

# **O** THE HIGH ALTITUDE **BSE R V E R**

The Newsletter of the Rocky Mountain Planetarium Association  
Vol. XXXII, No. 2 Summer 2002 *Final Issue!*

## *All Good Things...*



### *In this issue:*

**President's Corner - Aaron McEuen**

**A Closer Look - Jim Manning**

**Daily Motion! - Mike Murray**

**Tools of the Trade - Mark Reed**

**From the Editor - Cory Stone**



# **ROCKY MOUNTAIN PLANETARIUM ASSOCIATION**

*EPISD Planetarium, 6531 Boeing Dr., El Paso, Texas, 79925*

---

---

## **ROCKY MOUNTAIN PLANETARIUM ASSOCIATION Board of Directors & Committee Members**

### **President / Webmaster**

**Aaron McEuen**  
Hansen Planetarium  
15 South State St.  
Salt Lake City, UT 84111  
801 531-4934  
*amceuen@co.slc.ut.us*

### **President-Elect**

**Jim Manning**  
Taylor Planetarium  
600 W. Kagy Blvd.  
Bozeman, MT 59717  
406 994 6874  
*manning@montana.edu*

### **Past-President**

**Christine Shupla**  
Dorrance Planetarium  
Arizona Science Center  
600 East Washington  
Phoenix, AZ 85004  
602 716-2078  
*shuplac@azscience.org*

### **Secretary/**

### **Conference Coordinator**

**Richard Cox**  
Hansen Planetarium  
15 South State St.  
Salt Lake City, UT 84111  
*rcox@co.slc.ut.us*  
801 531-4934

### **Treasurer / HAO Editor**

### **Publications Committee Chair**

**Cory Stone**  
The Gene Roddenberry Planetarium  
6531 Boeing Drive  
El Paso, TX 79925  
915 779-4317  
915 779-4315 (FAX)  
*coryls@aol.com*

### **Historian**

### **Mickey Schmidt**

Center for Educational Multimedia SWISP  
USAF Academy, CO 80840-5566  
719 472-2779  
719 472-4281 (FAX)  
*mickey.schmidt@usafa.af.mil*

*After 32 continuous years of publication, the High Altitude Observer is about to undergo a tremendous change. The new publication is tentatively called: The Great Western Observer. Much like the HAO, the new GWO will be a quarterly journal in constant need of articles, photos, and features. Cory Stone will be the contact person for this new publication at the addresses above.*

---

---



# President's Corner

## Aaron McEuen

RMPA President  
Hansen Planetarium  
801-531-4934  
*amceuen@co.slc.ut.us*



## What's it all worth, anyway?

In the weeks to come, a large group of Astronomy, Space and yes, computer visualization enthusiasts and professionals will be gathering in Wichita, Kansas, a town that exists due to the invention of a certain technology, the same technology that will get us there. We will gather to talk about how, what and why the world's planetaria do what we do, show off technology, share ideas, etc. But when I think of IPS 2002, I find myself concerned about a growing format and its effects on this business.

There seems to be an overwhelming emphasis on Full-Dome Video Systems at this IPS conference. Why not? It is the next 'big picture'. It appears to be better, doesn't it? That is my concern.

Granted: Hansen Planetarium just bought a Digistar 3 and I am a strong proponent to this format, I still sit at my desk and struggle with the bigger part of the job. How do we connect with the audience? Just because we can give a visual show that takes people places they can only get to in dreams,

does not mean they leave the experience feeling satisfied. Just because the Wright Brothers had a plane, doesn't mean that people will fly in it! They had to connect.

I still, to this day, think that a decent script, strongly produced soundtrack, a set of slides, and an 'acoustic' star ball can compete with an 'all-dome' video system. After all, the slide show planetarium outnumbers the 'whole-dome' video system planetarium, and will for quite some time. When we get right down to it, partial-dome, full-dome, or non-dome video systems are in the same boat, struggling with the same issue. How do we connect with the audience?

## *A Quick Story*

A few weeks ago, the ISS flew over Salt Lake City 5 times in one week. I decided to see how many of my neighbors I could get interested in this. This meant that they would have to put forth the effort to get off their couches, walk A FEW STEPS and see something incredible, for free. I contacted four households on my street and simply told them that "I have scheduled a unique event,

something that I cannot stop and you must come and see, at *this* time!"

