

# SOUTHERN SKIES

Volume 13

Number 4

Fall 1993

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Journal of the Southeastern Planetarium Association

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# *Southern Skies*

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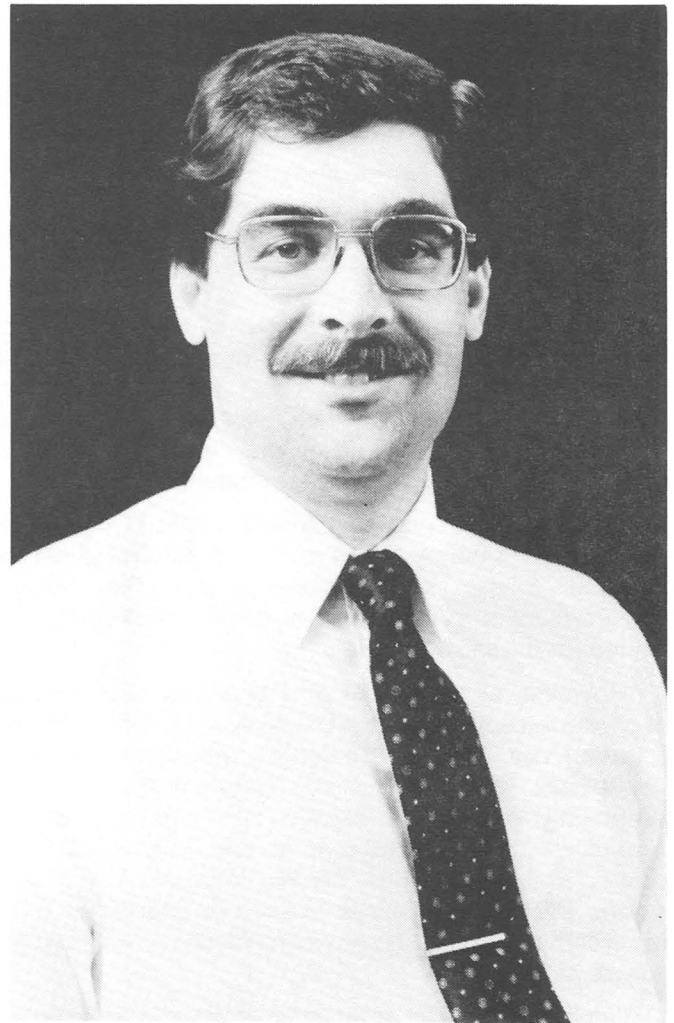
Fall 1993

## A Message From Your President

Involvement in science education has made most of us keenly aware of the value of the *scientific method* as an insurance against the propagation of 'bad science'. In the world of the researcher, preserving this scientific method requires that the scientist follow strict procedures in the laboratory to insure that his or her data isn't skewed or biased. There are other safeguards inherent in modern scientific practice -- such as the publication of findings and evidence, as well as subsequent peer review, including attempts by other scientists to either duplicate or refute the original findings. These procedures, though cumbersome and tedious, help to insure objectivity and to prevent science from wearing the proverbial "rose-colored glasses" that can mislead us in our understanding of the universe.

Likewise, it is important that science educators present an unprejudiced view of 'science in progress' to their audiences. A variety of conference papers and journal articles have appeared in recent years, appropriately advocating that planetarians deliver "balanced" presentations when it comes to current knowledge in astronomy and the other sciences. This approach stems from the understanding that sometimes even the most seemingly plausible scientific explanations may eventually be proven incorrect -- and conversely, that the initially least popular theories can eventually win out, given a healthy scientific method. (A classic case of this effect is illustrated in the history of *plate tectonics*. When originally proposed, this theory was ridiculed by the majority of those in the scientific community. In fact, this negative attitude toward such a novel idea was maintained for decades until further substantiating evidence was finally developed in the 1960's. Nowadays, *plate tectonics* enjoys near-universal acceptance as an important process of Earth's geology.) For this reason, many of us have tried to maintain a more balanced approach when presenting scientific "theory" versus "fact" in our shows.

Over the years, however, I have wondered whether planetarians always maintain this same degree of



Richard McColman  
Morehead Planetarium, Chapel Hill, NC

objectivity when it comes to science and technology public-policy issues. Traditionally, planetarium professionals in the U.S. have welcomed the advances made in astronomy and space science--particularly in the high-visibility efforts of the American space program. In fact, many have developed the feeling that planetariums are "kindred spirits", if you will, with NASA, due to our mutual advocacy for scientific progress. No doubt, much of this is due to the public interest in, and attendance increases at, our facilities during the Apollo moon landings, the Voyager missions, etcetera. To that extent, it can be argued that the U.S. space effort, on occasion, has been a "shot in the arm" for planetariums. Naturally, planetariums have felt a need, from time to time, to reciprocate in-kind by making our presentations as kind to NASA and other science-policy institutions as possible.

But, is there not a certain danger in confusing the role of "science educator" with that of "policy advocate"?

A few years ago, I wrote and produced a show entitled *The Star Voyagers* -- ostensibly a treatise on the early history of manned space flight. A few days after the public premiere of the show, we held a special showing for the museum staff, and were quite pleased with their positive comments. I was particularly struck, however, by the reaction of our museum Public Relations officer who proclaimed, "Boy that was a really heavy-duty flag-waver!". In the end, that is the one staff response that I still remember about the program. In fact, it has since prompted me into a bit of soul-searching on this subject.

"Yes, I had concentrated primarily on the U.S. program in the script," I thought, "but that's only natural given the historical Soviet space secrecy, and the heavily 'you-are-there' storytelling and human-interest approach I wanted for the show".

However, as time went on I began to recognize the inappropriateness of the pro-U.S. bias in the show. At best, it turned out that the Soviet contributions had been handled as little more than "historical footnotes" -- comprising only brief mentions within the script's chronology. The flaw, though, became fully evident as I reconsidered the full title -- *The Star Voyagers: The Pioneers of Manned Spaceflight* -- not "American Spaceflight", but "Manned Spaceflight". It seems I had lost a certain sense of balance in this script.

I've witnessed the same sort of planetarium-bias as relates to the advocacy of government programs. A few years back, I watched another show that dealt heavily with the American space effort (but unlike mine, billed itself accurately in its title). I do remember being struck, though, by what I would describe as an "atta-boy, NASA" tone in the script. I particularly recall one line in the presentation, in which the narrator characterized NASA (to the best of my recollection) as, "the most efficient government agency ever created". There was no indication as to what objective

criteria (if any) were used to compare the efficiencies of the various agencies in question. I can only surmise that the statement was, instead, a wholly subjective judgment.

It appears that even science educators are vulnerable to losing their sense of objectivity. One problem with taking an advocacy approach to official science programs and policies is that not everyone in the astronomy, space science, and physics communities concurs with their relative scientific merits. For example, there are those who, from a science perspective, question the "dead-ended" approach of the Apollo program. Some prominent astronomers and space scientists even question the scientific need for having had *manned* lunar missions at all. Even today, large numbers of scientists have asked important questions about: the space shuttle and the space station; the real value of humans in space, versus the role of machines; the need for big, expensive, complex (and therefore more potentially problematic) one-chance-only unmanned spacecraft, versus projects incorporating multiple smaller, cheaper probes; and the science payoffs of fewer big-budget programs, versus that of more numerous, less expensive projects. The ongoing problems with the shuttle, and the seemingly non-stop inflation of the original space station budget, along with the difficulties of some big-budget, "one-shot" unmanned missions, such as Galileo and Mars Observer, have tended to dramatize (if not add validity to) these arguments. Even the current NASA administrator, Daniel Goldin, has recently decided to give the agency an about-face and have it move away from its expensive "single-shot" space projects, in favor of cheaper "multi-shot" missions.

The second drawback to becoming "cheerleaders" for government science programs is that we may run the risk of damaging our credibility in the eyes of the public. For example, a number of planetariums (including this one) came quite close to taking a reactionary and premature "NASA is being unfairly persecuted" public position in the immediate aftermath of the Challenger accident. Certainly, it is true that the media wasn't altogether fair in its criticisms of the space agency during that period. For example, in the days leading up to the accident, the news services criticized NASA's weather-related and other launch delays as being "too cautious" and cited these as evidence that it had "lost its previous bold, pioneering spirit". Immediately after the disaster, though, these same news outlets were denouncing the agency as "reckless" and "responding too much to outside pressure to launch". While it appears that the networks and newspapers had lost their prized objectivity on this issue, some planetariums were perhaps less than balanced in our own approaches as well. A few of us explained to our visitors that "manned space flight is a dangerous business, and it's unrealistic for us to expect that no deaths or injuries will ever occur in space". While this statement may be valid as a general observation, the Challenger Commission (as dramatized by Commission-member Richard Feynman and his

now-famous glass of ice-water) ultimately showed that it was primarily poor science, bad procedures, and blind-sightedness on the part of NASA and Morton Thiokol that led to the destruction of the billion-dollar orbiter and the deaths of the Challenger Seven.

