

# **ANNOUNCEMENTS!**

## **PULSAR now ON-LINE!**

That's right, if you have Internet access, you can read highlights of the PULSAR and view full color images of all the art work in each issue. Check it out at

<http://www.iaaa.org>

## **SLIDE PREPARATION CONT'D**

SLIDES MUST MEET THE ENTRY DEADLINE for consideration! Slides received after the deadline will not be considered. SLIDES WILL NOT BE RETURNED. If you send an original slide (a slide photographed from the artwork), be sure that you have a second original slide in your files, or submit a high-quality duplicate as your entry instead. All entered slides will be kept in IAAA's permanent slide file. Remember: following these guidelines will ensure that your image is well-represented to the juror(s). Failure to follow these guidelines may result in your work not being seriously considered for any project.

**ADDITIONAL COMMENTS:** Our discussion so far has been focused on slide submissions. For actual reproduction, larger format transparencies like 2 1/4", 70mm, or 4" x 5" color (positive) transparencies are preferred over 35mm slides. Most custom labs that handle copy work will do this larger sized film (although in the U.S. a given lab might do 70mm or 4" x 5", but not both).

## **Web Surfin' Sites to check out :**

<http://umbra.nascom.nasa.gov/comets/>

[SOHO\\_sungrazers.html](http://soho_sungrazers.html)

<http://oposite.stsci.edu/pubinfo/pr/1998/19/pr.html>

<http://www.eso.org/>

<http://mpfwww.jpl.nasa.gov/mgs/index.html>

<http://www.monstersinmotion.com/scifi/>

<http://oposite.stsci.edu/pubinfo/pr/1998/14/pr-photos.html>

<http://www.sandia.gov/media/comethit.htm>



### *BOARD OF TRUSTEES*

Dave Hardy  
Jackie Burns  
Dirk Terrell  
Don Davis  
Anil Rao  
Aldo Spadoni  
Kara Szathmáry

### *OFFICERS*

*PRESIDENT*  
David A. Hardy

*VICE PRESIDENT*  
Dirk Terrel

*VICE PRESIDENT FOR EUROPE*  
Jackie E. Burns

*TREASURER*  
Beth Avary

*MEMBERSHIP*  
Dale Darby

*EDITOR, PULSAR*  
Jon Ramer

*PROJECTS OFFICER*  
Joy Day

*PUBLIC RELATIONS OFFICER*  
**POSITION OPEN**

### *IAAA POINTS OF CONTACT*

#### *MEMBERSHIPS:*

Dale Darby  
6001 Moon St. N.E. # 932  
Albuquerque, NM 87111-1451  
Tel: (1) 505-797-9192  
e-mail: [Darby0147@aol.com](mailto:Darby0147@aol.com)  
Annual Subscr: US \$40.00 (or UK  
£26.00 to DAH below)  
Life membership: \$350/£230

#### *PRESIDENT and UK SUBS:*

David A. Hardy  
99 Southam Road  
Hall Green, B28 0AB, England  
Tel: (44) 121 777 1802  
Fax:: (44) 121 777 2792  
e-mail: [Dave@hardyart.demon.co.uk](mailto:Dave@hardyart.demon.co.uk)

#### *EUROPE VICE PRESIDENT:*

Jackie E. Burns  
21 Rose Valley Crescent  
Stanford le Hope  
Essex, SS17 8EH, England  
Tel: (44) 01375 403 252  
Fax:: (44) 01375 404 775  
e-mail: [101641.1113@compuserve.com](mailto:101641.1113@compuserve.com)



# Aug / Sep 98

The Official Newsletter of the



## International Association of Astronomical Artists

# CALLING ALL ARTISTS...

Opportunity  
knocks...  
Publishing  
guide inside...



*Supernova!* by Dan Durda. A gas giant planet is stripped of its atmosphere and its moons turned into mega-comets as the local sun explodes.

**Editor: Jon Ramer**

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

## IN THIS PULSAR...

Profile: Steve Munsinger

Meet THE BOARD

Kudos Korner

So, You Wanna Be Published?

Call for Art!

Profile: Grover Schrayner

Art Tips -

COLOR!-COLOR!-COLOR!

Astronomical Feature of the Month -  
SUPERNOVAE REMNANTS

From Dave Hardy

By Lynette Cook & Susan  
Lawson-Bell

From Dave Hardy

From James Wappel

Contest!!

