

# President's Message

Can it be time for conference already? You bet, and I'm hoping that we'll see a good turnout in Roanoke for what will be another spectacular meeting.

Our host, Gary Close, says that just about everything is in place. Look for more information about the conference in this issue, but realize that in no way can any one put into words the fun, learning, and sharing that one experiences by attending a SEPA conference.

A couple of items will be on the agenda at the annual business meeting. The first and most pleasant task will be to inform you of a bid for our year 2000 conference site. Duke Johnson at SciWorks Planetarium in Pfafftown, North Carolina is inviting us to his dome. Besides being a relatively new facility, it's a place that has never hosted SEPA before. If anyone else out there has been contemplating making a bid, please get in touch with Council immediately.

To keep you well informed, Council had been considering a joint SEPA/GLPA conference thanks to a kind offer from Jack Fletcher at the Hummel Planetarium in Richmond Kentucky. Gary Tomlinson and the GLPA Council were most cooperative in pursuing plans. Most difficulties for a joint meeting had been overcome, but the nearness to the July 2000 IPS meeting was the reason the proposal was abandoned.

Also on the business meeting agenda will be the election of our next President Elect. You can read about both candidates later in this issue, but let me mention our nominating committee which consisted of Richard McColman, Carole Helper, and Gary Meibaum. Kris McCall served as liaison to Council. They put together quite a list of potential candidates and had the daunting task to narrow the field to two people. Thanks, everyone, for a job well done!

Probably the most debated item for this year's business meeting will be a proposed increase in dues. There are a number of reasons why a dues increase is in order.

First, SEPA's dues have been at their current level for more than 15 years. The purchasing power of the organization has diminished as costs have gone up.

Maintaining a Web site, printed materials (including Southern Skies), group program production, and distribution of other resource materials are a few of the topics that Council members have discussed with me.

Some of these proposals have not yet been discussed with the membership because we realize that providing these additional benefits would require a greater level of funding.

The second reason is, that with our Bylaw changes from back in 1996, it would be proper to have a lower dues rate for our Associate Members, since these folks don't get the same level of benefits as full members of SEPA.

Finally... , hmmm... , I've heard some rumors of another excellent reason to take up the dues matter this summer. Your incoming president George Fleenor would like to have that business matter resolved before he takes office in 1999, and I can't say I blame him for wanting to have that matter settled before then.

Let me now take a sentence or two to thank those individuals who supported and submitted materials for the Members Guidebook. As this publication grows, it should be even more useful to our membership.

It is beginning to look like the plans to distribute copies at Roanoke may be a little premature, as many people who promised to forward material to me have still not come through. Getting a new project like this off the ground hasn't been easy. The Members Guidebook is still very much a work in progress.

Hope to see you all in Roanoke!

Mike Chesman  
President  
Bays Mountain Planetarium  
Kingsport, TN



# IPS Report

John Hare  
IPS Representative



IPS conferences are held every two years. The next is scheduled for London, UK this June/ July. IPS Council will meet on the Friday and Sunday prior to the conference. A decision will be made on the site for the 2002 conference. Four sites have submitted invitations.

The Bishop Museum  
Planetarium, Honolulu, HI  
Chabot Observatory & Science Center,  
Oakland, CA  
Hayden Planetarium, New York, NY  
Planetarium Morelia, Morelia, Mexico

Montreal, Canada is the site for the IPS 2000 conference. Tentative conference dates are July 9 - 14.

Assuming you are a current IPS member, the new IPS Planetarium Directory should have reached you by the time you read this. The latest directory is a result of the efforts of former SEPA planetarian, Shawn Laatsch who serves as IPS Treasurer as well as running the Arthur Storer Planetarium in Prince Frederick, MD.

If you have been an IPS member for at least 10 years, you should have been recognized as an IPS Fellow. The IPS awards committee is asking any members who have attained that tenure status and have not been recognized, to please forward that information through me.

I will be in attendance at both the Council meeting and the conference. If you have a preference for where you would like IPS to meet in 2002, as well as any other concerns regarding IPS, please communicate with me prior to my departure for the UK on June 24. See you in Roanoke!

President's Message  
continued

## 1998 Paul W. Campbell Award

Last year at our Pensacola conference, we gave out the first SEPA Fellowship Awards to Jim Hooks and Jane Hastings. They have an outstanding service record to the planetarium community and to SEPA in particular. There are others deserving of recognition. Executive Council is now in the process of selecting recipient(s) for 1998. If you know someone deserving of this honor, let an officer know. Below is a quick summary of qualifications.

Recipients must have been SEPA members for at least 10 years and display qualities in each of the following five areas:

1. Integrity: maintains high standards for the profession and is respected by peers in the organization
2. Friendship: fosters community spirit within SEPA and is helpful to members
3. Service: shows long term support to SEPA with volunteer service including committee work or service as an officer
4. Knowledge: maintains expertise and continues to improve skills in the planetarium field
5. Vision: sets challenging goals and

displays creativity and imagination  
Conference Bid, 2000

In the summer of 1998 we will meet in Roanoke, Virginia followed by Jacksonville, Florida in 1999. At our June meeting we will be voting for our year 2000 conference site. Duke Johnson of the SciWorks Planetarium near Winston Salem, North Carolina will be presenting a bid. Council would like to remind others who may be considering a conference bid of the need to contact us to be placed on the business meeting agenda. Thanks!

## Read Me: Proposed Dues Change

Article Two, Section Three of the SEPA By laws states that annual dues shall be an amount determined by a majority vote of the membership at the Annual Business Meeting.

During the business meeting at the Roanoke Conference (June 9 - 13) SEPA Executive Council will recommend the following item be voted on after appropriate discussion by the membership: that the fee for Full Membership be raised from the current \$15 to a new rate of \$25.

Some of the reasons for requesting the increase in dues can be found earlier in this issue's President's Message.

# Celestial Potpourri

## We need dues, articles, an editor; slides, we

I'll remind those who still haven't paid your dues for '98, your grace period has just expired. This is your last issue.

In this issue you will find a list of slides available for duplication and distribution to SEPA members from two sources. In addition to the STScI images we have received for a couple of years, we now have a relationship with the Jet Propulsion Lab.

We have 66 images from the ongoing Galileo Mission to Jupiter and its moons; one image for the New Millennium Mission, Deep Space 1; two images for the Stardust Mission, and four for the Mars Surveyor '98 Orbiter/Lander. If you would like copies of these images one generation from the originals sent from JPL, see the instructions which accompany the listing.

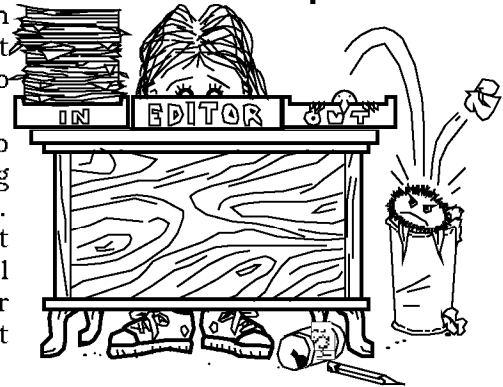
Please send any submissions for the next issue of Southern Skies to my home address. It's listed on the inside of the front cover under the heading Southern Skies Editor. I will not be receiving any e-mail through my ten-nash account during the summer months. You must send me your submissions on disk unless you're an

AOL subscriber. I can't receive e-mail attachments from you if you're not an AOL member. Send your summer submissions on a disk please.

Here are a few requests for authors. Please use the personal pronoun *who* instead of *that* when you refer to people in your article. Please stop double spacing after punctuation. I don't care what your high school typing teacher taught you, it's not typographically correct. Please stop using quotation marks around your show titles. I italicize them. Please stop using exclamation points in your writing. Spell out numbers greater than ten, and use numerals for numbers of 10 or less.

We are in desperate need of an editor for the Digital Cosmos feature. I have not

Duncan R. Teague  
Secretary/Treasurer  
Southern Skies Editor  
Craigmont Planetarium  
Memphis, TN



Mike Cutrera

Send your \$15.00 check made payable to SEPA to the following address:  
Craigmont Planetarium, 3333 Covington Pike, Memphis, TN 38128 3902

Name		
Planetarium		
Organization		
Address		
City		
State	Zip	
Area	Voice	
Area	Fax	
Position		
E-mail address		

# Small Talk

Elizabeth Wasiluk  
Small Talk Editor  
Berkeley County Plan-  
etarium



We've just ended all the eclipse craziness and I must admit that I am guilty of participating this time. I'm a veteran of only two other trips specifically to see an eclipse.

In 1991 I signed on to attend a cruise to see the total eclipse that year with Griswald, back when she used to be planetarium director of Discovery Place's Kelly Planetarium in Charlotte, NC.

The trip was organized by Discovery Place and Sue had been on a cruise down the Amazon to see Halley's Comet before, so I figured I was in safe hands. Originally this cruise was supposed to drop people off in Matzalan, Mexico so people could watch the eclipse. It was not originally planned to be an eclipse cruise, it just turned out a regularly scheduled Carnival cruise was posed to be in the right place at the right time to view the eclipse. Sue had written them about perhaps viewing from water if it looked cloudy, but they seemed to say they would make no accommodations for eclipse watchers from their regular itinerary. But when we arrived on board, it was mentioned that we would be viewing the eclipse from on board ship and attempts would be made to chase it, if clouds got in the way.

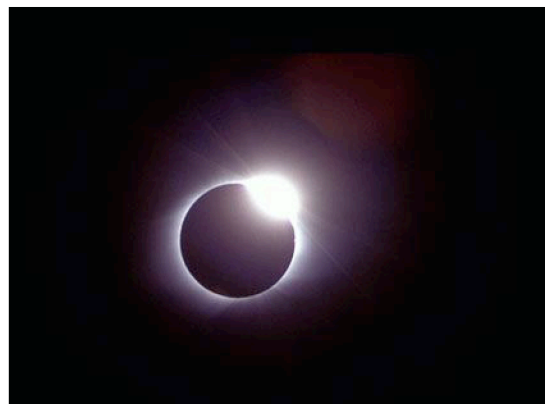
This didn't make everyone happy, however, certain groups on board had chartered busses to take them from Matzalan, Mexico to the center line and beyond if it were cloudy and they'd already paid, so arrangements were made for people to get off

of the ship if they wanted to, in Matzalan, early in the morning and be back to pick everyone up later after the eclipse. Then the course of the discussion was whether to get off the ship or not. When eclipse day dawned, it appeared sunny and there were no crowds of people at the place we docked, so I planned to get off with a friend to watch via land despite Sue's warning not to give up my mobility. Besides, we were told no one could set up and sleep on the deck, and by the time we got up to set up on the deck, there were already hundreds of people set up.

