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Please look at the address label on the front, and note when your membership expires. If you are overdue, or coming up due soon, mail it in! ALSO: Don't forget to mail in an address change if you move!!!
President's Message...
Kara Stathmary

We have received several responses to the proposed IAAA manifesto green paper. Beth Avary and William K. Hartmann took on the task to "feel" the pulse of our membership. Their mandate, from the Board of Trustees, was to formulate in words their observations of the styles, techniques and attitudes used by our membership to interpret astronomical knowledge.

I have repeatedly encouraged our membership to participate in this historic debate. What was important to me and the Board was that our members have an opportunity to share their views and their experiences without prejudice and by working as a team, open tolerant, and receptive to new ideas. I thank all of our participants for their generous time, insights and depth of feelings regarding their personal views, preferences and artistic intentions.

Every now and then however, a number of curiously hostile and accusatory letters cross my desk questioning the direction that the IAAA has pursued as a non-profit, educationally oriented, organization. In particular, a few recent letters have specifically reflected on the nature of some of the articles in Pulsar, the manifesto debate as well as the styles and techniques of some of our new members. Unfortunately, these letters are riddled with a host of misconceptions as to what the direction, the debates, and the dialogues and the issues are all about. So, let me back track a bit so that I can put the last three years into perspective.

Prior to incorporating as a non-profit organization, the IAAA had committed itself and set its sails on a course to internationalize, which would establish astronomical art as a global interwoven fabric of astronomy and art and in the process define space art as a new genre of art in the international arena. The word "astronomical" in our name has always, by it's very definition, implied an art form that is inspired by the astronomical sciences and the exploration of space. Once, however, we became aware of the similarities and the differences in tendencies of styles and approaches of different cultures, as was the case in Iceland in 1988, our delegation initiated a period of self reflection prior to the rendez-vous with the Soviet Cosmic Group.

The aim of self reflection was redefinition, renewal, growth and change. An organization undergoing this process did so with the understanding that success required a collective vision, will and effort. We decided to formulate a collective synthesis, a manifesto, of the common threads of scientific and philosophic approaches that inspire all astronomical artists.

Ten years earlier, in 1978, Ron Miller initiated the debate as to what constitutes space art and with what tools, skills and astronomical science knowledge an artist must have to paint "believable" astronomical art. "The goal of the artist," he wrote "was to look at reality, to form a personal impression of it, and to develop the skills necessary to render the impressions in objective terms." "The balance," he continues, "between naturalism and imagination often becomes the artists identifiable style. The artist is normally allowed great latitude in his adherence to reality." "The purpose is to visualize a part of reality which is 'unseeable', and the person who does this is the scientific artist." When the scientific artist creates an accurate vision of unseen objects, he not only provides inspiration to those working in the field, but he forms a method of communication to the rest of the world: the non-scientific public.

Nowhere does Ron insist that there is only one approach to astronomical art. Rather, he states very clearly that "the artist who practices space art must be able to handle a representational painting technique." This does not mean that the work of art must be photographic in style which of course Bonestell used - partly as a result of his experience as a motion picture matte painter. Nor does this mean that mixture of techniques could not be used to achieve the artist's intentions. "The real test," writes Ron "is 'believability', and photographic realism is only one way to achieve it."

Lucien Rudaux and Ludeck Pesek used and impressionistic style to create works that have all the appearances of having been painted from "life". "Starry Night" by Van Gogh is but one example of his work where Vincent repeatedly attempted to render his belief that the static night sky was as turbulent as the wild flowers of the meadowlands.

Albert Biome, writing to George O Abell, pointed out that "Van Gogh, C. Flammarion, and Jules Verne all looked to (astronomical) science for the solution to humanity's pressing problems." He continues, "Van Gogh's Starry Night incarnates the effort to visualize the reality of Flammarion's observations and speculations. While based on immediate perception, it expands on the reality to include the latest astronomical discoveries of nebulae, the double and multiple star systems rotating around a common center of gravity, and above all, the new insights into the 'unfixed' and dynamic universe."

"The picture's execution were fraught with the deepest personal meaning for the painter" which "incarcerated both mind and spirit."

continued on page 18
The Future of the IAAA

Carter Emmart

The organization is now going through a natural growing pain in its effort to grasp both a focus and a directive for the future. It is a vital necessity to be able to define ourselves to the world in order to be able to court support for activities, sponsor shows, and review future applicants for membership. Regardless of any lack of articulated focus by an original founding group, there developed a name: The International Association of Astronomical Artists.

International; it now truly is, and amazing when one considers it and its reflection on how the inspiration of the Beyond serves to weld us together as we really are, One.

Association; and how can one deny the absolute and irreversible effects of this group actually getting together and sharing each other's inspiration, thank you Bill, this was a GREAT idea.

