame.html>
- <http://www.spacedaily.com/news/life-01c.html>

## RENEWAL TIME!!!!

January 1st was the due date for renewals; so please be sure to send yours in ASAP. US renewals go to Kim Poor c/o Novaspace, UK renewals go to Dave Hardy. Other overseas members may send Dave sterling pounds only (not euros!); otherwise please pay in US\$ to Kim. Make checks/money orders out to 'IAAA', NOT to any individual. Dues have been kept to a bargain \$50/32GBPounds for Fellows, \$45/28GBP for Artist Members, and \$40/26GBP for Associate Members. Addresses to right.....

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Annual rates by member type, \$40, \$45, or \$50, non-US members send payment in pounds sterling to DAH below.  
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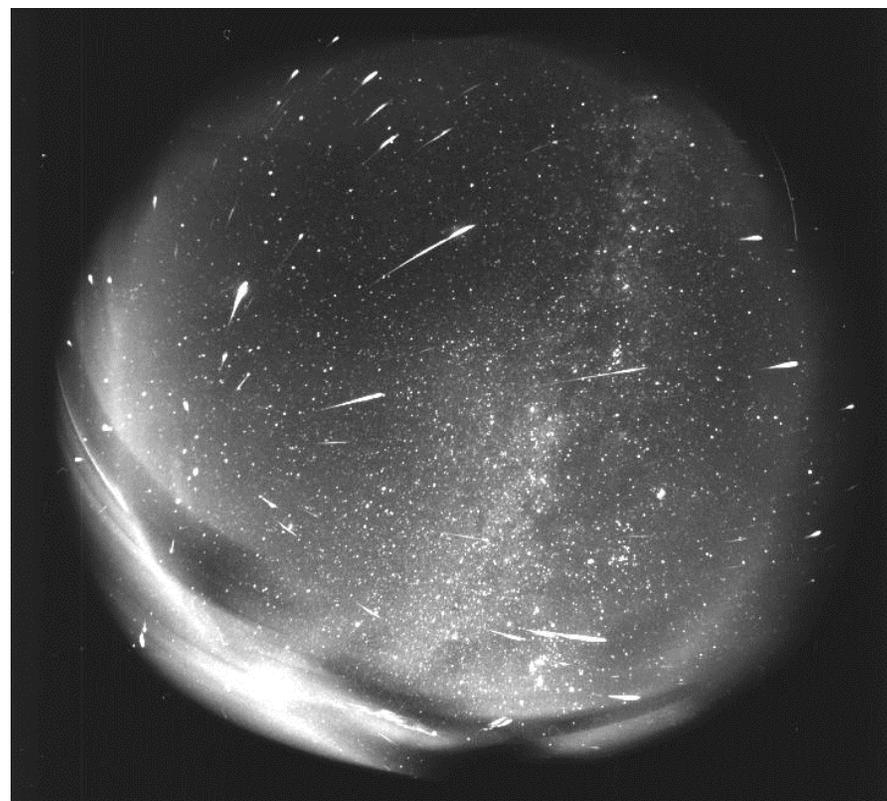
**Dec 01 / Jan 02**

The Official Newsletter of the



International Association of  
**Astronomical Artists**

## LIGHT UP THE SKY!



A great fisheye lens / time-lapse photo of this years Leonid show. Member reports on the shower inside. Photo from Don Davis.

**Editor: Jon Ramer**

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

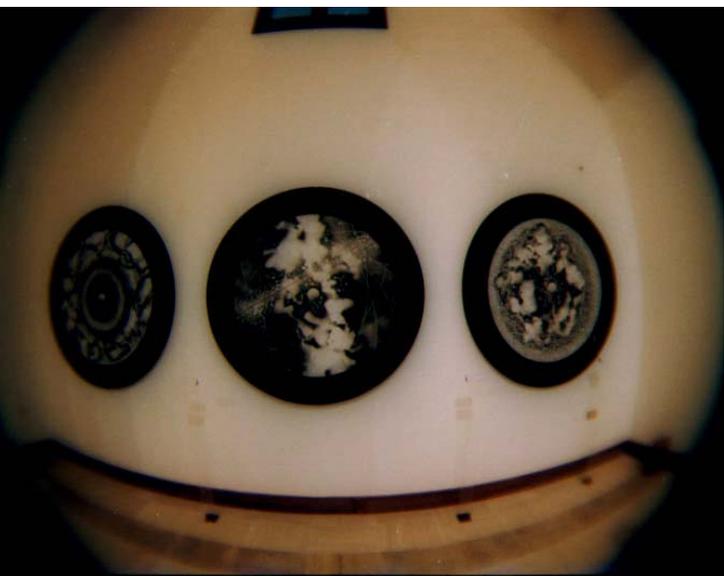
# IN THIS PULSAR...

