SOUTHERN SKIES

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Journal of the Southeastern Planetarium Association

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President Richard McColman Morehead Planetarium University of North Carolina Chapel Hill, NC President-Elect Kris McCall Sudekum Planetarium Nashville, TN

Past-President Robert Tate Harper Planetarium Atlanta, GA

Southern Skies Editor

Linda Hare 3602 23rd Avenue West Bradenton, FL 34205 Phone: 813-746-3522 Fax: 813-747-2556

Southern Skies Associate Editors

Featured Planetarium

Astro-Video Review

Mike Chesman Bays Mountain Planetarium 853 Bays Mountain Park Drive Kingsport, TN 37660 Phone: 615-229-9447

Laser Talk

Mark Howard John Young Planetarium Orlando Science Center 810 E. Rollins Street Orlando, FL 32803 Phone: 407-896-7151 Fax: 407-896-3561 Dave Hostetter Lafayette Natural History Museum & Planetarium 637 Girard Park Drive Lafayette, LA 70503 Phone: 318-268-5544

Reviews Kris McCall Sudekum Planetarium Cumberland Science Museum

800 Ridley Blvd. 800 Ridley Blvd. Nashville, TN 37203 Phone: 615-862-5160 Fax: 615-862-5178 Secretary-Treasurer Linda Hare Bishop Planetarium Bradenton, FL

IPS Council Representative John Hare

> Bishop Planetarium Bradenton, FL

> > Graphics

Mike Cutrera Bishop Planetarium 201 10th Street West Bradenton, FL 34205 Phone: 813-746-3522 Fax: 813-747-2556

Small Talk

Elizabeth Wasiluk Berkeley County Planetarium Hedgesville High School Rt. 1 - Box 89 Hedgesville, WV 25427 Phone: 304-754-3354 Fax: 304-754-7445 Southern Skies

Volume 14

Number 1

A Message From Your President

Is Bigger Necessarily Better?

How important is size? It seems to be an obsession of modern society--one that tends to classify everyone and everything, often without much consideration given to less cosmetic and more substantive attributes. Emphasis is placed on the tallest buildings, the biggest athletes (partly explaining the steroid-use scandals of the past several years), and the largest and most powerful cars. Those that don't "measure up" are frequently relegated to the category of the "also-rans". As Randy Newman satirically puts it--"Short people got no reason to live".

This same emphasis on the superficial, it appears to me at least, has carried over into the planetarium world, too. In my ten years in the planetarium field, I've worked in both large and small facilities, and while I recognize the various merits and drawbacks of each, I'm puzzled by the degree of importance often placed on dome size. In particular, I'm not entirely comfortable with the term "major planetarium" (usually used to indicate facilities with diameters of 50 feet or more), despite my current association with one. Although we frequently use the terms "major" and "minor" in constellation names as synonyms for "large" and "small", these adjectives also imply conditions of relative importance. In fact, my handy Webster's defines "major" as--"greater in dignity, rank, importance, or interest". Conversely, the term "minor" is defined as-- "inferior in importance, size, or degree: comparatively unimportant". To my mind, the use of the term "major planetarium", suggests that all those not in that category are "comparatively unimportant".

The use of this terminology reminds me of an old dog food commercial. Remember the one where the kid sings, "My dog's bigger (and better) than your dog"? Implicit in this is the notion that "size" is the major determinant of "value" or "quality". I trust we're all sophisticated enough to recognize the fallacy of such a concept, given as blatant an example as this. But size does tend to consume our attention in more subtle ways. Richard McColman Morehead Planetarium, Chapel Hill, NC



January 1994

An old friend of mine, an amateur astronomer, often smiles a knowing smile whenever mention is made of the local astronomy club in his area. "Yeah, a lot of those guys just sit around comparing the sizes of their instruments", Tom's been heard to exclaim with a snicker (and perhaps just a hint of innuendo, as well). Of course, many members of the club do have a genuine interest in astronomy and observing for its own sake. But while we recognize that diameter *is crucial* in a telescope's light-gathering ability, it also appears, as Tom suggests, that some club members exhibit a "mine's bigger and better than yours" macho-style equipment obsession.

I believe a similar undercurrent exists in our perceptions of ourselves and of others in the planetarium field. It's not entirely uncommon, in fact, to pick up on this attitude in conversations during association meetings. I've heard comments like, "with his talents, he really should be in a major facility", and "her's is just a small planetarium". Such attitudes have even permeated the perspectives of smaller-dome planetarians who have occasionally been heard to say things like, "I've only got a 30-foot dome". Many of us, myself included, have fallen prey to this sort of thinking.

Just what is it that makes us adopt such a perspective? If our *common goal* is to provide astronomy education, why should some institutions be considered less important than others merely because of their size. To be sure, staff size, personnel qualifications and diversity, quality of programs, equipment, and attendance all vary among institutions. However, much of this variability cuts across dome-size classifications. Also, there are some examples of small planetariums whose creativity and inventiveness in programs far outshine the efforts of some of their large counterparts--and frequently despite a lack of the newest and best equipment, huge budgets, and large staffs. Perhaps it is hunger (in this case the lack of the biggest and best) which is the most powerful of motivators, though many of these resource-poor planetariums continue to struggle on a daily basis. While small facilities often must get by on small budgets, and even smaller staffs, large institutions can sometimes have their own impediments--in the form of large, complacent bureaucracies; and big, specialized, but territorially-fragmented and disharmonious staff structures--with a resulting deficit in the staff's overall sense of "ownership" in the institution and its programs.

In my judgment, even annual attendance figures can be a rather fallacious way to judge the relative "importance" of individual planetariums. The success of the educational process shouldn't be based primarily upon the number of people contacted, but instead, gauged by its qualitative effect on the *individual*. During the 1960's, conservative columnist William F. Buckley, Jr., writing about some of the rationale then being used in the arguments against the use of nuclear weapons, observed that to condemn nuclear war primarily on the basis of the numbers of people killed in such a conflagration is to "dehumanize" the worth and humanity of the individual. (The fact remains that "war is hell"--regardless of whether one or one-million die.) Likewise, educational success is dependent upon the quality of understanding imparted to, and gained by each individual. Humans do not have a "collective consciousness" as such, and because our brains work independently of one another we ultimately engage in the educational process on an *individual* basis. Therefore, seeing planetarium visitors merely as "beans to be counted", it seems to me, cheapens the planetarium's overall value within society.

How should we then assess the importance of our institutions? I believe we should start out by accepting the premise that all planetariums have equal potential for achieving their educational goals, regardless of dome diameter, staff size, annual attendance, or budget. I'm reminded of the words of a familiar fictional sage, who proclaimed, "Judge me by my size, do you? And well you should not! For the Force is my ally ... and a powerful ally it is". Likewise our "force" lies not merely in the size of our star chambers, staffs, or levels of technology, but in the power of creative minds and dedicated spirits. The creativity, inventiveness, and motivation of planetarians are much more important than the superficial concerns of facility size. Einstein and Gandhi each had a profound impact on events in this century, despite their own humble beginnings and lack of wealth or other extrinsic resources. Certainly our task is no more profound than the challenges that faced them. Indeed, size is not so important as we strive to reach our goal.