Astronomical; we don't need another definition because we all know this means measured space beyond our Home, and each one of us is held in eternal rapture by this; we love it and we depict it for the rest of humanity to join with us.

Artists; we are all, and we are lit by the flame of common inspiration beyond the boundaries of culture, style and form.

The beauty of art is that it can NEVER be defined, but if we are to take our lead from the past, all movements revolve around a central theme and that is a theme of inspiration. Our theme is astronomical and it is worth reflecting on the very nature and philosophical vastness of what this means. A world-wide expression of this inspiration is all that we are about and we should indulge the many wondrous versions that this takes form. Without this perspective we fall short of what I believe is a proud and most appropriate name. Forever timeless are the worlds and works of Chesley, Vincent, Leonardo, and the cave painters. Their living inspiration is the torch you and I have chosen to take. Let us come together, far and wide, to celebrate this fact and paint the silence of the heavens.

Uwe writes: I would like to make another suggestion for a European Space Art Workshop. [You may recall that I have suggested one in Gran Canaria – the volcanic islands of Tenerife and Lanzarote, where there is also the UK Observatory for added interest – and Arthur Woods has suggested one to be held in Switzerland – DAH]

A very fascinating landscape here in Europe (Asia) lies 300km behind Ankara in Turkey. There are very fascinating alien-like tuff-stone mountains and from there we could observe the total solar eclipse of 1999. I think this workshop could be cheaper for European space artists than a trip to Arizona or Hawaii. I have seen film of Turkey, and there are also very interesting hot springs, forming the most fantastic shapes and terraces. I had expected to see the 1999 eclipse from Cornwall in Britain, it being the only total eclipse visible from the UK this century; but I dare say I could be persuaded otherwise! – DAH]

I should like to make some further remarks about my paintings for Pulsar readers. My favourite artists are Renoir and Monet. I do not stand in the tradition of Caspar David Friedrich, as Ron Miller says he does, though I like his [Friedrich's] fine art.

In my landscape painting I try to look more to the whole than to details. You will see this in slide 1: a star cluster with atmospheric reflections on the sky of a snow-storm planet. I used red colours for the whole because star clusters are old-star populations as we know.

Another attempt is a combination of portraits of astronomers and their discoveries. In my cycle 'Renaissance of Solar System Exploration', consisting of 10 paintings, I have combined the mythological aspects of planets' attributes, astronomers and exploration by spacecraft. In my Jupiter painting (slide 2) we see Galileo and the Galileo space probe. Zeus is sitting inside the planet. Well, it is a controversial experiment and Andrei Sokolov thinks it is doubtful, showing only one or two astronomers and one space probe for each planet!

The medium I use is oil on board, applied thinly. Finally, I want to propose a new 'science fact' column in Pulsar. This should include new research information which is interesting to space artists. For example:
The magnetic field of Neptune is evident at the distance of Triton, so it could be that charged particles from geysers will interact with the magnetic field. Or: On Mars we usually see two types of storms, thus:

Small scale – winds are blowing dust particles above the surface.

Large scale – wind roll during Mars perigee [periare?].

[Well, there's some food for thought; thanks, Uwe! Anyone care to contribute to such a column? My feeling is that it should be open to all members, so that all can benefit – DAH]

And A Dozen Red Roses for the Morts Please

Gail Statham

A special "Thank You" is in order here for Nadine and Greg Mort. They braved chaos and invited all the IAAA members attending the NASM verissage to their home "for a small get together...an evening to get acquainted before the opening." What awaited us was truly unexpected! Warm, witty and gracious hosts, an awesome and most sumptuous buffet prepared by Nadine, great conversation and, of course, a viewing of Jupiter through Greg's impressive mini observatory.

And get acquainted we did. We discovered we weren't the only adventurers driving the 13 hours or more in questionable vehicles! Sandy and Tom Hunt came from Milwaukee and, like us, had to be back at work Thursday morning...did you folks make it? Debra Corbett, whose brilliant flower/nebulae I find so inspiring, had traveled from Iowa with her daughter Jackie. Mrs. and Mr. Emmart were in fine form standing in for Carter. Carter and his dad will be heading to Baja together to view the eclipse in July. Angela Mann and friend Dick Wingerson (whose long drive back to Colorado must have been good because they are now engaged) gabbed with us until the wee hours. The gabfest resumed on the terrace, over coffee, with Greg the next morning. And, in from the west coast Beth Avary. As Director of Exhibitions, Beth has put countless hours in this project and it was really rewarding to see it culminate into this grand occasion! Thank you Beth.