By Jon Ramer



### From the Editor-

Hi Gang, this month the call for art is out! We've got TWO opportunities for the IAAA to show it's stuff in this issue, so check out the articles on pages 8 and 10 Next time it's gas giants - see you then!

*You!*

### Remnants by James Wappel

Debris hurtles away from the titanic explosion of a supernova. An image done primarily in reds and grays.

## Astronomical Feature of the Month :

-- SUPERNOVAE --

-- REMNANTS --

It's the single most spectacular thing in the life of a galaxy – a supernova. Supernovae occur when a massive star ends its life in an amazing blaze of glory. For a few days, a supernova emits as much energy as an entire galaxy. When it's all over, a large fraction of the star has been blown into space and becomes a supernova remnant. A typical supernova remnant is a few light-years across. They are incredibly complex, with tendrils and filaments of excited gas streaming into space and they glow in every color of the rainbow.

What happens after a star goes supernova depends upon the type and mass of the source star. Most of the time the gas cloud initially expands at rates of up to 10,000 km/s. Gradually the expansion rate slows down while dissipating into the interstellar medium, seeding the neighborhood with heavy elements and providing the necessary shock waves for new stellar formation.

There are two primary types of supernovae – Type I and Type II.

Type I involve two stars, one of which is a white dwarf with a gravitational attraction so intense that it siphons off material from its companion. When the white dwarf exceeds its stability limit it goes into thermonuclear instability and produces one of the largest explosions known in the Universe.

A Type II supernova involves a single star undergoing core collapse. Gravity condenses hydrogen gas at the center of the star to the point where nuclear fusion is initiated. Hydrogen is fused into helium and energy is given off in the process. As more helium accumulates at the center, the temperature rises due to compression until another nuclear fusion is initiated. This time helium is converted to carbon and oxygen. The fusion process continues, making neon, magnesium, silicon, and sulfur. Finally, iron is created, but here the fusion process stops - it takes more energy to fuse iron than it releases. Under the incredible pressure, the iron core collapses very quickly (within hours or less). Since the iron core can collapse only so far and can no longer undergo fusion, it becomes extremely hot. As everyone knows, hot gases expand rapidly. The star's outer shells rush in to fill the void left by the collapsed iron core and the expanding iron and the collapsing outer gases collide. The result? Tremendous shock waves that blow the outer layers away from the core - the supernova's gigantic explosion.

And quite possibly a wonderful painting or two.....

*The Cygnus Loop, a brilliant image with blue, green, violet, and yellow remnants.*



HST photo.



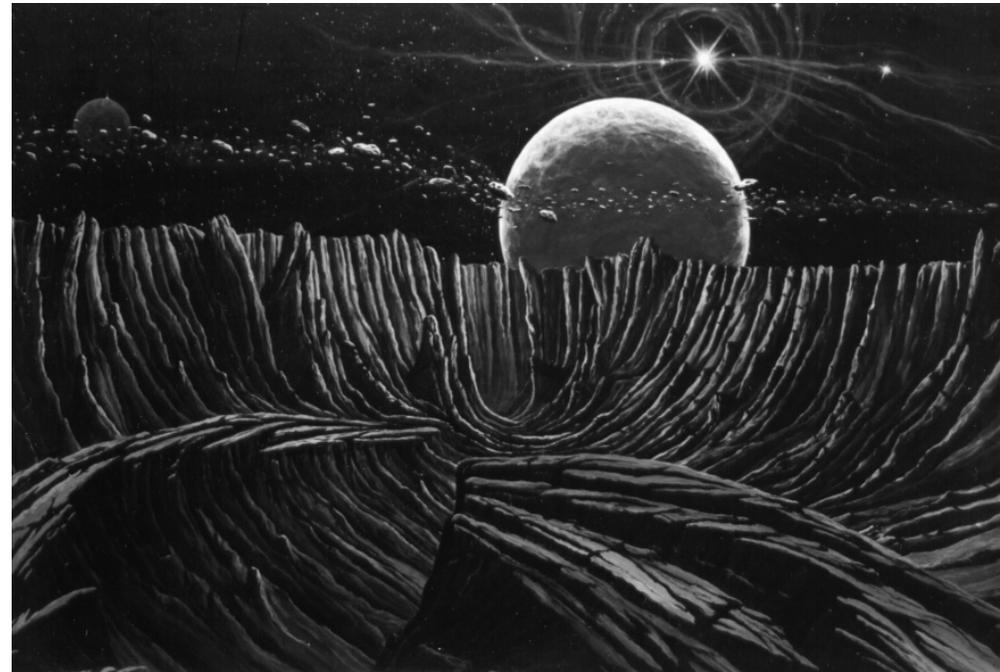
The filaments of gas framing these planets are the tattered remains of a star destroyed in a supernova explosion. The shock wave from the blast has rocked the scarred and pitted worlds of a nearby planetary system.