"Where?", they asked.

"Your front porch", I replied. My little test amazed me. The results were not exactly what I expected. The first night, I got only one out of four houses partaking in the event. It appeared that even when competing with TV and the mysterious unstoppable event, the TV still won...

BUT, the one neighbor from the first night had such an impression on him, he talked about it to their daughter, then she went to the house one lot south. The next night I had eight people outside. By the last night, I even had a few phone calls from people I seldom talk to on my street! The fourth neighbor called as ISS was overhead. I heard him yelling from behind neighbor number one's house and in the phone. Quite a stereo effect. They all heard about it from the small group I started with. It appeared that I had connected to these people in such a way, they wanted to tell others.

That, my friends, is what we need to accomplish within our profession (immersive theater or not).

For these new 'digital-dome video' theaters, we seem to find ourselves in a quandary. What exactly do we call ourselves? Full-dome, all-dome, partial-dome, digital-dome, video-dome, whole-dome, or immersive theaters? While this debate lingers on, let's spend some time thinking of ourselves as 'connection-dome theatres'.

All we really need to do, regardless of format, is make people feel that *certain feeling*, the feeling that it is all worth something. You all know what this 'connection' is. You all know what I mean. I challenge all of you to think of one thing you can do, small & simple, and see how big of a 'connection' you can make with people. Put this practice to test in your show building skills. My show was the ISS. The connection, I think, was the mystery and how I presented the idea to my neighbors. That my friends, is what it's worth!

If you would like to keep up with the new 'all-dome' video format and some of the discussions and debates, go to:

**[www.egroups.com](http://www.egroups.com)**

and do a search for 'fulldome'. You can get on this listserv the same way you can for RMPA.

-Aaron

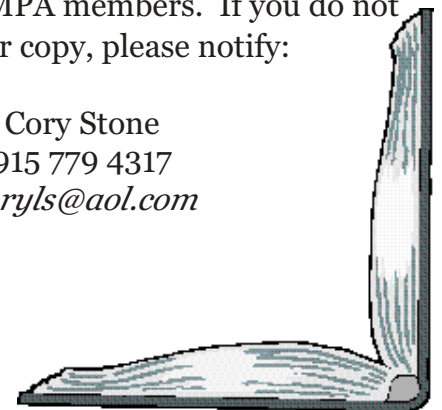
#### **DID YOU GET YOUR PRIMER BOOK??**

One of the benefits of RMPA membership is our publication called

**"The Planetarium Primer."**

This guide has over 60 articles about planetarium operations and astronomy education, and it's **free** to paid RMPA members. If you do not have your copy, please notify:

Cory Stone  
915 779 4317  
[coryls@aol.com](mailto:coryls@aol.com)



---



# Announcement

---



## ODYSSEY FINDS WATER ICE IN ABUNDANCE UNDER MARS' SURFACE

Using instruments on NASA's 2001 Mars Odyssey spacecraft, surprised scientists have found enormous quantities of buried treasure lying just under the surface of Mars—enough water ice to fill Lake Michigan twice over. And that may just be the tip of the iceberg.

"This is really amazing. This is the best direct evidence we have of subsurface water ice on Mars. We were hopeful that we could find evidence of ice, but what we have found is much more ice than we ever expected," said William Boynton, principal investigator for Odyssey's gamma ray spectrometer suite at the University of Arizona, Tucson.

Scientists used Odyssey's gamma ray spectrometer instrument suite to detect hydrogen, which indicated the presence of water ice in the upper meter (three feet) of soil in a large region surrounding the planet's south pole. "It may be better to characterize this layer as dirty ice rather than as dirt containing ice," added Boynton. The detection of hydrogen is based both on the intensity of gamma rays emitted by hydrogen, and by the intensity of neutrons that are affected by hydrogen. The spacecraft's high-energy neutron detector and the neutron spectrometer observed the neutron intensity.

The amount of hydrogen detected indicates 20 to 50 percent ice by mass in the lower layer. Because rock has a greater density than ice, this amount is more than 50 percent water ice by volume. This means that if one heated a full bucket of this ice-rich polar soil it would result in more than half a bucket of water.