There were also several relatively "local" people present at the Morts. We were pleased to meet a new IAAA member Jay Ryan (a physicist recently bitten by the astronomical painting bug) and his wife Debra, both of whom kept the dinner conversations lively. I had the distinct pleasure of sitting beside Susan Lawson Bell during dinner. As we are both studying Art History at university, we spent a great deal of time comparing notes. Susan was accompanied by her husband Dana who also works at the Smithsonian in no less a fascinating place than the archives. He and Kara discussed at length the possibility of IAAA members getting access to yet unseen laser discs containing fantastic footage of several space missions. More to come on that later! Ted and Terry Chaconas, Greg and Nadine's neighbors, were great moral support...they had a good time egging Greg on during his speech and toasts. And last but hardly least, Richard Harms, Principal Investigator of faint object spectroscopy for the Space Telescope and Greg Madgetsiki (I have probably just butchered the spelling of your last name, my apologies), an X-ray astronomer at Goddard Space Flight Center were both distinguished and delightful guests.

It was a very special evening and a most gracious gesture on the part of Nadine and Greg. Thank you both very much.
Further Report:  
In The Stream Of Stars  
William K. Hartmann

It's too early to say how well our book is doing commercially, but we can report that it is getting international attention for the IAAA and our art. Workman Publishing arranged about a dozen interviews about the book with a number of West Coast and Texas radio stations, and the interviews were fascinated by the art, the IAAA, and the Soviet-IAAA connection. We've had favorable notices in Christian Science Monitor, other papers, which reprinted, and other IAAA artviews with me as I write this, on the Los Angeles Times, and deduced paintings by Beth ists. I don't have the rest, so I can't give a better table (maybe later). Two positive in an electrical engineer by Hudson and Minsky reand Planetary Information ation of 4000 in the NASA community (with paintings by Bonestell, Bean, Dzanibekov, and Poplavsky). A call for the St. Louis Post Dispatch resulted in a long interview and publication in color of paintings by Dzanibekov, Minsky, and others. On the day of the eclipse, the Hilo (Hawaii) Tribune Herald carried a half page feature article on our Air and Space Museum show, and the book, with paintings by Mark Mercury and myself; this article turned out to be from the Smithsonian news service, not local, and may have appeared elsewhere.

Let me correct an error I made in my report in March/April 1991 Pulsar. The book has not put $1500, but $3000 into the treasury of the IAAA, as well as that of the Planetary Society. The payments from our advances on the book were twice as big as I reported.

In my March/April report I mentioned a few glitches and apologies. I would like to add an apology to Mark Mercury. He received a book from the publisher, with a letter of thanks for his contribution, but upon opening the book found his work was not included! We had selected a picture towards the end of the selection process, and he had gone to some trouble to get it photographed; somehow it never made it into the book.

Taking note of page 13 in the March/April issue here's a official apology and tear of remorse to David A. Hardy for his missing "A" (what, does he think it's a grade?) and the missing three years on his age (it's hard to imagine how a guy so old always seems to act even as young as I am).

Perhaps the biggest new positive not, in addition to the reviews reproducing IAAA art, was attending the opening of the IAAA/Soviet show at the Smithsonian Air continued on page 14

How Green is Your Palette?  
by David A. Hardy

Before you read this, I'd like you to dig out the September/October 1990 issue of Pulsar, and re-read Michael Carroll's article "I'm Seeing (Cadmium) Red." He laments the fact that due to new laws on industrial pollution, paints like cadmium red may well be off the US market by 1992, asking if one can imagine painting a volcanic eruption without it, and suggests that American artists may have to get their paint from friends across the ocean. I for one will be glad to oblige. (Incidentally, I have just completed work on a new book for the publishers of Visions of Space, to be called The Fires Within: Volcanoes on Earth and Other Planets. Most of the double spreads were painted in Alkyd oils, where I certainly used Cadmium Orange and Red, but for the smaller, gouache illos I used Winsor & Newton's Orange Lake Light and Flame Red.) Anyway, Michael's piece inspired me to do some research, and this article is at least part of the result.

Paint has been an essential part of civilized life since way back in history. And despite more and more sophisticated methods, it has always been made to the same basic recipe. When wheat was not in season, the miller (a forebear of Ron's?) ground up local rocks on his grinding wheel, mixed them with linseed oil, and sold them as paint. Resin—boiled-up tree sap—was mixed with rust (red oxide). Genuine sepia came from the in-sac of a cuttlefish. Indian yellow came from the urine of cows fed on mangoes, which was painful for the cows. Thankfully, neither of the last two methods are used today! So change is always with us, and paint-makers are constantly seeking new sources of pigments.

As you all know, paint consists of PIGMENT; giving colour and the ability to cover a surface; BINDER; giving the ability to stick to a surface; and LIQUID SOLVENT; to dissolve the binder, making the paint easier to apply, which then evaporates to leave finished or 'cured' paint. (Naturally, I have to include all types of paint here, household and industrial as well as artists', but improvements in one field inevitably spill over into another.) In the last 100 years, all three components have been transformed. For instance, in the 19th century binding agents were improved by the process of polymerization; raw oil is cooked at 500-550°F; boiling is continued until the linseed oil becomes almost gelatinous. This makes a more durable paint, as individual molecules bind together in a series of cross-linkages, forming stronger, more complex molecules. The paint is easier to spread, dried better, lasts longer. Today this process uses chemical reactions.