## COLOR! COLOR! COLOR!

That's right - COLOR!! It's true - the next printing of the IAAA annual magazine PARALLAX will be in COLOR!!!! Reds, blues, greens, yellows, purples, and yes - even oranges! A veritable rainbow of art. (Somewhere over the rainbow, there's a moon in the sky...) Just who will paint these incredible visions of multi-angstrom delight? Why, YOU of course! And what will you paint? Whatever astronomical view that strikes your fancy! This PARALLAX will be used as a "who we are" booklet presented to folks interested in the IAAA, as well as one issue per member. We want to put our BEST foot forward, to that end, we're having a little contest! This is a COLOR issue folks, so get colorful! (Follow the yellow paint road... Follow the yellow paint road...) The premise of the issue is to showcase five or six paintings on the inside and outside covers with explanations by the artist on the techniques and methods used to paint the picture on the inside pages. Remember, we are the IAAA - one of those A's is for "Astronomical" and your subject matter should reflect that. What we're looking for are well done astronomical pictures with excellent application of color. Simple, right? :) The issue will go to print the end of September and should be mailed out the beginning of October. All art forms are welcome, traditional and digital. Previous paintings are as welcome as new work. You can either snail-mail photographs (sorry, no slides, don't have the capability to transfer) to me at "Jon Ramer, 5007 Rhine Way, Dayton, OH, 45458, USA" or e-mail your submission (JPEG format please) to me at "ramerj@worldnet.att.net". Due date for submissions is **15 September 1998**.

COLOR - it's what everybody wants.... So let's see some! (Look Toto!

10 It's the Emerald City!)



## *Galactic Runes* by Michael C. Turner

Orbiting the core of a quasar galaxy, a bizarre stellar system has formed near the result of a supernova explosion. Viewed from within an ancient volcanic crater on the surface of a moon orbiting a terrestrial sized planet, a pulsar appears as a brilliant "jetting" stellar entity. Above the moon's horizon an irregular ring of debris partially eclipses the parent planet and other companion moons.

### **Profile: Steve Munsinger** Born in Cirencester, England, I now make my home in Wyoming. Upon

graduating from the University of Wyoming with a Bachelors of Fine Arts Degree in 1992, I set my sights on making a career doing what I love best; painting and drawing. My life-long love of science fiction, fantasy and space art has been fueled by thirty plus years as an amateur astronomer. My favorite past-time is comet watching. In 1985 I was a contributor to The International Halley's Comet Watch sponsored by NASA.

In 1994 I was one of twelve international winners of the L. Ron Hubbard Science Fiction Illustrator's of the Future Contest. I attended an illustrators workshop with contest judges Frank Kelly Freas, Bob Eggleton, and Ron and Val Lindahn. During the workshop the judges critiqued my portfolio and recommended that I join the IAAA.

Presently I teach art at the high school and junior college levels. My "spare" time I spend with my telescope and playing guitar composing and recording original pieces. My artistic passions are space art, science fiction illustration, and portraiture. I work on illustration board using acrylics, air brush, and traditional brushes.

## NEW BOARD ELECTED!

Over the last few weeks your Board has been holding its first extended and 'formal' Board Meeting by e-mail, chaired most efficiently by Kara Szathmary. Even after sifting out the 'asides', there were some 300 messages flying back and forth! Many important decisions were made which affect the future of the IAAA, including workshops and exhibitions etc. The meeting concluded with one of its most important tasks -- the voting in of our next Board, whose office commenced on 1 July.