For planetarians, it's exceedingly easy to adopt a subtle bias in favor of science programs and policies that concentrate in those areas in which we deal. Once started down this "slippery slope" we might even succumb to total acceptance of a science policy position without giving much thought to its relative scientific merits. (After all, "they're on our side, aren't they"?) Unfortunately, in doing so, it is also possible to lose the same scientific objectivity that we otherwise espouse to our audiences and hold so dear.

I believe that we, as science educators, bear the responsibility to represent the entirety of the science community -- both those who establish and implement agency policies, as well as their science critics. Assuming this role, it seems to me, will ultimately promote, through example, a greater appreciation for the objectivity which is

the hallmark of the classical scientific method. As stated earlier, there is a great deal of disagreement among astronomers and space scientists on many science policy issues. Rather than participating as activists for one side or the other, would it not be in the best interest of modern science and science literacy for the public to get as balanced a view of science issues as possible?

As planetarians, we should be constantly vigilant about "crossing over the line" from "education" to "advocacy" when it comes to scientific positions. It is one thing to advocate the *process of science* and to promote the education of people in scientific matters. However, I suspect it is something else altogether to promote, either inadvertently or willfully, a *scientific position*, regardless of whether that position is research-related or policy/program-oriented.



To join S.E.P.A., or to renew your S.E.P.A. Membership,  
simply fill out this form and mail with \$15.00 to:  
Southeastern Planetarium Association  
Linda Hare, Secretary/Treasurer  
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Position \_\_\_\_\_

Facility \_\_\_\_\_

Business Address \_\_\_\_\_

Mailing Address (if different) \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_



## Editor's Message

Here we are with another issue of *Southern Skies* ready for the printer. With each new issue, I have more and more people to thank for making it possible.

Dave Hostetter called me with good and bad news a while back. The bad news was that he was getting burned out editing the "Reviews" column, and that he would like to pass it on to someone else. Being Dave though he was not about to leave me in the lurch, and said that he would like to revive the "Featured Planetarium" column. His first "Featured Planetarium" is contained in this issue, and as always, Dave has done a great job.

The search was then on for a new editor of the "Reviews" column. I called our President Elect, Kris McCall, and asked her if she would consider taking on the chore. She promised to give it a try, and that is all I can ask. Thank you Kris!

I had heard from some folks out there who wanted to see the return of "Small Talk", but no one wanted to take on the task of editing it. I called Betty Wasiluk with the problem, and she said she would give it a try. Her first attempt is in this issue, and is greatly appreciated.

After attending various planetarium conferences, visiting many planetariums, and seeing how many people were presenting papers on and talking about lasers in their facilities, I felt it was time for us to include a column about

lasers in *Southern Skies*. Again I got on the phone and contacted someone who I felt had a lot to contribute on this subject. Mark Howard has agreed to edit "Laser Talk", and his first contribution is also in this issue. Thanks Mark!

Let me know what you think about the new additions, and about anything else you may want to see. This is your Journal, and if I don't hear from you, I have no idea what your thoughts are.

Another huge "thank you" goes out to everyone who has tackled the chore of sending the information to be included in "News From SEPA States". If you have news that you would like to pass on to fellow SEPA members, call or write to the person listed with your state. If there is no one listed, maybe you would like to take the responsibility of gathering news for your state.

One more big "thank you" to a new planetarian in our region -- Mike Cutrera. Mike has recently joined the staff at Bishop and is very well versed in the MacIntosh and computer graphics. I went to Mike with a list of graphics I wanted for *Southern Skies*, and in no time at all, he came up with everything I needed. Thanks Mike!

Again, this issue of *Southern Skies* is proof that when you need help, particularly in the SEPA region, all you need do is ask. Please take the time to thank those who are taking the interest and responsibility and making it possible to put your Journal together. I certainly appreciate all the help they have given me. I couldn't do it without them!!!



**SEPA '94**  
**Charlotte, North Carolina**  
 #####

**SEPA '95**  
**Macon, Georgia**  
 #####

Look for updates in future issues of  
*Southern Skies*

## **FEATURED PLANETARIUM**

**Edited by Dave Hostetter  
Lafayette Natural History  
Museum & Planetarium  
Lafayette, Louisiana**



## **INDIAN RIVER COMMUNITY COLLEGE PLANETARIUM**

**Ft. Pierce, Florida  
Contributed by Jon U. Bell  
Planetarium Director**

As a lot of you know, I changed employers last March; I'd been at the Virginia Living Museum in Newport News, Virginia, for pretty close to 14 years (more, if you count all those extra hours!); I enjoyed my association with the Museum and the folks who worked there, but there was this new facility at Indian River Community College in Fort Pierce, Florida, and it represented a great opportunity for me.

Fort Pierce is on the Treasure Coast, a little more than halfway down the Florida Peninsula, on the Atlantic Coast (if you headed east from Lake Okeechobee you'd bump into it before you got your feet wet.) The nearest planetaria to Ft. Pierce are over an hour away: Astronaut Memorial Hall at Brevard Community College in Cocoa; or the Aldrin Planetarium at the South Florida Science Museum in West Palm Beach. So, there's been a definite need for the building of this valuable community resource.

The planetarium was built as part of a new science center for the college. The money needed for construction came from Public Education Capital Outlay funds (PECO). Basically, it's a tax on some public utilities that's been earmarked for the construction of public educational buildings in Florida. The total cost for the science center and planetarium was 8.6 million dollars (the planetarium construction portion of that figure was roughly a million dollars, and approximately \$800,000 of *that* million was spent on the planetarium projector, control systems, and ancillaries.

At the moment, the planetarium has no production facility - we hope to add a darkroom, slide and graphics work station, etc., as we go along. And WQCS, the campus radio station, has a new sound recording facility which is super - I've just finished putting together the soundtrack for the latest show at the station, and it was a genuine pleasure!

Construction of the center and planetarium began in the autumn of 1992. Official dedication and the first public tours were on February 26, 1993; and two weeks after my arrival (on the Ides of March - now there's a scary date!),



Young stargazers get their first view of the electric stars in the new theater.

The theater features a Spitz 512 automated planetarium system, with a couple of partial panoramas for the front of the tilted dome (everybody say, "hyperhemisphere"). The dome is gray, with big portholes in the rear, and there are also two video projectors that cover small areas of the dome to the left and right of center. Besides that, there is a pair of slide projectors that project onto the center of the dome, a handful of special effects and a Spitz geocentric earth projector. There's also a lot of potential here - plenty of behind-scenes space for putting in a production work station, and lots of storage space.

I was presenting live, "Sky Tonight" shows to the public and school groups.

Attendance has been great - the public shows have sold out, and last spring we turned away a lot of school groups because of overflow. The shows have been very well received, and now the new show series is underway, with "To the Edge of the Solar System", "Star of Wonder", "Daughter of the Stars", and "Bear Tales and Other Grizzly Stories" scheduled for 1993-94. People have been coming in and buying big blocks of tickets - it's very gratifying!



Naturally, no planetarium experience is complete without a chance for the audience to look through a telescope or see the real stars in the real sky. The public observatory that the college had maintained, however, was on top of the old science building, and had been closed down for safety reasons (last week, the physics professor and I hauled down the homemade 14 inch newtonian reflector, and tomorrow, I am told, a crane will be arriving to lift the observatory dome off the roof).

So for the present, we stand outside in the dark when the show lets out, and with a couple of telescopes and a lot of pointing, help folks see the things I was talking about in the program. Luckily, there is an absolutely terrific local club, the Treasure Coast Astronomical Society, whose members have been on hand to help make our real sky interpretation a success.



Middle school students get a safely filtered view of sunspots through the college's 8" telescope during a summer reach-out program.

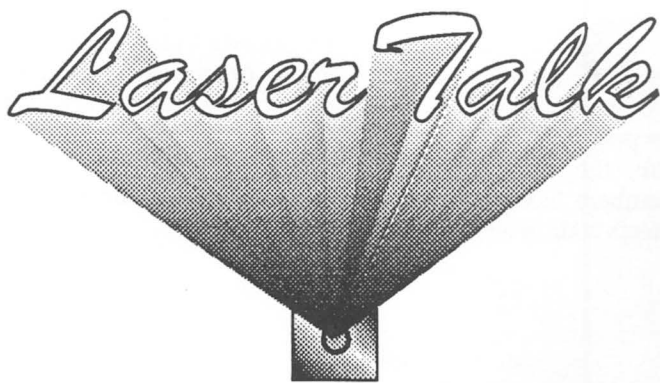
Jon Bell, a past president of SEPA, holds a BS in Earth Science Education from the State University of New York at Plattsburgh and an MA in Science Education from Columbia University. His work experience includes college planetarium operation, an internship at the Hayden Planetarium in New York, and 14 years in senior management at the Virginia Living Museum in Newport News.