A revolution in solvents started in Britain during World War I. The armaments industry demanded coatings that dried far more quickly than traditional vegetable oil solvents. Organic carbon-based solvents were the answer. The early automobile industry modified gun cotton into a binder
for paints; nitro-cellulose would only dissolve in organic solvents. This gave paint which was more durable, and which would dry in hours instead of days. As the solvent evaporates, a polymeric binding agent absorbs oxygen and polymerizes again, giving greater durability.

At first, this all spelt out SUCCESS, and the industry prospered. Specialized products were produced for a widening variety of customers. Paints were produced to resist high temperatures, for instance. Many thin layers of paint were replaced by one thick layer. Non-drip (thixotropic) emulsions were developed. But gradually, small local companies have been replaced by huge multi-nationals like ICI. These were able to afford massive R&D and massive advertising, but also new technology. And, of course, in some cases massive pollution. Solvent emissions are a significant cause of air pollution. As they evaporate, they react with sunlight to trigger the process of photochemical oxidation, creating an artificial ozone layer at ground level and damaging plants, crops and human health.

Paintmakers always had free access to the chemical shelves. There is no doubt, as Michael pointed out, that many pigments are poisonous or carcinogenic, and in the UK many paints now carry toxic warning labels. The US is also moving in this direction, although a bill put to Congress in 1979 failed because of strong industry opposition. A voluntary system was introduced instead, and is believed to have produced a 90 to 95% compliance. Since 1984, laws on labelling art products have been passed in at least half-a-dozen US states, but because these vary a national law would be greatly preferable.

Manufacturers who do not comply say that many people who buy their products ignore all warnings. (Certainly in the case of children, strict supervision is essential.) It has been known for over ten years that the solvents in gloss paints cause damage to the nervous system, i.e. brain damage. Painters (again, used as a general term) suffer a higher incidence of lung cancer — there is really no safe level of solvents — and also have a higher incidence of sore throats, running eyes, headaches. Artists may use smaller quantities, but often work in poorly ventilated conditions and use no precautions when working with potentially toxic materials.

Not only professional artists, but amateurs, hobbyists — and millions of schoolchildren, regularly come into contact with cadmium, lead, arsenic, manganese, antimony, chromium, mercury in pigments, as well as solvents in paint, varnishes and brush cleaners. Among the problems believed to be caused by solvents like benzene are aplastic anemia (a blood disease), memory loss and dizziness, and nerve damage; hexane in aerosol sprays is also a culprit. Painters, sculptors, printmakers and ceramicists have suffered kidney damage, sterility and miscarriages. Children have a higher metabolic rate, so their bodies are more liable to absorb toxic elements.

Some makers have introduced new formulas which exclude hazardous substances. This seems to be the trend in the UK, but for the general domestic/industrial market this will mean a more limited choice, as well as greater expense. New 'green' paint will not perform as well, will be less flexible, the colours are not as bright, we shall have to use more of it, and paint more often. Water-based paints are not as resistant to heat or stains. (I understand, though, that 95% of the US market is already water-based, and that domestic users don't like a high-gloss finish, unlike the UK.) At one extreme, solvents can be removed entirely, so one ends up with a powder coating. This is held to a surface by electrostatic attraction, and cured in an oven. Only large companies will be able to afford to make this sort of changeover, and many small family businesses will go to the wall. And, of course, the cost of new technology will inevitably be passed on to the customer.

To go back to art-related diseases, one of the problems is the length of time it can take to connect the use of paints and other materials to the symptoms being experienced, and thus diagnose the problem — by which time it may be too late. (It was not until the 1970s that it was suggested that Goya's strange illness and van Gogh's insanity could have resulted from the ingestion of lead in paints...) A 1981 study of the higher incidence of various cancers in artists than in the population as a whole was based on statistics of dead artists. It goes without saying that prevention is better than cure, and better education is essential. Art organizations such as ours can help in promoting public awareness.

So we may think that ours is a pretty safe profession, but it is fraught with potential dangers. There are obvious precautions we can all take. Those of us who work with materials producing fumes must ensure adequate ventilation, and if necessary install extraction fans and wear masks and goggles. Good spray booths are now available for use with airbrushes, fixatives and adhesives. Moistening your brush in your mouth should be avoided!