According to statistics contained in the 1992 LNP Planetarium Compendium, 87 percent of planetariums in the U.S., and 72 percent worldwide are less than 50 feet in diameter. Under the conventional definition, this classifies the overwhelming majority of planetarium facilities as "non-major", or according to Webster, "comparatively unimportant"! Though I'm tempted to ask the question, "What's wrong with this picture?", I'll leave those sorts of judgments to the reader.

Am I making a "mountain out of a molehill"? Possibly. But I think it's worth pondering whether the attitudes of planetarians regarding facility size leads to a subtle, or perhaps even a not-so-subtle "caste system" of sorts among planetariums.

For instance, I find it a bit curious that all planetariums--despite their sizes, annual attendance figures, and budgets--must pay the same fees to acquire starshow kits. The institution with 150,000 visitors per year can purchase a show for the same amount as the facility that sees only 20,000 or fewer in the same period. This means that the small planetarium, on average, must invest a much higher percentage of its working budget for the software resources per-visitor that it acquires--if it can acquire them at all. Other educational institutions, however, generally do not have to suffer this same degree of disparity when it comes to acquiring their "staple" resources. A small school system, for instance, will expend similar amounts of money on a per-student basis for the same math textbooks as used by a large school system, because the textbooks are priced per-book (therefore, per-student). While there certainly are examples of selected school resources which can have a less equitable cost-versus-utilization ratio (library books, for example), the average per-client resource cost exhibits less disparity in the traditional school environment than with planetariums.

Of course, the show producers would argue that the cost of producing each show kit is the same, regardless of who purchases it. (This issue can be particularly critical for the commercial show-kit producers, since, unlike planetariums that distribute shows that they produce for their own consumption anyway, they enjoy no non-profit status or ticket revenues). On the other hand, I understand that space theater film-rental rates are tied directly to attendance. Would it be impossible for the planetarium industry to adopt a similar philosophy with its starshow distribution?

The current scenario serves to foster inequality among institutions, and makes it difficult for all planetarium visitors to benefit from the same resources. In practice, therefore, smaller facilities tend to get the "short end of the stick", which may explain some of the perceptual size-segregation, but it doesn't have to be that way. I believe that, as planetarium professionals, we have a responsibility to enhance the profession as a whole, rather than simply "standing guard" over our own limited backyards and neighborhoods. A large number--perhaps even a majority--of planetarium visitors worldwide attend facilities of the smaller variety, and are totally oblivious to how some of us choose to classify (either through our practices or semantics) particular planetarium facilities. Call it "pie-in-the-sky", but I assert that if we wish to call ourselves "planetarium professionals", we have a collective obligation to create mechanisms within the planetarium field which will provide a more uniform high-quality educational experience to every planetarium visitor, regardless of his or her location--rather than encouraging disparity between institutions or groups of institutions.

I believe that through an objective assessment, we'll all find that the potential similarities between our facilities are greater than their potential differences. Certainly, we share a common mission, and in some sense, that alone should make our differences pale in comparison. Whether through acts of omission or commission, the concentration on dome size only serves to detract from the accomplishment of our overall goal. In contrast, the execution of creative educational programs, without regard to superficial considerations, should be what drives us professionally.

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IPS REPORT

by John Hare IPS Council Representative Bishop Planetarium Bradenton, Florida

The International Planetarium Society (IPS) Council met at the Kirkpatrick Planetarium in Oklahoma City on October 27, 1993. Highlights of the meeting were as follows:

Plans for the 1994 IPS Conference hosted by Mike Hutton in Cocoa, Florida, were discussed and finalized. Detailed information regarding the conference are contained elsewhere in this Journal.

President Bill Gutsch made a detailed presentation on the 1996 IPS conference scheduled for Osaka, Japan. The tentative dates are July 8 - 15. The conference fee will be around \$250.00 and airfares will be in the \$850.00 to \$1,050.00 range. Hotel rates will run about \$60.00 per night. A two-day preconference tour to Nara and Kyoto is being planned for about \$175.00, and post conference tour possibilities include Tokyo and the Japanese Alps. Visits to both the Goto and Minolta manufacturing facilities will likely be on the agenda. All plans at this time remain tentative and costs are simply projections based on the expected exchange rate.

Three invitations were received for the 1998 conference - from London, Paris, and Pittsburgh. I'll detail each invitation in the next issue of Southern Skies so you'll have an opportunity to give me any feedback prior to the next IPS Council meeting in Cocoa, at which time a vote will be taken on the '98 site.

Other business included the acceptance of the Japan Planetarium Society as an IPS affiliate.

The Council finally resolved the problem with the long awaited IPS Directory. Copies of the Directory should reach members early in 1994!

Finally, Undine Concannon of the London Planetarium, as Chair of the Publications Committee, presented some good ideas for publications.

All things considered, it was a productive Council Meeting with decisions that promise to increase the value of IPS membership in the future.

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MEMO

DATE: <u>Before April 1, 1994</u> TO: <u>All SEPA Members</u> FROM: <u>Southern Skies - Assistant Editors</u> MESSAGE: <u>Please get in touch with us with</u> information you would like to see included in upcoming issues of Southern Skies.

FEATURED PLANETARIUM

Dave Hostetter Lafayette Natural History Museum & Planetarium 637 Girard Park Drive Lafayette, LA 70503 Phone: 318-268-5544

LASER TALK

Mark Howard John Young Planetarium Orlando Science Center 810 E. Rollins Street Orlando, FL 32803 Phone: 407-896-7151 Fax: 407-896-3561

REVIEWS

Kris McCall Sudekum Planetarium Cumberland Science Museum 800 Ridley Boulevard Nashville, TN 37203 Phone: 615-862-5160 Fax: 615-862-5178

SMALL TALK

Elizabeth S. Wasiluk Berkeley County Planetarium Hedgesville high School Rt. 1 - Box 89 Hedgesville, WV 25427 Phone: 304-754-3354 Fax: 304-754-7445

ASTRO-VIDEO REVIEW

Mike Chesman Bays Mountain Planetarium 853 Bays Mountain Park Road Kingsport, TN 37660 Phone: 615-229-9447 FEATURED PLANETARIUM Edited by Dave Hostetter Lafayette Natural History Museum & Planetarium Lafayette, Louisiana



KELLY SPACE VOYAGER PLANETARIUM AND OMNIMAX THEATRE Charlotte, North Carolina Contributed by Sue S. Griswold Director of Astronomy-OMNIMAX-Planetarium

Discovery Place, a hands-on science and technology center in Charlotte, North Carolina, opened in October 1981. It was an expansion project of the Charlotte Nature Museum, where the original Kelly Planetarium was located (a 24 foot plaster dome, concentric bench type seating, and a Spitz A3P projector). A new planetarium was planned for the original Discovery Place project, but a shortage of funds made it necessary to postpone the planetarium. A strong education and public schedule was continued at the smaller facility for the next 10 years while plans for expansion of Discovery Place were made.

Both Discovery Place in its uptown Charlotte location, and the Nature Museum approximately 5 miles away, are operated by a non-profit educational corporation called Discovery Place, Inc. A very close relationship exists between the museums and the local school system. For example, all 4th and 8th grade students (approximately 12,000 total) are

prescheduled for a planetarium visit each year. A school teacher is assigned to the museum to present these programs and to assist museum staff in program production. Additionally, all 5th and 8th graders attend a program on Growth and Development, and all Kindergarten students attend a class called "Living Things". The museum also houses a Challenger Learning Center that is supported by the school system with two full time teachers, and all 6th grade students "fly a mission" each year.