The new Board consists of:

David A Hardy (President)	Jackie Burns (Euro Vice President)
Dirk Terrel (North American VP)	Don Davis (re-elected)
Kara Szathmary (re-elected)	Anil Rao
Aldo Spadoni	

Our thanks to all nominees, successful and otherwise (the voting was close), and my especial thanks to our retiring members, Dana Berry, Michael Carroll, Joel Hagen and Mark Mercury for their untiring and invaluable efforts over the last two years.

Now we need YOUR support to carry through the projects ahead of us.

Sincerely,  
David A. Hardy, President

## Kudos Korner

- The latest issue of *Ad Astra* has some great front and back cover art by Pat Rawlings on the "X Prize: The New Race to Space"
- Triple kudos to Jim Scotti, Dave Hardy, and Dan Durda! Jim did an article for *Sky & Telescope*, Dave did the illustration of 1997 XF11 for it, and Dan did an illustration that made it onto the cover (in the inset at top)
- Arthur Woods did a magnificent cover on *Leonardo...the Journal of the International Society of Art Science and Technology...MIT Press*. It's of an inflatable solar sail carrying "seeds" from Earth. Excellent Arthur!
- Second kudos to Dave Hardy for his recent cover for the Science Fiction and Fantasy Writers of America bulletin. It's a crop of his fabulous painting "Proxima's Planet." The editor said it was their best cover yet. (Of course!)
- John Whatmough had several splendid images in *Astronomy* magazine
- Don Dixon had the cover of *Scientific American* with an excellent colorful black hole/quasar/purple spiral. Any airbrush in there Don?
- Hats off to Mike Carroll, Jon Lomberg and Joe Tucciarone for some splendid work in this month's *Astronomy*
- And two hats to Joe for work in *Sky & Telescope*
- Universe 98 in Albuquerque was well represented by the IAAA. Pat Rawlings had a stunning painting there in support of the local childrens outreach people

**Profile: Grover Schroyer** I was born in 1959, and have been painting since 1975. I was inspired, like many others, by Bonestell's paintings in "Conquest of Space", literally wearing the cover off my father's copy. Seeing "2001: A Space Odyssey" further drove home the sense of wonder, and I was doing my own space art shortly.

I graduated from the Ivy School of Professional Art (Pittsburgh, PA) with an Associates degree in illustration, and have been doing freelance work intermittently since then. I'm concentrating on being primarily a fine artist, and have been selling work in the Pittsburgh area and doing shows at several galleries here, most recently at Gallerie Chiz, Shadyside, PA in April 1996.

I would characterize my space art as celestial landscapes, as opposed to hardware oriented work or purely fantasy pieces. One of my recent pieces depicted a scene just above the clouds of a gas giant planet, with sparkling globular clusters dotting the twilight sky above a crescent phase satellite. Another recent work was a scene of Northern Lights over White Dome Geyser, in Yellowstone Park. It has been an ongoing project of mine to fully master painting realistic aurora. I work exclusively in acrylics.

## ART TIPS

**This tip is about low fire enamels** - from James Wappel

Recently, I began experimenting with a water based medium manufactured by Pebeo called Porcelaine. Currently, low fire enamels are used primarily for "craft" projects. This has lead to a negative image among the dealers of fine art materials, however, the "craft" label is undeserved. Here are some of the best qualities of Porcelaine.

- Durability: Artwork could survive for as long as centuries with little or no care. Since the paint is baked onto the surface, long term exposure to sunlight and moisture does not harm the image.
- Easy to use: Unlike high fire enamels which require a kiln and temps over 1300F, Porcelaine fires in a conventional oven at 300 degrees in 35 minutes. They clean up with water, and will work with any watercolor/acrylic brushes.
- Fast drying: This medium dries extremely quickly, allowing the artist to put down numerous layers in a short period of time. Working in this fashion takes full advantage of the translucency of Porcelaine.
- Cost effective: Porcelaine is less expensive than watercolors. Also, a box of ceramic tiles is far cheaper than primed canvas or watercolor board.

**PAINTING TIPS** - First your painting surface must be clean and free of all oils or dust. Do not thin your first layers with water. This will damage the initial bond that is formed as firing proceeds. Subsequent layers, however, can be thinned. Paint layers as you see fit. Once a painting has been completed, it must set for 24 hours before firing. During this phase, the image can be easily damaged (in fact, it can be washed from the surface altogether!). Once fired, you may paint another layer. I recommend beginning with a limited palette (red, blue, yellow, white and black), and working with standard white ceramic tiles. The Porcelaine colors mix very well, so it is not necessary to get the whole line of colors! **A NOTE OF CAUTION:** Due to the rapid drying time (we are talking seconds here, not minutes), I would not try to put this through an airbrush. You will probably ruin both the painting and your airbrush.