But there is no need to over-react. As Michael said, the quantity of toxic materials used in the art industry must be extremely small compared with industry as a whole, and banning, for example, the cadmium family of paints would be a disaster for artists. As we say over here, "Don't throw out the baby with the bath water!" We may have to pay more for safety measures, but as long as we ensure that paints are made, used and disposed of safely the planet should be safe — and industry will continue to prosper. And hopefully, so shall we.
Space Available
by Joel Hagen

Vista Pro software Puts Mars in Your Studio

As I write this column, my multi-tasking Amiga computer is running an animated fly-through of Tithonium Chasma on Mars. I generated the full color, 3 dimensional animation on a new piece of Amiga software, Vista Pro, from Virtual Reality Laboratories in San Luis Obispo, California.

Vista Pro uses USGS digital elevation model (DEM) data to produce realistic pictures of the landscape represented by the data. A sophisticated interface allows you to control virtually all aspects of the image generation. The palette can be set to shift to different colors at different elevations, giving the appearance of beaches, trees, cliffs and snow in terrestrial landscapes. The resolution, lighting, haze level, and other factors are similarly adjustable. The generated landscape is composed of a network of triangles representing the three dimensional surface. It is possible to specify larger, and fewer triangles to test the lighting and viewing angle on a scene with a quick rendering. Once you are satisfied, smaller triangles may be selected, increasing the detail of the landscape but taking longer to render. The results of a high resolution rendering with smallest polygons (or optional Gouraud shading) can be stunning. While Vista allows the user to generate realistic fractal landscapes, its ability to recreate actual places is its attraction to me.

Included on the disk are DEM landscape files for Mount St Helens, Yosemite Valley, Crater Lake, Big Sur, Morro Bay, The undersea topography of Woods Hole, and several other areas. What grabbed my attention, however, was the DEM
file for the caldera of Olympus Mons. Fortunately for any IAAA artist owning an Amiga, the crew at Virtual Reality Lab are well-informed space enthusiasts. In fact, they also publish the premier Amiga astronomical software, Distant Suns.

A new set of six DEM data disks is now available to Vista owners which covers the entire length of Valles Marineris. I can position myself anywhere in this virtual landscape and look in any direction under any lighting angle. I can create an animation path through the landscape and leave the computer to generate that animation frame by frame. I can use the "river" and "lake" options to flood any area, watching where the water flows through the topography. I can set an artificial sea level at any elevation to see which regions would be under water. I can move my viewpoint slightly between two otherwise identical renderings and merge them into a stereo image. I view this through goggles plugged into my mouseport, synched to Amiga's interlace display. Such stereo views can be mind boggling.

One of my frustrations with the landscape animations generated by NASA is the exaggerated vertical scale. "Mars: the Movie" has always bothered me for the steep slopes and misleading angle of repose. Vista's DEM data also suffers "Z" axis exaggeration, a factor of about 3.5. However, Vista Pro offers an adjustable scale parameter which allows the user to scale the landscape back down to true proportions. To me, this is one of Vista's most powerful options. I can finally look around down there with my stereo goggles and see things from ground level in true proportion. Amazing. Venus, Triton, and Miranda are in the works.

Software: Vista Pro Virtual Reality Laboratories, Inc. 2341 Granador Court San Luis Obispo, California 93401 (805) 545-8515 List: $149.95
SYSTEM: Amiga, 3 meg required
and Space Museum in Washington, May 14, 1991, and seeing not only our art being displayed in a major museum, but also a pile of about 50 of our books, signed by the editors including Vitalie Myagkov, who was present, and being sold to various invitees. The show includes not only art by many members, but a whole wall of photos of the IAAA in Iceland.

On the down side, the art critics of the Washington Post and other Washington paper trashed this show, which puts the IAAA right up there with Richard Nixon and Spiro Agnew. The papers said it was unimaginative throw-back science-fiction illustration and (a more interesting point) not as exciting as the real thing. What interests me is that all the book reviews I've seen have praised the same art that is in the show. I think this proves the sociological influences at work; book review editors are out to tell people about an interesting read, and are willing to express a sense of wonder. Art critics have much more "profound" pretensions, and want to prove they are in the avant garde, capable of seeing more subtleties than mere mortals, which (in this century) means trashing representational art. Strange that two different camps of critics would see work so differently.

I think I can read these negative and positive reviews and ponder them, but the important thing is to go on with our vision and realize that with our work hanging on the mall in Washington DC, and our book being reviewed nationally, the IAAA has come an incredibly long way!

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**Letter to the Editor...**

First of all I would like to apologize for this issue being so late. Partially due to my June and July schedule, and then several personal crisis hit at once. But I'm back on track now.

The beginning of the summer was an incredible time for me. I had the chance to go with a U.S.G.S. (United States Geologic Survey) team studying the area and lake in front of the Bering Glacier along the Gulf coast of Alaska. It was probably some of the most physically demanding work I have ever done, but the rewards can not easily be equaled. It was a very remote area, and somehow the thrill of discovery and exploration was overwhelming. Although I never got the chance to get up to the face of the glacier, my trip up into the lake and through the "iceberg forest" will continue to awe.