After 7 years of operation, Discovery Place had made its mark as a premiere science education and entertainment facility in the Southeast. The time was right for a major bond referendum and private fund raising effort that brought in over \$14 million. An 80,000 square foot addition opened in the Fall of 1991, bringing the museums total exhibit and program area to 150,000 square feet. The cornerstone of this Phase II expansion was a planetarium and OMNIMAX theatre. Combined under a 79 foot tilted dome, the Kelly Space Voyager Planetarium and Charlotte Observer OMNIMAX theatre presents programs 363 days per year. The show schedule is balanced with approximately two OMNIMAX film showings per one planetarium presentation. This ratio was determined to be optimum by surveys of other successful combined theatres worldwide.

The planetarium instrument was provided by Spitz, Inc. of Chadds Ford, Pennsylvania. It consists of a large starball lit by dual zenon light sources, projecting over 10,000 star images. Six individual planet projectors are located in front of the starball, and a Moon/Image projector is mounted behind the starball. Careful coordination of these projectors' locations was necessary due to the presence of the OMNIMAX projection lens in the center of the theatre.

The upper projection room houses over 40 slide projectors, mounted in racks of 3 or 4. They provide panorama projection with a 7-wide field of projectors, overlapping 50%. In addition, individual special effect projectors are installed here, along with an Arc Zoom projector with an X-Y slew mirror. All theatre lighting, sound, and special projectors are controlled by a console located at the upper rear of the theatre. The sound system is by Sonics, and consists of 44 individual speakers in 7 locations behind the dome.

Seating is available for 307 visitors with an area at the top that can hold 8 additional removable chairs or 6 wheelchairs. Programs are usually staffed with 3 or 4 operators: one at the control console, one in the lower projection booth, and one or two hosts who admit visitors on the lower level and assist when they leave the theatre on level 3.

The current program being shown is FRONTIERS IN SPACE, a Kelly Planetarium adaptation of the popular

program produced by the Hayden Planetarium in New York. Other programs available are OASIS IN SPACE, our first program which was shown from opening day in October 1991, until October 1992, and STARSEEKERS, a program produced in coordination with the Singapore Science Centre and with National Science Foundation funding.

Everyone in the SEPA region (and beyond!) is encouraged to make plans now to attend the SEPA annual conference, being held in Charlotte, June 7 - 11, 1994. The staff of the Kelly Planetarium and Discovery Place, Inc. are all looking forward to sharing our facilities with you. Registration packages should be in your hands by March 31. If you haven't received one please call Sue Griswold at 704-337-2618.



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SEPA CHARLOTTE, NC JUNE 7 - 11, 1994

BACK TO BASICS

by Lynn M. Grayson Marketing/P.R. Specialist Discovery Place, Inc.

Why do we have planetariums? Who comes to see the shows? Are we innovatively covering the subject matter? Are we accomplishing our mission? These questions and more will be discussed at this year's Southeastern Planetarium Association Conference scheduled for June 7 - 11, 1994, at Discovery Place in Charlotte, North Carolina.

Discovery Place, located in the heart of uptown Charlotte, is one of the country's leading hands-on, science and technology museums. In 1991, the award-winning museum added a five-story, 79 foot diameter, combination theatre featuring an OMNIMAX and a Spitz Space Voyager Planetarium system.

The museum will host the 1994 SEPA conference with programming that revolves around this state-of-the-art planetarium system, the OMNIMAX theatre, a newly produced \$1.1 million *ASTRONOMY: HOW DO WE KNOW*? exhibit, two major traveling exhibits, plus Discovery Place's wide range of permanent exhibits.

Getting there is easy. Access to Discovery Place includes two major interstate Highways (I-77 and I-85), and direct flights to Charlotte Douglas International Airport from more than 125 cities in the United States and abroad. Charlotte is centrally located to both North and South Carolina.

As one of the anchors for the uptown cultural district, Discovery Place provides a center of activity bubbling with contagious enthusiasm. All meetings, seminars, and receptions will be located within walking distance to the host hotel, Spirit Square—a multidisciplinary arts complex, the North Carolina Blumenthal Performing Arts Center, the Overstreet Mall, Founder's Hall, and lots and lots of speciality shops.

If you have time for a road trip, the mountains of North Carolina are within two hours, and the beaches can be reached in four. You may choose a mini excursion to one of our neighboring planetariums: The Schiele Museum of Gastonia, N.C. or the Settlemyre Planetarium in Rock Hill, S.C.

With more than 241 days of sunshine annually, participants to the conference will have the opportunity to play golf, take advantage of activities on Lake Norman and Lake Wylie, visit Paramounts Carowinds, or the New Herritage Christian Theme and Water Park.

It's a world-class city, and this year's SEPA conference is sure to generate a world of new ideas. Mark your calendars today for this important industry conference! For more information contact:

Sue Griswold Director of Astronomy-OMNIMAX-Planetarium Discovery Place 301 N. Tryon Street Charlotte, North Carolina 28202 (704) 337-2618 1-800-935-0553





LASER TALK

Edited by Mark Howard John Young Planetarium Orlando, Florida

In this, the second installment of *Laser Talk*, we hear from Jack Dunn, Director of the Mueller Planetarium in Lincoln, Nebraska, regarding a special laser show for the visually impaired. As it is the purpose of this column to introduce our readers to interesting or non-traditional uses of laser projectors in the planetarium theater, I welcome input from anyone wanting to share their experiences or ideas. Please send your comments to:

> Mark Howard John Young Planetarium 810 East Rollins Street Orlando, Florida 32803 * * * * * * * * * * * * * * *

LASER STARS FOR THE VISUALLY IMPAIRED

(Based on a paper presented to the annual conference of the Southeastern Planetarium Association 1993)

Contributed by Jack Dunn Mueller Planetarium Lincoln, Nebraska

In the fall of 1992, at the GPPA/GLPA conference in St. Louis, I first reported on our preliminary work at Mueller Planetarium with visually impaired audiences. In the past year, I have had many truly enriching experiences and met many wonderful people. But, for those of you who weren't in St. Louis or at the SEPA meeting this year in Bradenton, perhaps I should start at the beginning.

Planetarians often take for granted the fact that we can make the stars appear at the flip of a switch. Day in and day out, you and I teach and entertain with those stars. Many of us have been doing this for years. In fact, the stars are so much a part of our lives that it may be hard to imagine life without them.

But, suppose you had never seen the stars - suppose you had been denied the visual stimulus which has provoked countless curiosities and philosophies. Or worse yet, suppose that you had once seen the stars, but their light had dimmed for you to the point of invisibility. How much would you miss them?