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## From the Editor-

Hi Gang! Finally got around to printing some surrealistic art – hope everyone likes it! Also had some reports on the Leonids that were too great to pass up. Hard to believe, but this is my 25<sup>th</sup> issue as Editor of the Pulsar! How quickly the time flies.... ;-)

*You!*



*A Gallery Display By Italo Rodomonti*  
One fish-eye lens shot deserves another.... This is a view of three works (of about twenty) by Italian member Italo Rodomonti in a recent showing of his. More of his work can be found on page 7.

# Astronomical Feature of the Month : -- OPTICALLY IMAGED -- STAR

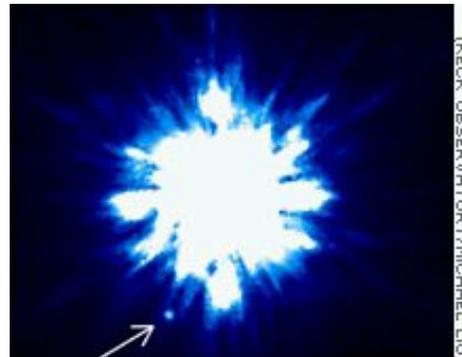
Astronomers have taken optical images of a brown dwarf orbiting near a Sun-like star, making it the closest object ever observed around a star through direct imaging. The distance between the brown dwarf and its parent star is less than that between the planet Uranus and the Sun. The observation is the latest in a flurry of star system discoveries made using new ground-based technology that in some cases generate sharper pictures than space telescopes. Brown dwarfs, middling objects between planets and stars, are considerably more massive than the largest planets but do not have enough mass to ignite the thermonuclear reactions necessary to become stars. This one, located 58 light-years away in the constellation Sagitta, contains more than 12 times the mass of all the planets in our solar system. Its parent star is roughly 2 billion years old, about half the age of our Sun.

In recent years, dozens of distant planets have been found, but only through indirect means, such as observing the gravitational tug on their parent stars which only work within the first 4 astronomical units (AU) of a star system. The newly discovered brown dwarf is 14 AUs from its parent star, also known as 15Sge.

Astronomers made the discovery using the Gemini North and twin Keck telescopes, which stand atop Hawaii's Mauna Kea. These observatories take advantage of the volcanic mountain's thin, clean and dry air by using adaptive optics to produce images with higher resolution than even the Hubble Space Telescope. Without the adaptive optics the brown dwarf would be too faint and too close to its parent star to be seen.

*From CNN Science.*

*Image on left was taken in visible light with the light from Sacitta masked where the brown dwarf is. Image on right is a higher wavelength photo.*



GEMINI OBSERVATORY/MICHAEL LIU

KECK OBSERVATORY/MICHAEL LIU

## Profile: Ron Russell

Ron Russell is a leading investigator and reporter of the mysterious Crop Circles.

Spending several months each year photographing, measuring, researching, and experiencing the circles, he had brought his keen discernment to bear this strange phenomenon. Ron is a MUFON field investigator, a CSETI board member, regional coordinator for the Center for Crop Circle Studies, and a professional artist with works in the Smithsonian and Guggenheim museums, NASA, Star Trek, Sony and other major collections around the world. Educated at Stanford University, San Jose State University, New School for Social Research, NYC and a lifelong artist from an artist family, he devotes much time and energy to the research of the profound art and symbolism of the crop formations. He conducts small, yearly tours to the circles to share first hand experiences and information with people of all ages. He is the author of the Llewellyn Crop Circle Calendar series and numerous articles and reports printed in journals on the phenomenon. Ron has been featured on ABC-20/20, Fox-Sightings, BBC TV, and is a rational and able spokesperson in several crop circle video documentaries. He has been a featured speaker for New Science forums, Global Science Conferences, International UFO Congress, World UFO Congress, New Age Expos, Rotary Club and Kiwanis conferences, and many university and open churches nationwide.