The shear beauty of an iceberg is not easily described. It looks more akin to a molded piece of acrylic than ice. There is some thing about the nature of film that seems to portray the ice as compacted snow. The pictures you find in almost all books reflects this phenomenon.

As a result of this trip, we will now have an Alaska and Icebergs section in the archive. I can't wait to get back to Alaska and discover what else that territory holds in secret, waiting for discovery.

The eclipse in Hawaii was not to be sneezed at either. It was the most "alien" experience I have ever had. You were looking at something in the sky that just **should not** be there. Even knowing exactly what it was, a chill of fear still struck the very core of my humanity. Expecting the colors to be reminiscent of a sunset, I was amazed at the unexpected purplish gray color everything took on. We could see the beautiful dancing inner corona through thin clouds, with bright neon pink/magenta prominences. The sound of the crickets never came, it didn't get as dark as I had anticipated.

Saurie
Hawaii Workshop Report

Michael Carroll

Perhaps more than any previous workshop, the Hawaii expedition reaped treasures which will benefit the entire membership of the IAAA. In addition to the countless slides which will be added to the archives (are you using your archives?), some superb video will be available. Thanks to Don Davis, Dave Hardy, and Bob Kline, we have professional quality footage of the solar eclipse, active lava flows, and erupting magma fountains. It is spectacular stuff!

Hawaii is a natural site for a workshop, with its lofty volcanoes and rugged primordial landscapes. It also sports a culture rich in the arts. The IAAA held art shows at the Volcano Arts Center and at Waikaloo Gallery during our stay. We visited the studio of Jon Lomberg, who had a very successful print release and gallery show in conjunction with the eclipse. We also visited a church which had two impressive murals done by IAAA member Ken Charon, who lives just outside of Hilo. Ken also did a wonderful job as tour-guide and host on many occasions.

Hawaii's goddess of fire, Madame Pele, was gracious to us, holding eruptions which sent lava cascading across miles of landscape and out to sea. Several hundred acres have been added to the big island just this year. Our group took a somewhat arduous trek across several miles of pahoehoe ('rope' lava) at night by flashlight - over terrain reminiscent of a Geiger set out of "Alien." The Dante-esque scene that awaited us was well worth the hike. Clouds of steam billowed out of the crashing waves, glowing an eerie orange from the lava. When the wind shifted so that you could see under the steam, the lava looked like a steel mill: molten orange magma pouring out of the cliff. Some of the lava actually floated on the waves as it cooled. Sparks would fly into the air as the water hissed. All of this has been captured on video which we hope to have available for check-out later this year.

Another highlight was, naturally, the eclipse. Rumor has it that only about 10% of the island witnessed the event due to heavy cloud cover. Everyone in our group - at three different sites - saw it to varying degrees. It was spectacular, as if the last half hour before sunset was compressed into fifteen seconds. The winds died instantly, the temperature dropped ten degrees in a few seconds, and the sky turned and iridescent green-gray. Those who stayed at Kilauea crater said a fog bank formed within thirty seconds and settled into the crater, just as it does each night (as night the process takes about an hour!). The only artist who missed it was Ken Charon. He and his girlfriend hiked into the Kau desert the night before and got rained on. For their trouble, the got soggy sleeping bags. Bill Hartmann came up with an equation that states: "The amount of eclipse you saw was inversely proportional to the amount of trouble you went through to get there." Most of us want to the northern part of the island and camped out between our two rented vans. After harrowing hours of indecision whether to stay or go to a different location, we remained at our site and saw the great event through broken and thin clouds.

On a more personal note, there was much good-natured discussion within the group about the nature and definition of space art. It reminded me of letters written back and forth by some of the impressionists. The experience made me believe that while the IAAA is going through some growing pains, the so-called "crisis" is nothing of the sort, and we look back on this debate as a formative step in positive growth for our genre. We should all be supportive and appreciative of Bill Hartmann and Beth Avary as they struggle to synthesize all the input from our membership on the subject. In the meantime don't let definitions get in the way of your painting; more often than not, a painting defines itself.
Presidents message continued from page 4

Not all astronomical art comes from the Bonestell lineage! Therefore the style of the artist is not the issue nor the priority. Content, however, is! At least 98% of our membership have a representational style, contrary to the belief that hard working, prompt paying, non-realists have diluted the aims and aspirations of the founding members.

The notion that non-realist "swirlies" within the IAAA membership and in particular within the administration are steering the IAAA towards a wider and wider audience by admitting anyone to membership is utter nonsense and a lot of poppycock. The IAAA as a broadly supported, public benefit, non-profit organization has indeed attracted a great amount of interest through our collective accomplishments; however, this does not mean that we have perforated the vision that drew the founding "members" together. It was with foresight that the previous administration recognized that a "patch work quilt" of art styles were being produced internationally which had as serious practitioners as any in the American groups.