# CALL FOR ART! CALL FOR ART!! CALL FOR ART!!

From Dave A. Hardy, President

For the last couple of years I have been negotiating with **Astronomy Magazine** to try to get an article about the IAAA and space art. I'm delighted to say that I now have agreement on a 'gallery': *six pages of space art*, with one or two paintings on each page! Only one piece of artwork from any one member will be published, though you can send two for choice, and there is NO payment. As you know, neither the Board nor I would normally agree to this, but this counts as 'free advertising' and will be invaluable to both the IAAA and the artists involved.

The article will probably run in the January 1999 issue, so all art has to be with \*them\* by October at latest -- so we need all artwork by **5 September 98**. We need about 20 pieces from which to choose; remember that it must be **ASTRONOMICAL** art-- though this does not mean it has to be totally realistic or representational, as long as it is based on current scientific knowledge. But no SF or fantasy!

In order to facilitate the selection of art, which will be reviewed initially by the new Board but ultimately chosen by ASTRONOMY's Art Editor, our new Board member Dirk Terrell has set up a website on which we can review the art. So if you are able to send work digitally, please send, initially, a small low-res (72dpi) JPEG as an e-mail 'attachment' to: **spaceart@falcon-net.net**

Those who cannot send work digitally will need to send a \*good\* 35mm slide for choice. In the USA, east coast, and west coast:

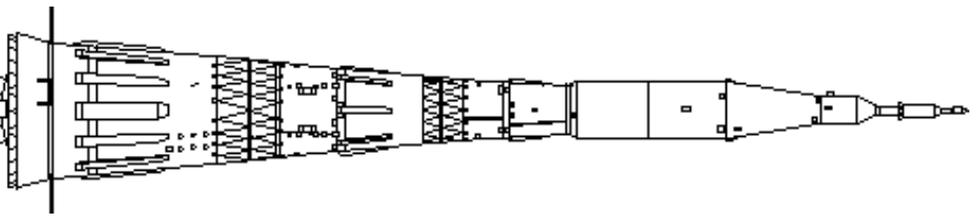
Susan Lawson-Bell  
Natural Light Studio  
932 S. Walter Reed Drive, 2nd Floor  
Arlington, VA  
22204

Aldo Spadoni  
3157 Crownview Drive  
Rancho Palos Verdes, CA  
90275-6413

From the UK and Europe, please send to me (Dave Hardy) at the address on the back page of the Pulsar.

If your work is chosen, you will be asked to send a high-quality 4x5 transparency or high-res digital art to an address to be given later. **PLEASE ENSURE THAT ALL SLIDES ARE OF HIGH QUALITY.** (See the article in this Pulsar on this subject.)

So go to it, and let's put on a good show!



**WHAT AM I?** Can you identify this launch vehicle? Answer on back page.

David A. Hardy was born in 1936 and published his first of space art in 1952. Influenced by Chesley Bonestell, Arthur C. Clarke, and R. A. Smith, Dave has worked in both tv and the movies, and has numerous books to his name (Visions of Space and Challenge of the Stars to name two). A 1979 Hugo nominee, he has been working digitally since 1985 and currently produces 90% of his work on a PowerMac 8500/230, though he still enjoys painting when he can.



Jackie Burns is a self taught artist, specializing in water color and airbrush. Somewhere between "16 and 60" years of age, Jackie is fond of Celtic imagery, being well versed in the meaning, lore, and history of Celtic designs. An avid amateur astronomer, she is a frequent attendee of major science fiction and fantasy conventions.

Dirk Terrell, 32, has a BS degree in Physics from Clemson University, and MS and PhD degrees in Astronomy from the University of Florida. He has been painting for about three years (acrylic) and doing computer graphics for about ten years. He is currently self-employed as a software developer and commercial Internet service provider.