This was the case for a Lincoln woman who came to me in late May of 1992. This person has a condition known as retinitis pigmentosa (RP). It is an extreme form of night blindness combined with loss of peripheral vision. Those with RP have almost no dark-adaption ability and their field of view is diminished. It is a hereditary condition for which there is no known cure. This person grew up on a farm in Iowa, enjoying the stars as her companions in life's adventures. However, this view, and many others are now gone from her life. She came to me, sent by a friend who thought that possibly the Planetarium stars might be bright enough to, in some way, give her a glimpse of what she remembered. I was fairly certain that all existing star projectors were too dim. This proved correct. In the darkened chamber I asked what she saw and she said she perceived something which turned out to be the star projector itself. As for the dome - there was nothing there for her.

But, almost 15 years previous to her visit, an old friend who worked with lasers told me of a chance experience where he had observed that a visually impaired group had "seen" some work he was doing. What Lawrence Goodridge had shared with me back in the seventies stayed with me. Well, it took almost 15 years, but when Kay Konz showed up at my Planetarium door - the opportunity to test Larry's observation was finally realized. I decided to try our laser projector with my eager visitor. I should point out that at that time we had a simple multi-colored system which did not have the ability to put blank spaces into drawings. But, we tried some simple points, gratings and circular scanned images. The results were amazing to say the least. We found that she saw laser light with ease.

After the excitement cooled down, we determined that we must do something with this new knowledge. We invited in other visually impaired individuals - some with RP, but also some with other impairments. We contacted the National RP Foundation Fighting Blindness and the International Laser Display Association. In the ensuing months we have been led to leading low vision researchers who have asked us to gather information about our experiences. Probably the biggest conclusion is that results are highly individualistic. This is because there is such a tremendous variety of vision disorders and the ability for perception varies greatly from individual to individual. In June of last year, as my coconspirator was coming into the Museum for some more experiments, she discovered a group from the Nebraska School for the Visually Impaired in Nebraska City. What would you think if someone told you they were bringing a group of legally blind children into the Planetarium? Many people might think we were crazy. But, we tried just a few simple patterns, then ran part of a show. That was an unforgettable day when, as she said, "I heard blind children see".

Our laser show audiences have always been good people. The visually impaired are even more appreciative. They respond to the fact that someone would take the time to try to bring them some of the simple everyday pleasures too many people take for granted. We took a technology and put it to use to help a new audience for the Planetarium. Our work has received enthusiastic support from the laser companies which are members of the International Laser Display Association. As a non-profit member, our Planetarium sought their help in gathering information and spreading the idea of helping the visually impaired population. On October 24th and 25th of 1992 (the weekend of the end of Daylight Savings Time) our Planetarium and planetaria in Champagne, Illinois, and Boston, Massachusetts, held laser demonstrations created by ILDA members. At Mueller Planetarium we created a laser star show. It is a very simple introduction to the night sky, much like the shows you have been giving for years but with one difference - the stars and constellations are all projected in laser light. This program is being shared with all ILDA members free of charge - and admission for visually impaired audiences is always free.

In the past year, I have met with both visually impaired students and their teachers from all over the mid-west. Last April, Mike Royal from Omaha (who has RP) qualified to run in the Boston Marathon. The weekend of this event, the Boston chapter of the RP group held a special recognition event at the Boston Museum of Science's Hayden Planetarium. Through the gracious cooperation of ILDA member Laser Images, the laser show we created was matched with a showing of Laserium's show "Zodiac". The combined effort was shown to children from the Perkins School for the Blind on the Friday of the event, and to the RP group on Saturday. Perhaps the most exciting development came from an unexpected source. Α neighbor of one of the officers in the Boston RP group called me in early April. Alan Waxman does research at MIT's Lincoln Laboratories. It turns out that his specialty is in low vision technology. He asked if anyone had actually put our discoveries to use in new technology. I replied that we were just barely starting to do shows.

Waxman replied that he thought he might have some ways to create high contrast line drawing type images inside of a pair of "goggles", which would respond to their surroundings, using a subminiture LED display. Sounds like science fiction, doesn't it? Well, by the end of April, I had a report back from Boston that he had already demonstrated a prototype pair of glasses which were used by a gentleman with RP to read a newspaper and attend a ballet. Obviously, this device is a prototype and we have no idea when it may be commercially produced. But, it is indicative of the exciting things which have happened since we took the time to work with a special audience.

Through our efforts on this project, I have also learned of other planetarians who have worked with the visually impaired. The Boston Museum of Science has produced a large print and braille book called "Touch the Stars", which is in use in several planetaria and schools. Jalie Phifer, who is now in graduate school at the University of North Carolina at Chapel Hill, has developed the "star bowl" for teaching star patterns to visually impaired students. Using simple household items, she has produced a beautiful teaching tool. (See "Starbowls: Constellations for the Blind" in the Summer 1993 issue of *Southern Skies*.)

The laser star show is still evolving. Currently I am writing a series of guidelines, based on our experiences and those of other ILDA members. These guidelines will be distributed through ILDA. In the interest of safety, we feel it is necessary that lasers be operated in accordance with established federal statutes and that proper procedures be followed. The laser star show has also been seen in Denver and the interest continues to expand.

I can tell you that working with visually impaired audiences can be one of the most rewarding experiences possible. What began as a simple request from one person has grown in ways that may enrich the lives of thousands. Our work expands as we have contacts from Planetaria, laser display companies, and visually impaired groups from all over the world. I continue to return to that simple request with which we started. I believe that the greatest message in this story may be for those who have "normal" vision. Enjoy and value what you have. For ages, humanity has looked to the sky with awe and wonder. Feel this wonder and spread it to audiences old and new. That is why we have become planetarians.

OBSERVING FOR THE DEAF?

by George Fleenor Bishop Planetarium Bradenton, Florida

Each weekend, the Bishop Planetarium presents an evening sky lecture series called "The Tonite Show". The program features current topics and events in astronomy, followed by a telescope observing session. As with many programs, attendance varies with as many as 60 participants and as few as two. As luck would have it, one such minimal attendance occurred on an evening I was scheduled to work. The small number of participants had been experienced in the past, however, these two individuals were deaf. Suddenly I was faced with a very unusual situation. How do I present a livelecture in a dark theater to the hearing impaired? If I had advance notice of the encounter, steps could have been taken to better prepare.

I began my attempt of the presentation by raising the theater lights enough so that my mouth could be easily observed. In presenting the information, I was very careful in pronouncing my words as clearly as possible. I had to rely on the exceptional abilities of the individuals to receive and understand the information. The topic of the program was "First Light Targets". The program was designed to be followed by telescopic observation of the objects previously mentioned. I began to think ahead and wonder how I was going to pull that event off? Suddenly the answer struck!

In our observatory, we use a computer to run our Lynx CCD camera system. The computer can be remotely controlled from our "Science Theater" as well. The computer also has several programs stored on its hard drive relating to astronomy. The desktop planetarium program "EZ Cosmos" is one such program. Occasionally, I use "EZ Cosmos" to identify R.A. and Dec. information for observing various deep sky objects that are hard to obtain visually from the light polluted skies of Bradenton. In addition to R.A. and Dec. information, the program offers brief information regarding the object. Setting the visual magnitude limit to twelve, we are able to show all of the Messier objects, as well as many others that we so often observe. The computer gave us the opportunity to show what constellation we were in, where in the constellation the object was located, what the object was, and how bright it appeared. Using the R.A. and Dec. information we were able to observe over 20 objects in a brief period of time.