In 1992, Jon successfully took on the challenge of operating two planetariums at the same time - the Newport News facility, and the Hampton City Schools Planetarium. Programs he's written for other planetaria include "Star of Wonder", "Bear Tales and Other Grizzly Stories", and "Daughter of the Stars". He also writes *Opening the Dome* for the Planetarian.

### NEXT ISSUE

Kelly Planetarium  
The Discovery Place  
Charlotte, North Carolina





## LASER TALK

**Edited by Mark Howard  
John Young Planetarium  
Orlando, Florida**

Welcome to "Laser Talk" - a new feature column dedicated to the use of lasers in the planetarium. Lasers are certainly nothing new to the planetarium field. Many of us have been presenting laser shows for several years to supplement revenue and to help support educational programs. While laser presentations have for the most part been limited to late night rock & roll light shows, recent advancements in laser display technology have made the laser projector an important educational tool. For example, it is now possible (in fact, easy) to display constellations, complex geometrical shapes, or even 3D graphical representations of mathematical equations. Laser displays have already made their way into feature planetarium shows at a few planetariums. "Touch the Stars", a new show-kit from Strasensburgh planetarium, and "Star Trek" a planetarium show which travels with the touring "Star Trek" exhibit from OMSI (Oregon Museum of Science and Industry) are just two examples. The Mueller Planetarium, in Lincoln, Nebraska, has also had great success with a special show they have produced for the visually impaired. The possibilities seem endless.

Each installment of "Laser Talk" will feature a new approach or technique used in planetarium laser displays. If you have any suggestions or ideas you would like to share please contact me at:

John Young Planetarium  
810 East Rollins Street  
Orlando, FL 3280

Thanks to Greg Makhov and Phyllis Monohan of Lighting Systems Design, Inc. in Orlando, for this first installment.

## LASERS IN PLANETARIUMS

Contributed by  
**Greg Makhov & Phyllis Monohan  
Lighting Systems Design, Inc.  
Orlando, Florida**

The ubiquitous laser lightshow in planetariums is just one of the many possible uses of a laser display system. Although lasers got their start in planetariums from the unique appearance of laser light, modern displays are far more sophisticated. Displays are no longer limited to abstract Lissajous patterns and amorphous Lumia effects.

Modern lasers displays are the last bastion of vector graphics. With greatly increased capabilities in computers, scanning systems, and color control, laser displays can now tell stories, paint pictures, or demonstrate a principle. Particularly over the last two years, there have been several breakthroughs in both performance and cost, making this powerful technology more accessible.

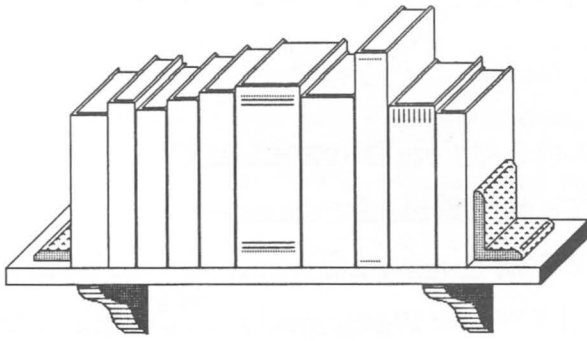
Full color displays have become increasingly common. This is accomplished with laser(s) that produce red, green, and blue colors, which can be mixed in any amount to synthesize new colors, like orange, magenta, and purple. For smaller venues, aircooled lasers are effective, many of which also are powered from a normal 110 volt wall plug. These systems are about as easy to set up as a slide projector! Larger venues require higher power, typically using watercooled lasers. Recently, improvements have been made in Mixed-Gas Argon/Krypton lasers, resulting in reliable, long-lived white light sources.

Artistically, color has tremendous impact. Complex images are clearer, objects can be defined by color, and realistic images can be produced. Her hair is yellow, her skin is flesh-tone, her eyes are blue, and her lips are red. This is a far cry from a silhouette of a guitar rotating on the dome.

For educators, lasers present new possibilities. Imagine discussing a complex equation, then graphing it in laser light, and rotating it in 3D space! In an astronomy lesson, imagine outlining the constellations not with a slide, but laser light. A physics class can view 3D vectors in real time, from any viewpoint. Picture a discussion of spaceflight, and plotting different trajectories directly on the planetarium dome.

In the early days, many people considered laser displays a fad that would be popular for a few years, and then fade away. Instead, lasers have become a staple for planetarium shows, with greater versatility than a star projector, and greater mobility than slide projectors. Audiences have come to expect them, and show producers are using them to ever greater effect.





## REVIEWS

Edited by Kris McCall  
Sudekum Planetarium  
Nashville, Tennessee

### Light at the End of the Universe: Leading Cosmologists on the Brink of a Scientific Revolution

by Michael D. Lemonick  
Villard Books, New York, NY, 1993  
ISBN 0-679-41304-9 (bound)  
336 pages  
\$24.00 (Canada \$31.50)

Reviewed by Tom Hocking  
Morehead Planetarium  
Chapel Hill, North Carolina

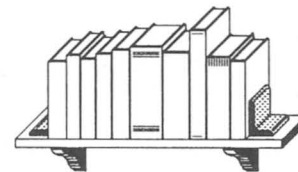
I want to recommend a detective story to you. Every once in a while a popular book comes along which arouses the public's interest in just what it is that astronomers do. Most of those were associated with PBS television programs like *Cosmos*, *The Astronomers*, and *Space Age*. This one is a stand-alone which goes the genre one better by introducing general audiences to some of the most complex topics in the universe without losing them in the process.

Michael Lemonick, former executive editor of *Discover*, and currently an associate editor of *Time*, serves as the reader's personal (and personable) worldly guide to dark matter theory in astrophysics (he makes it fascinating!) and to the people studying the question from all sides. Lemonick knows his stuff: the story he tells is based on many on-site interviews conducted over the course of

several months with the men and women at the cutting-edge of cosmological research. His list of interviewees reads like the Who's Who of dark matter research. Vera Rubin, John Huchra, Jerimiah Ostriker, John Bahcall, Ed Turner, Lyman Spitzer, John Wheeler, Freeman Dyson, and others are featured, along with their position along the dark matter continuum of controversy. As a reader of this extremely lucid account, I got the feeling that I had a privileged look at the conceptual crisis surrounding the theory of dark matter and its effect on our understanding of the beginnings of the universe.

In *The Light at the Edge of the Universe*, Lemonick introduces the reader to the works of the "Seven Samurai" and the "Gang of Four", and in doing so he not only gives the historical background of the dark matter problem, but weaves a clever web to make the reader actually care about finding a solution to it!

*The Light at the Edge of the Universe* is Lemonick's first book. I truly hope it is not his last about astronomy. This one is certainly a keeper!



### Eclipses of the Sun

by Mark Littmann and Ken Willcox  
University of Hawaii Press, Honolulu, 1991  
ISBN 0-8248-1371-5  
QB541.L69  
224 pages

Reviewed by Kris McCall

For those who have never experienced "totality" or all the "hoopla" that surrounds it, Mark Littmann and Ken Willcox prepare you, as best they can, with a book. They give the reader the information and inspiration to observe all types of eclipses without getting bogged down in technical quicksand or distracted by too many details. I would strongly suggest this book to the general public and especially to teachers as they prepare for upcoming events such as the annular eclipse that will sweep across the U.S. in 1994.

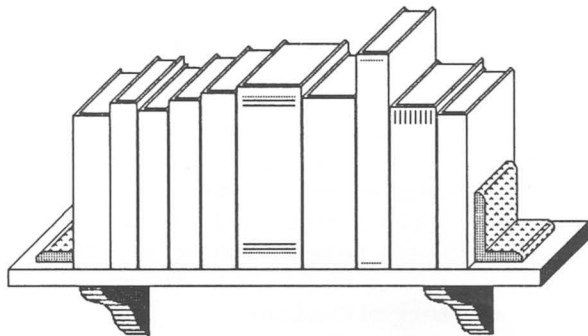
The authors have provided a brief but complete picture of the sun and how it works, as well as what can be learned from observing eclipses. There is also a good explanation of the saros cycle and how ancient civilizations may have figured it out.

The broad historic background of eclipses includes mythology, significant events that were influenced by eclipses, and a variety of good stories from eclipse veterans that anybody would find interesting.

There are lots of clear, concise, and useful diagrams along with many sidebars packed with additional tidbits of information. There are also several appendices, a glossary, and a bibliography for anyone who wants to know more.

The only complaint I have with the book is their recommendation that people use exposed black and white film as a safe method for viewing the partial phases of an eclipse. I never suggest this method unless pressed for it, especially when there are so many other safer, easier, and cheaper ways to view the eclipse.

I wish I had had time to read this book before the Big One in 1991. There is a lot of good detail about that particular eclipse that would have come in handy. Unfortunately, it did not come out until shortly before that eclipse, but should become a great resource for future events well into the next century.