Don Davis, 45, got his start in space art working at the U.S. Geological Survey doing the first Lunar maps while still a teenager. Few are capable of the detail needed for planetary mapping - Don's maps are accurate enough to target spacecraft by. Don frequently illustrated books and articles by the late Carl Sagan, and collaborated for many years with Sagan in the Sunday PARADE magazine.

Kara Szathmary is a leading exponent of 'non-representational space art.' Born in 1945 and living Quebec, Canada, Kara has degrees in physics, mathematics, and astrophysics. A self-taught artist, he produced his first space art in 1969 and was first published in 1976. Kara was President of the IAAA from 1989 to 1992, and was a leader in the interactions with the Soviet artists during those years.



Born in Hyderabad, India in 1954, Anil Rao now lives in Colorado, USA. Educational interests are biology and comparative endocrinology. Presently, he teaches human anatomy and physiology and other biology related subjects at the Metropolitan State College of Denver. Comfortable in both the traditional and digital media, Anil's interest in space and space illustration goes back to the 1960's.

Aldo Spadoni is an engineer, conceptual designer, and futurist with nearly 20 years of aerospace engineering experience. He has contributed to the design of numerous aircraft, missiles, and spacecraft for NASA and the U.S. armed services, including designs for the International Space Station. Aldo's work has appeared in numerous magazines.



## SLIDE PREPARATION FOR IAAA GALLERY & EXHIBIT ENTRIES

By Lynette Cook and Susan Lawson-Bell

Having good quality slides is necessary to ensure your images are professional looking, well represented, and will be given equal consideration by the jurors. The guidelines that follow for photographing art and submitting slides apply not only to the upcoming Astronomy gallery, but to all submissions.

**PHOTOGRAPHING ART:** You can take slide photographs of your art yourself or take it to a professional lab. Regardless who photographs it, certain guidelines apply:

1. The slides must show color that is true to the original.
2. The exposure must be correct (not too light, not too dark).
3. The image should be centered in the slide frame.
4. Show the full frame image, without mats or picture frames. If the dimensions are not proportional to the slide's dimensions, bring either the top or bottom to the edge of the frame (whichever one is appropriate), and let the other dimension fall as is. This will leave a gap between the edge of the image and the slide mount. If possible, photograph the art on a black background so this portion of the slide will not need special masking (many labs will photograph on black if you ask). If this isn't possible, have the lab tape the edges for you before the film is mounted or tape it yourself.
5. Use the right kind of film. Be sure you have "D" type film, for daylight, if you photograph your art outdoors. Use "A" type film for artificial or indoor light (such as tungsten film). Film with low ASA numbers, such as ASA 64, has finer grain and gets better detail. Higher ASA film, such as ASA 400, has a coarser grain and doesn't pick up as much detail. Go with the lower ASA ratings.

**PROFESSIONAL LABS:** There are many labs which do quality slides from original art. This is called "copy work." Ask your colleagues for recommendations or check the yellow pages in the phone book for custom labs. Prices generally run from \$5 - \$10 per original slide. Copies of the same art (all shot from the original art at the same time) cost less, usually around \$2 - \$3 each. Turnaround time also varies from 3 days to a week.

**DOING IT YOURSELF:** If you are doing your own photography, you need the right equipment and setup. For indoor slides you will need the following:

1. Slide stand (art is photographed flat).
2. 35mm camera with 50mm lens mounted on the copy stand, facing the flat table below. While nearly any 35mm camera will work, the easiest to use is a camera with a detachable head. With the head off, you can look directly into the viewfinder without having to stand on a chair and look into the viewfinder from above.
3. Two flood lamps with tungsten bulbs set at a 45 degree angle to the copy stand.
4. Polarizing filters: a filter in front of each flood lamp bulb and a filter on the camera lens. Set the camera filter so its lines are perpendicular to the lines on the lamp filters. This reduces the glare on the art and allows the color to be more vibrant. It is especially helpful when the art is glossy, such as with a shiny varnish, or has a buckled paper which catches the light on the raised surfaces.
5. Gray card (a 50% neutral gray card used to get an "ideal" light meter reading).
6. Film: Ektachrome 64 tungsten slide film or Fujichrome 64 tungsten works nicely.
7. Camera cable release to eliminate camera motion caused when you take the picture.

