**Steering Committee:**

Michael Carroll  
3581 Ray Street  
San Diego, CA 92104

Rick Sternbach  
209 West Yale Loop  
Irvine, CA 92714

Kim Poor  
PO Box 37197  
Tuscon, AZ 85704

**Membership/Secretary:**

Maralyn Vicary  
1112 Avenue Road #302  
Toronto, ONT  
CANADA M5N2E3

**Archivist**

Laurie Ortiz  
1018 Robinson Avenue  
San Diego, CA 92103

**Press Liaison:**

Andrew Chaikin  
22 Forest Street  
Cambridge, MA 02140

**Treasurer:**

Asenath Hammond  
209 West Yale Loop  
Irvine, CA 92714

These officers will serve a term of two years. Elections will be held in alternate years, in the month of July. Interim elections will be held to fill a vacancy, should one arise.

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**EDITORIAL MATTER**

This issue is late. Your editors apologize; it has been a very hectic summer, and we are still feeling our way with Parallax. We will publish one more issue this year; Parallax will appear quarterly in 1985. (We have acquired a production assistant to help us meet our deadlines.)

But we need your help, too. Parallax needs articles, artwork, news, suggestions... We'd like to start a "who's who" column to help our members who haven't met to get to know something about each other. With this issue, we've started a logo spot--we'd like artists to send us their own logos, to show individual approaches to the same question--how do you distill the kind of work you do into one small illustration? We would like to do a survey on who uses what media, what tools. We'd like to run a help column--got a problem with an airbrush, a technique, a type of paint? We need articles for the Space Artists Handbook, which we'd like to publish by the middle of 1985. We want news--where are our members exhibiting/lecturing/publishing/appearing? Read any good books lately? Do a review! Do you have any software to share? Any ideas about future IAAA projects?

Most of all we want feedback--what would you like to see in your newsletter?
**NEWS BITS**

### IAAA Art Show

The IAAA Art Show has completed its run at the Gates Planetarium in Denver, Colorado. Following its debut at the Fleet Theatre in San Diego, California, it travelled to the Flandrau Planetarium in Tuscon, Arizona; interest in the show has come from as far away as Japan and Taiwan. Reports of upcoming show dates will be published in PARALLAX.

Artists wishing to exchange/add artwork should get in touch with Mike Carroll during this hiatus.

### Society of Illustrators Exhibition

Several IAAA artists exhibited works in the juried Society of Illustrators show in New York this past June. Pam Lee was in an outstanding category, as all of the 11 slides she submitted for consideration were excepted--she received a letter attesting to the rarity of this feat.

Unfortunately, some of those who had participated in the show received their artwork back in damaged condition. Rick Sternbach, who had shipped in two boxes, got his work back jammed into one box with none of the original padding; as a consequence, glass had shattered.

Please let the Steering Committee know if your art was damaged; as the SoI has recently extended invitations to their general show, we feel that we ought to let them know the extent of this problem.

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### Death Valley Slides

A set of fifty 35mm colour slides is now available from the IAAA. The slides cover artwork produced by IAAA members during and after the 1984 Death Valley Workshop. Some two dozen artists are represented. Paintings depict Mars, Venus, the Jovian system and other locations both in the solar system and beyond.

Slide sets may be ordered by sending a cheque or money order for $45.00 per set, payable to:

Laurie Ortiz
Reuben H. Fleet Space Theatre
PO Box 33303
Balboa Park
San Diego, CA 92103

Please do not send cash.

### Ars Pro Tabulis

Laurie Ortiz, IAAA’s Photo Archivist, is asking for submissions for the Photo Library. Slides and prints may be sent to her at the Reuben H. Fleet Space Theater.

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### Medical Insurance

The IAAA is investigating group insurance policies. As those of you who are free-lance or otherwise not covered by a group policy know, the cost of medical insurance can be prohibitive. A group plan gives a cost break and frequently better coverage than an individual plan. Those interested please write to Asenath Hammond. Give birthdate and sex, any major pre-existing conditions and whether you want coverage for spouse/children. We'll get information on costs and pass it on.
Following the highly successful workshops in Hawaii and Death Valley, the IAAA is looking to more distant lands for future space art conferences. Joel Hagen is investigating Iceland as a possible site for the summer of 1985. New Zealand and Australia have been suggested for 1986, to tie in with observing Halley's comet; the dry valleys of Antarctica have been proposed for 1987-88 (see Air-to-Ground Chatter).