## M E M O

**DATE:** Before January 1, 1994

**TO:** All SEPA Members

**FROM:** Southern Skies - Assistant Editors

**MESSAGE:** Please get in touch with us with information you would like to see included in upcoming issues of Southern Skies.

### FEATURED PLANETARIUM

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**Don't forget**  
*News From SEPA States*



## SMALL TALK

Edited by Elizabeth S. Wasiluk  
Berkeley County Planetarium  
Hedgesville, West Virginia

Linda Hare has asked me to do this column and I reluctantly agreed. At the SEPA conference, I revealed some rather simple technical ideas that work in my planetarium and challenged you to come up with more. You could even keep your identity secret if you thought that your idea was too simplistic.

To date, the only response has been from someone who learned the hard way that epoxy works much better on special effects projectors than regular glue. (Sure that makes sense now, but how many of you will admit that you learned that the hard way?)

I'll bet most of you can come up with some little idea that you take for granted that would be worth a gold mine for someone in SEPAland. So write, phone, or fax me the information or I'll be forced to hand Linda empty pages next issue, or worse, expose you to my technical ineptness.

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Now, what did you do after Bradenton's SEPA meeting? I attended the Space Science and Engineering Workshop at Tufts University in Boston, and once I got there, expenses were free. I got lots of free stuff to take home to my little dome, such as computer programs, videos, posters, and books, and I got to play with prototype Mars robots.

Lisa DeFur, of the Craigmont Planetarium in Memphis, Tennessee, and Tom Hocking of the Morehead Planetarium in Chapel Hill, North Carolina, attended the SPICA Workshop at Harvard University.

"SPICA" stands for "Support Program for Instructional Competence in Astronomy" and basically is a workshop to train people to teach astronomy to other teachers in a workshop setting, and develop hands-on activities in astronomy to be done with their students. The workshop is expense paid for three weeks and offers a stipend for attending and for completing additional workshops during the following year. After chatting with Lisa over the phone, despite the change in leadership, the program continues to build a network of astronomy educators in the country and is definitely worthwhile. Perhaps the planetarium people who are also SPICA people could do a joint workshop at a future SEPA or IPS meeting? Meanwhile check out one of these "free" workshops if your travel budget is nonexistent.

To get information on the Tufts workshop write:

Space Science Workshop  
Wright Center for Science Education  
Science and Technology Center  
Tufts University  
Medford, MA 02155

To get information on SPICA write:

Dr. Linda M. French, Ph.D.  
Project Manager  
Harvard-Smithsonian Center for Astrophysics  
60 Garden Street  
Cambridge, MA 02138



# THE ROLE OF THE CCD IN A PLANETARIUM

by George Fleenor  
Bishop Planetarium  
Bradenton, Florida

I enjoyed James Mullaney's paper entitled "The Role of The Telescope in a Planetarium" presented during the 1993 SEPA conference in Bradenton. I further enjoyed the reprint of his paper in the Summer issue of the *Southern Skies*. I could not agree more with Mr. Mullaney's view of the use, or lack of use, of the telescope with the public. Indeed visitors should be given the opportunity to observe first hand the wonders of the universe. Nothing can compare to the actual "seeing" of an object first hand, making what he refers to as the "Photon Connection". Using the most sophisticated equipment in the planetarium theater, we still fall short of being able to replace the real thing. I constantly remind amateur and professional astronomers to try to remember their first look through a telescope. Remember the thrill of actually seeing Saturn's rings or Jupiter's Galilean satellites! Remember those first looks at distant stars and nebula! Remember the millions of questions that raced through your mind in a single second! Nothing can compare to these first time glimpses through the eyepiece of a telescope no matter how big or how small the telescope might have been. Every time you treat a novice to their first glimpse of an object in the night sky, you have the opportunity to relive those first encounters you experienced years ago.

However, don't get caught up in the moment so much that you forget the novice has not yet learned how to truly "see". Learning to "see" through the eyepiece comes only through time and observation. Many novice observers glance at an object only to see the basic image. Very few novices immediately grasp the big picture. How many times do you explain to an observer how to "see", what position in the eyepiece, what feature to look for in relation to other features? Observing the planets or exploring the moon are great beginning places that are easily toured by the novice without too much definition from the host. What about those more distant wonders? What about the faint patches of light we call star clusters, nebulae, galaxies, and quasars? Are these distant objects as easily seen by the first time observer as were those first time glances of the planets or moon? How does the encroachment of light pollution and the lack of aperture effect their view? To "connect", the observer must be able to detect the object before he or she can truly observe it. Thus enters a new

technology. A technology that will enhance the view through the eyepiece!

In Mr. Mullaney's paper the author referred to CCD/Video imaging in this way: "CCD/Video imaging that's all the rage today - even given its attendant wondrous capabilities - simply doesn't "cut it". Looking at celestial objects on a TV monitor or projected onto a planetarium dome (even in real time) cannot fulfill the need of the human mind and soul for that direct personal contact with the cosmos from which we sprang." This is the point at which I differ with Mr. Mullaney's belief regarding the role of the telescope in a planetarium. I agree with Mr. Mullaney in the fact that CCD/Video imaging should NOT replace those first hand looks through the eyepiece. However, the CCD/Video technology gives us the tool to "see" in a way that we could have never dreamed of before. What if Galileo had not used the technological invention of the telescope. Would he have made the contributions he did? Would he and future observers have understood these distant worlds without the new tool? I think not! The development of the CCD/Video technology enables us to take the novice and lead him or her on a tour through the cosmos that he or she could only get on the silver screen or Star Trek! This time the tour is real and not some science fantasy from Hollywood. The use of the CCD/Video enables us to show observers how to "see" and what to look for. For example: Imagine showing a novice the galaxy M82 through the eyepiece of a 6 inch F12 refractor from a light polluted city. Not a pretty picture is it? You ask your observer whether he or she can see the object. In some cases they can barely see the image. Other times they will admit to something they had not observed at all. How do they know what to look for? What does a galaxy look like anyway! Even the best description of what an image is supposed to look like fails to make the observer completely understand what they are looking for. And then you throw in the phrase "Can you see the dark bar across the middle?". Remember your eyesight has been trained over the years to "see" the faintest of objects. To you it may be easy to look through the eyepiece of the telescope and see an 8th magnitude galaxy as easily as you would see the planet Saturn. The novice, however, has no real chance of that.

With the use of the CCD/Video camera, a short exposure can be taken while the observer is actually observing through the eyepiece. An exposure as short as 60 seconds will reveal the needed light for a good, in depth tour of the galaxy through the six inch telescope. With the object on the monitor (dimly lit) the observing director can point out where the object is located and what special features to look for. This can be accomplished easily by using a second telescope piggy-backed to the observing scope or using a beam splitter for dual purposes. The use

(See CCD/Video on Page 16)

# ELECTRONIC COMMUNICATIONS UPDATE

by Richard McColman  
Morehead Planetarium  
Chapel Hill, North Carolina

In the last issue, we discussed some new advances in telecommunications expressly for planetarians. Through a special monthly-updated subscriber's directory available from Alan Gould of the Lawrence Hall of Science, planetarians can now find and telecommunicate (link via computer and modem) with each other on a one-to-one basis via Internet. Additionally, the PEN, or Planetarium Electronic Newsletter, which was also set up by Gould, was instituted to provide a weekly "electronic magazine" contributed to by these same planetarians. This provided a way for planetarians to communicate within a group. By sending an electronic mail message to Gould at his e-mail address "lhsastro@garnet.berkeley.edu" (there actually were a couple of typos printed in his address as it appeared in my first article on PEN), planetarians could send information or inquiries to the entire group, and could receive responses within less than a week.

Since the last issue of *Southern Skies*, planetarium telecommunications have advanced considerably. At last count, over 100 planetarians are now linked to each other and to the rest of the astronomical world through these telecommunications services -- and the list continues to grow. In September 1993, a dedicated news group, or discussion group, on Internet called "sci.astro.planetarium" was instituted, which provides even faster telecommunications capabilities. Once you get an address through one of numerous Internet full-access sites (including most colleges and universities, as well as a number of other telecommunications networks), you can get into its news system and then onto "sci.astro.planetarium" -- assuming that your local network has it available (if it doesn't, you can contact your local network administrator and request that it be added). Once on, you can leave messages that are communicated to all of the news group's users worldwide within a matter of seconds or minutes -- and get responses within hours or even minutes, if an interested planetarian happens to be "on-line" at the same time you send your message.

This opens up all sorts of possibilities for interactive communications on current issues in the planetarium field and in astronomy, as well as creating the ability to send and receive messages on technical assistance, educational materials, planetarium shows, job listings, late-breaking events in the field, etc. The major advantage of "sci.astro.planetarium" is that it doesn't require that

messages be sent to an editor, who compiles a PEN issue (made up of all the messages received since the previous issue), and then re-transmits to the subscribers. Planetarians can simply get on-line and into "sci.astro.planetarium", and begin sending and receiving messages to-and-from the discussion group immediately. In many cases, responses to information and inquiries can be received during that same on-line session.