## Profile: Ann Harwell

Julie is a professional artist, working full-time at Artspace Studio #105, in Raleigh,

North Carolina's city market with over 40 other visual artists in open studios. A self-taught creator, in the four years that she has been a professional artist, she has received a North Carolina Visual Artist Fellowship, a United Arts Regional Artist Grant, and a Shannon-Ross Scholarship. Her work has been juried into twenty-four shows both nationally and internationally, winning fifteen awards. She has been featured in numerous magazines including National Geographic and Astronomy. The City of Raleigh recently purchased one of her quilts for their permanent collection.

## Profile: Julie Rodriguez Jones

Julie is a semi-professional artist and the artist/owner

of "Art From the Soul", a licensed business in San Pablo, California. She says, "I have recently begun to focus on drawing space scapes digitally using freehand digital airbrush. I initially focused on planets, nebulae and comets and recently was selected to exhibit my painting 'Black Hole' at the 2-, 3-, 4-Dimensional International Juried Art Exhibition at the Period Gallery, Omaha. My interest in astronomy began as a youth, grinding the mirror for an 8f8 Newtonian reflector and joining the Contra Costa Astronomical Society. My initial studies at UC Berkley were in physics. By day, I am a 30-year career employee of the Lawrence Berkeley National Laboratory, a Department of Energy national research and development laboratory. Though I have had an interest in Art most of my life, it was only three years ago that I began to refocus my time on this great love. Art is a spiritual experience for me and the combination of art and astronomy is a glorious marriage of science, art, and spirituality.

# THE IAAA DOES LEO...

This year's Leonid meteor shower was a real spectacle witnessed by many IAAA members. Each gave great reports! We'll start with **Joe Bergeron's** comments: "This shower/storm was absolutely awesome. I started looking at 11:40 PST and saw 40 mostly bright Leonids in the next half hour. These had orange heads and greenish trains. The rate started to pick up around 1AM. After that it entered the "storm" category, with a sustained period of 2-3 meteors per second. It was impossible to look anywhere in the sky without seeing multiple meteors at all times. Sometimes a flash would announce a bright meteor in a part of the sky I wasn't looking at. Quite a few left persistent trains lasting up to a minute. Some of these meteors were brilliant at magnitude -5 or so, and most were at least magnitude 2 or better. These later meteors tended to be whiter or bluer, still with greenish or bluish trains.

"The view of the radiant was incredible, with constant diverging streaks showing the position of the radiant without ambiguity. It looked like a meteor shower in a movie, madly exaggerated. It surpassed every shower I've ever seen before by a factor of a hundred. I must have seen something like 5,000 meteors in all."

**Robin Hart** watched from her home in California: "What a show! My husband and I had an excellent view of the shower from my deck (we face due east). The only part of the sky obscured by the house was the west. I would have loved to have climbed up on the roof but it's a 3 story drop to the bottom. We were clouded in around 11:00 and miracle of miracles the sky cleared up around 1:00 in the morning leaving only a few high clouds.

"For a while around the peak at 2:00-3:00 am it really looked like a shower. Often in my field of view, at least 10 would flash off at one time. Meteors around the radiant were short and fast and there were many spectacular pairs and triples going through Orion's belt that were long and left long after images. I have never seen pairs or triples before. They reminded me of aircraft flying in formation. The interesting thing was that they were about the same magnitude. There were a number of brilliant fireballs mostly in the northeasterly direction, but none bright enough to light up the whole sky. That still has to be bested by the beautiful purple fireball I saw some years ago during the Perseids that lit up the whole parking lot. We stayed out until 3:30 when things started to slow down and it just got too darned cold and damp. This will go in my book of memorable meteor showers!"