Despite the ones who got off to bus to go to the center line, there were also four other people we met who we banded together with to watch from land. As it turned out, the weather was great up until the partial phases began, and then it was history for the eclipse. We missed this so-called Eclipse of the Century! The worse part was that everyone on board ship saw the eclipse and just a few miles down the coastline it was perfectly clear. However, we weren't the only ones to miss the eclipse in Matzalan. We heard that Sue and her husband ran into Joe Tucciarone at a bar in Matzalan, Mexico called Senior Frog's. He was apparently consoling himself for missing the eclipse. Some people have told me that George Brown was with him, but I'm not sure of that. Despite the cruise being nice, there was no eclipse for me.

I tried again in 1994 for the annular at Buffalo State College, where I went to grad school. I figured that I'd line up something else to do, just in case the weather during out to be typically Buffaloanian (read that to be cloudy). It did, after getting really close to annularity. I had to console myself with having a reunion of people I'd known when I went to school there.

And this year I tried once again. I figured that going with George Fleenor and the SEPA folks, I was bound to have a great time even if I ran into clouds. Colleague and friend Conrad Jung, staff astronomer of Chabot Observatory in Oakland, California (yes, Mike Reynolds is his boss) had persuaded me to go on the trip in 1991, so we'd been shopping around for a trip we could both go on in 1998 as well.



Before I left, like everyone else, I had tons of things to do to get ready, including lining up people to speak to my astronomy class in my absence and getting coach Allen and my principal skilled in setting up and using the sunspotters (little devices that look like bird feeders that allow you to view the sun safely) to view the partial eclipse. I'd already gotten people at the Board office to approve professional leave. Somehow the local papers picked up on the story that I was going to view the eclipse and it ran on the front page, in full color. It must have been a slow news day.

The day I left was a real nightmare. It was snowing and raining coming into Dulles. I had arranged to stay overnight in a hotel, but the next morning they had forgotten the wake up call, and it was a mad dash to the airport. Luckily I didn't miss my plane. I was surprised that it wasn't packed, as its final destination was another island in the eclipse shadow. As I met up with Conrad in the Miami airport, my luggage got broken into, but luckily nothing was taken.

Getting ready to leave for Aruba, I ran into the rest of our crew. I must admit, I didn't know everyone in our group. But besides George and Stephanie, Patrick McQuillan and his wife, and Jonathan Sabin and his wife to be were there. Jonathan was staff artist for Bishop and shared an office with me when I was there. Also Mike Benson, vice chairman of the South Eastern Regional Astronomical League. So we were off.

We got to Aruba and got on the bus (after long delays from the picture taking guys in our group who held us up trying to get through customs with their tons of equipment). The resort we stayed at was fabulous, everything was included included tours, water sports, drinks, food, and entertainment. As George put it, there were nicer places to stay on the island, but for the price, this was a pretty good deal. I especially liked the fact that it was on a quiet, private beach and that we didn't have to share one beach with several hotels like the people at the Hyatt.

Speaking of the Hyatt, we had friends who were staying there and they joined us to watch the eclipse from our resort. Mike Mallon had also been clouded out at Matzalan, but he wasn't in the same spot we'd been. He and his wife Wendy had brought their 17 month old daughter along. Wendy was also 7 months pregnant,

so you can see they were into adventure travel. Seriously, they'd been on an African Safari on their honeymoon and had gone on a Wilderness Adventure tour to see the eclipse in Peru. They'd also hiked through the Amazon, so this trip must've felt luxurious.

While set up on the beach for the eclipse, lots of people came up to us to ask questions and get eclipse watching advice. We met a group of British guys from New Jersey that asked us about taking pictures. This was their first eclipse.

The day started out well, bright and sunny at breakfast, and lasted that way to first contact. Then all of a sudden, it totally clouded over. We kept reassuring everyone that this had happened the previous day and it all blew over in a few minutes, but while grabbing drinks while talking to Patrick, it began sprinkling. Some guy next to us says he'd lived on the island for 22 years and couldn't remember it ever raining in February.

That did it for us. Most of the former Matzalan crowd started getting pretty worried and stayed that way until Mike says he has a van and if we didn't want a cloud to infringe upon our precious few minutes of totality, we'd better get in. I looked at Conrad and said, I'm not calling this one, I'm the one who wanted to get off of the ship in Matzalan. I don't want to make another bad call. We head off for a patch of blue sky in the van a la Blues Brothers car chase.

While Wendy and I are singing Barney songs to daughter Madelaine who is crying over the sudden change in plans, Conrad and Mike are scanning the skies for the alternative location. Suddenly we hear Stop the van here. We look up and say



Are you guys crazy? This is someone's driveway! As it turns out it is Debbie's driveway. She works on the Tattoo Party Boat. This boat will pick you up at your hotel and for 15 American bucks you can go to the eclipse party with an all you can eat barbeque, all you can drink bar and special eclipse party t-shirts. She says that she was going to do some laundry during the eclipse, but since we were setting up, she'd get her daughter and wake up her husband (He was going to sleep through the eclipse.) and join us.

I was amazed that it was still so light with just a sliver of sunlight visible. I was the first to see Venus, long before totality began, just where it was supposed to be. I'd done several programs before setting the sky to totality and handing out star maps to visitors to see what we could find.

Debbie's husband and Conrad both shouted out that they were looking at shadow bands and then quickly and silently there was the diamond ring and totality. Somewhere, someone in the distance was setting off fireworks.

Mercury and Jupiter were clearly visible. At first I'd mistaken Mercury for Mars, but later after checking charts, I knew I'd been wrong. Streamers in the corona were easily seen by the naked eye. The red of the chromosphere was also clearly visible to the naked eye along with a giant prominence at the twelve noon position, that is, if the Sun were a clock. Also smaller ones were seen at four o'clock. We saw a couple of birds fly in from the coastline, tricked into believing it was night.

All too soon there was a second diamond ring and totality was over.

It was spectacular! We headed back to our resort and were happy to learn that



everyone on the island seemed to have pretty clear skies for the event, so we didn't have to leave.

The rest of the day we watched cruise ship after cruise ship come in. We knew people on practically each one, so we waved. We heard later that everyone seemed to have good weather for this eclipse. Even the people back home at Hedgesville had clear skies to see the partial.

We did hear a rumour that one cruise ship had missed the shadow and ended up with 99.8% eclipse. I don't know if that story is true or not, anyone have any information?

Later on the trip we stayed up real late to see Alpha Centauri and the Southern Cross. We split Alpha Centauri A and B and Acrux in binoculars. I swept up the Jewel box in Crux in binoculars and Conrad found Omega Centauri in his telephoto turned telescope. Later we heard George had found the Eta Carinae nebula, but we didn't get out early enough to see it before setting.

One of our favorite things to do was to sit in a jacuzzi and stare up at Orion, nearly overhead. Patrick joked that each time he saw it up there, he felt that someone was monkeying around with latitude on his star projector.

The worse part of the trip was coming home. It seems everyone wanted to be back to work Monday morning and the airport in Aruba was packed. Some people didn't make their connecting flights. Conrad and I had plans to meet people in Miami before we left, but that had to be aborted, since we got in too late.

We did manage time for a quiet dinner together before parting to talk about the next eclipse. Seems the British guys from New Jersey want to get a group together for the one in 1999. Hmmmm. Maybe...

So how did you fare during the '98 eclipse, was it total for you? Or did you dazzle the masses under your dome or real sky? Drop me a line if you are not planning on going to Roanoke to tell me your adventures in eclipseland.

Postscript: I received a fax from astronomer/author Jay Pasachoff, Williams College, Hopkins Observatory and Planetarium, Williamstown, MA. He was on the island of Aruba as well and had run several successful eclipse experiments. He sent word that a colleague had IMAXed the eclipse.

# Astro-Video Review

## Teachers Resource Distribution Center

I'm going to yield my space this month to Paul Lewis. During March 1998, I had the pleasure of attending the opening ceremonies for the new resource center he describes below. I believe that Paul's support of the planetarium community will make this a great resource within the SEPA region. Contact Paul and see what I mean! Mike Chesman

Normally this column is dedicated to the task of reviewing a video and providing you with some insights into perhaps what or what not to consider for your programs. I will depart from that structure this month to introduce myself and what I represent to SEPA.

I am Paul Lewis, and I am the Director of Observing Programs, Outreach in Astronomy, and, most recently, the Director of the Teachers Resource Distribution Center (TRDC), sponsored by the NASA/Tennessee Space Grant Consortium at the University of Tennessee, Knoxville. If you have ever had the good fortune to visit a Teacher Resource Center at any of the NASA regional facilities e.g., KSC, Goddard, or JSC, then you have a good idea about us. If not, here goes.

TRDC is a support center for K-12 educators. That includes you. We provide the latest materials for the dissemination of astronomy and space science. The formats for those materials include 35mm slides; videotapes; cassette tapes; IBM, Mac, and Apple IIe software; activities guides; lesson plans; and other printed materials.

There are computers connected to the Internet for use by visitors at the center. All of these materials may be duplicated free of charge. The visitor supplies his/her film, videotape, and diskettes. We do keep in stock some materials that can be purchased from the TRDC at cost. For example Maxell T 120 P/I videotape is available on site for \$1.77 each.

If you cannot visit the center, we will copy each tape for you for a \$2.00 service charge per tape. You pay the postage both ways. Just so you don't feel gypped the UT video department charges us \$8.00/hr for copying or recording videos. The videotape collection alone is worth your attention. We

have approximately 300 hours (and the collection grows) of NASA space science, aviation and aeronautics, planetary exploration, manned spaceflight, satellites, living in space, and just about anything else you can relate to NASA.

These videos are in the public domain, and you may use and abuse them as you see the need for your planetarium programs or they stand on their own as video programs ranging in length from 5 minutes to 1 hour.

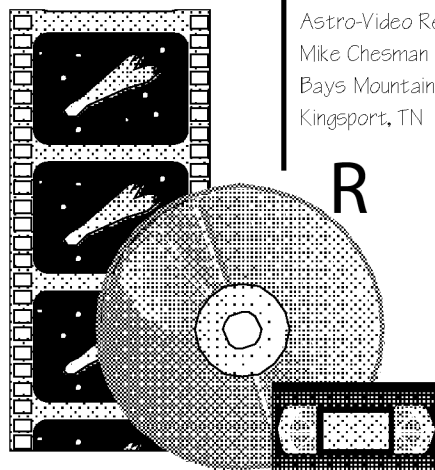
For those of you with video projectors in your planetariums, you may find some useful footage for various program applications as you may excerpt these tapes. NASA only asks that users of these materials provide the viewers with the appropriate credits for those who put them together or provided the raw footage.