Meanwhile, PEN as originally constituted has ceased to exist, with a "PEN Digest" taking its place. The PEN Digest is essentially a scaled-down version of the original PEN, and continues to provide a more formal method of sending and receiving information.

In addition to "sci.astro.planetarium", there is also the old standby Internet news group "sci.astro", which contains lots of good info on the latest finds in astronomy and space science. In many cases, news of hot discoveries and developments in space missions are posted within a day of their occurrence. This affords the user the ability to stay on top of the latest astronomical and space developments, without the delays of hard-copy publications and the editorial filtering of the standard news services.

John Mosley, editor of *The Planetarian*, predicts that much of the information transfer currently taking place in the planetarium journals will eventually shift into this realm of telecommunications. Therefore, I would encourage all planetarians in the SEPA region to explore possible Internet access sites in their areas, as well as the hardware and software needed to get on-line. Doing so will enhance your ongoing knowledge of astronomical news and developments in the planetarium field.

For more information on telecommunicating with your fellow planetarians contact:

Alan Gould, Assistant Director  
William K. Holt Planetarium  
Lawrence Hall of Science  
University of California  
Berkeley, CA 94720  
Phone: (510) 642-5863

Internet address: lhsastro@garnet.berkeley.edu

or

Tom Hocking, Educational Coordinator  
Morehead Planetarium  
University of N.C. - Chapel Hill  
CB #3480  
Chapel Hill, NC 27599  
Phone: (919) 962-1247  
Internet address: starman@gibbs.oit.unc.edu



# COUNTDOWN TO "94"

**Michael T. Hutton  
Astronaut Memorial Planetarium  
& Observatory  
Cocoa, Florida**

*Ed: The following is a compilation of articles published in the March and June 1993 issues of "The Planetarian".*

In July of 1994, the International Planetarium Society will hold its twelfth biennial meeting in Cocoa, Florida. This meeting has been designated by the IPS council as the silver anniversary meeting for IPS. It also happens to be the silver anniversary of the Apollo 11 moon landing. The IPS conference held in conjunction with the celebration of Apollo at the site where man first left this planet for another world is certainly an unprecedented opportunity for us to pause and reassess who we are and where we are going. With these important anniversaries to celebrate and reflect upon, it seemed only natural that the conference theme should be "Reflections".

Registration and a reception are planned for Sunday evening, July 10, with final activities on Saturday afternoon, July 16. The full schedule will be published after it is approved by the council during their next meeting in October. The conference registration fee will be \$218. This will allow us to meet one day longer than in past years. After reviewing comments and suggestions from many of you, it is clear that a longer conference will provide you with something which is continuously requested of conference hosts -- **free time**.

This next statement is of special importance. **ONLY REGISTERED DELEGATES WILL BE ALLOWED TO ATTEND CONFERENCE FUNCTIONS.** Because of the size of our group and the logistics of accommodating everyone, it will not be possible to bring guests to things like planetarium shows and SPACE CAMP. If you want to bring your spouse or children to these functions, they will have to register for the full conference. I am sorry, but there will be no exceptions.

There will be two conference hotels, the Howard Johnson Plaza and the Cocoa Beach Hilton. These hotels are located directly on the beach and rooms will be \$70 per night. This price is good for one or two people in a room and will be extended one week before and one week after the conference. This is an excellent price for quality beach-front accommodations, and I would strongly suggest you make your reservations early. It will be very crowded on Florida's Space Coast during the silver anniversary of Apollo 11.

Two hotels are necessary in order to provide the kind of conference a professional organization like IPS deserves. My plan is to use the conference facilities at The Plaza for meetings, workshops, and paper sessions. The conference facilities at the Hilton will house the first official "Trade Show" at an IPS conference.

The two conference hotels are physically very close to each other and you can take a pleasant 10-minute walk along the beach to get from one to the other. You should expect to see hotel reservation forms this fall, and I would recommend that you return them as quickly as possible. This meeting promises to be one of the most heavily attended IPS conferences and you will want to make sure that you have a room at one of the official hotels.

Another significant point of interest at the '94 conference will be the newly renovated Astronaut Memorial Planetarium & Observatory, my facility. Information about the original facility can be found in the August '78 issue of *Sky and Telescope*. This article describes the facility as it was up to November 1992. At that time a major renovation began which will significantly alter every aspect of the original facility.

The building is being enlarged and when the project is completed in December of 1993, it will be four times larger than the original with approximately 50,000 square feet. The new planetarium will have a 70-foot dome making it one of the ten largest in the United States. More important though is the use of a Minolta Alpha Model Infinium and a new Evans and Sutherland Digistar under the same dome. The old planetarium room is being converted into a flat screen movie theatre and will use an IWERKS 870 projector as well as standard 35mm. There will be a new 4,000 square foot exhibit hall as well as many other amenities.

As Chairman of the "IPS 94" conference, I want to make our international guests feel as welcome as possible. As you will see, we are working on many support services for our international delegates to help make their stay in Florida as rewarding as possible. I want to take this opportunity to invite you to make suggestions about how we can become a better international conference.

As with any conference, the main goal of the host is to create an environment where people can communicate freely and easily. At an international meeting, achieving this goal is made more difficult because of the language barriers. Addressing this single problem has occupied our attention since last summer. I am happy to report that some of our efforts have already generated some unique support for our meeting.

The South Brevard Beaches Jaycees organization plans to announce to the Florida State Jaycee Conference that "IPS 94" will be the group's regional project for the year; the Jaycees will work with IPS conference organizers to escort international participants and help facilitate meeting



arrangements. International students from Brevard Community College also will be on hand as informal interpreters and facilitators during the conference.

In addition to the Jaycees and exchange students from Brevard Community College, the Florida Spacecoast Council for International Visitors will greet and register international delegates to the conference. The FSCIV is affiliated with the National Council of International Visitors in Washington, DC, and has members fluent in over 30 different languages.

International delegates will also be invited to participate in a most unusual conference activity. Some members of the groups mentioned earlier have volunteered to host international delegates in their homes. International delegates will be able to converse in the language they prefer and will share a meal with their hosts. We hope this will give some of our visitors an opportunity to get to know us better and at the same time get a different view of Florida's Spacecoast than the one portrayed by planetarium directors and NASA officials.

By the time you read this article, most of you will have received a postcard from me announcing the "IPS 94" conference. This postcard may seem like a simple thing to do in order to remind people about the conference, but it actually represents much more.

Most IPS members received an English version of the postcard; but others, depending upon where they live, may have received a card written in French, German, Japanese, Russian, or Spanish. We applied for, and received, a \$4,500 grant from the Brevard Tourist Development Council to support translations. Not only does this fund the translation of the postcards, but it will also help underwrite translations of an "IPS 94" promotional brochure, the registration forms, and the conference agenda. These materials, written in several global languages, should be especially helpful to our international guests who may find English troublesome.

While I am on the subject of the postcards, there is an important item I must mention. Just because you received a postcard, do not assume that you are on my mailing list for hotel and conference registration materials. The only certain way you can receive conference registration materials is to drop me a postcard, letter, or fax and request the materials. PLEASE DO NOT CALL! Sending me a copy of your business card is all that it will take. On the back, simply write "IPS Registration". If you did not receive a postcard, then please send me something. I sent the cards to everyone in the IPS Directory; if you did not get one then we do not know about you. Send a letter and introduce yourself. We would be happy to hear from you.

In addition to the Tourist Development Council Grant, the Florida Humanities Council has awarded "IPS 94" a \$10,398 grant for a unique, free public forum featuring

American and Russian panelists. The forum will bridge the International Planetarium Society's technical and professional conference with the national and international celebrations of Space Week '94. "IPS 94" will wind up Saturday, July 16, 1994. This will be the kickoff date for Space Week 1994 and the celebration of the Apollo 11 silver anniversary. To signal this hand-over, IPS, supported by the Florida Humanities Council, will present "Growing Up With Rockets: Reflections from Cape Canaveral to the Kremlin". This will be a free, open, public event with audience input and discussion. It will involve IPS, the public, historians, local educators, and members of the Florida Spacecoast Council for International Visitors in a dialogue.

The symposium's presentations and audience-involved programs will stimulate participants to reflect upon the way rockets and their technology have shaped this part of Florida and its communities. It will explore the ways our former adversaries view us, and we them, during the space race. The successful journey of Apollo 11 capped a decade of rivalry between two superpowers. What was it like to grow up on Florida's Space Coast in the 1950s and 1960s? How did Russians perceive their own space program at the time? What did they think of the efforts of the United States? Were they aware of Florida's role in the USA's space program? Did people on either or both sides see their space programs as a way to bring the world together in peace, or as an instrument for world domination? "Growing Up With Rockets" will be a vehicle for public discussions and learning. Floridians who experienced the early days of space exploration and its impact upon our state, and particularly this region's history and development, will get to meet someone from the "Other Side". A representative from the "Other Side" and other international delegates and participants will get to meet and learn from Floridians.