Other regional workshops may be organized as an alternate activity for those members who cannot attend the distant ones. Recently, a group got together informally in Utah.

Planetary Society-IAAAA Exhibit/Auction

The art show/auction organized by the Planetary Society will run from October 15 through November 15 in Houston, Texas. It will be on display at the University of Houston, and will culminate in an auction on November 16, with proceeds to be shared between the Planetary Society and the individual artists.

Michael Carroll will be travelling to Houston in connection with the show; he will be giving a talk on space art. He reports that the IAAA/Planetary Society poster will be on display at Nasa's Johnson Space Center. It had been hoped that original works could be on display as well, but the Space Center has spatial limitations.

Visual Sizes

by Rick Sternbach

The drive toward mathematical perfection in one's renderings of celestial objects has reduced many an astronomical artist to a gibbering heap of trig tables and pencil stubs. Then we had the pocket calculator and trig functions at our fingertips to help with those often complex calculations that preceded the accurate drafting before the first brushstroke even took place.

Now we have the home computer to give us the results we seek, given that we understand the equations we want to program in the first place.

The short routine below is written for the Commodore 64, but is easily translated into other versions of BASIC. It will calculate the visual size of the Sun, given the distance of the observer. Other objects can be substituted if you know their radii.

30 PRINT"THE SUN"
40 PRINT"--------"
50 PRINT
60 PRINT"DIAMETER: 1,400,000 KM."
70 PRINT"RADIUS: 700,000 KM."
80 INPUT"OBSERVER DISTANCE": OD
90 IF OD<700000 THEN PRINT "YOU ARE INSIDE THE SUN!":PRINT:GOTO 80
100 X=700000/OD
110 Y=ATHCK/SQR(-X**2+1))
120 Z=Y*57.295
130 Vs=Z+2
140 PRINT"VISUAL SIZE=";VS;" DEGREES"

If you want to use another body, substitute its radius for that of the Sun in lines 70, 90, and 100. The C-64 works in radians only and does not have a DEG mode like the Atari, hence the conversion to degrees in line 120, where the value of Y is multiplied by 57.925 (180 divided by Pi).
Using NASA Photos As Reference by Ron Miller

Photographs from NASA probes such as Voyager, the Lunar Orbiters, Viking and so on have been true goldmines for the astronomical artist. They can be subtle traps, too, if they are not used with some care. Many neophyte space artists (and not a few oldtimers) have been led astray by misleading information in these photos.

There are three main sources of confusion, and any one photo can contain any one or even all three: increased contrast, false color and distorted perspective. The first two are distortions introduced by NASA in order to make the photos more useful to scientists, who are more concerned with the information to be gotten from the pictures than whether or not the pictures accurately represent what the naked eye would see. The third problem is caused by the very nature of the picture-taking process itself.

Take a look at pictures of Mars, before and after enhancement. The former is closer to what the naked eye would be likely to see; in reality, the surface contrasts on Mars are very low. Most of the craters, for example, would be almost invisible except near the terminator. Yet a computer-enhanced photo shows vivid detail—and therein lies the temptation and the trap.

Jupiter and Saturn have been the greatest victims of false-color enhancement, in addition to having the contrast of their pictures increased. Be very careful to try to discover whether the reference photos you are using have been enhanced; check them against earth-based telescopic photos and the drawings of visual observers.

Since the photos taken by NASA fly-by and orbital vehicles are through high-powered telescopes, there is often a distortion of perspective introduced. This usually takes the form of "flattening" the subject. For example, the bands of Jupiter's clouds appear nearly straight, whereas if you were seeing the planet from a point where it appeared to the naked eye as large as it does in the photo, the bands would be greatly curved and less of the polar regions would be visible.

Using telescopes also distorts the apparent relative distances between, say, Jupiter and its moons. The famous picture of Io suspended against the frame-filling clouds of the planet is a good example. If you were close enough to Io to have it appear to your unaided eye the size it does in the picture, Jupiter would be many, many times smaller. (See diagram)

The main thing to keep in mind is not to be deceived by the apparent reality of the NASA photos. Yes, they are photos taken with real cameras of real places, but they do not necessarily represent what you would see if you were to go to these places yourself—not more so than your own insides look like an X-ray. This is one of the ways in which astronomical art can demonstrate its genuine value—not by slavishly copying photographs, but by intelligently reinterpreting them in order to make them more real than they were to begin with.
**Books:**

Bill Hartmann, Pam Lee and Ron Miller have a book coming out from Workman Publishing this fall. Tentatively titled "Leaving the Cradle", it will have more than thirty paintings by each artist and a text describing probable developments during interplanetary exploration over the next century. It deals with space stations, world economy, asteroid mining, return to the Moon, Mars and other issues.