If you're looking for a launch sequence of a Saturn 5, Delta rocket or day or night time Shuttle launch and landings, we have what you need. If you need animation footage of Voyagers, Magellan, Galileo, Mars Pathfinder, Cassini, Ulysses, etc., we have that too.

We are presently working on a catalog of these materials and will make it available upon completion at your request. You can find a sample of what is available (complete programs and video series) on the Internet at <[www.phys.utk.edu](http://www.phys.utk.edu)>. Look for the Teachers Resource Distribution Center.

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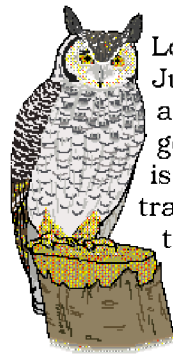
Astro-Video Review Editor  
Mike Chesman  
Bays Mountain Planetarium  
Kingsport, TN



# Her Own Space:

Roanoke: June 9 – 13, 1998

Barbara Reynolds  
The Night Owl



With the IPS meeting in London in late June and early July, I hope SEPA will be well attended. My hunch is budgets will be strained. Roanoke is ideally situated. Most can travel relatively inexpensively to that location. We'll miss those of you who cannot do both conferences this year. With a trip to Greenbank and a Mill Mountain ice cream social planned, you won't want to miss SEPA '98. Gary Close is busy working out details as we go to press in May, 1998. Why attend?

Jane Hastings said it best last year: SEPA is the one time of the year when I connect with people who understand what I do every day, and I learn so much. I think of Jane as the small dome coordinator. Perhaps the small dome group meeting can be put into the schedule, given the response to my small dome piece in the last issue of *Southern Skies*. Many can relate to changes taking place in the planetarium world. Alternatives need to be explored to bridge the gap for those in a facility either struggling with a small budget to find ways to continue to exist, or who are in a state of transition to larger science centers. Whether you're investigating ways to link up with the local education system, dealing with small budgets, or having to take the show on the road, ... the times, they are a changin'.

Fear not; help is on the way. A relatively new multimedia company in the Southeast may meet your needs. To meet the demands of fiscal constraints and in response to feedback, Thayne Saunders, owner of Specialty Entertainment Multimedia Productions (SEMP), Jacksonville, Florida, has created a line of affordable planetarium star programs. The programs, developed with business partner and former planetarian Stephen Meeks, are sophisticated and versatile and can be used in any planetarium.

*Stars of the Night Sky* is the centerpiece offered by SEMP. The 25 minute narrated tour of the night sky is accompanied by a rich musical sound track and introduces

the audience to the history of astronomy and the skylore associated with seasonal constellations. Thayne answered requests by planetarians attempting to meet school curriculum needs, by creating a 15-20 minute alternative.

This version allows the planetarian to focus on the current season, and allows time for a question and answer session with students.

This program could also be used as an adjunct to star parties, or those times when portable planetariums are used; ask Dave Hostetter how he survived five years in Lafayette. He could have used such a program then. Recently, *Stars of the Night Sky* was presented in a slide show format in Florida to local school board officials, and they were very enthusiastic. Other programs in the making include an educational video created with the Weather Channel, a solar system detective star show for 2nd-4th grades, and a soon to be released full length planetarium star show about the history of the space program. To meet the needs of the growing population, a pre school program for 3-4 year olds, complete with interactive instructions is in the works. A lady or gentleman with an umbrella tells stories about the sky! SEMP will also create programs you may need in your facility, or even provide a script, narration and musical score mixed for you, based on whatever visuals you have on hand. Look for Thayne Saunders at Roanoke in June.

I am planning to write a planetarium folklore article for the fall 1998 *Southern Skies*. Please talk to me at SEPA '98. I'll have my notebook and would like to compile stories about how various planetariums were named: who was Settlemyre? What did Alexander Brest do? Why is it called the Sudekum or the Kelly? I'm sure your planetarium has a special interesting history. Do a bit of investigating, and I'll write it up for fall. I will serve as roving reporter for the summer issue, which will be





# Kodalith Text Slide Blues: A Solution with Character

I need some text slides,  
Background darker than night,  
I need them today,  
But I just can't get it right.

I'm worried,  
And I got no time to lose,  
I gotta find a way to get around  
The Kodalith Text Slide Blues

Are you sick of shooting text slides? Have you ever needed one in a hurry and just didn't have the time to do it? Or, perhaps you're like me and you just don't have the equipment or skill to shoot Kodalith text slides.

Since the latter is my situation, I needed an easy way around the problem. Having the local camera store create the text slides on their computer and printing them on slides was my best answer. Unfortunately, the background was never dark enough and I had to hand paint the slides to achieve the desired black level. It also took at least three days; hardly useful if you need them in a hurry.

The solution I am offering here is only useful if you have a video projector. If you do, the solution is easy: a color video character generator. They are made to be used by anyone who dubs videotape and wants to include titles. The background can be made many colors including transparent. This allows you to actually show text over video either as just a nice background, or to make a point. The one I have can hold up to twenty pages of text, can scroll text, and can run a series of pages in a loop. This last feature allows you to show text on the dome while the audience waits for the show to begin. I use it for such announcements as show schedules and special events. It is also useful to put up interesting information such as *This Week In Space History* or a *Sky Almanac*. It is fairly versatile.

Getting one of these devices can be the tricky bit because they retail for around \$200 - \$250. We managed to get ours donated because the president of a local electronics company happens to be one of our board members and has always been very generous to us. He is also one of the

officers of his Kiwanis Club and was able to convince them to donate the money for it, and he sold it at cost. Without him, this probably would never have happened, but it would have paid for itself in the long run in time saved and money spent on materials.

I would like to recommend this option to those of you who have video capability as a great time and labor saving device.

I was so impressed with it, I bought the company. (Well, I really didn't, but if I had had a spare million dollars or two, I might have. Of course, if I had a spare million or two, I probably wouldn't be writing this now; I'd be in Hawaii!)

Thomas Finicle, Jr.  
The Wetherbee Planetarium

Paid Advertisement

## Wanted: Planetarium Curator

Wetherbee Planetarium in Albany, Georgia is taking applications for the position of Curator. The theatre is equipped with a 1964 Spitz A3P star projector, a 20 foot dome, and seating for 36. It employs a three screen standard format with a three screen panorama system, and it is manually operated. There is a fixed video projector with a laser disk player.

The position is dependent upon funding. Excellent communication in English and good presentation skills are required. Preference will be given to applicants with a degree and/or relevant experience. Duties include presenting live and pre recorded shows for school children and the public, maintaining the planetarium, and preparing new shows. Send your résumé to the following address:

The Wetherbee Planetarium  
Thronateeska Heritage Center  
100 Roosevelt Avenue  
Albany, GA 31701

# News from SEPA States

George Fleenor  
Bishop Planetarium  
Bradenton, FL

## Astronaut Memorial Planetarium & Observatory, Cocoa

Ian Griffin reports: In the last year we have installed a Sky Skan interactive system, and are now working on our first interactive planetarium shows (a planets show and a death of the dinosaurs in interactive show for summer '98) and also finishing up our new laser show The Doors which should open on 24th April. Our new Mannheim Steamroller Laser show played to packed houses during the Xmas season, and proved to be an entertaining mix of laser, Digistar, all skies, and video effects, all produced by our team of Joe Tuccierone, Mark Howard, and Ian Griffin.

We had a Web cam up and running for the February solar eclipse, and had over 17,000 visitors to our site during the eclipse. We plan to have the Web cam up and running every clear night in the not too distant future.

On the astronomy front, we have discovered four asteroids using a CCD attached to our 12" telescope at the observatory. The first asteroid, 1998 BU25 was discovered on 26th January, and since then we found 1998 DV1, 1998 DT10 and 1998 FA (found on March 16th). With another few years of observations we will be able to name these asteroids.

Staff wise, we are still looking for an engineer, and the planetarium Director Ian Griffin produced a new heavenly body on March 21st, when his third child Aengus was born.

## Bishop Planetarium, Bradenton

George Fleenor reports: The Bishop Planetarium dedicated its new telescope and reopened its newly renovated observatory on February 3rd as scheduled. Astrophotographer/Imager Jack Newton gave a fabulous talk on astrophotography for the novice and experienced alike. One hundred forty people attended the dedication on what was one of the worst weather nights possible. After the dedication was over and visitors had left, the sky parted for first light to be witnessed by George Fleenor and staff member E. Bill Serdyn.

While George Fleenor was on vacation in Aruba (with a few other SEPAn's and other

crazy astronomy types for the eclipse), the planetarium hosted a partial solar eclipse party. A couple of hundred people enjoyed a special lecture by Sarasota astronomer, Chuck Pisa, and direct observation through the 8" and 6" telescopes. The views were offered through white light and hydrogen  $\alpha$  light. A video image was also piped through to the museum and planetarium.

The planetarium staff also conducted an observing session on March 28th on



downtown's Old Main street, as a part of Bradenton's Annual Arts festival. Old Main Street was blocked off for a two day festival full of arts, crafts, games, music, and more. Dozens of people participated in true side walk astronomy and hundreds of others were exposed to the planetarium and astronomy club.

The planetarium is also getting ready for National Astronomy Day activities. The usual displays of telescopes, computer software, and other observing aids will be set up in and around the planetarium. There will be a couple of free star shows, lectures, and observing sessions, both solar and nighttime, offered to visitors. Should be fun, as usual.

The next scheduled star show will be Loc Ness's recent production of Light Years From Andromeda. The next matinee laser show will be Parrothead Jam featuring the music of Jimmy Buffett. These programs

are scheduled to run through the summer months. Several new laser shows have also been produced. Recent additions include: TechnoFantasies, Metallica, Kiss, Aerosmith, and of course a new Darkside of the Moon. A recent upgrade to the laser optical bench yields brighter, larger, and sharper laser images. Of course, all the shows are produced in ILDA format.

Several Summer Camps are being offered through the facility. Two of these camps will be Space Camps. The camps will be geared towards middle school and feature a side trip to Kennedy Space Center and Cocoa's Planetarium. Watch out Ian, here we come!

Recently the Parker Manatee Aquarium added a new pool guest. A 4½ year old Manatee named Newton joins 49½ year old Snooty. Snooty had never seen an other manatee since his birth. It was an event in itself. Both are doing fine and the combination has helped increase visitation to the whole facility. Both were born in July: this year Newton turns five and Snooty turns 50. In honor of this milestone, in addition to Laser Fantasies turning 18 years old, the Bishop Planetarium is choreographing, with a contracted laser company, an outdoor laser show which will be held in conjunction with or following the July 4th celebration held on the waterfront. Each year an estimated 100,000+ visitors gather at the waterfront adjacent to the planetarium for fireworks. This year we plan to capture their attention with a multi benched outdoor laser show. The music will be simulcast through a local FM radio station. Should everything fall into place as planned, it will be an amazing event complete with planetarium and manatee images dancing to the rhythmic beat! Keep your fingers crossed.