If you haven't guessed by now, the representative from the "Other Side" is Oleg V. Sizuchin, Director of the Moscow Planetarium. Within the budget of the grant from the Florida Humanities Council are all of the travel expenses for Oleg to come to the United States and participate not only in the "Growing Up With Rockets" program, but also the entire "IPS 94" conference. Personally, I can't wait to get rid of that bird he gave to Von Del Chamberlain, who then dropped it in my lap.

We are continuing our efforts to find travel expenses for our colleagues from countries where hard currency is limited. We are currently working with: the Florida International Affairs Commission, the United States Information Agency, the National Council for International Visitors, the Embassy of the Kingdom of the Netherlands, the Embassy of the Kingdom of Saudi Arabia, and others. While firm funding for planetarium directors from other countries is still being negotiated, we are very optimistic that more of our colleagues will be with us in 1994 - many perhaps for the first time.

What can you do? If you are planning to present a paper at the conference, it would help if we had the complete text of the paper at least 45 days before the beginning of the conference. This would allow our volunteer translators to study the material before you present the paper. Then, during the paper sessions, our translators could help our international guests understand you better. Receiving the complete text of your paper early is also a requirement if it is to be included in the conference Proceedings. So, please plan ahead when you decide to give a paper - it will help all of us.

Speakers and presenters addressing multi-national audiences should follow a few simple guidelines to ensure effective communications. Since most of our topics are technical, speakers should speak distinctly and avoid slang and colloquial expressions. This was a comment made at the wrap-up session in Salt Lake, and I think a particularly valid one since I was guilty of making this very mistake. Many words which we freely use domestically, like "fish-eye", "hypersphere", "flat-dome", and "digi", could have very different meanings to our international members.

We need to be aware of cultural differences in learning and communication styles. Extemporaneous presentations with significant audience participation, which characterize many North American planetarium sessions, are not well received and often misunderstood by people of other cultures who are accustomed to a more formal, didactic delivery.

Other efforts to better support our international guests are in the planning stages. But, for now, this represents our accomplishments so far. If you have any ideas or suggestions, Bob Tuck, staff astronomer at our facility, is the chairman of the International Affairs Committee. Please feel free to contact him directly.

I am also happy to report that our president, Dr. Bill Gutsch, has volunteered (?) to chair the Speakers Committee. With Bill at the helm, I am sure we can look forward to some exciting presentations. If you have any suggestions, please feel free to contact him directly.



More "Countdown to '94" in upcoming issues of *Southern Skies*.

## CCD/Video - Continued from Page 12

of the CCD/Video has enabled us at the Bishop to lead hundreds of more people through the universe with wider eyes and better understanding of what they are looking at. Using the CCD/Video technology also gives a larger number of observers the opportunity to witness specific events such as occultations, and solar or lunar eclipses. While allowing observers a glimpse through the eyepiece at the wonders taking place, CCD/Video allows them the opportunity not only to "SEE" the image in real time, but the entirety of the event itself.

I do agree with Mr. Mullaney, every planetarium should use the telescope to enhance the "cosmic connection" and schedule regular observing sessions (weather permitting of course). Technology is only as good as it is applied. Applied wrongly, this new technology could cheat the novice out of that first time experience. This isn't necessarily the goal of the users already using CCD/Video. Many planetarians around the country are using CCD/Video technology in their regularly scheduled observing sessions. Many of those are using their new technology to enhance the view the observer gets through the eyepiece. Armed with this new fairly inexpensive technology, observing directors can guide their patrons through the cosmos. Don't be afraid of the technology, embrace it and milk it for all you can get! You and your visitors will be amazed at what the universe has to offer with the application of this new technology!!



**NEXT  
SOUTHERN SKIES  
DEADLINE**

**JANUARY 1st, 1994**

# MUSIC FOR PLANETARIUM SKY-SHOWS

by Paul Kaplan  
Castle Lane Productions  
Hawthorne, New Jersey

In today's world of hi-tech automation, computer graphics, and video, sky-shows require modern, appropriate music compositions, so that the entire sky-show package is viewed as a highly-polished cinematic experience. Whether the music is from a pre-recorded source or written for a specific show, the music must be timely, possess character, and the music must be presented with variety.

That "cinematic experience" is what audiences of today's planetarium sky-shows expect. With today's big budgeted movies and television shows, MTV, and sophisticated computer and video games, people are prepared for excitement and stimulation. There are those who might not consider this, but the truth is these items exist, and in a very real sense, are competition for planetariums. The planetarium must be a center for education and learning - there is no doubt. But, it is also a place of awe, wonderment, and of course, fun. By using the appropriate "complements" to the sky-show's narration and star field, the learning process can only be enhanced. The "complement" I feel qualified to speak about, of course, is music. By perceiving music as a "spouse" in the "marriage" of picture and sound, as in the planetarium sky-show, the sky-show becomes a much more effective learning tool, not to mention a more dynamic presentation. When a director finishes editing a film, and it is time for the composer to step in and score the film, the director often says to the composer (while watching a particular scene of interest) "OK, now make them *feel* it".

Years ago, a pianist sat in the "pit" and rendered improvisations to the action on the silent screen. Soon, composers wrote books of organized music for pit pianists. Around 1916, small orchestra folios were composed, such as M. L. Lake's "Descriptive Numbers For Motion Pictures And Dramatic Purposes", scored for Bass, Cello, Clarinet, Drums, Flute, Trombone, Viola, and Violin. Most of the music written and catalogued up to 1925 was classified into categories such as: Confusion, Fire Scenes, Storm, Love Themes, Fear, and so on. Of course, this is the equivalent of today's music track libraries.

In 1933, Max Steiner wrote *King Kong*. The score gave the otherwise puppet-like character of the ape a quality of size and horror that affected the audiences tremendously. But it was *Captain Blood*, in 1935, that composer Erich

Wolfgang Korngold brought to the movie theater with dramatic fanfare and Straussian orchestrations that are still in effect today.

Now, let's move from the movies to the planetarium sky-show, i.e., from the screen to the dome. Of course, music must still play a supporting role to the narration, but it must work *with* the narration *and* the visuals to make the point, to create the illusion, and to make them feel it. As one television director recently said to me, "People don't realize it, but music is as important as the picture". (Have you ever watched your favorite TV show or video, and tried muting the sound? Pretty silly, right?) I have seen many planetarium sky-shows, and all too often, the score is a series of five or ten notes, or a simple melody repeated over and over again - for forty minutes. The melody may be fine, but where is the imagination, the inspiration, the drama, the tension and release? After a while, minds young and old may tend to tune out - not just the music, but more importantly the narration, the story. As a colleague of mine once said in speaking about planetarium sky-show music scores, "There's more emotional impact in a thirty second commercial!". By *not* simply adding some music, but rather by choosing or writing appropriate music that works hand-in-hand with the visuals, a much more effective sky-show is created.

I'm not saying planetariums should make movies. What I am saying is that we can learn from the movies the ideas of tension, release, drama, satisfaction, i.e., emotional range and variation. Music is very instrumental in providing this. The score to a sky-show shouldn't sound like a car chase, but rather than just being a bed of music all the time, the music should be an active member in the story-telling process.

*"The absolute case for scoring music, its absolute purpose, is to heighten the emotions. If you look at a scene and have something to say which will heighten the emotional message, then write it. If not, stay quiet. Silence is part of the music as well, part of the interplay in the audio-visual realm."*

Paul Kaplan is a composer for film, television, the stage, and planetariums. Paul has presented papers and given music workshops at various planetarium conferences.



# NEWS FROM SEPA STATES



## ALABAMA

Joyce Divina. Joyce is the Vax System Manager! Welcome Joyce! Are you a member of SEPA yet?

Miami Space Transit Planetarium - Mark Bennett reports the planetarium and museum are gearing up for the annual "All Florida Artists" art show Oct. 15th - 18th. Yes, that's right, an art gallery in the planetarium. Currently the starshow "Child of the Universe" is drawing healthy crowds. Mark also reports attendance is up for their laser lightshows since they advertised during "Bevis and Butthead" on MTV! (Ha Ha Ha Ha Ha)



## FLORIDA

George Fleenor  
Bishop Planetarium  
Bradenton

Alexander Brest Planetarium - Director Kathy Poe reports the opening of a new show entitled "Backyard Critters". The starshow was produced in-house and complements a traveling museum exhibit "Backyard Monsters". The exhibit features enormous robotic scale models of common insects found in the backyard. The starshow is designed as a constellation show featuring the insects as they navigate by using the stars. The 32 minute starshow can be run without the exhibit and will be sold commercially for \$550.00. Kathy also reports that a new show is currently being produced to strike the fancy of everyone. She would not give any specifics but promises more information in the next journal.