**Don Davis** also watched the shower from California and has this to say: "Well, this was the one to see, and I'm glad I saw it from the vicinity of Joshua Tree National Park. Saturday began forebodingly with a near overcast of high clouds, but by sunset I could see the crescent Moon and fair amounts of blue sky. By midnight the stars and planets shone brightly with just a hint of thin clouds here and there. While leaving for the dark desert I saw a bright meteor whiz overhead as soon as I opened my front door, a good omen! During the 90-minute trip to the park entrance I watched the modest light pollution of the desert cities withdraw behind me. There were momentary glints of meteors occasionally seen near the horizon but I did my best to avoid being distracted by looking for them. Along the actual entrance road to Joshua Tree there were dozens of cars also heading for this well known viewing site, and at the last moment I turned off onto a dirt road just outside main entrance into a dark relatively secluded area, deciding to let the other people worry about where they were going to park. (cont'd page 4)

## LEONIDS cont'd

"It was about 1:40 A.M. when I stopped, got out my digital camera and tripod, then stood around and let my eyes dark adapt. For the first time in my life I didn't have to wait to see meteors. Leonids were everywhere, and the majority were quite bright, perhaps first magnitude and brighter. Looking towards the head of Leo, occasional very short meteors appeared, generally drawn out by perspective into longer streaks further from the radiant point. Most meteors across the sky were white streaks 10 degrees or so in length, but the brighter ones stretched across much more of the sky. These would leave glowing trails that would fade typically within 10 seconds or so. The few very brightest fireballs had dazzling heads leading dimmer streaks of the brightness of ordinary larger meteors. One exceptionally brilliant example flashed overhead and was bright enough to cast shadows.

"Sometime between 2 and 3 A.M. the number of meteors seen was astounding, for sustained periods at least one per second. Many times I saw two at once, and even three appeared simultaneously. There seemed to be a tendency for paired meteors to be the same brightness. Once I saw two meteors perhaps -2 magnitude appear and move away from each other into the outer peripheral vision of both eyes. I had a distinct impression that brighter events tended to come in clusters, so if you saw one bright meteor in a given region of the sky you would anticipate seeing more in that general area at once. At times a meteor would briefly blaze, then fade, and another would appear where the first should have gone as if nearby particles were hitting the atmosphere after drifting apart along the same path. Once three such 'blinks' appeared along a meteor's path as if it were 'skipping'. There were moments when I saw many meteors within a few seconds wherever I looked. You would literally glance away just in time to see a new event take place just after seeing another one.

"There must have been about 5000 meteors per hour during the peak, and very few empty periods such as during regular meteor showers. I would look in any direction and see either a Leonid or the fading trail of one. At times I was seeing sparks here and there across my visual field which reminded me of seeing isolated fireflies winking on and off in a wide dark farmland. Sometimes meteors would be diffused by intervening southerly clouds. Once in awhile an unseen fireball would light up the entire scene as if someone far away was using a flashbulb. As Leo and the radiant climbed, the Zodiacal Light towered beyond the hilly horizon tilted modestly towards the right, or south. The inner Zodiacal light was brighter than the region of the Milky Way near Orion, with only silhouetted horizontal masses of distant clouds interrupting the base of its smooth tapered contours.

"The Leonid display seemed to slow down by 4 A.M., although by the time I left as dawn began washing out the Zodiacal light it was still at a level of activity comparable to what I had seen three years previously. For a minute I drove very slowly on the deserted dirt road with only my parking lights on, leaning forward and looking up through my windshield at Leonids, savoring the novelty of deliberately looking for meteors while driving! Finally I have glimpsed a meteor storm. I will always remember the magic of that night."

(cont'd 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, here's a little of the magic behind the camera.

### How did Dave float about in HAL's brain room?

Strings yet again! The camera was pointed directly upwards into a vertically built set, then Dave was harnessed with his body between the camera and the tethering rig hiding the wires. He appeared to move effortlessly into unnatural positions with no apparent support. As with other shots, this shot demanded that Dave (Keir Dullea) be trussed up for real instead of a stunt double filling in for him. The real kicker is that Dullea had to hang *upside down* to film these shots! Look closely and you can see that his face is red in of them. Well, that's it! 2001 is now over so this is the last "2001" trivia question - hope you enjoyed the series!