The gamma ray spectrometer suite is unique in that it senses the composition below the surface to a depth as great as one meter. By combining the different type of data from the instrument, the team has concluded the hydrogen is not distributed uniformly over the upper meter but is much more concentrated in a lower layer beneath the top-most surface.

The team also found that the hydrogen-rich regions are located in areas that are known to be very cold and where ice should be stable. This relationship between high hydrogen content with regions of predicted ice stability led the team to conclude that



the hydrogen is, in fact, in the form of ice. The ice-rich layer is about 60 centimeters (two feet) beneath the surface at 60 degrees south latitude, and gets to within about 30 centimeters (one foot) of the surface at 75 degrees south latitude.

"Mars has surprised us again. The early results from the gamma ray spectrometer team are better than we ever expected," said R. Stephen Saunders, Odyssey's project scientist at NASA's Jet Propulsion Laboratory (JPL), Pasadena, Calif. "In a few months, as we get into Martian summer in the northern hemisphere, it will be exciting to see what lies beneath the cover of carbon dioxide dry-ice as it disappears."

"The signature of buried hydrogen seen in the south polar area is also seen in the north, but not in the areas close to the pole. This is because the seasonal carbon dioxide (dry ice) frost covers the polar areas in winter. As northern spring approaches, the latest neutron data indicate that the frost is receding, revealing hydrogen-rich soil below," said William Feldman, principal investigator for the neutron spectrometer at Los Alamos National Laboratories, New Mexico.

"We have suspected for some time that Mars once had large amounts of water near the surface. The big questions we are trying to answer are, where did all that water go?' and what are the implications for life?' Measuring and mapping the icy soils in the polar regions of Mars as the Odyssey team has done is an important piece of this puzzle, but we need to continue searching, perhaps much deeper underground, for what happened to the rest of the water we

think Mars once had," said Jim Garvin, Mars Program Scientist, NASA Headquarters, Washington.

Another new result from the neutron data is that large areas of Mars at low to middle latitudes contain slightly enhanced amounts of hydrogen, equivalent to several percent water by mass. Interpretation of this finding is ongoing, but the team's preliminary hypothesis is that this relatively small amount of hydrogen is more likely to be chemically bound to the minerals in the soil, than to be in the form of water ice.

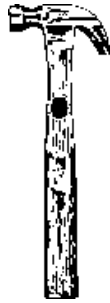
JPL manages the 2001 Mars Odyssey mission for NASA's Office of Space Science, Washington. Investigators at Arizona State University, Tempe, the University of Arizona, Tucson, and NASA's Johnson Space Center, Houston, operate the science instruments. The gamma-ray spectrometer was provided by the University of Arizona in collaboration with the Russian Aviation and Space Agency, which provided the high-energy neutron detector, and the Los Alamos National Laboratories, New Mexico, which provided the neutron spectrometer. Lockheed Martin Astronautics, Denver, developed and built the orbiter. Mission operations are conducted jointly from Lockheed Martin and from JPL, a division of the California Institute of Technology in Pasadena.

Additional information about the 2001 Mars Odyssey and the gamma-ray spectrometer is available at /is available on the Internet at:

<http://mars.jpl.nasa.gov/odyssey/>  
and  
<http://grs.lpl.arizona.edu>



# The Tools of the Trade



**MARK S. REED**

**Peter F. Hurst Planetarium**

Jackson High School  
544 Wildwood Avenue  
Jackson, Michigan 49201  
517-841-3860

Hello RMPA,

I am a member of RMPA but work in Michigan... (no mountains in southern Michigan) Most of the time I have elected to not submit info about what my place is doing because of the fact that I think it is important to showcase regional activities.

Having said that, you asked for little tricks to make presentations better....

From Wal-mart or some other store that sells Christmas decorations, planetarium people might consider adding a remote controlled electrical outlet (a radio frequency activates the switch) to their theatres. They are usually under 20 bucks depending on what you get. I use one that is hooked up to one of those illuminated seasonal earth's that the ASP sells. I put the remote in my pocket and while I am teaching, I will click the button and almost "magically" the Earth appears within the black

box. It is a "showmanship" kind of thing that is cheap but effective. It is also a way to activate some things that may be difficult or cost prohibitive to automate within a theatre.