**Awards:**

Pam Lee and Don Dixon were award winners at the World SF Convention in Anaheim, CA over the Labor Day weekend. Pam received an award for her painting "Sin"; Don's award was based on his body of work.

**USSR Trip:**

Fred Durant reports that he, his wife Pip, and Bob McCall journeyed to Moscow and Leningrad in June as guests of the USSR Union of Artists. He feels that he succeeded in making the point that space art is becoming a distinct genre, with many facets. He did mention the IAAA, and left the *Sky & Telescope* article with them. He hopes that an international travelling exhibition might be feasible in 1986-87.

**Space Art in Holland:**

Several letters and a copy of *Ruimtekunst* ("space art") have come from Holland. We have found a translator, and hope to bring you more on space art in Europe.

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**Letters should be sent to the editors. Please write/type on one side of the page only. The editors reserve the right to excerpt and/or edit for the sake of clarity and space. All opinions are those of the correspondent.**

From DENNIS DAVIDSON:

I am seriously thinking of organizing a workshop to go to the dry valleys of Antarctica during the austral summer of 1987-88. It would be a challenge to develop low temperature drawing and painting techniques while observing some excellent Martian landscape analogs.

As you probably know, the dry valleys of Antarctica are some of the driest places on Earth and resemble the Martian physiographic profile more than any other area on Earth.

It would be smart to associate with a scientific research team, since all Antarctic research is expeditionary and requires considerable support from the National Science Foundation (NSF). I suggest a dual source of funding for this project: the NSF and the National Endowment for the Arts.

While I am on the topic of future workshops--I do not think that it is unreasonable for the IAAA to start pushing for a workshop aboard the Space Station in 1996, four years after it is scheduled to come on line in 1992. If we start pushing for a Space Station workshop now, we may be able to get at least a Space Shuttle workshop by 1996.

Who knows--maybe this could lead to the ultimate workshop in 20 years--the surface of Mars.
From M.E. VICARY:

I talked to Pam Lee last week and we were both complaining about how many requests we'd received recently for "freebies" (using our illustrations or slides for free). We would like to hear from other artists on how they feel about this. Who would you donate work to? How much work would you donate?

We'd also like to hear what other artists' guidelines are for setting prices for slides. Recently, many of us were called by a woman asking for work for a show in LA. She received a different price-per-slide from each artist that she called. Is this good business?

Would anyone be interested in a "slide bank" where everyone has some slides which could be listed in a brochure sent to people who call, or mailed out to try to find customers? Each artist could be paid the same fee, but all the 'business' would be conducted through the IAAAn. This would standardize the slide business...On the other hand, there are a lot of artists who like to keep this sort of thing to themselves. We'd be interested in hearing everyone's opinions and ideas on this.

(Edward comment: A slide bank/resource list would certainly be useful, even if artists wanted to set prices individually. I spoke with someone who'd been given a list of artists by Ron Miller--he was astounded by how many astronomical artists there were--and pleased that he'd finally learned how to get in touch with them--RMS)

From PAT RAWLINGS:

Enclosed are some xeroxes of a wireframe building block Space Station we have on our micro here in the office. The sequence of views illustrates an astronaut's changing viewpoint as he MMU's around the structure. The program uses X,Y,Z coordinate input rather than digitized 3-view drawings, but once you have the data in it's very easy to manipulate. It's rather crude, but works well with "human enhancement".

(Ed. note: drawings have been excerpted)
...and suddenly the earth went nova!

On the slopes of Meteor Crater, Don Davis reportedly overheard a tourist couple talking at the Visitors Center:

Husband to wife: "It's damned lucky that thing didn't hit this building!!"

Submissions:
Submissions should be typed, double-spaced, on one side of the page. Original art will be returned after publication; a good photocopy is acceptable.

LOGO!

The IAAA's own logo was designed by Bob Kline of Huntington Beach, California. Typeface is Handel Gothic. The logo appears on all official publications of the association.

The official logo of the Death Valley Workshop was designed by Bill Hartmann. It appears on the title cards that accompany the show in its travels.