## Kudos Korner

- The IAAA is well represented in the Feb 2002 Sky&Telescope:
  - Dan Durda has an illustration (p.22) of brown-dwarf spectral types based upon some recent research, a subject of debate on the listserve a while back
  - Bill Hartmann's picture of colliding C- and S-type asteroids is on p.29
  - Ron Miller has a hot landscape of the Earth during the Sun's red-giant phase (pp.60-61), to illustrate a new book on "Extreme Stars." Is that picture from the book, Ron?
  - Not an IAAA member, but there's an early piece of space art dating from c.1886 on p62, a lunar-surface drawing
- The cover picture of the 2002 January "Asimov's Science Fiction" is Mark Garlick's futuristic Brighton
- Dave Hardy has his 'extrasolar Jupiter' painting (as discussed on this list a month or so ago) in the latest ASTRONOMY magazine, p20
- Joy Day's glass paintings were featured in a show Dec 14- Jan 31, "Astral Bodies An Exhibition of Contemporary Glass Art" the show was at the Tri-Lakes Center for the Arts, Palmer Lake, Colorado
- Joy also participated in a show entitled "Prevailing Human Spirit" that ran from 9 Jan - 2 Feb at the Society of Illustrator's Museum, 128 East 63rd Street, New York. Her large canvas images in this show were inspired by the hope for healing and recovery after the events of September 11. Proceeds from the show go directly to the 9/11 Fund
- The January 2002 German magazine "Star Observer" has a wonderful 12-page article about Dave Hardy, with a detailed interview and lots of nicely sized prints of his art
- Mike Carroll had a nice painting of the Pioneer 10 spacecraft in the center spread of the Nov./Dec. 2001 issue of the Planetary report in an article on the strange acceleration of Pioneers 10 and 11

## ART TIPS

Here is a little tip for airbrushing from Bob Kline.

"I found a solution to thinning acrylics for airbrushing. First was to overcome the problem of mold and mildew growing in highly thinned acrylics. Many paintings I do are large and will sometimes take a couple months working only periodically on it so the thinned paints tend sit a long time. When I came back to do more work on the piece I found many of the thinned paints had gone moldy, at least moldy enough to keep clogging the airbrush! What a waste of paint and time and money. A solution had to be found. First I thinned the acrylics with distilled water which greatly extended the shelf life of highly thinned paints. Distilled water lacks the minerals and other nutrients that helps sustain mold and mildew. Ultra pure distilled water works even better however is hard to find (but is available at lab supplies companies). Then I found that thinning mostly with Liquitex airbrush medium works the best. This can be found at most art supply stores. You get two benefits from using it. First it greatly reduces mold growth and the best benefit is that you are thinning the paint with mostly binder (this is the clear polymer material that "glues" the pigment particles together and to the canvas). The more paint is thinned with water the weaker its bonding ability and is less archival. I usually thin about 60 to 80% airbrush medium to 40 to 20% distilled water. For spraying large areas and using a spray gun even less water is used. The Liquitex airbrush medium is better to use for airbrushing than the polymer mediums found at paint supply stores, which are too heavy bodied and are designed mainly for brushing and rolling. I have done some painting on Plexiglas with this technique and works very well. First sand the Plexiglas with 220 grit sandpaper, then thoroughly remove the sanding dust before painting. After drying a couple of weeks, the acrylics bonded tightly to the Plexiglas. The longer the acrylics are on the Plexiglas the better they bond, probably because Plexiglas is a form of acrylic. After a couple of months of drying on one painting, I did a high tac tape pull test and could not lift the paint! As strange as it may seem, sanded Plexiglas makes a good very durable and very archival painting surface."

## IT WAS TWENTY YEARS AGO TODAY....

From Kara Szathmary, IAAA President and Chairman of the Board

It was in 1982 that the initial "seed" group of artists who had been assembled to work on Carl Sagan's "Cosmos" eventually evolved to friendships and professional ties. From a humble first exhibition (organized by Michael Carroll) for the first Planetfest in Pasadena, California, to the very first workshop (organized by Bill Hartmann) to see whether the group of wiry artists with similar artistic passion and interests could manage to live, work and create together in a Hawaiian geological setting - among volcanoes, molten rocks, steam vents, lava tubes, and other worldliness. From this experience, the friendships moved to another level - faith, belief and the euphoria that as artists they were onto something. An association! And they were right. Here we are today, incorporated and stronger than ever, continuously growing by drawing into our family, talented artists of multitude of skills, media, experiences, ideas, opinions, perceptions and view points, all shared and bantered about as the spirit moves one's soul to respond. Thank you for giving of yourselves for the common good will of all.