For the record, Visions of Space by David A. Hardy and In the Stream of Stars by William K. Hartmann and Ron Miller et al are marvelous space art books commemorating the events and the art of our group in the past three years. They are also valuable historical documentation of this period as well as a valuable bit of advertising for our international cause. The proposed manifesto is an acknowledgment of the tendencies that make up these two books.

Metaphorically, the manifesto can be construed as a photographic image of a bright stellar disk which represents astronomical art, a faint and narrow sleeve which envelopes the disk represents space (hardware) art and a much fainter trace, after the image of solarization, represents cosmological art. The manifesto should not be viewed as a Venn diagram where astronomical art is a subset of space art which is a subset of cosmological art as some have previously referred.

We may have doubled in size during this time frame, however, never once have I abandoned my mandate to place the IAAA further along the road to become players in the international art arena. Nor have I surrendered the task of producing the manifesto. The horror of awakening up one morning to the reflection of the IAAA in the mirror as the American Association of Astronomical Illustrators is one I will not entertain.

My suggestion for a grand unification of art styles to the IAAA is not so meaningless after all as it springs primarily from the fact that CONTENT is our common bond. If our genre is to have any credence than our paintings must appear inspired rather than engineered, and intellectually full rather than being only technically adequate. To have our paintings viewed as original and imaginative vision of interplanetary destiny, in the art community, we must also show flashes of wit and wisdom, otherwise what's the point of group effort and momentum as a genre of art?

Now is the time to put our past behind us, endorse a manifesto and get on to educating not just the non-scientific public but also ourselves as to techniques, attitudes, visions and craftsmanship. Also, we must begin to contribute new articles, exchange ideas, viewpoints, and creative artistic explorations that was the hallmark of Parallax. If this is our collective will then our efforts will find success in the international art arena; and, whatever the nomenclature, Space Art will be the genre of art we all aspire it to be.

Ad Astra,
Kara
(Lord of the Swirlies)

1 SPACE ART, Edt Ron Miller, Starlog Press, 1978


P.S. Applications and nominations are now open for the office of President. Anyone interested may inquire. All applicants will remain confidential and will be reviewed only by the Board.
Manifesto Letters
Beth Avary

We have received so many letters regarding the proposed manifesto, that we have decided to do a special "green paper" issue concentrating just on this topic that will come out as soon as the responses from this issue of PULSAR come in. For those of you who are new, or need a refresher, what follows is the proposed manifesto written by myself and Bill Hartmann on instructions from the board. It was felt that as the group has gotten so large over the past few years that a manifesto was needed to define what our work is about. So here goes:

The IAAEA was formed as a group of artists whose work is focused on what we define as astronomical arts. This is any art:
• inspired by human exploration and knowledge of the universe around us,
• and/or demonstratively informed by scientific knowledge (for example through content, artists' statements, and/or artists' background, etc.),
• and/or dealing with concerns about humanity's relationship to the physical universe and our cosmic environment.

Unlike many historical art movements, ours is not restricted or defined by styles or techniques. It includes diverse approaches. Among these can be found styles that are abstract, conceptual, expressionistic, realistic, surrealistic, and whimsical. Our shows to date have included many of these styles.

We recognize that no art form can be strictly defined. However, we recognize the following usages of terms. Astronomical Art is art drawn from the science of astronomy. A larger area that includes astronomical art is Space Art, which deals with human exploration. In addition to these, a third term, Cosmological Art has been coined to describe art which, while including astronomical and space art, is more broadly concerned with human relationship to the physical universe as a whole.

We conceptualize these three forms in a bulls-eye pattern, with astronomical art at the center. Just as a star's image in the Hubble Space Telescope was supposed to concentrate most of the light into a central core, we visualize our work and exhibitions as concentrating most of our efforts in the astronomical and space art central regions of the bulls-eye, but with a smaller percentage falling in the broader "cosmological" area.

Please send your 2¢ worth in, we want to hear from you!
Beth Avary
70 Sioux Way
Portola Valley, CA 94028

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Art of the Cosmos
Beth Avary

It's a great disappointment to have to announce that the Montreal symposium and exhibit has fallen through. From what I understand, the sponsor decided at the last minute not to provide sufficient funds. By the time I was notified of this, it was too late to cancel the Cookes crating date, as many paintings were already on their way. They are being stored in a humidity and temperature controlled room set aside just for us, and as soon as everything is in, the crating will begin. By the time you read this, I will personally have gone to Cookes and checked everything out. I have spoken to James Hagler, the curator of the Alabama Space and Rocket Center, who said he will probably be able to take the show early and keep it through August of next year. The Discovery Museum in Connecticut is now on the list of firm bookings, they will take the exhibit next year from mid August to December. Also, the Hayden Planetarium in New York, and the Adler in Chicago are interested.