The use of the "EZ Cosmos" program enabled us to make the "cosmic connection" with our hearing impaired guests. Both of the individuals expressed sincere thanks for a very informative evening. Other participants who arrived later, just for observing, enjoyed the presentation as well. They too agreed, the use of the program gave them a better idea of where to look in the sky for the objects, and what to expect when observing them! The use of the computer in this way has caused us to reformat our evening observing sessions and to dream of new ideas on how to better serve the public in inspiring them to seek the beauty of the evening sky!

Try it you'll like it!







REVIEWS Edited by Kris McCall Sudekum Planetarium Nashville, Tennessee

Oxford Illustrated Encyclopedia of the Universe

Archie Roy, Editor Oxford University Press, 1992 Cloth ISBN 0-19-869140-8 \$45.00

Reviewed by Steve Fentress Strasenburgh Planetarium Rochester, New York

Ed.: This review also appeared in The Planetarian, Vol. 22, No. 4, December 1993.

I was about to write that this book has a handsome dust jacket. Then, Vic Costanzo, our artist, pointed out that the Orion nebula photo on the jacket is printed backward. That's the Oxford Illustrated Encyclopedia of the Universe in a nut shell: attractive at first glance, but vexing and disappointing on even slightly closer examination.

This is a collection of (it says here) 1100 short articles on astrophysical concepts, named stars, constellations, planets, moons, astronomers, observatories, and the history of astronomy and space exploration. It's aimed at "any interested person who has no previous detailed knowledge of the subject". It has 200 pages - not as big a book as the title or price would lead you to believe.

There are occasional bits of good writing (the article "radar astronomy", for instance). Most of the text, however, ranges from only fair to just awful. Often, the writers seem to be daring you to figure out what they mean. For example (page 27):

> The great utility of colour indices is that they relate to the relative amounts of light radiated at different wavelengths, not the actual light levels, because a difference of logarithmically defined magnitudes corresponds to a ratio of brightnesses.

Who needs this?

The artwork is a serious liability; the poor illustrators seem to have had this job thrown at them with little help or explanation. Specular highlights are airbrushed willy-nilly at 10 or 2 o'clock on round shapes, rendering the "eclipse" and "phases of moon" diagrams incorrect and useless. The maps of the moon and Mars are ghastly. The Voyager trajectory illustration shows one craft apparently repelled by Saturn's rings.

If you want a good illustrated general astronomy book, spend twice the money and get the sumptuous *Cambridge Atlas of the Universe* by Audouze and Israel; or spend half as much, or less, and get Dickinson's thoughtfully illustrated *The Universe...and Beyond*, or Pasachoff's *Field Guide to the Stars and Planets*, or Chartrand and Wimmer's *Golden Sky Guide*. Any of them will give you far better value for your money.

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ASTRO-VIDEO REVIEW

Edited by Mike Chesman Bays Mountain Planetarium Kingsport, Tennessee

Welcome to the first installment of, what I hope will be, an ongoing series in your SEPA newsletter. Over the years, I have appreciated the many book reviews done by fellow planetarians. I have even used those as a guide in selecting new resource material for our library. Perhaps this column can serve a similar purpose in letting you know about some of the video gems available for the astronomy enthusiast. In almost all cases, copyrights will prevent you from using these tapes and discs in any of your planetarium productions. But, if yours is like my facility, you are always searching for supplemental materials to use in classes, or for that local astronomy club meeting. So lets begin!

A lot of you probably have a copy of the Astronomical Society of the Pacific's merchandise catalog. For over a year, I have passed over the ad for a 30 minute videotape, called "The Aurora Explained". Recently, I ordered the tape, and am I ever glad I did! The tape provides a lucid explanation of the Northern Lights. Lots of special information is also provided, like the best times and seasons to observe northern auroras (answer...between midnight and 2 A.M. around September or March), or the fact that the aurora is mostly heat and radio energy, and only a little appears as light. You'll learn a lot about the various colors in auroral displays; for instance, nitrogen produces red or blue, and oxygen, red or green. Under the right conditions, this is like the red-green-blue of a computer monitor; and therefore capable, through blending, of producing a wealth of other hues. How does atmospheric density effect the colors we see? How high are these lights? These and other basic questions are thoroughly explained.

Four researchers, from the University of Alaska at Fairbanks, serve as guides in this enlightening documentary. They are part of the University's Aurora Color Television Project, and that is what makes this tape so very spectacular. No doubt, you've seen colorful aurora slides and perhaps some time-lapse movie film. On this videotape you'll see the Northern Lights in real time, and in full color, thanks to a remarkable low-light video camera. The producers claim the color camera to be the equivalent of ASA 2,000,000 film. That's no typo...yes, two million! The results are startling and breathtaking. The videotape features a nice soundtrack by Alaskan composer, Yonni Fischer. After viewing the video, I had a strong desire to travel far north to witness these shimmering "curtains" myself.

The video tape is available from the Astronomical Society of the Pacific for \$39.95. A companion, 262 page, *Aurora Watchers Handbook*, is available with the tape for an additional charge. Although the tape is complete onto itself, you will find the book a good addition to your library. The tape and/or book can also be ordered directly from the University of Alaska, by calling 907-474-6389. Have your VISA or MasterCard ready. Proceeds from the tape's sale go to support further research and education. A thirty minute videotape of selected auroral images, set to special music, is also available by phone.

Next issue I'll comment on the video of the film, So Many Galaxies...So Little Time..





SMALL TALK

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

After seeing this column in print for the first time last month, I wondered if my qualifications for editing this column has something to do with size? Was Phil Groce a former editor before I moved to the SEPA region? Never matter - I'm sure it's just coincidence.

This month I got contributions from a father/daughter team and I'd like to challenge any other father/daughter members of SEPA to also contribute.

The first suggestion comes from my former boss, John Hare, at the Bishop Planetarium in Bradenton, Florida. He had a comment on last column's anonymous suggestion on the use of epoxy. John says that, "Epoxy bonds are substantially weakened when subjected to <u>heat</u>. A number of our baby food projectors that were originally assembled using epoxy have experienced this problem. Our solution has been to use silicone adhesive. Silicone is able to withstand high temperatures." John cautions however, "One problem with silicone is that it takes several hours to set up, and several days to attain full strength." Page Hare of the John Young Planetarium in the Orlando Science Center in Orlando, Florida, sent in the following suggestion: "For laser shows, tape the shutters of your star machine open - our crowds love to have stars projected on them."

Paul Trembly, the Senior Program Associate at the John Young Planetarium gave me the following suggestions: "During our Holiday laser show, there is a section where wreaths are projected on the dome - we took strands of Christmas chaser lights and attached them behind the dome where the slides are projected. From the audience point of view it looks like there are blinking lights in our slides. This was also done on a slide of fir trees."

Another suggestion from Paul is: "Keeping the idea of things behind the dome - try taking clear merry midget lights and placing them at random all over the back of the dome. Wire them in groups and tie each group to a flash key (if all the lights are turned on at the same time, it makes a pretty good "sky" as seen from inside a Globular Cluster.)"