Buehler Planetarium, Davie

Dave Menke reports: Sharon Parker, formerly Assistant Director, has been appointed to her second year as Director of Distance Learning at Broward Community College. Susan Barnett will remain as Interim Assistant Director as she has been.

Director Dave Menke has been serving on IPS president Thomas Kraupe's staff as chairman of IPS Professional Services. Dave is also Secretary General and COO of the International Planetarium Directors Congress.

The Buehler Planetarium is show

ing Cosmic Catastrophes in March, The Cowboy Astronomer in April, and nothing in May or early June; also showing is In My Backyard for children now through May 3.

The Buehler Planetarium will close in early May for 6 weeks to renovate the theatre (seats and carpet only): will reopen June 24.

We are doing well with our outreach program. While the large theatre is closed, we will be doing more mobile astronomy programs with the two portables: Apollo and StarLab. We also have a smaller, 15 dome theatre, with a Goto Mars 2 model, and it is running short shows (10 minutes) and also houses a gallery of astro photos. Currently, we are displaying Brian White's remarkable color photos of Comet Hale Bopp (2 by 3) and we have a 3 D display of the Comet from Bryan White. Mr. White attended SEPA last year with his great pictures.

Kristin Lester is doing well as our Intern, but she ends June 30th, and we will have a new Intern (not yet chosen). Candidates welcome until April 3rd deadline.

Orlando Science Center, The Dr. Phillips CineDome, Orlando

Paul Trembly reports: we are starting laser shows again with an AVI OmniScan projector. Shows open April 3rd. We had over 500 visitors for our Solar Eclipse watch. Visitors, for the first time, got to view in both white light and H α. The solar disk was nicely active for the event.

Alexander Brest Planetarium, Jacksonville

Submitted by Patrick McQuillen: the Alexander Brest Planetarium is running Bear Tales and other Grizzly Stories by JHE as our Spring public program. The show is well received by all except the staff of the planetarium (but only because we get that darn Waltzing With Bears song stuck in our heads).

We are gearing up for summer camps. This year we are planning week long summer camps at the Challenger Learning Center that we manage. This should be interesting because the Challenger Learning Center is not located at the museum but is located at one of the area middle schools. This makes it harder to plan activities because that is the only thing at the middle school. There is no planetarium that you could easily take the kids for an hour. So

News from SEPA States  
continued

George Fleenor  
Bishop Planetarium  
Bradenton, FL

George Fleenor  
Bishop Planetarium  
Bradenton, FL

I will let you know how it turns out.

We are planning another trip to the Kennedy Space Center to view the STS 91 launch on May 28. The first trip, last fall, was very successful. So as things usually work, we were asked by higher ups if we could do more of them. But it does get me down to see the launch, so it isn't that bad.

Planning for SEPA 99 continues. We are working on selecting a hotel at present. As soon as we chose I will let everyone know costs, dates, etc. Look for that information soon.

In a personal note, I was chosen as one of the two educators from Florida for a program sponsored by JPL called Ambassador to Jupiter. This program hopes to expand the educational outreach of NASA for the Galileo spacecraft project. For me it means doing more programs that focus on Jupiter. Also, my wife and I just purchased our first house, had it built and everything. So if anyone wants to stop by Florida and visit, we have room for you (as soon as we find space for the stuff in all the boxes.)

Aldrin Planetarium, West Palm Beach

Erich Landstrom reports: the Aldrin Planetarium at the South Florida Science Museum was officially rededicated by Dr. Buzz Aldrin on Sunday, March 1st during a black tie reception to celebrate the completion of \$250,000 in renovations. The Apollo 11 astronaut joined the museum's board of directors, executive director, and director of astronomy education in the ribbon cutting ceremony. His remarks focused on the future of space exploration and the role of the planetarium in science education.

During his two day visit, Dr. Aldrin and his wife spoke with high school students at the John F. Kennedy technology and engineering magnet school, met with representatives from Pratt & Whitney, shook hands, signed autographs, and showed off his Buzz Lightyear dolls.

The grand reopening visit by the planetarium's namesake was part of SpaceWeek activities that began with the solar eclipse on February 26th. The Aldrin Planetarium presented Operation: Eclipse, a live presentation with real time images of the solar eclipse from Internet graphics, satellite television, and the CCD camera mounted to the Gibson Observatory.

Six hundred twenty five people concurrently walked the Path of Totality set up

in the museum's backyard, where telescope stations operated by volunteers from the museum and the Astronomical Society of the Palm Beaches provided direct and indirect observation of the Sun, along with an excellent hands on project.

A survey was taken by observers from ages 2 - 70 with a 2.5 refractor with a T1 solar filter and a 20mm eyepiece. After looking, they were then invited to trace out the eclipse on graph paper, noting the percentage of cover and sunspots still visible where the Sun was not occulted. The resulting sketchbook is also a flipbook of the eclipse's progress.

SpaceWeek and Operation: Eclipse showcased the new equipment in the Aldrin Planetarium: a Sony VPH D500 multiscan video projector, a Panasonic AG 5700 video cassette recorder, two Pioneer CLD V2600 laser disc players, an Allen & Heath 20 input 8 track recording console, a Tascam 102 MKII tape deck, an Alesis XT ADAT machine, an East Coast Control System automation, a Joe Hopkins Engineering laser system, the refurbished Spitz A3P star projector, 61 new seats in a unidirectional horseshoe, new carpeting, new paint, and a new director of astronomy education, Erich Landstrom.

During Summer '98, the Aldrin Planetarium switches to an extended summer schedule with summer camps in the morning, followed by afternoon presentations of Destination Universe: Our Future In Space from the Davis Planetarium, our live starshow Night Sky over the Palm Beaches, and then Laser Kids II and Way Out Rock laser light concerts by JHE. During the weekend evenings, matinee and midnight laser concerts are added, including Laser Jimi Hendrix and Laser Floyd: Dark Side of the Moon.

Freeport McMoRan Planetarium and Observatory, Kenner

The Freeport McMoRan Planetarium is currently showing several in house productions including a Sky Tonight presentation and also a look at the subject of Archaeo Astronomy. We continue to do extensive work with our Young Astronauts program. In April we arranged to take them to Washington, DC, and in May we plan to take them to the NASA Stennis Space Center in Bay St. Louis, Mississippi.

Late last year we received a \$2 million educational grant from NASA towards building a new 50 planetarium, but unfortunately at this date nothing has been decided.

Finally, our long awaited Space Station exhibit should be opening sometime in July, but I am not 100% confident of this, since I have been reporting to you that it should have been opened in late 1995. We have also been doing a lot of work with our local astronomy club, the Pontchartrain Astronomy Society, in doing numerous telescope presentations at local schools and other educational facilities.

Louisiana Nature and Science Center Planetarium, New Orleans

Mark Trotter and Dennis Cowles are busy as usual. For the public they are showing Planet Patrol: A Solar System Stakeout, The Sky Tonight, and The Family Laser Show. For school groups they also run The Little Star That Could.

On Friday and Saturday nights they do laser shows. The current lineup includes Pink Floyd's The Wall, Rush 2112, Led Zepelin, Pink Floyd's Dark Side of the Moon, The Alternative Laser Show, Metallica, and The Best of Pink Floyd.

They are making preparations for the Louisiana Nature Center's Space Day in July (no, the fake one in May, which is really stupid because everyone knows that Space Day is supposed to be close to the Apollo 11 anniversary). They are also getting prepared for summer camps, which are normally extremely busy.

They have rearranged about half of the planetarium star theatre to make room for more shelves, so they can now store more stuff, including the Dynamax 8 telescope which the former Nature Center director arranged to have donated to the planetarium. The telescope is in great shape, despite its age.

They are expanding their programming

beyond the planetarium to the Nature Center classrooms. The new programs are scheduled to begin in September, and will include meteorites, the study of light, planetary geology, radioactivity, and more.

They are continuing the monthly special topic series, Science Insight, which runs on the first Saturday of each month. Science Insight programs this year have included a talk by a local television meteorologist and El Niño, a discussion of the connection between Easter and the calendar, a program on the latest findings about Mars, and a program about how lasers operate.

Future programs will include the Galileo findings about the Galilean moons, the Earth considered from a planetological perspective, a cryogenics demonstration by Air Products Corporation (the people who make the fuel for the shuttle), and a program on meteorites.

They are continuing to upgrade their planetarium's equipment. There are short term plans to add a digital video editing system, and there are long term plans to upgrade the laser system as well as the hardware and software for the automations system.

St. Charles Parish Library Planetarium, Luling

Springtime at the St. Charles Parish Public Library and Planetarium brings the beginning of the last minute rush of school visits, not only for those children who flood into the library to complete their projects but also the classes which have decided to wait to the last minute to introduce their students to the wonder and excitement of the planetarium.

To add to the crush, we have just lost one key library administrator, we may lose a second position, and the Head Librarian is retiring in June after 20 years of service. Needless to say we are running short of staff. As a result, the planetarium is recycling The Universe of Dr. Einstein for the spring public shows. It has been many years since this old standby has been produced, but I think it still can be a popular show.

Lafayette Natural History Museum Planetarium, Lafayette

David Hostetter reports that the Lafayette Planetarium began presenting the Adler Planetarium production, Is There Life on Mars on March 17. As many other

News from SEPA States  
continued

Michael Sandras  
Freeport-McMoran  
Planetarium  
Kenner

planetarians know, this is a very busy time of the year for this facility. Dave is also excited to report that plans are going ahead for their new facility. By the time this report comes out, there should have already been an architect's meeting to plan this facility.

Michael Sandras  
Freeport-McMoran  
Planetarium  
Kenner

The public has very well received the meteorite exhibition, and it seems the visitors to the museum are really enthralled by this exhibit. Finally, the planetarium has been given a satellite dish by a local TV station. Unfortunately this dish has not been installed.

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#### Gibbes Planetarium, Columbia

Todd Slisher  
Gibbes Planetarium  
Columbia, SC

Here in Columbia things are moving at a snail's pace with the new facility, but rapidly drawing to a close with the current planetarium. Our last feature show, Destination Mars, opened April 4th and was well received by audience members. Other activities this spring included a space explorer day for brownie troops, a partial solar eclipse watch, and the normal slew of spring school shows. Our final school programs run until May 1st and public shows run until May 31st. After this point, the Gibbes Planetarium will be closed and all the equipment transferred to the South Carolina State Museum for the new planetarium project.