## FELLOW & RUDAUX NEWS

In January, your President struck an Ad Hoc Advisory Counsel of Fellows, omitting any Fellows of the IAAA who had been nominated for the IAAA's highest honor - The Rudaux Award. This Advisory Counsel of Fellows totaled 14 members all together. The Confidential message from the President asked the Fellows to decide if we should elect a second wave of Grand Master Artists to our Hall of Fame? The Results: 71% of the Fellows agreed that it should be done and with via a double majority affirmed and ratified one candidate for election.

It is with great pleasure and honor that I announce the 2001 Lucien Rudaux Memorial Award winner. Please all \*applaud\*, \*salute\* and \*congratulate\* our newest addition to the IAAA Grand Master Hall of Fame:  
**DAVID A. HARDY**

Sincerely yours,  
Kara Szathmary, President, IAAA

Dave replied with:

I must admit to being surprised, as well as pleased and honored, when I read the above. Surprised, because I have previously put forward three names of members who I feel are at least as worthy as myself, if not more so, to receive this award. As an admirer and promoter of the work of Lucien Rudaux since I obtained his book SUR LES AUTRES MONDES, I am delighted that my peers feel my efforts to be deserving of this. (It is perhaps a good moment to remind newer members -- and others -- that the Rudaux Award takes into consideration not just a member's artistic ability, but his/her contribution over a period of time to the promotion of space art and the aims of the IAAA.) A heartfelt 'thank you' to everyone.

Dave Hardy, FIAAA

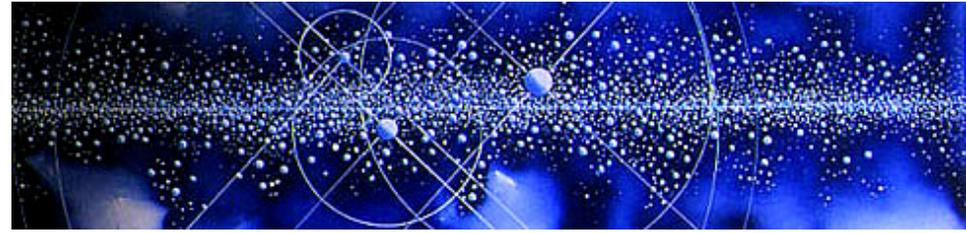
And for other news about Fellows, the Counsel of Fellows has extended the honor of Fellowship to six new Fellows, Joe Bergeron, Michael Boehme, Jackie Burns, Joy Day, Joel Hagen and Aldo Spadoni. Congrats to all!

### *Voyage II*

By Devy Wolfe

A beautiful acrylic image on a large 50' by 60' canvas, done in predominantly blues and purples.





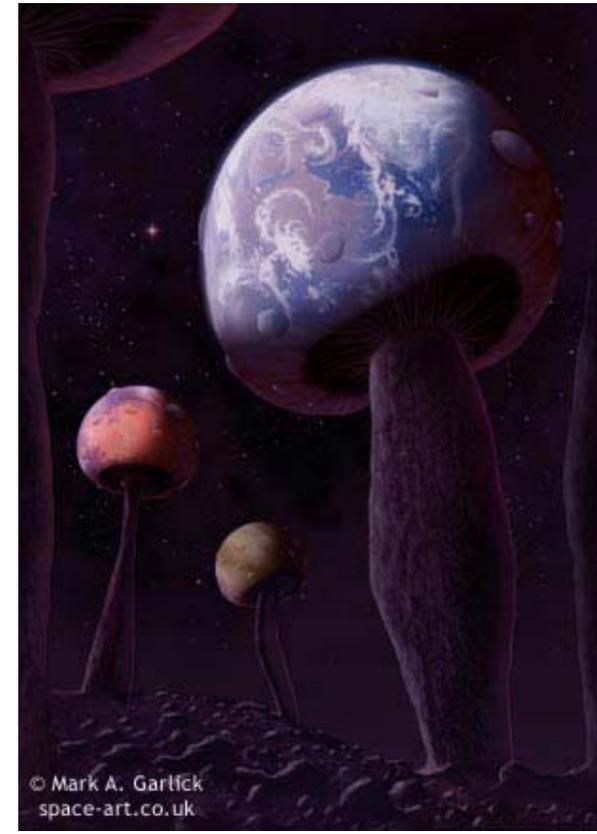
Pinnacles State Park way out in the Mojave Desert where the skies are very dark with my brother from Ridgecrest where we had totally clear skies with excellent transparency. The scene was much like being in a Bonestell painting with all those jagged spires pointing skyward. I took many different time exposures many with the pinnacles in the foreground. It was difficult to tell the meteor count per hour because there were so many over the entire sky. I estimate about 4000 to 5000 per hour. I watched the shower from 12:00 am to sunrise. The peak was about 3:00 am, although the exact "peak" was hard to estimate because they were fairly steady from about 1:30 to almost 4:00. Meteors could even be seen as late as a few minutes before sunrise. Just above the western horizon opposite the sunrise you could still see meteors! Some that would of been very bright at night could be seen fairly close to area of sunrise. This will probably be one of those once in a lifetime astronomical events never to be forgotten!"