I know that people from outside of Florida have suggestions too, and I need to hear them. Fax or send them to:

Elizabeth S. Wasiluk Berkeley County Planetarium Rt. 1 - Box 89 Hedgesville, WV 25427 Phone - (304) 754-3354 Fax - (304) 754-7445

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COUNTDOWN TO IPS "94" (CONTINUED)

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

Ed.: The following article also appears in The Planetarian.

IPS "94" is now only a few months away and preparations for the conference are proceeding smoothly. During the IPS council meeting in Oklahoma City, the schedule, registration materials and other details of the 1994 IPS conference were evaluated and approved. Most of this information was sent to you in the registrations booklet last December. Many of you have sent in your conference registration and hotel reservation forms and we appreciate your prompt attention. For those of you who have been distracted with other things, I hope this installment of Countdown will encourage you to send in your conference forms now. If you have not received the registration booklet, please accept my apologies and assurance that it is not too late to register.

Registration

The registration fee for IPS "94" is \$218.00, with a late fee of \$50 if received after May 15. We need a separate registration form for each person attending the conference. Remember, all delegates must be members of the International Planetarium Society.

Because of the logistics of dealing with a group as large as IPS, we must insist that only registered delegates attend conference activities. Please do not bring your spouse, children, grandchildren, or friends to the paper sessions, Space Camp demonstrations, planetarium shows, or activities at the Kennedy Space Center reserved for IPS. If you bring guests to these functions your colleagues will, at the very least, be greatly inconvenienced.

On the other hand, your guests are welcome to the many social functions and meals planned for the conference. Simply purchase tickets to these events separately. A list, with the per person cost, is provided on the registration form.

Accommodations

Headquarters for IPS "94" is the Howard Johnson's Plaza Hotel located at 2080 N. Atlantic Avenue, Cocoa Beach, Florida 32931. Room rates at the plaza are \$70.00 single or double. You may make your reservation by calling 1-800-55-BEACH or 407-783-9222. Be sure to have your credit card ready when you call.

It is <u>very important</u> that you make your hotel reservations early. There are a number of other events scheduled for next July which will create a high demand for hotel rooms along Florida's Space Coast. If you have not made hotel reservations yet, I would strongly recommend that you do so immediately.

Papers

The deadline for submitting paper presentation abstracts if February 1. If your paper is accepted, you will be notified by March 1st, and a session and time will be assigned. Since our intention is to publish a proceedings for the conference, priority will be given to those papers which are submitted with a copy of the full text.

Transportation

To help simplify your travel needs, we have selected TRAVELMAX Inc. as the official travel agency for IPS "94". Travel arrangements can be made by calling TRAVELMAX's toll-free number at 1-800-367-4309 or 407-676-1770. Participants should identify themselves as IPS members wishing to attend the conference. For those desiring to fax their reservations, the FAX numbers are: 407-722-0521 or 407-728-5564.

When making your travel arrangements, we strongly recommend that you rent a car. Public transportation along Florida's Space Coast is extremely limited and prices for rental cars in Florida are among the most reasonable in the world. TRAVELMAX can help you make arrangements for a rental car at special IPS discounted rates.

Speakers

Dr. William Gutsch, Director of the Hayden Planetarium in New York and President of IPS, is the Chairman of the Speakers Committee. He reports that contacts have been made with several noted speakers. However, announcements regarding IPS speakers will not be made until we have firm commitments.

Dr. Ron Maddison, senior astronomer and director of the observatory here at AMPO, has extended an invitation to Dr. Patrick Moore to participate in the IPS Conference. To our delight, Dr. Moore has agreed to attend the entire conference and give a special talk about using the media to promote astronomy.

In addition to his many books on astronomy, Dr. Moore has the distinction of hosting the longest running television program in history. The BBC has been broadcasting "The Sky at Night" for more than thirty years and Dr. Moore has been the only host. This is one presentation you will not want to miss!

Space Shuttle Launch

The best (and worst) event that can happen at IPS "94" 15 a launch of the Space Shuttle. As of the writing of this article, STS-65 is scheduled for launch during the month of

uly. Unofficial sources at NASA have indicated that the unch is targeted between July 8 and July 14. Although this schedule is likely to shift a little, it is quite possible that a launch of the Space Shuttle will occur near or during the IPS Conference.

Although I can promise nothing at this time, I am trying to arrange for the entire delegation to view the launch from the Kennedy Space Center. If I am successful, the impact on the IPS conference will be significant. First, you might as well make paper airplanes out of the schedule because it won't be worth the paper it is printed on. We will do the best we can to salvage the schedule, but your cooperation will be necessary. This will be especially important for those who are not staying at the conference hotels. For those individuals, it will be even more difficult o communicate changes in the schedule.

Another important consideration will be the impact on hotel room availability. Even under normal conditions, a Shuttle launch brings many visitors to the Space Coast. Since this launch coincides with the Apollo Silver Anniversary, I expect a larger than normal number of Shuttle spectators. To make things more complicated, the unior Olympics are being hosted here as well. This is why you have heard me state many time: MAKE YOUR HOTEL RESERVATIONS NOW!

Pre- and Post-Conference Activities

After an extensive debate concerning pre- and postconference tours, the conference planning committee decided that it was impractical to organize this type of activity. There are just too many things to do in the Central Florida area.

Aside from the many tourist attractions, there are several unique opportunities for you to consider as part of your visit to Florida this July. Just prior to the IPS meeting, the Digistar User's Group and C-360, Inc., will be holding their annual meetings at the Cocoa Beach Hilton.

The Digistar User's Group (DUG) will begin their meeting on Thursday, July 7. This meeting will attract anyone interested in the Evans & Sutherland Digistar planetarium projector. As part of the conference, users of Digistar will demonstrate some of their programming used in planetarium shows over the past year. Representatives from Evans & Sutherland will be in attendance to answer technical questions and discuss improvements to the system. Seminars and workshops relating to computer graphics are also part of this meeting along with DUG's unique brand of fun. Cost is \$20. C-360, Inc. is a planetarium organization for those facilities that use motion picture film as part of their programming. Originally a 35 mm film group, C-360 has expanded to include 870 and other film formats. As part of the C-360 conference, an 870 film festival will be held in the new IWERKS theatre at the Astronaut Memorial Planetarium and Observatory. The C-360 conference starts Saturday, July 9, and ends with a board of directors meeting Sunday afternoon, July 10. Cost is \$45.

In addition to these conferences, many Florida planetariums have expressed an interest in hosting IPS delegates either before or after IPS "94". Florida contains a great variety of planetariums and most can be reached within a two- or three-hour drive from Cocoa Beach.

IPS '94 International Affairs Report

International activities directly connected with IPS "94" have encouraged the separate formations of the Association of Russian Planetariums (ARP) and the Ukrainian Planetarium Association (UPA).

The UPA comprises six institutions. Representatives held their first conference in November 1993. The ARP includes planetariums in at least eight cities, as of mid-November 1993.

Local Developments

Since the last installment of <u>Countdown to "94"</u>, a number of changes and accomplishments have occurred. The most significant was the substantial completion inspection of our new planetarium. With this phase of the construction behind us, we can now begin to move equipment and furnishings into the new building. I also get to move into my new office and get back on Internet.