Take a light meter reading on each individual flood lamp to ensure that both lamps read at the same intensity. Adjust their proximity to the copy stand, if necessary. Then get a reading on the gray card to establish the middle exposure you are going to take. Check the position of the polarizing filters. Here's how you can do this: the filters over the lamps should have an arrow to indicate direction. Have both of these point "up." Place something shiny, like a metal film canister, under the camera. Turn the polarizing filter on the camera until the image of the canister in the camera's viewfinder is at its darkest. Once you do this, your filters are aligned correctly. Next, position the art under the camera so that the image is centered. Raise or lower the camera on the sliding mount until the art completely fills the frame. You must bracket. This means that you take three different exposures of each piece of artwork. Using either the light meter in the camera,

or a hand-held light meter, determine the correct exposure by taking a reading on the gray card. Take one shot at the exposure considered perfect, plus two others: one at an f-stop lower (lighter) and one at an f-stop higher (darker). This will ensure at least one of the three exposures come out right. For outdoor slides, find a way to support the art so that you can photograph it. You can set it on an easel or attach it to a wall or other clean, vertical surface. You'll need a tripod for the camera, and a cable release attached to the camera. On a sunny day you'll need to use a polarizing filter to avoid glare spots. Photographing on a foggy or overcast day is sometimes easier, since there is no direct sun you won't need a polarizing filter. The basic guidelines from above still apply, namely: bracket the exposures; center the image; square the image (make certain the camera faces the art directly and is not tilted); use a full frame image; eliminate peripheral materials, such as frames and mats; and avoid superfluous backgrounds in the image, such as your easel, a pegboard, grass, the side of the barn, your fingers, etc. Remember to use daylight film. ASA 64 is good.

**TIPS:** A 50mm lens will work just fine for photographing most art. A good quality close-up lens may be needed if your art is small. Try placing a small pocket mirror in the exact center of the black backing board or cloth. You can see the camera lens reflected (centered) in this mirror when the camera and artwork are perfectly facing each other. This will help eliminate alignment problems. If you use cloth behind your art, the best material to use is black velvet, as it reflects very little light.

**PREPARING THE SLIDES:** If you have correctly photographed your artwork, the lab can mount the slides when they develop the film. If you have a choice, ask for plastic mounts rather than paper ones, as the plastic holds the film chip more firmly and allows easier focusing in the projector. If you have non-art items on the slide (background, easel, etc.), it is easiest to ask for unmounted film when you get the film processed. The unmounted film will be returned to you uncut (in a long strip). When you have the strip, you can cut each slide and tape the non-art portion of each film chip. Tape is excellent since it is easy to crop out areas with clean, straight lines. A good tape to use is thin silver tape, available at most photo supply companies. There is a heavier, opaque black tape made by Bogen (#MPB 1418) which is even better. Apply the tape to the front, non-emulsion side of the slide. Once the film chip is taped, mount the film in a sturdy, glassless mount. Glass slides are not recommended, they can crack during shipping. Plastic mounts are preferred. Gepe is a good brand, a box of 100 costs about \$11.00. The mounts come as two "halves," a light gray "top," and a darker gray "bottom," which snap together after the film chip is inserted. Don't use cheap plastic mounts that do not snap shut securely. You can use paper mounts if you can't find plastic, but this will require the use of a tacking iron. This is a small metal unit that heats up and will seal the adhesive on the paper mount. They can be purchased from most photo supply stores. It is possible to tape slides that are already mounted, but you need to do this carefully and cleanly. Make certain that you are not covering the slide mounts with several layers of tape, creating sticky, messy-looking slides. Remember, you want to look professional. Also pay attention to slide storage and cleanliness. Slides should be dust and smudge free, oil and dirt free, scratch free, without adhesive residues, stored in clean dust-free environment, and submitted in plastic sleeves.

**LABELING & CAPTION INFO:** When you have your slides, follow any "official" submission directions regarding the written information on the slide mounts. If there are none, include the following: your name, title of the piece, medium, dimensions, date painted, copyright symbol (©) (applied at artist's discretion), and a RED DOT in the LOWER LEFT HAND CORNER as the slide is viewed. Typed information is preferred, but this can be neatly handwritten if you don't have access to a typewriter or computer. Keep the rest of the mount clear of smudges and non-essential writing. On separate sheet of paper you should provide the following: your name, your nationality, title, and at least three sentences of descriptive information, including complete names or titles of subject matter such as hardware, mission, astronomical body, etc.