Many of you have expressed concern over the fate of the facility and staff. There is mixed news on that front. A budget request for 14 million dollars to construct the new 50 planetarium, observatory and large format theater is still in front of the SC State Senate awaiting a vote. If passed, a new theater could open as early as fall 2000. Currently Jeff Guill is already at the State Museum supervising the new project.

Unfortunately, the budget proposal for other positions failed in the Senate. Although the State Museum Foundation has pledged to raise the money, this leaves the rest of the staff in a precarious state. The current Art Museum has opened up a computer/AV specialist position to retain one staff member, hopefully Bryant Siegfried, and assuming the money is raised, Todd Slisher will transfer to the State Museum this summer to run an interim astronomy program until the new planetarium comes online. As always, keep your fingers crossed for us.  
Dupont Planetarium, Aiken

During the summer, the Dupont Planetarium at the Ruth Patrick Science Education Center will be showing The Voyager Encounters, Journey into the Living Cell, and Through the Eyes of Hubble. For the 1998-1999 academic year there will be three new shows available. Larry Cat in Space and More than Meets the Eye will be available for school groups and for the general public. A special program called How Obscure will also be introduced during this year for school groups.

The Dupont Planetarium has the only known camera obscura in the world that shines onto a planetarium dome. For those who are unfamiliar with this, a camera obscura is sometimes called a pin hole camera. Smaller versions of this can be created by making a small pinhole in a box, providing the source for its name. An image from outside of the box then appears on the inside of the box. The image appears inside of the box and upside down because of the simple fact that light waves travel in a straight line.

There is a special window in the Dupont Planetarium that makes the planetarium act like a giant pin hole camera. This new show will use this unique camera obscura as the main event. The focus of this program is light. The camera obscura will be used to demonstrate how we see and to help students understand how the lens in a contemporary camera works. Students will also learn about sundials using the two sundials in front of the Ruth Patrick Science Education Center. Mathematical explanations will be presented so that students can understand how and why a sundial works. This program will focus students attention and enlighten them about the simple physics of light.  
Settlemyre Planetarium, Rock Hill

In Rock Hill they are happy to announce the position of planetarium educator has been filled. Ms. Rebecca Masters will be joining their staff starting in April 1998. We extend a hearty congratulations and welcome her into the SEPA and SCOPE (South Carolina Organization of Planetarium Educators) region. [Let's hope she doesn't run off upon meeting the rest of us. Todd] Their previous educator, Barbara Reynolds, reports that she is pursuing various interests at home and will be missed but not forgotten.

Two new weekend programs are in the works. Light Years from Andromeda and Bear Tales will join the lineup. In addition Glen reports that he is planning a new Christmas show. Also during the summer they will continue the SC Jr. Scholars summer camps.

Glen also reports great success with his integration of York county school curriculum goals such that in addition to adding the fifth graders, the eight grade science teachers will begin a trial year with them. If all goes well, the following year they should be doing programs for all York county eight grade students. This should push their butts in the seats count to around 21,000 22,000.

As a final note, Glen hopes to add six additional projectors to the theater next

year, possibly as an All Sky system, if he can convince administrators to shell out the bucks. He hopes to see you in Virginia.

#### Hooper Planetarium, Greenville

Doug Gegen reports that things are going well in Greenville. They opened the Loch Ness show, Mars, as a Friday night public offering this spring to correspond with the current Mars spacecraft observations. They are also gearing up for their Summer teacher training classes. This program is run under a state grant and includes science teachers from all over South Carolina. In one of several week long sessions, elementary and middle school teachers are run through many different science disciplines. The training sessions are activity oriented and by the end of the course teachers have assembled an entire pack of materials from lesson plans to ready made activities worth over \$600.

Doug also reports getting ready for summer science groups for families. These are oriented around stargazing activities and provide a stimulating look at the night sky from the observatory. In addition, they are planning ahead for next year's school groups. A new program on the nature of light will be premiered along with corresponding auditorium activities.

Todd Slisler  
Gibbes Planetarium  
Columbia, SC

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#### Craigmont Planetarium, Memphis

Duncan Teague and Lisa DuFur have been trying for four years to secure a grant to acquire a satellite dish. They want to resume hosting interactive video teleconferences like the Private Universe Project and the Tomorrow's Astronauts programs they offered with the assistance of Time Warner Cablevision.

A Goals 2000 grant awarded to the planetarium from the state will allow for the purchase and installation of a dish,

MCET registration fees, a new computer, and a large format printer.

At last.

THE DEADLINE FOR THE NEXT IS  
SUE OF SOUTHERN SKIES IS JULY  
1. SEND SUBMISSIONS ON A 3.5  
DISK OR VIA EMAIL ATTACHED FILE  
TO STARMANTNG@AOL.COM NOT  
TO TEAGUED1@TEN.NASH.TEN.K12.

Duncan Teague  
Craigmont Planetarium  
Memphis, TN

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#### Arlington Public Schools Planetarium, Alexandria

Lee Ann Hennig reports as a representative of a group of nine planetariums in the Fairfax area. They are all on the typical nine month contract school year. Some of them teach regular high school astronomy classes. She also says they are all fighting the budget battle and holding their own so far. There a couple of new faces in their group. The main group does a good

job of taking the new comers under their wings and helping them learn the ropes. Lee Ann does several mostly live public programs on demand, through the year, as well as scouting groups at the rate of 1 2 each month. She says she will be going to the IPS meeting in London so may not be able to join us for the SEPA conference in Roanoke, but a few others in the group may be there. She plans to attend the MAPS conference in West Virginia. Check

Dave Maness  
Peninsula Planetarium  
Newport News, VA

out her Web page at: <<http://www.fcps.k12.va.us/DIS/OHSICS/planet/index.htm>>. Be sure to use the capital letters as written.

#### Virginia Living Museum, Peninsula Planetarium, Newport News

Dave Maness  
Peninsula Planetarium  
Newport News, VA

The Peninsula Planetarium is getting ready for the spring rush of school shows. Laser shows have ended for this year with several sell outs. It was one of the more successful runs in recent years. Our success seemed to hinge on paid advertising in various media, especially radio. For the spring program we are running Life Beyond Earth from the Davis Planetarium in Baltimore. We thought that it would compliment our exhibit of Joe Tuciaron's space art which remains on display through the end of May. Thanks to Ken Wilson and the Science Museum of Virginia at Richmond for the generous loan of items for our exhibit.

We are continuing to develop plans for a new 50 theater and a new building to house the main exhibits of the Virginia Living Museum. Ground breaking should be within about a year's time, if all goes as hoped. We hope to even have space space related exhibits, that is. That will be a first for us. Currently the only exhibit space they will allow us is in our entrance way to the theater and the observatory, as well as an occasional temporary exhibit. If you have seen any very good astronomy exhibits recently, I would be very glad to hear about them. We also plan to improve our observatory with particular attention given to disability access.

#### Science Museum of Western Virginia, Hopkins Planetarium, Roanoke

Gary Close reports that the long anticipated renovations are now taking place!

So, they are temporarily closed. Sky Skan is installing Spice automation for video, slides, and effects. They are also putting in a new Barco 1209S video projector, a conic tilt pan mount for the existing Barco 701S video projector, line doublers for the video, and laser disc players (SVHS and Beta camSP (component video which is frame accurate and broadcast quality) VCRs,) a Precision XY Slew. East Coast Control Systems is installing a new automation system for the Spitz 512 as well as a new control panel. They are also doing physical renovations of the control area, madly preparing for SEPA conference. (Mailing will be soon.) Gary told me to ask that people please send registration materials along with paper submission forms as soon as you can. Deadline for early registration will be May 15.

#### Science Museum of Virginia, Ethyl Universe Planetarium, Richmond

Eric Mellenbrink reports that things are moving at a steady pace with preparations for renovations to take place after Labor Day. Until then, there will be six IMax Theater films and two planetarium shows per day. The film Everest just began its run through the end of summer. Other film offerings include Alaska: The Spirit of the Wild, and To the Limit. The planetarium programs are Jeff Bowen's production called Lifestyles of the Stars and a live presentation which changes every two months called The Night Sky, shown daily.

After Labor Day the planetarium will shut down operations for six months. During that time, Spitz will be re coating the domed screen. The theater will also get new seats, new carpeting, and aisle lighting. The theater is scheduled for reopening on March 1, 1999.

#### Berkeley Planetarium, Hedgesville

In the win some lose some department, after a wait of eight years, the powers that be finally made use of the paint purchased by the Hedgesville High School faculty senate to paint the background of a space mural done by students outside of Berkeley County Planetarium when the school first opened in 1977 or so.

A long forgotten principal had painted the background white (as if outer space is really that color). After a run in with the powers that be over a wish to have it paint

ed black (That's satanic, cried people in charge. You can't do that! I guess then, so is outer space for that matter). Elizabeth Wasiluk, the planetarium's director, settled for an almost black navy blue. (The trick was, relates Ms. Wasiluk, to show the officials a very lightly painted swatch and then have the background painted very dark. Looks velvety back. Nice.)

Alas, it wasn't to stay. A few months later the powers that be placed the pipes to the new sprinkler system right over the mural.

Elizabeth Wasiluk  
Berkeley Co. Planetarium  
Hedgesville, WV



# Hubble Images CD ROM for Windows and Macintosh

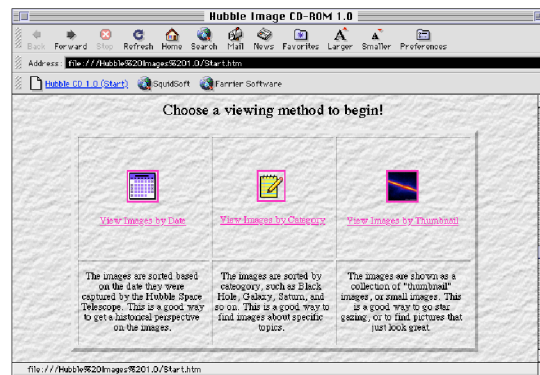
It's terrific.

The Hubble Images CD ROM contains 227 selected images from over 100,000 taken by the Hubble Space Telescope. You can access all these images from the Space Telescope Science Institute for free, but here they are in a convenient html format. Believe me, the images on this CD ROM display faster than you can download them through an ISDN line.

The CD is organized as though you are browsing pages on the World Wide Web; html tags take you to the file you want to view on the disk. Version 3.01 of Microsoft Internet Explorer is included on the CD, but if you already have a copy of Explorer or Netscape's Navigator or Communicator on your computer, you can use them without installing anything extra.

Each of the images is available in three forms. There is a thumbnail version to give you a preview of the full size image. These thumbnails are usually 10-30 kilobytes in size. There is a page format image that serves as the basic image displayed by clicking on the appropriate link. These images range from 50-150 kilobytes in size. Finally there is a high resolution version of each image. These files may be up to 350 kilobytes in size.