There also have been some changes to the staff of Astronaut Memorial Planetarium and Observatory. Davin Flateau and Steve Cooper have joined our staff and will be working in our production department. Davin worked at the new Buhl Planetarium and has also worked for several laser lightshow companies including Laser Fantasy. Steve comes to us from the Digistar Planetarium in Iowa and will be Director of Production here in Cocoa. Paul Stearns, planetarium technician, has moved on to work with East Coast Control Systems. We will miss Paul and wish him success with Jon Frantz and ECCS.

All of us at BCC are working hard to make your visit to Florida's Space Coast an enjoyable and meaningful experience. With your help, I am confident that IPS "94" will be one of the best planetarium conferences you will ever attend. Thank you for your cooperation and we look forward to seeing all of you on the beach this July.

NEWS FROM SEPA STATES



ALABAMA

FLORIDA

George Fleenor Bishop Planetarium Bradenton

St. Pete Jr. College - Ken Perkins reports he will be retiring from the planetarium in May! (Congratulations Ken on a job well done, and thanks for being an inspiration to us all!) The college does plan to replace Ken and keep its planetarium doors open to the students and public. On the first Friday of each month, the planetarium is featuring an "Introduction to the Night Sky" which is followed by the regular Friday night observing session.

Bishop Planetarium, Bradenton - The Bishop Planetarium is currently running "More Than Meets The Eye". The winter seasonal crowds are healthy, making us a bit more wealthy and wise! Laser show attendance is also climbing higher. The planetarium was successful with its late night lunar eclipse party. A small group of 150 joined staff members and the local astronomy club in the museum's north parking lot. One astronomy club member (Tom Clark of Techtron Telescopes) had his 15 inch dobsonian baptized by a visiting four legged observer! Oh the joys and excitement of public observing sessions! The first Saturday of each month the planetarium will be presenting a new sky lecture series "Skies Over South Florida". Plans are being made for Astronomy Day activities as well as the upcoming partial/annular solar eclipse, the collision of comet Shoemaker-Levy 9, and the 25th anniversary of the Apollo Moon landing. This is definitely an astronomical year. Time to capitalize!

Miami Space Transit Planetarium - Jack Horkheimer & Co. are currently presenting "Child Of The Universe" and "How To Know The Stars Of Winter". For a limited time, patrons are permitted to see both shows for the price of one! On the first Saturday evening each month, the planetarium offers a free star lecture followed by

stargazing...weather permitting. Laser shows such as "Pink Floyd vs Roger Waters", "Aerosmith", "Laser Hendrix", and "Led Zeppelin-1" are continuing to draw large crowds.

John Young Planetarium, Orlando - The search for a new planetarium director has been completed. Scott Niskach was hired, and is expected to begin the first week of February. Scott was director of the Forsyth Planetarium in Winston-Salem, North Carolina. (Welcome to the Florida group, Scott!) The planetarium will be featuring "More Than Meets The Eye" starting in February. A special show, "Holiday Lights" a family laser show was presented during the holiday season and was well received. Upcoming "Cosmic Concerts" will feature Pearl Jam, Garth Brooks, and U2. The science center will be featuring "Backyard Monsters", a traveling exhibit which will be running through spring.

The Saunders Planetarium, Tampa - Happy New Year from the staff of The Saunders Planetarium. We started our second year of operation in October, and after a busy summer it is very nice to settle into a comfortable show schedule. Presently, we are running concurrent programs: "Larry Cat in Space" and "More Than Meets The Eye." The real excitement is taking place on the opposite side of the building from the planetarium...the construction of a \$35 million expansion that will triple the existing square footage of exhibit areas, and add a 350 seat OMNIMAX theater. The construction is truly entertaining. Recently, a new crane was brought in that was so large that it actually required other cranes to put it together. Measuring the period of the swinging cable and lead weight at 19 seconds, we calculate that its length was approximately 100 yards (assuming a massless cable). Hopefully, by the end of January, the Omni dome should begin to take shape as the building prepares for a spring 1995 opening.

Tony Butterfield, a member of The Saunders Planetarium staff, has recently formed his own planetarium production company specializing in customized computer animations for astronomy and laser light shows. On December 4, he presented a demo tape at the fall Florplan meeting held at the newly constructed Ft. Pierce planetarium. In January, Tony will be working with the John Young Planetarium in Orlando, and in the spring, he will be visiting planetariums throughout the southeast region demonstrating his work.

Buehler Planetarium, Davie - The current starshow is "The Cowboy Astronomer" which will run through April 17th. Each program begins with a live tour of the current evening sky. Laser shows are featuring the music of Pink Floyd and U2. A special presentation "Worlds of Wonder" was presented by Susan Barnett. The program explored "the remarkable vistas of our solar neighborhood", derived from the explorations of the Voyager, Pioneer, and Mariner spacecraft. Every Friday and Saturday evening the planetarium's Evening Sky Gallery theater hosts a 15 minute presentation that introduces the winter constellations of the night sky. The program is presented every 20 minutes from 6:30 PM to 9:30 PM. The program is also presented on Saturday and Sunday afternoons from 1:00 PM to 2:30 PM. Challenger Center is being planned. The Christmas season saw a workshop about buying telescopes and a unique holiday program concerning Cajun sky lore.

Gary Meibaum has just opened a new children's show at the St. Charles Parish Library Planetarium (a Louisiana dome in actual operation!), and continues with regular scheduling of public and school programs.



The Lafayette Natural History Museum's Planetarium remains closed, and is expected to remain that way for another two years. Long-promised decisions about renovation or relocation continue to be tabled. School programs continue with Starlab and classroom presentations in area schools, and public programs continue in a 15' geodesic Fome-Cor dome off-site. Public programs about the Hubble Space Telescope repair mission were extremely well received.

Lafayette

According to David Mayeux, Baton Rouge's planetarium also remains closed, with programming continuing in a museum area called Science Station. A

MISSISSIPPI

Gary Lazich Davis Planetarium Jackson

Jackson's Davis Planetarium ran "The Star of Bethlehem", "Aunt Jenne's Christmas", and Brevard Community College's Christmas laser show "A Fresh Aire Christmas" in December. The laser shows helped set new attendance records for December and helped local record stores sell out of their copies of Mannheim Steamroller Christmas music.

The Planetarium's McNair Space Theater will receive new seating, carpeting, and lighting during January and February, in preparation for a "grand re-opening" in March. The old seating (230 high-back rockers with red vinyl and cloth covering) is available for sale. (Contact Dick Knapp at 601-960-1550.)

The Davis production team has been working on adapting "The Great Silence", a planetarium program on the search for extraterrestrial life, created by the Verne Theater in Finland. Hansen Planetarium's "The Secret of the Cardboard Rocket" will premiere as a family feature later this year before becoming our school group solar system program.

Mississippi's Student Space StationTM operated its second overnight mission on December 2 and 3, for 50 students and 7 teachers from Agricola Elementary School. Activities included visits to the Mississippi Air National Guard Station and FAA Air Traffic Control Center at the Jackson airport, round-the-clock operation of Mission Control and Space Station *Athena* in 3-hour shifts, and "sleeping under the stars" in the Theater. Everyone ended the mission tired but happy - especially the staff!

Agricola Elementary School has taken the lead role in the development and testing of educational activities for the Voyages film project. The students have participated in a wide variety of exploration simulations - including time spent in a meat locker as "arctic explorers"! Principal Loretta Goff and State Department of Education representative Jo Prather will conduct a symposium on these activities at an international reading conference to be held in Toronto in May.