St. Pete Jr. College - Ken Perkins reports they are currently running the starshow "First Light" and are installing "Hubble Report From Orbit". The two starshows will alternate monthly with the exception of December when they will feature a traditional Christmas starshow. Starting in January, on the first Friday of each month, the planetarium will feature an "Introduction to the Night Sky" which will be followed by the regular Friday night observing session.

Indian River Community College - Jon Bell reports the grand opening of the new planetarium was a success. Planetarium attendees were treated to a spectacular starshow entitled "To The Edge of the Universe" written and produced by the famous Jon Bell himself. The starshows have been running for capacity crowds and Jon is ecstatic! Evening patrons were treated to spectacular views of Saturn through telescopes belonging to the local astronomy club. Jon also reports that the observatory, located in the old science building, is being renovated. On a personal note - Jon will be making another change in his life soon. On July 23, Jon will be wed to Lisa Schoenster. Lisa is from Hampton, Virginia, and the wedding will take place there. Congratulations to Jon and Lisa!!! For more information about Jon and the planetarium, see the "Featured Planetarium" column.

Bishop Planetarium - The Bishop Planetarium is proud to announce the hiring of a new staff member. Mike Cutrera joined the Bishop staff September 1st. Mike came from the Mallory Kountze Planetarium in Omaha, Nebraska (University of Nebraska at Omaha). A hardy SEPA welcome to Mike, his wife Lisa and daughter Francesca. The planetarium is slowly recovering from the recent conference and is gearing up for the upcoming school year. The current starshow is Memphis' "Cosmic Whispers" and the children's show is J.H.E.'s "Bear Tales...". The staff is in the process of rewriting a children's starshow to be premiered in November entitled "Fantastic Skies". This starshow will feature a life size Tennessee Mountain Hillbilly puppet! Snooty the Manatee is now in his new pool, and we all celebrated for him at a big party.

John Young Planetarium, Orlando - The search for a new planetarium director is still in progress. Job announcements have been mailed to the IPS membership and hiring is scheduled in December. Currently the starshow "Touch the Stars" is being presented along with several other school and kid show classics such as "Larry Cat In Space", "Wonderful Rocket", and "Magic Sky". (Has nothing to do with the Orlando Magic basketball team! However, that might be a good idea! Constellation "SHAQ?") Laser shows are reported healthy with good attendance at their new laser show "Alternative Laser Static" and of course Pink Floyd's "Wish You Were Here".

E. G. Owens Planetarium (Pensacola Jr. College) - is currently running "The Planet Patrol". During the holiday season "Digistar Extravaganza" will demonstrate many of the wonderful things the Digistar is capable of. Also, the mini show "Santa's Toy Bag" will be presented. In January the starshow will be "Bear Tales and Other Grizzly Stories". Frank Palma reports the addition of a new staff member -

B.C.C. Planetarium, Cocoa - Construction on the new planetarium is going well. Mike Hutton reports the dome skin is currently being hung (9/25/93). The Minolta Infinium projector, known as "Duke", is being readied for installation as well. Technicians are also preparing for the installation of the Digistar! The old star projector affectionately known as "Jake" was shipped off to its new home in Chattanooga, Tennessee. Though the planetarium and observatory have been closed for renovation, B.C.C. has offered a Starlab outreach program to area schools. The Starlab was purchased with a major donation from Lockheed Space Operations Company of Titusville. Starlab visits to area schools have already been supported by The Community Foundation of Brevard County, Impression Technology, Rockwell International, and The Science Fare Store. IPS '94 should be nothing less than spectacular!

Buehler Planetarium, Davie - Currently showing in the Zeiss Theatre is "The Planet Patrol". Being presented in the Anneliese Rhein Gilesie Evening Sky Gallery is a presentation that introduces the fall constellations. Mythology behind the constellations is presented in story form. Productions of the Buehler Laser Team include: "Laser U2", "Laser Floyd", and "Laser Country".

Daytona Beach Planetarium - Roger Hoefler reports all is well in Daytona. Roger has been busy redesigning the county school system curriculum and currently has 11,000 school kids scheduled for this year. Recently the "Dork" automation system was modernized and is now fully operational. The current starshow is Memphis' classic dinosaur show. Roger anticipates running Loch Ness' "Tis The Season" during the holidays. The planetarium is currently running 14 public starshows a week!

Lee County Nature Center, Fort Myers - Doug Lozen reports recently a visitor to the planetarium complained of discomfort with the seating during a starshow. The visitor donated the appropriate funds for tilt seating to be installed in the entire theater! The planetarium is gearing up to aid the nature center in its Haunted Walk for Hallowe'en. The planetarium will be presenting mini laser shows for the event. The facility is also searching for funds to upgrade the 20 watt star lamp of the 512 to the new 75 watt version. The planetarium staff is also producing a weekly 2 minute "Sky Watch" program for the local Public radio station. They will also be offering telescopic observing on Sunday evenings from November through April and have special plans for a November eclipse party.

The Saunders Planetarium, Tampa - October 3 marks the first anniversary of The Saunders Planetarium in Tampa, Florida - and what a year it has been. Alan Peche, Planetarium Director, reports that total attendance was just under 70,000 with nearly 1700 programs given. Not bad for a 30-foot dome and a 30 year old Spitz A3PR. As were the rest of the science museums in the country, they were

affected by the "Jurassic Summer". July, their busiest month, had an average of 7 shows a day! Attendance has now slowed to normal for this time of year, giving the staff a much deserved rest as they open "Larry Cat in Space" and the new version of "More Than Meets the Eye".

South Florida Science Museum, West Palm Beach - Rumor has it that former SEPA member Dr. Charles D. Smith is the new director of the science museum. Welcome back Charlie!

## GEORGIA

Carole Helper  
Mark Smith Planetarium  
Macon



On October 4, the Georgia Association of Planetariums met at the Mark Smith Planetarium in Macon. In attendance were planetariums from Macon, Atlanta, Savannah, Columbus, Fort Valley, and Fairmont, and Jon Frantz from East Coast Control Systems. Luncheon speaker was former planetarium Ken Guyton, now with Emory University. The next GAP meeting will be hosted by David Dundee of the Jim Cherry Planetarium on Monday, September 26, 1994.

The Savannah Science Museum recently painted an analemmic sundial on the parking lot. It has been quite popular with children. Their current public show is about Christopher Columbus. The staff is looking forward to their annual Haunted Museum fund raiser.

Clay Powers has been promoted to Acting Director of the Patterson Planetarium in Columbus. Clay's new show, "Faces of the Moon", will be running until Thanksgiving. Their Christmas show will be "Larry Cat in Space".

Speaking of cats, an orange, lasagna loving feline has invaded the Jim Cherry Planetarium at Fernbank Science Center in Atlanta. "Garfield's Galactic Adventure" recently opened with a pizza party reception to sell-out crowds. The planetarium is also showing "Our Nearest Star".

John Burgess retired July 1, after 24 years at Fernbank, and 32 years at the DeKalb County School System. John is working at the Rollins Planetarium in Young Harris this year, during Jimmy Westlake's absence.



## KENTUCKY



## LOUISIANA

**Dave Hostetter  
Natural History Museum  
and Planetarium  
Lafayette**

The Lafayette Natural History Museum and Planetarium will almost surely relocate to a local historic building (built c. 1920) and former department store in downtown Lafayette. An official decision should be made by the time this issue is in members' hands. The planetarium will be moved there, reopening in late 1995. Meanwhile, public programs continue in a 15' temporary dome and school programs continue with Starlab and classroom presentations in area schools. The Planetarium's Young Astronaut chapter recently scheduled a field trip to the planetaria in New Orleans and Kenner, getting almost out of town before the van broke down (which is, of course, better than breaking down in a swamp somewhere...).

Gary Meibaum, of the St. Charles Parish Planetarium in Luling, reports that an ant rode into the slide gate on a slide of Albert Einstein during a recent star show, replacing Einstein's image in the slide. Talk about your special effects!

Gary, in conjunction with Mike Sandras (from the Freeport McMoRan Daily Living Science Center in Kenner) has free original program scripts available for distribution on IBM compatible disk or printed copy. Topics are archaeoastronomy and the Magellan mission to Venus, and they hope to add more topics soon; each program lasts 30 - 40 minutes. Contact Gary for a copy or information.



## MISSISSIPPI

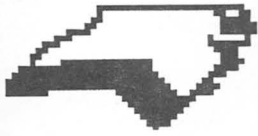
**Gary Lazich  
Davis Planetarium  
Jackson**

The McNair Space Theater of the Russell C. Davis Planetarium in Jackson ran "Our Home in the Milky Way" and the hemispheric film "The Great Barrier Reef" as its summer features. "Cosmic Interlopers", a special presentation on the Perseid meteor shower, drew 130 people and several opportunities for media coverage. (The Perseids looked spectacular in Rainwater Observatory's dark skies.) Summer laser programs featured the music of The Alan Parsons Project, Led Zeppelin, and Pink Floyd. Autumn features include "Firefall" (shown with the hemispheric newsreel "The Eruption of Mount St. Helens!"), laser programs featuring Van Halen and Hallowe'en music, and a very popular new school program combining "Larry Cat in Space" with the wide-screen film fantasy "Rainbow War". After showing "The Star of Bethlehem" and "Aunt Jenne's Christmas" in December, the Theater will close for two months while we install new seating and carpeting.