The CD's cardboard envelope/mailler recommends that you view the images in 256 color (8 bit mode) on your Windows computer and in thousands of colors (16 bit mode) on your Macintosh. Each of the images looks absolutely marvelous, and it's a pleasure to have such ready



access.

The html coding organizes the images in three different ways. You can elect to view them chronologically from August of 1990 to November of 1997. I was surprised to see that several months may not be represented during that time period. I don't know if the missing months are the result of the Space Telescope Science Institute's not releasing any images for those months or the distributor's selection process.

The second method for viewing images is by subject. You can go to an alphabetical listing of planets, moons, asteroids, and galaxies to browse images on a certain topic instead of having to wade through the chronological listing to see if the object of your interest was photographed that month.

The third viewing method has the 227 images grouped together on 16 pages. This is what browsing is all about. You can see 15 thumbnail images at a time (two on the last page), and you can get an up close and personal view of whatever happens to strike your fancy.

This product shows the advantage and low cost of the CD ROM combined with html coding for media distribution. It's really nice to have all these images in one place. You probably won't argue about what images have been chosen for the CD.

Order the \$24.95 Hubble Images CD ROM by calling (800) 894-6758. If you want more information or if you need to send a purchase order, then I suggest you contact Farrier Software through their Web



Review by  
Duncan Teague  
Craigmont Planetarium  
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# HST's Greatest Hits of '96

Duncan Teague  
 DT Publishing  
 3308 Bluemont Drive  
 Memphis, TN 38134-8454

The Space Telescope Science Institute (STScI) provides slides of Hubble images to individuals within regional affiliates who arrange to duplicate and distribute them. At our '96 conference, I was designated to receive and coordinate STScI materials and make them available to SEPA members.

Below you'll find a brief description of all 40 images distributed in 1996. Numbers next to the descriptions are shortened versions of STScI press release numbers, e.g., 21a refers to PR 96 21a.

The entire set of 40 slides is \$50, including postage and handling. Send your check or purchase order to the address at left.

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|--|---|
| <p>01.a Hubble's deepest ever view of the universe, revealing 1,500+ extremely faint galaxies in various stages of their development</p> <p>01.b Sample galaxies from the same Hubble deep field</p> <p>02 The inner region of a warped dust disk around Beta Pictoris once hidden because of the star's glare</p> <p>03 An image of the Egg Nebula taken by WFPC2; it shows the emergence of mysterious searchlight beams from behind a dying star</p> <p>04 The first direct image of a star other than the Sun: Betelgeuse.</p> <p>05 In more detail than has ever been seen before, the process a star like the Sun goes through when it dies</p> <p>09.a In clear, detailed pictures the first ever images of Pluto's surface; four views</p> <p>09.b Pluto surface map</p> <p>10 Gravitational lens effect captures image of primeval galaxy</p> <p>11 Images of globular cluster Mayall II, consisting of 300,000 old stars, in orbit around the Andromeda galaxy</p> <p>13.a The Helix Nebula, NGC 7293 showing collision of gases near a dying star</p> <p>13.b Helix Nebula detail with cometary knots surrounding the dying star</p> <p>14 A view of Comet Hyakutake that focuses on the near nucleus region of the comet</p> <p>15 Three layers of Uranus's atmosphere</p> | <p>taken with infrared filters; both clear and hazy layers created by a mixture of gases</p> <p>16 Image taken of Saturn where its rings appear edge on because of the position of the Earth in Saturn's orbital plane</p> <p>17 A view of several star generations found in the central region of the Whirlpool Galaxy</p> <p>18.a A rare view of Saturn's rings seen just after the Sun had set below the ring plane</p> <p>18.b A series of 10 images of several small moons orbiting Saturn</p> <p>21.a NGC 1365, a barred spiral galaxy located in the Fornax cluster</p> <p>21.b NGC 4639, a spiral galaxy located in the Virgo cluster</p> <p>22.a The Crab Nebula and a detail of the pulsar in its center</p> <p>22.b Sequence of three images showing changes in the Crab Nebula pulsar</p> <p>23.a Huge, billowing pair of gas and dust clouds in Eta Carinae</p> <p>23.b Expansion of Eta Carinae debris</p> <p>25 Hubble's 100,000th exposure captures an image of a distant quasar</p> <p>27 A vast nebula, NGC 604, which is known for a great starbirth region</p> <p>29.a 18 gigantic star clusters which may be building blocks for a new galaxy</p> <p>29.b Blue sub galactic clumps which may be galaxies under construction</p> <p>30 Jupiter's moon Io passing above turbulent clouds</p> <p>31 Clusters of stars and a fishhook shaped cloud of gases found in NGC2366, a giant star forming region</p> <p>32 Changes in Jupiter's auroral emissions</p> <p>33 Views of weather on opposite hemispheres of Neptune</p> <p>34 A Martian dust storm around the edge of the north polar cap</p> <p>35.a A survey of quasar host galaxies</p> <p>35.b A quasar caught in the act of colliding with its companion galaxy</p> <p>36.a Supersonic comet like objects in the Cartwheel Galaxy</p> <p>36.b Cartwheel Galaxy composite image</p> <p>36.c Cartwheel Galaxy illustration</p> |
|--|---|

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Below you'll find a brief description of all 40 images distributed in 1997. Numbers next to the descriptions are shortened versions of STSci press release numbers, e.g., 09a refers to PR 97 09a.

The entire set of 39 slides is \$48.75, including postage and handling. Send a check or purchase order to the address

01	Central supermassive black holes in galaxies NGC 3377, NGC 3379, and NGC 4486B:	17	stars surround their mother
03	SN1987A Fireball: One tenth light year long dumbbell structure expanding at six million miles per hour in supernova 1987A	18	A collision between two spiral galaxies in the heart of galaxy Arp 220
08	Changes in the nucleus of Comet Hale Bopp as it moves closer to the sun beginning in September 1995	19	Fireworks near a black hole in the core of Seyfert galaxy NGC 4151
09.a	Transition from spring and summer in Mars's northern hemisphere; photo taken shortly before opposition	20	STIS reveals an invisible high speed collision around a supernova
09.b	Three photos of Mars taken six hours apart with 90 degree difference between images; photos taken shortly before opposition	21	Hubble pinpoints the optical counterparts of a gamma ray burst in a distant galaxy
11	The Egg nebula in which stars are born and die violently; photo shows jets of gas being blasted into space	22	Hubble captures a volcanic eruption plume from Jupiter's moon Io
12	A supermassive black hole located in galaxy M84	23	A gamma ray burst blazes from a titanic explosion in deep space
13	NICMOS captures region of the Orion nebula filled with action as a center for the birth of new stars	24	Hubble's look at Mars shows a canyon dust storm, cloudy conditions for Pathfinder's landing in July 1997
14	Supernova 1987A: different colors represent different elements in the ring	24.a	Dissipation of a large dust storm on Mars
15.a	A view of Mars's cloud cover	24.b	Hubble shows dust and water ice clouds exhibit substantial daily variations
15.b	Seasonal changes in Mars's north polar ice cap	25	Powerful telescopes discover the largest galaxy in the universe
15.c	Four views of Mars rotated 90 degrees between images during summer in Mars's northern hemisphere	26	Hubble separates components in the Mira binary star system
16	The Cone Nebula: six baby sun like	27	Hubble reveals huge crater on the surface of the asteroid Vesta.
		28	Hubble finds a bare black hole pouring out light.
		29	Hubble shows blobs of gas formed by some nova outbursts.
		30	Hubble keeps track of a fading gamma ray burst.
		31	Mars at the beginning of autumn in the Martian northern hemisphere.
		32	Hubble sees a neutron star alone in space.
		33	Hubble identifies what might be the most luminous star known.
		34.a	Hubble reveals stellar fireworks accompanying galaxy collisions.
		34.b	Detailed images of colliding galaxies.
		35	Hubble shows images of a blue straggler star.
		36.a	Hubble tracks clouds on Uranus.
		36.b	Hubble spots northern hemispheric clouds on Uranus.
		37	Hubble shows infrared view of moon, ring, and clouds of Jupiter.
		38.a	Hubble sees supersonic exhaust

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# JPL '98 Slides

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NASA JPL has sent us the following slides for the Galileo Mission and others. Slides are \$1.25 each.	
P 35036B	Launch of Galileo on STS 34 Atlantis
P 35213	Deployment of Galileo and IUS
P 37218	Venus Colorized Clouds
P 37327	Moon: Western Hemisphere
P 37539	Infrared Image of Low Clouds on Venus
P 37593	Earth: Ross Ice Shelf, Antarctica
P 37630	Global Images of Earth
P 40449	Gaspra: Highest Resolution Mosaic
P 41383	Gaspra Approach Sequence
P 41432	Moon: North Pole
P 41474	Earth: Northeast Africa and the Arabian Peninsula
P 41493	Earth: False Color Mosaic of the Andes
P 41508	Earth: Moon Conjunction
P 42501A	South Polar Projection of Earth
P 42964	Asteroid Ida: Five Frames Mosaic
P 44130	Asteroid Ida: Limb at Closest Approach
P 44131	Ida and Dactyl: Enhanced Color
P 44297	High Resolution View of Dactyl
P 44520	Asteroid Ida Rotation Sequence
P 44542	Comet Shoemaker Levy 9 Fragment W Impact on Jupiter
P 47058	Ganymede: Comparison of Voyager and Galileo Resolution
P 47065	Ganymede: Mixture of Terrains and Large Impact Crater in Unuk Sulcus Region
P 47162	Full Disk Views of Io (Natural and Enhanced Color)
P 47179	Three Views of Io
P 47182	Jupiter's Great Red Spot
P 47183	Dark Bands on Europa
P 47194	Live volcano on Io
P 47196	False Color Great Red Spot
P 47903	NIMS Ganymede Surface Map
P 47905	Five Color Views of Io
P 47906	Europa In Color
P 47935	Io Glowing in the Dark
P 47961	Ganymede's Nippur Sulcus
P 47970	Ganymede Color Global
P 47971	Io in front of Jupiter
P 47972	Changing Volcanoes on Io
P 48035	Stereo View of Ganymede's Galileo Region
P 48040	Natural and False Color Views of Europa
P 48063	Thunderheads on Jupiter
P 48112	Ganymede Uruk Sulcus High Resolution Mosaic Shown in Context
P 48113	Ganymede Galileo Regio High Resolution Mosaic Shown in Context
P 48114	Jupiter's Great Red Spot
P 48122	Two views of Jupiter's Great Red Spot
P 48127	Ridges on Europa
P 48145	Io: Volcanically Active Regions
P 48188	The Main of Ring of Jupiter
P 48231	Callisto Crater Chain at High Resolution Shown in Context
P 48236	Europa: Ice Floes
P 48293	Callisto: Scarp Mosaic
P 48294	False Color Mosaic of Jupiter's Belt Zone Boundary
P 48299	Asgard Scarp Mosaic
P 48445	True Color Mosaic of Jupiter's Belt Zone Boundary
P 48496	Color Global Mosaic of Io
P 48526	Europa Ice Rafts
P 48527	Closeup of Europa's Surface
P 48532	Mosaic of Europa's Ridges, Craters
P 48584	Io's Sodium Cloud
P 48698	E4 True and False Color Hot Spot Mosaic
P 48700	Jupiter Equatorial Region
P 48952	Jupiter's White Ovals, True and False Color
P 48954	Ancient Impact Basin on Europa
P 48956	Active Volcanic Plumes On Io
P 48439A	The Mars '98 Lander
P 48440A	The Mars '98 Lander
P 48494A	The Mars '98 Orbiter/ Lander
P 48495A	The Mars '98 Orbiter/ Lander
P 48567	Dr. Peter Tsou holds Aerogel
P 48589	Stardust Spacecraft
P 48691	Deep Space 1 Spacecraft

# Shuttle Chemistry

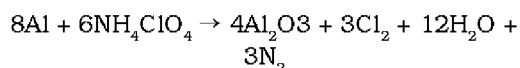
Have you ever wondered what propellants launch the shuttle, what the reactions are like, or how much energy they produce? We shall look at the reactions of the solid rocket boosters (SRBs), the main engines, and the orbital maneuvering system (OMS) engines.