Jackson hosted the 1993 C-360 Conference in late October. Guests included Albert Weishaupt and Jan Voskamp (from Planetron Dwingeloo in the Netherlands) and Jack Horkheimer from Miami (who, for some strange reason, kept "looking up"). The Conference featured screenings of several 870 films and provided the first direct comparisons of the same film in 35mm and 870 formats using both flat and hemispheric lenses. Special thanks go to Kirk Wooster of Vistascope Corporation for providing a remarkably versatile projector, and Kosi Sasaki of Minolta Corporation for providing an outstanding fisheye lens. Next year's conference will immediately precede the IPS Conference in Cocoa.

NORTH CAROLINA



Cyndi Zeger Woodson Planetarium Salisbury

Woodson Planetarium is busy with captive school audiences. Winter grade levels include Kindergarten third grades. A new second grade program includes live interaction integrated with the capabilities of video automation and special effects laser disks. Horizons Unlimited is open to the public through the winter months on the second and fourth Sundays of each month. Public planetarium shows will include "Daughter of the Stars" and a new production "Welcome to the Universe".

The SciWorks Planetarium, in Winston-Salem, has just celebrated its one year anniversary, and is happy to report that their Spitz 512 system has performed flawlessly during that time. They now have eleven shows programmed and ready for those eager school groups. Their newest addition is "tis The Season" (Loch Ness Productions). Duke Johnson, has joined the staff of SciWorks as Planetarium Coordinator. Duke recently completed an internship at Buehler Planetarium in Florida.

The Kelly Space Voyager Planetarium, at Discovery Place in Charlotte, celebrated its second full year of operation on November 1, 1993. In the first two years, over 220,000 visitors attended star shows. On November 27, an adaptation of the Hayden Planetarium show "Frontiers in Space" opened for public and school audiences. The show was edited down to 32 minutes and enhancements were added to the music track to add depth for the six channel playback system. In addition, a local artist painted several new panoramas for the show. Everyone who comes to SEPA '94, June 7-11 (that means all of you reading this note!) will have a chance to see this "new" show.

The Morehead Planetarium in Chapel Hill will be offering a limited run of spectacular laser shows from the Laser Drive medley to Led Zeppelin, U2 and Pink Floyd from February 1 - March 27. Some of the public starshow offerings are: "Fire From the Sky", "Follow That Star!", and "Space Explorers", along with "Sky Rambles" a live star show hosted by a Morehead Planetarium astronomer. The planetarium will try something different in February with Family AstroNights. This is a three-part short-course designed to encourage children and their parents to learn about the universe in a cooperative hands-on environment. The first meeting will be a parents-only planning session where they will be introduced to the concepts to be studied, and provided with a choice of activities to be selected for use with the children in the next two sessions. After the first meeting parents will receive activities, star maps, and study guides allowing them to bring their children "up to speed" for the second session. The second class, which will be held two weeks later, will be in the Star Theater and will include a tour of the Morehead Observatory. Weather permitting, the third session will feature an outdoor observing session using binoculars and several different types of telescopes.

SOUTH CAROLINA



Rick Greenawald Hooper Planetarium Greenville

Jim Brown reports that the Stanback Planetarium (Orangeburg) is now back in operation after its TKO by lightning. Luckily the \$3,000 in damage was covered by insurance. Jim would like to ask us all a couple of questions: 1.) Are your theater and equipment properly insured? 2.) Are you protecting yourself from possible lightning damage? These are two questions we should all think about. I can tell you that here at the Hooper Planetarium, I turn off power to the automation equipment at the breaker box each and every night as a precaution. It is an easy practice to get into and can protect you from fire too. Have you ever accidentally left a projector on all night? I haven't because the power is off. Thanks for the reminder Jim.

Glenn Dantzler of the Settlemyre Planetarium in Rock Hill reports that he is immersed in maintenance work as of late, but he is taking the time to attempt putting together a Saturday morning children's show. Glenn also reports that Jim Mulaney of Spitz paid a recent visit to the museum.

Here in Greenville I have been burning the midnight oil as of late, finishing a new fifth grade school program entitled "Journey to the Planets". Does anybody have a title for a planet show that hasn't been beaten to death? The students will teletransport up to the Stellar-Wind II, a planetary class cruiser, in earth orbit and then take a journey through the solar system. I produced the show in two months time, actually three months of normal work hours, so I've been dragging a little as of late. The show covers the solar system in 31 minutes, a time constraint placed on me by others, and so it really moves, sort of a hang on to your seats and don't lose your lunch type show. I look forward to the first performance on January 5th. I also look forward to starting on a new production soon.

Congratulations to Jeff and Lani Guill (Gibbes Planetarium in Columbia) on the birth of their son. Jeffery David Guill was born on December 22nd and weighed in at 8 lbs. 8 ozs. The proud father reports that little Davey and parents are doing just fine. Jeff also says he has a new planetarium assistant, it may take a few years though. On the planetarium front, Jeff reports that he will be opening "Touch The Stars" on January 22nd. Two thousand five hundred activity books for children have been put together with the help of the Bi-Lo grocery store chain. In March, the planetarium will host two weekends of Girl Scout activities. The scouts will earn their Sky Explorer Badges. Finally, plans are in the formative stages to try to broadcast the May 10th solar eclipse across the state on the educational television network. event began in January with the distribution of a solar eclipse safety flyer. During the month prior to the eclipse, the Planetarium is offering "The Solar Eclipse Road Show". This is an assembly program that covers the history and science of eclipses in addition to indirect methods of observation. Since the eclipse occurs during the school day and this is the last solar eclipse visible from this area for twenty-three years, we want as many people to see it as possible. Hopefully the weather will cooperate.

The day after the eclipse, the Sudekum Planetarium will shut down for three and a half weeks for major physical renovations. The dome will be cleaned and new seats and carpet will be installed. After twenty years and almost two million people, it's starting to look a little rough, and church pews are more comfortable than the chairs which have suffered an average of 15,000 seats per seat. The Planetarium will reopen on June 4th and so begin another hectic summer season.

Big news from Nashville - Kira Celeste McKall was born on January 17th at 1:26 AM. Kira weighed 7 lbs. 10 1/2 ozs. and is 19 3/4" long. Word has it that her name translates to "Heavenly Lady", and that Mom, Dad, and Daughter are all doing fine. Congratulations to Kris, Allan, and Kira Celeste!



VIRGINIA



Kris McCall Sudekum Planetarium Nashville

TENNESSEE

Through May 8th, 1994, the Sudekum Planetarium in Nashville is running a new original production called "In Search of Intelligence". The show examines the definition of intelligence, efforts to communicate with other species here on Earth, and how this information can be applied to SETI. One version of the promotional materials encourages visitors to "Join the search for intelligent life in the Sudekum Planetarium".

The folks in Nashville are also gearing up for the partial solar eclipse on May 10th. Since the staff will not have the chance to travel to the centerline, an 80% eclipsed sun is still a good excuse for a party. Promotion for the



WEST VIRGINIA

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ISSUE

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Linda Hare, Editor Bishop Planetarium 201 10th Street West Bradenton, FL 34205