Mississippi's Student Space Station™ hosted Mission 93-A during Spaceweek. The crew of 32 students included Lital Gerassi from Israel, making this our second international mission. Space Station graduates continue to score highly in math and science competitions. Eric Ford of Jackson won seven awards at the International Science and Engineering Fair (and a summer job at Intel!) for his work with computer landscape simulation. Later this year, thanks to a grant from the Hinds County Private Industry Council, the Space Station program will expand to involve at-risk students in after-school mission preparation activities leading up to a special mission in spring. By then we hope to have hired a full-time co-ordinator for the program.

Work continues on "Voyages", a wide-screen film in 870 format celebrating the spirit of exploration. If all goes well, the film should premiere in time for next year's 25th anniversary of the Apollo 11 landing and for the IPS Conference. Jackson will host this year's C-360 Conference in late October. The Conference will include the unveiling of a new Space Transportation exhibit provided by NASA's Stennis Space Center as well as screenings of several 870 films.

## NORTH CAROLINA



The Morehead Planetarium in Chapel Hill was closed for a few weeks this summer for a face lift. They now have new carpeting, recovered seats, and a newly painted dome. Some of the public starshow offerings for this Fall are: "Dinosaur Disaster", "Mystery of the Universe", "The Travels of Terry Trasher", "Sky Rambles", and "The Planet Patrol". Course offerings will be: "Build-A-Rocket", "Advanced Rocketry", "Fly-A-Rocket", "Space Stories", "Microgravity: Which Way is Up?", "Teacher Activity Days I, II, and III" (project SPICA mini-workshop), "Planet Watch '94", and "Science Olympiad Preparation".

## SOUTH CAROLINA



**Rick Greenawald**  
**Hooper Planetarium**  
**Greenville**

Jim Brown, of the Stanback Planetarium in Orangeburg, has had a few electrifying experiences as of late. Unfortunately, it has been in the form of lightning taking out key components of the automation system. In early August a strike took out his Thyme box giving him no SMPTE capabilities, then just after he got it back, lightning struck again and took out a Sugar box, a Nutmeg, and four Cinnamons. As of this writing he has yet to have his budget approved, making it impossible to have the equipment repaired. Jim says he is basically out of commission, but he is limping along as best he can. Jim also has plans to add lightning protection to his theater. On a better note, Jim reports that his teacher resource center is open and running. A word of warning to all, don't try to use the old adage 'Lightning never strikes twice' with Jim.

Jeff Guill, of the Gibbes Planetarium in Columbia, reports that the position of Production Assistant has been filled by Todd Slisher who hails from Ann Arbor, Michigan. Todd volunteered many hours at one of the theaters there. On behalf of the planetarians of South Carolina, we offer a warm welcome to Todd. Jeff also

reports that their Starlab will be going out to schools on a rental basis this year. Teachers will have to complete a four hour workshop and meet all other criteria before they can rent out Starlab. The Gibbes Planetarium is also gearing up for the lunar eclipse in November and reports that registration for school programs has been very strong this year.

Glenn Dantzler, of the Settlemyre Planetarium in Rock Hill, reports that they have acquired the 24 1/2 inch classical cassegrain telescope they were trying to purchase. The museum must now begin fundraising for an observatory, which according to Glenn, could take a while. Glenn also reports that John Dobson will be visiting the museum in March. Mr. Dobson will be giving talks to both the public and school groups while visiting. Glenn also reports that he is currently working on "Galaxies" which will accompany a photographic exhibit entitled "Heavens Above" and will feature the astro-photography of amateurs from North and South Carolina.

Here in Greenville we are planning to cut back on our public schedule. Currently we offer one program on Friday nights, with the observatory, and three programs on Saturdays. As of the first of the year we will be ceasing Saturday operations, except for the second Saturday of the month when the whole center is open, and adding another Friday night program. We have found that attendance is good when there are two or more facilities open at the same time, but if it is only the planetarium, attendance suffers greatly. As I write this, we are also gearing up for a big new earth science program for the eighth grade. Over the next five weeks we will have over four thousand students from our district going through this program that consists of "Venus: Earth's Fiery Twin" in the planetarium and a program entitled "The Nature of Light" in our auditorium. Both topics tie into the earth science curriculum in South Carolina. The response was so good that we have 100% participation by our middle schools. We now hope that we might use a similar format to reach an entire grade level in our high schools.

I would also like to note that I recently had the chance to visit the Buhl Planetarium in Pittsburgh and take in their current show "Cosmic Perceptions". If you happen to be passing through there I highly suggest you stop in and see this show. If I had to sum up the show in one word it would be "incredible".

That's the way it is from South Carolina.

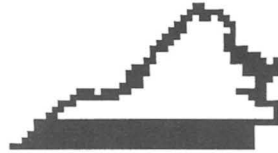
## TENNESSEE



Kris McCall  
Sudekum Planetarium  
Nashville

The Sudekum Planetarium in Nashville is pleased to announce that Shawn Laatsch has joined the staff, replacing Robin Levine-Fields, as one of the two astronomy educators. Shawn arrived just in time to prepare for a full season of school programs, camp-ins at the museum, and taking Starlab out on the road.

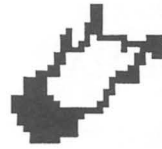
The Cumberland Science Museum, home of the Sudekum Planetarium, will be hosting the COSI Mission to Mars exhibit from February through April of 1994. This exhibit has been booked to complement the Planetarium instead of having us give a show to accompany an exhibit (such as dinosaurs). Regrettably there won't be any data from Mars Observer to make this exhibit even more timely. If you have not had a chance to see this exciting exhibit or participate in its Mars Base One simulation, you might consider a trip to Nashville next spring.



## VIRGINIA

The Virginia Living Museum Planetarium in Newport News is offering "What's Up?" - a live guided tour of the current night sky, every Saturday at 11:00 PM. Running from September 18 through November 14, is "Daughter of the Stars" - a program that looks into the rich cultural heritage of North America.

The Arlington Public Schools Planetarium is offering the following Fall schedule: Programs - "Stars Tonight", "Hubble: Report From Orbit"; Courses - "Astronomy For Families", "Astronomy O!O!O!: Life, The Universe and Everything"; Meeting - NOVAC, October 20, 7:30 PM.



## WEST VIRGINIA





# ESTABLISHMENT OF THE NATIONAL PLANETARIUM COUNCIL

**By: Dale Smith**  
**Bowling Green State University**  
**Bowling Green, Ohio**

*Ed: This article was received after the <sup>Fall</sup> ~~Summer~~ issue of Southern Skies had already gone to the printer. I felt that it was too important to be held for print in the next issue.*

Authorizing votes by the American regional planetarium associations have created a new voice for the nation's planetariums, the National Planetarium Council. The Council is the first national organization of American planetariums. Its roles will include providing a single voice to speak for the American planetarium community when needed, helping the regionals to work together as desired, and seeking funding for projects of benefit to the nation's planetariums.

The members of the NPC will be the existing regional associations. The regionals themselves will remain autonomous, and the Council will provide the means to accomplish common projects or projects that require a national organization. Similarly, the NPC is independent of IPS, whose scope is international.

The steps leading to the creation of the NPC began with an article by Bob Tate in the SEPA newsletter in early 1992 calling for such an organization. The article led to a meeting in early 1993 of Bob Tate (SEPA), Steve Mitch (MAPS), and Dale Smith (GLPA), representing the presidents of the seven regional associations. The principles of the NPC were drafted at this meeting and later written into the proposed NPC By-Laws in consultation with all the regional presidents.

The By-Laws were ratified by the members of SEPA, PPA, GLPA, GPPA, and RMPA in their 1993 conferences. In some cases, the vote was unanimous; in others, such as RMPA, members felt that many questions remained to be answered. MAPS also approved the By-Laws in a straw vote and SWAP voted to support the concept of a national council. Both groups are expected to consider formal ratification of the By-Laws in their 1994 meetings.

The representatives of the regional associations to the NPC Board of Directors are as follows: GLPA - Dale Smith, GPPA - April Whitten, MAPS - Steve Mitch, PPA - Lonny Baker, RMPA - Bess Amaral, SEPA - Bob Tate, SWAP - Christine Brunello. This list includes both the official representatives of the regionals which have ratified the NPC By-Laws and the informal representatives of the regionals which have not yet ratified by By-Laws.

With the NPC now established by the ratifying votes, the first task of the Board will be to undertake the incorporation of the NPC. Following this initial step, the Board will begin the process of building the NPC into a viable organization that can accomplish its goals. If you have any questions or suggestions, please contact your regional association's representative. Future progress will be reported through the regional newsletters.

**FALL**

**1993**

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