Not at least until next year!

## *Planet Fungus*

By Mark Garlick

I got the idea for this just by seeing a photograph of some mushrooms on the front of a greetings card. I made a sketch with pencil, scanned it, and added all the bits and pieces in Photoshop. Voila: funky fungus!



© Mark A. Garlick  
space-art.co.uk

Two IAAA astronomers stayed up for the event. First comments from **Malcolm Currie**. "The show was just as good over Hawaii as elsewhere. I saw an Earth-grazer over Hawaii that was 150 degrees long. The longest in path and duration meteor I can recall seeing. Saw several multiple meteors like others did too. I believe that some of the multiples are related. Meteoroids are friable. Crumbling giving rise to only a slight change in orbits struck me a decade or so ago as a plausible explanation for a phenomenon I've observed in telescopic meteors. There I see meteors come in quick succession 0.5s to a few seconds separation, but travel along nearly identical paths, that's with a few minutes in parallel paths. Having seen several occurrences, I don't think it's due to chance."

At 3:40 AM on Sun, 18 Nov **Bill Hartmann** said: "Saw 17 handsome meteors in 5 minutes observing, without even being able to see the whole sky (blockage by some trees and buildings). Brightest about -1 magnitude with strong luminous train lasting 1 second. The radiant is very apparent. Short bright meteors in direction of Leo, but long meteors crossing much of the sky, very fast, if you look at right angles to Leo, i.e. 90 degrees away.

"I got up again at 4:30 and it was about the same, averaging 3 to 4 meteors per minute in a moderately bright urban sky. About half of them quite bright, like 1st magnitude, leaving trains. No more than at 3:30 AM, maybe less. News reports and other IAAA emails suggest a similar story -- impressive but not once-in-a-lifetime spectacular.

"The thing that really impressed me is that I've never seen a radiant so apparent. You could really see that they came from Leo. In that direction, they were coming right at you, so the trails were foreshortened and very short. Below Leo, an occasional meteor would drop toward the horizon. Above Leo, they'd zip across the zenith and make a long trail across the sky. Same to south and north, beautiful long trails with luminous trains glowing for a second. I saw one train, the brightest meteor I saw, that was clearly iridescent or colored, with faint red and blue visible for about a second as it faded.

"Question: Did anyone else see pairs or triples moving along roughly the same path a few seconds apart? I saw a couple of pairs like this, and in one case three meteors appears to follow almost the same path, within a few degrees, maybe 4 seconds apart. If this was other than random chance, I can't figure out the physics of why they would be associated with each other in space. With Earth moving relative to meteors at, say, 20 km/sec, they must have been tens of km apart in space."

**BJ Johnson** answered Bill's question with this: "Yes, and we also saw a number of these at Mount St. Helens that appeared to be definitely related to one another. The timing and paths were very close together, some near simultaneous, leading us to speculate that it was the result of chunks that split off together and remained in close proximity to one another or a chunk that had fractured and broken up later on with little force, so that the pieces would not drift apart."

We'll end with **Bob Kline's** comments: "This was by far the most spectacular meteor shower I have ever seen! Went to the Trona