Combustion is an oxidation reduction reactions; electrons transfer from one element to another. Under many circumstances, combustion takes place in the presence of molecular oxygen (O<sub>2</sub>), which combines with a fuel to produce gases.

Under ideal circumstances combustion will produce only the reactants predicted; in reality combustion isn't very clean. The combustion of gasoline in an automobile engine theoretically should produce only water (H<sub>2</sub>O) and carbon dioxide (CO<sub>2</sub>) but this isn't what really happens. Lots of other less desirable products are created, like carbon monoxide (CO). If gasoline combustion were perfectly clean, we wouldn't have a need for catalytic converters or other anti-pollution measures on cars. The reactions given below show the ideal products from the combustion.

SRBs are solid rockets; the fuel they use is in solid form. Solid fuel rockets will, once ignited, continue to burn until all of the fuel is gone. Once the SRBs are ignited, the orbiter will launch. There's no way to stop the reaction once it's initiated. The two main chemicals in SRBs are aluminum (Al) powder, (the fuel) and ammonium perchlorate, NH<sub>4</sub>ClO<sub>4</sub>, (the oxidizing agent). A small amount of iron oxide is present as a catalyst for the reaction, and the chemicals are bound together using a binding agent and an epoxy like plastic.

The combustion reaction looks like this:

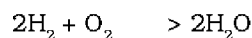


This reaction heats the interior of the SRBs to a temperature of 3475 K (5800 F). The heat generated during the combustion causes the rapid expansion of the chlorine gas, the nitrogen gas, and the water vapor. This expansion provides the lifting force for the SRBs. At ignition there are over one

million pounds of propellant in each SRB; it takes only two minutes for all of it to burn. The white smoke that billows away from the pad during launch is aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) generated from the SRBs.

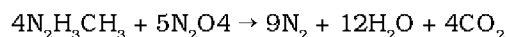
The main engines use liquid fuel, which has the advantage of being more controllable—the reaction can be stopped at any point by simply shutting off the flow of liquid. The main engines use the fuel that is carried in the external tank (which is manufactured a few miles away from where Mark Trotter and I work). The external tank contains liquid hydrogen (H<sub>2</sub>) and liquid oxygen (O<sub>2</sub>).

This reaction is interesting because the combustion product is water:



This is an incredibly energetic reaction. The combustion generates temperatures of about 3600 K (6000 F) in the main engines. The water vapor expands rapidly at this temperature, generating lifting force. The external tank carries enough fuel to keep the main engines running for 8.5 minutes—enough time to get the orbiter to orbit. Mark Trotter and I were given a tour of the facility where the fuel for the main engines is made (which is also manufactured just a few miles from where we work).

The OMS engines provide thrust for orbit insertion, orbit change, transfer, rendezvous, and de-orbit burn. They are also liquid fueled, which makes sense since they will be used repeatedly. They burn monomethylhydrazine and nitrogen tetroxide. This mixture is hypergolic—it will spontaneously ignite as soon as the chemicals come into contact with one another.



In the vacuum of space, this reaction generates a thrust of 27,000 newtons in each of the two OMS engines, sufficient to maneuver the vehicle. This is in comparison with the main engines, which generate a thrust of over 1.5 million newtons each.

Dennis Joseph Cowles  
Louisiana Nature and Science Center  
New Orleans, LA

# Exploring Our Solar System



Review by  
Alicia Cooper  
Sophomore Intern  
Craigmont Planetarium  
Memphis, TN

I recently reviewed the software by AIMS Media titled Exploring Our Solar System. This CD ROM introduces and further explains different objects in our solar system to an audience of all ages. I believe that people who want to receive

purely an introduction to our solar system should use this software. The graphics and information were fair. At times the graphics were a bit fuzzy and really didn't illustrate the information given. The information was a brief overview of the topic. If one needed more detail for a report, other sources would definitely be necessary.

The installation of the program was extremely easy. Afterwards an opening screen appeared. There were six boxes where you can choose whether you want to explore the solar system, watch a video, play with gizmos, look at a map, or quit the program. There was also a large video screen near the bottom right where the AIMS Media logo had just been presented.

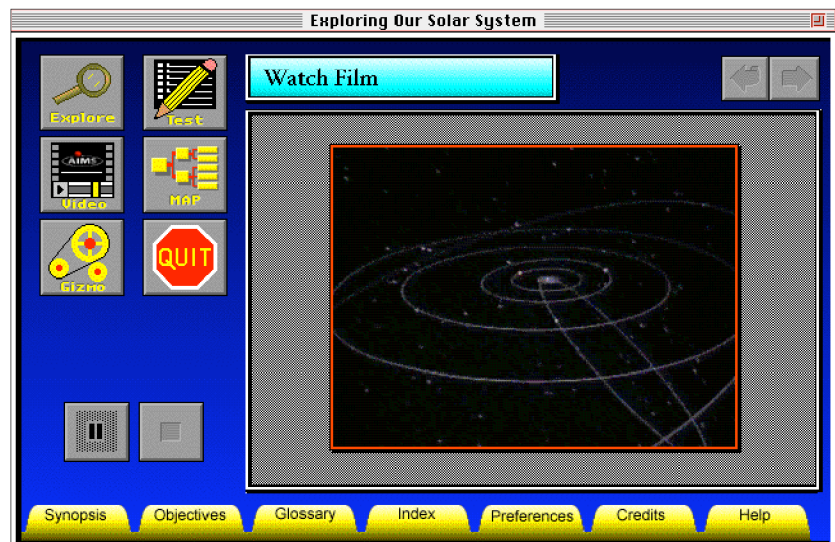
Seven file folder tabs lined the bottom of the screen. These gave a synopsis of what was to be expected, objectives on what AIMS Media planned for the audience to encounter, a glossary, and an index that listed the topics and astronomical words that one might want defined. There was also a preferences tab to enable a better video picture to suit your computer, a credits tab that again showed the AIMS Media video followed by produc-

ers names, and finally a help tab that I could not get to work.

The explore box provided two more choices if one wanted to learn more about the features of the solar system or individual planets. I couldn't understand why these topics were separated because there were links inside each to the other topic. These topics provided additional information on the Sun, the planets, asteroids, comets, the Moon, the formation of the solar system, magnetospheres, and unique features. Each of these was provided on the large screen. One could drag the cursor over to each picture, and the length and a brief summary of each presentation was included.

Once you click on a picture another small screen pops up, and a very brief video is provided on each subject. The graphics in each video were fair. After the video was over, the program would go to the next screen that provided other links. You had no choice about advancing, and there was no link back to main screen. Most of the links did not belong under the heading provided. Under the heading of planets, for example, there were links not only to all nine planets but also to the asteroids and meteors.

(continued on page 26)



# Eyewitness Encyclopedia of Space and the Universe

The Eyewitness Encyclopedia of Space and the Universe is one of the best software programs I've ever had the pleasure to use. Content is excellent, graphics are superb, and layout is simple. This program is a great learning tool. It's entertaining and interesting. I found it difficult to consider this educational media because it was neither boring nor too technical.

The packaging really caught my eye. The old saw "you can't judge a book by its cover" is true, but the way that software is presented says a lot. It said "professional." I found myself more open to look at the content because of the packaging.

The cover shows the title and some pictures, nothing elaborate. The back cover clearly states system requirements and includes a toll-free help number—a little thing but truly helpful. The inside cover has instructions for starting/running the program.

There is a main screen created in image map form. Text shows what the various parts of the program are. There is a help menu you access through a question mark on the left side of the screen. The help menu is simple. You choose an area of the program you don't understand, click its title, and learn about it. It's straight forward.

After I read the different sections of the software, I chose to click Star Dome, a virtual star observatory. There was first a map where you can choose a specific place to locate yourself. You then reach a second screen where you choose options, e.g., date, time, and what you want to view. There is a choice of looking at deep space objects, faint stars, constellations etc. Stars change to fit the settings. You can also choose the

option to search for something specific in the sky by clicking on the appropriate icon and scrolling down to your desired choice.

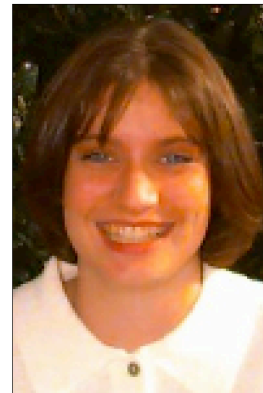
The next section I linked into was called Race for Space. This section is an overview of space exploration from the past to the future. It was good because it presented content that is educational but not boring. You can have the information read to you by clicking on a microphone icon. Narration is clear and easy to understand.

If there are related topics, they are displayed with links to take you there. Sometimes there were well done movies available to view. They are clear and substantial and contain good graphics.

The next link I chose was Hardware. This link was again a content arena that went into detail about different satellites, probes, and vehicles that explore space. There is information about Russian programs, e.g., the Salut mission. The information holds up to all the other sections in excellence.

The Who's Who section is an alphabetical listing of many people involved in space exploration. There were pictures of

(continued on page 26)



Review by  
Elizabeth Spilman  
Junior Intern  
Craigmont Planetarium  
Memphis, TN



# Candidates for SEPA Offices: Candidates for President-Elect

Dave Dundee  
Fernbank Science Center  
Atlanta, GA

It is an honor to be nominated for SEPA President Elect. SEPA has always been important to me, through its meetings and journals, as a way to learn and grow as a professional. As President Elect I would promote learning among our membership through touring workshops on such topics as show production, classroom technology, or current research in astronomy.