Much appreciation and thanks goes to everyone who is making this show possible! And thank you to Bill Hartmann for his cash donation to help with the costs! At present there are seventy one paintings, two sculptures, and a continuously running video "Powers of Ten" in the show. Since all the loan agreements are not in, this may change slightly, but it's really shaping up well, in my opinion, and will provide an opportunity for many people to become familiar with our art.
HOW TO GET INTO "THE BIZ"
Michael Carroll

First of all, the "biz" I refer to is the business of magazine illustration, since that is what I am most familiar with. For those of you who are just getting started in the art field, I wanted to give you some helpful hints. But I'm getting ahead of myself.

A funny thing happened to me on the way to my career. In school, I was told that illustrators usually don't freelance until they have been in the business for ten or fifteen years. Consequently, as soon as I graduated, I began a search for a "real" job with an advertising or design agency. Unemployment here in the U.S. was over ten percent at the time, and I spent over five months interviewing. I became good at applying for jobs, but not at graphic design.

During that time, a very important thing happened: I painted. I painted things I wanted to paint. And at the end of five months, I had a pretty extensive portfolio of paintings. It turns out that this is just what a magazine art editor is looking for. I submitted slides to various magazines, and was soon published in Science Digest and Astronomy. To this day, Astronomy is one of my most loyal clients, and a great supporter of the astronomical arts.

This little story illustrates several points which are important to breaking into the publishing industry:

1. Develop a collection of paintings, similar in style and subject matter (editors are looking for consistency in style and technical prowess). I suggest at least twelve.

2. Get professional quality slides of each painting, and develop a master file. In this way, you will have a good image from which to make duplicates in the future.

3. Make a list of magazines which publish your kind of art or cover the kind of subject matter which pertains to your art. This can be obtained from such printed sources as Writer's Market or by simply going to a good magazine shop or newsstand.

4. Call the magazines that you are interested in to find out the name of the art director or appropriate person to send images to.

5. Mail out letters addressed to the art directors, along with slides of your work. Tell them to please keep the slides for their files. In most cases, they will. Art directors tend to be good at checking their files periodically for needed images.

6. It never hurts to follow up with a phone call to confirm that they received your images. Be sure to ask about their needs, so that in the future you can send them appropriate art. Also, send the magazines updates of your work each year, so that they continue to remember you.

In this way, you can make good contacts within the publishing industry. As you make friends there, they will help give you tips on where other work might be found. Perhaps the most rewarding aspect of working with the publishing industry is not the paycheck, but rather the true friends and long-lasting relationships that you make. Good luck, and keep trying! Patience pays off. (And by the way, you don't have to be in the business for ten years to be successful at free-lancing!)
**CALENDAR**

**1991**
- Oct./Early Nov. - Board of Trustees meeting - Possibly by telephone
- Election of new president

**1992**
- Spring Technical Workshops (tentative) - contact: Mike Carroll

**1993**
- Workshop in Huntsville (tentative) - contact: Mark Maxwell

**1994**
- January - New *Pulsar* editor (and assymbler) along with a membership coordinator needed (one and the same person), currently everything is on a Mac based system using Pagemaker 4.01 for *Pulsar*, and membership is on WriteNow 2.0

**Archives** (see insert in this issue)

The archives were started with the fact in mind that not all members would be able to participate in the workshops. With the archive catalog (which is still being perfected) you will get a good idea of the slides available from the various workshops or other interesting locations. With this issue there is now a total of three pages to the catalog with more to come. The numbers on the catalog are interpreted below, but they are mostly to organize the file into some semblence of order. If you have requirements not listed, please ask anyway as I still may be able to help you. To look at 8 slides at a time just send self-addressed stamped envelope with your request. The cost for mailing in the U.S. is .52 cents, in Canada or other countries the cost is .75 cents. I am always open to new categories and submissions of slides. Please do not keep slides for any longer than about 4 to 6 weeks. Thank you.

**Location categories (first two numbers):**
- 07 Alaska
- 06 Anza-Borrego Desert
- 04 California Coastal Rock Formations
- 02 Death Valley workshop
- 01 Hawaii workshops
- 05 Iceland workshop
- 03 Southwest workshop (Arches, Canyonlands, Goblin Valley)

**Geological categories (second two numbers):**
- 01 Alluvial Fans
- 14 Ice Fields
- 02 Archess
- 27 Ice Formations and Icebergs
- 03 Badlands
- 25 Lakes
- 04 Buttes
- 15 Lava Rock Formations
- 05 Calderas
- 24 Misc.
- 06 Canyons
- 23 Mountains
- 07 Caves
- 16 Moraines
- 22 Cliffs
- 17 Mud Formations
- 08 Clouds
- 18 Mud Pots
- 09 Craters
- 19 Salt Pans/Fields
- 10 Dunes
- 26 Steam Vents
- 11 Faults
- 20 Volcanos
- 12 Geysirs
- 21 Waterfalls
- 13 Glaciers