I am married and have two children, Owen, 11, and Sara, 8. I enjoy working on the never ending project of my HO train layout. I've recently started building a Z gauge layout with the philosophy you can never have too many trains. I

collect stamps and toy robots, and I enjoy Egyptology. My wife Susan and I are bookaholics. There are overflowing book cases throughout our house.

I am Planetarium Chairman at Fernbank Science Center, where I've been employed for 20 years. I was intern for two years at Hayden Planetarium in New York. Before that I worked at the Flandrau Planetarium in Tucson, Arizona. I have my Bachelor's in Astronomy from the University of Arizona and my Master's in Astronomy from Columbia University in New York.

I am honored by this nomination, and I look forward to supporting SEPA and its

Dave Maness  
Peninsula Planetarium  
Newport News, VA

I was born and raised in Northern New York. From an early age I was interested in natural sciences and astronomy. I graduated from State University of New York at Plattsburgh. I worked in the college's planetarium starting as a freshman in 1973. I completed the Earth Science requirements before changing my major to Psychology to try counseling. I continued planetarium work into graduate school. With a growing aversion to taking out more school loans, I dropped to part time and began job hunting. The first job offer came from the planetarium field, the field that satisfied more of my varied interests. I was Assistant Planetarium Director at the Peninsula Nature and Science Center in 1980. In 1994 I was made Director of Astronomy after Jon Bell departed. I am technically approaching 25 years in the business. I've been at the Virginia Living Museum for 18 of those years.

I believe the planetarium will be necessary for years to come if we continue to change with the times. Changes will affect us in the future, in computer aided audiovisual production, lasers, video, and many more. Our organization should keep members informed, so we can absorb and make the best use of them. I do, however, have some concerns about the future.

As city sprawl and the accompanying lights obscure the sky from our youth, I fear that we will be needed less and less. Currently I look up from my yard and see only the brightest stars. Many argue this

only reinforces the value of a planetarium. If people can never see objects in the Universe, are they more or less likely to ask about them? I think it follows the old adage out sight, out of mind. Planetarium and observatory directors should fight a crusade against light pollution if for no other reason than this: we're losing the view of the night sky that inspired us. For many of our city youth it's already gone. It's no longer a force of inspiration for them. We should join the International Dark Sky Association and inform our visitors what they can do to bring our endangered skies back from the brink of extinction.

Most professionals agree salaries aren't what they should be. Many of us aren't given the status of teachers, though we teach children everyday. We are education specialists fostering knowledge of the workings of the solar system and interpreting the universe. We might encourage better and more formal training of planetarians. Many of us learned on the job because of lack of appropriate degree programs. I think we could look into the possibility of creating courses and programs of study with universities. I'd like to see them offer more online courses for the convenience of professionals already working in the field. Our organization might also consider creating a grant that would offer some financial aid to needy professionals wanting to improve their skills by attending workshops or college programs while working full time.



# Candidate for IPS Representative

My planetarium career began as an employee of Spitz in 1963. I served on the staff of Abrams Planetarium at Michigan State University from 1964 until 1979. In 1979 I became director of Bishop Planetarium, Bradenton, Florida and held that position until early 1996 at which point I resigned to pursue my present role with Ash Enterprises. I first joined SEPA in 1975 and have been a continuous member since 1979. I served as SEPA president in 1985-1986 and on a number of committees before and after. I have been an IPS member since its inception in 1971 and was recognized as an IPS Fellow in 1986. Additionally, I have served as IPS Historian since 1990.

While at Abrams, I was involved in the

beginnings of both GLPA and IPS. Early on, I became active in planetarium organizations as I saw, and continue to see, such organizations being a vital part of the profession. In addition to SEPA and IPS, I currently hold membership in GLPA, MAPS, RMPA, PPA, and ILDA (the International Laser Display Association) where I serve as Chair of their Ethics Committee. I maintain liaisons with individuals, institutions, and organizations worldwide but my primary focus and commitment continues to be to my own home organization, SEPA.

I welcome the opportunity to serve SEPA as IPS Council Representative.

John Hare  
3602 23rd Avenue West  
Bradenton, FL 34205

# Candidate for Secretary-Treasurer

Duncan Teague has been married for nearly 30 years to the former Judy Bousson, a speech language pathologist. They have two daughters: Katherine, a software engineer, and Christine, a singer/actress.

Duncan is a graduate of the Massachusetts Institute of Technology, where he earned a Bachelor of Science degree in Chemical Engineering and Humanities in 1968. He earned a Master's degree in Education from the University of Memphis in 1970.

After teaching physical science and physics for four years for the Memphis City Schools, Duncan became Director of the Craigmont Planetarium in 1974. He has been a member of SEPA since 1975, serving as President Elect from 1981-82, President from 1983-84, Past President from 1985-1986, and Secretary Treasurer and Southern Skies Editor since 1995. In 1981 Duncan received a SEPA Special Achievement Award for co-hosting the SEPA Conference in Memphis.

NASA's Ames Research Center in California awarded the Craigmont Planetarium three grants to produce and distribute star shows to select nationwide planetariums. Duncan developed *On the Shoulders of Giants*, the story of the Pioneer Venus

spacecraft mission to Venus, in 1978 and *Saturn: Gateway to the Stars*, the story of the journey of the Pioneer 11 spacecraft, in 1979. In 1983 he wrote and distributed *The Age of Space*, a star show which celebrated the 100th anniversary of the birth of Robert Goddard.

Duncan has been involved with three PBS elementary science series. He wrote scripts for and appeared in one episode of *The Scientific Bureau of Investigation* and four episodes of *The Science Corner*. In 1981 he served as writer and host for the internationally distributed six program PBS series *Vantage Point*.

In 1987 Craigmont Planetarium's student planetarium intern produced newsletter *Skylights* was recognized in Gregg Keizer's book *Using Newsroom at Home, School, and Work*. In this book about a desktop publishing program for Apple IIe computers, an entire chapter was devoted to the planetarium's newsletter. *Skylights* was recognized as the outstanding business publication produced with *Newsroom*.

In 1993 Duncan started an electronic publishing business. D T Publishing specializes in brochures, newsletters, journals, and slide imaging. He has also been involved with teaching computer classes

Duncan Teague  
Craigmont Planetarium  
Memphis, TN 38128-3902

Probably the most disturbing thing about this program is that all of the screens provided the same links. It was extremely repetitive, and it appeared the company was just trying to take up space. Finally, most of the links lead to videos that would begin without the viewer's having time to read anything.

The topic video showed a fifteen minute video about our solar system and its different features. This was the most impressive thing about this program. I discovered, however, it was one long video of all the other combined videos for each link under the explore topic. I found this much easier to follow and understand than the many other short videos because all the graphics and information were combined.

The next topic titled gizmos was pointless, and it did not work well. The viewer was supposed to be able to spin the Sun, Venus, and Jupiter. I guess the point was to be able to see the different sides of the planet. I didn't understand the use of just having selected planets and furthermore this feature did not work. Also you were supposed to be able to bring in the tides. This really confused me on the purpose because we were dealing with the solar system, but it didn't work either. This whole topic was made of links that were, again, repeated from the explore button. [It worked for me, but I was using the Macintosh version of the software on this hybrid disk. Ed.]

The last three buttons consisted of

taking a test or quiz, looking at an organizational chart, and quitting the program. The quiz section was very cool. It allowed you to answer questions that were in each mini video and the longer video. If you answer incorrectly, a video pops up showing the segment with the correct answer. If you answer a question correctly you are rewarded with applause. At the end of the quiz, the number of questions answered correct and incorrect are tallied.

The test section was a bit more frustrating. If a question is answered incorrectly, it stops there and doesn't continue. This was pointless after awhile, because you can choose all the questions and eventually get all of them correct.

The map section was unusual. It presents an organizational chart that shows the topics the program covers. The topics are repetitive links to what is under the explore button. I feel the company was attempting to make the screen look more full. Finally, there was a quit button.

Exploring Our Solar System is for beginners. It would be fun for little kids or even adults who want an overall taste of what our solar system contains. This program could never be a source for a report or presentation though, because the information on each subject is too limited. The graphics in this program are somewhat fuzzy, but every once in awhile there will be an exceptional one. I believe you could find better software for your \$49.95. If you're interested, call AIMS Multimedia

the individuals, their accomplishments, and a biography. It was quite detailed and would be a useful source for information on them.

The next section was 3D Models. It had a few models of space hardware that could be rotated when arrows on either side of the picture were clicked. The pictures are accompanied by multiple labels that don't show while the picture is being rotated.

The final information portion of the software is titled Cosmology. This section had a lot of content with a narration option and links to other related topics. This section also presented complex ideas such as black holes and wormholes. The next two sections are more for entertainment purposes. They were the Quiz Master and the Activities sections.

Quiz Master asks questions that cover many topics. At the beginning you decide

how many players, what topic, how many questions, and how long to play. Scoring is simple, and it is obvious whether you answer correctly. The Activities section had two parts. You have the opportunity to land a module on the Moon. The right amount of thrust must be determined to have a successful landing. It's simple, but not as easy as it looks. The second section was also fun. It dealt with the construction of rockets. You have to put the rocket together correctly and launch it.

I cannot express how entertaining this excellent program is. It makes learning about space topics interesting. It goes above and beyond a simple encyclopedia. It contains movies, interaction, simple yet inexhaustible content, and fun presented in an well organized manner. The Star Dome section alone could be its own program. I recommend this software to anyone

# *Southern Skies*

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SPRING 1998

## In This Issue

President's Message.....	1
IPS Report.....	2
1998 Paul Campbell Award.....	2
Conference Bid 2000.....	2
Read Me: Proposed Dues Changes.....	2
Editor's Message.....	3
SEPA Membership Form.....	3
Small Talk.....	4
Astro-Video Review: TRDC.....	7
Her Own Space.....	8
Kodalith Text Slide Blues.....	9
News from SEPA States.....	10
Hubble Images CD ROM.....	17
HST's Greatest Hits of '96.....	18
HST's Greatest Hits of '97.....	19
JPL '98 Slides.....	20
Shuttle Chemistry.....	21
Digital Cosmos: Exploring our Solar System CD ROM.....	22
Digital Cosmos: Eyewitness Encyclopedia of Space and the Universe CD ROM.....	23
Candidates for President-Elect, IPS Representative, and Secretary-Treasurer.....	24

SEPA's Web site url is  
<<http://kpt1.tricon.net/Org/baysmtn/sepapage/sepa.html>>

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