My two cents worth!

Mark Reed

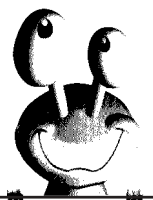
*From the editor...*

*These little goodies are indeed worth using. We use them at our facility to provide easy control of the exhibits in our hallway. The Energy Management Department does not wish us to leave all of these devices on all night (plus, we want to cut down on the wear and tear on disc drives and such). So, instead of walking through and turning on (and off) 20 exhibits by hand, we simply hit the remote and our exhibit hall 'magically' comes alive!*

*These devices can be purchased in a number of electronics catalogs as well as Walmart, Radio Shack, and I imagine they are available in just about any equivalent to the above mentioned stores.*

*-Cory Stone*

*The Gene Roddenberry Planetarium*



Here it is! Our new domain name  
for the RMPA official website!  
***<http://www.rmpadomes.org>***



*Our website is sponsored by the  
following generous organizations:*

**NETMEISTER**  
INTERNETWORK DESIGN & INTEGRATION



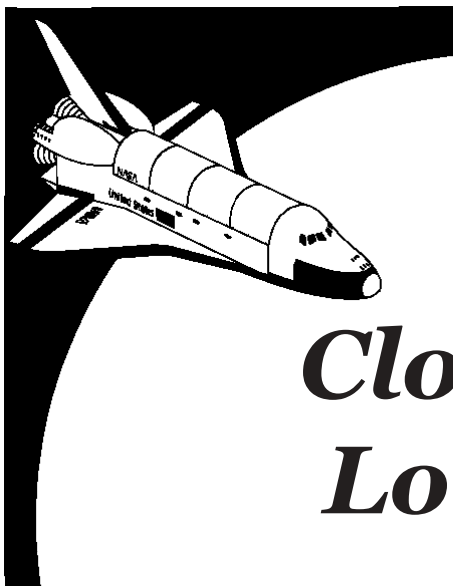
**The Buhl Planetarium**



**The Hansen Planetarium**



**Starlight Productions**



# A *Closer Look*

**Jim Manning**  
**RMPA President - Elect**  
**Taylor Planetarium**  
**Museum of the Rockies**  
**Bozeman, Montana USA**  
*manning@montana.edu*

## **The Mother Nature Factor**

**S**ometimes contrast is a good teacher.

June provided an interesting dose of just that for me, and it reinforced some of my personal notions about human nature and Mother Nature and how--despite our modern efforts to reshape the world in technological paradigms--you just can't fool you-know-who. But, if you pay attention, she can still teach you something.

It's easy to respect Mother Nature in a place like Montana, surrounded by mountains and forests and wildlife and a big sky that dominates the landscape. Out here, the world is not so tamed by computers and concrete that we forget who's really in charge. Or where our roots lie.

That doesn't mean we don't occasionally board a plane and fly off to see what "civilization" is like--and in mid-June, I boarded one and ended

up among the bright lights and steel-and-glass skylines of Chicago for the NASA Office of Space Science's Education and Public Outreach Conference. The conference assembled an impressive group of some 300 scientists, classroom teachers, planetarians and other informal educators, and a passel of NASA outreach types to discuss issues and challenges facing both formal and informal educators in incorporating space science research in their work, how scientists can participate, how science education research can help, and how technology can be effectively used in support.

It was a fascinating couple of days, with formal addresses and panels and small group discussions of a variety of issues and concepts. Some of the most interesting to me involved education research and assessment--that educational achievement is cumulative and built on a hierarchy of concepts, that student's preconceptions about the world need to be divined and addressed in order for them to correctly incorporate and internalize an accurate view of things, that we have no idea what (or how much) students are "getting" if we don't measure and assess--and that we'd probably be quite surprised how little effect we can have sometimes in actually changing people's close-held misconceptions or teaching them something new. In short, human nature has to be taken into account--how people develop their own views of the world, how they learn, how we can be most effective in providing real learning--even life-changing--experiences. Interestingly, several speakers pointed out that what isn't needed (in formal education, at least) is more "stuff" (e.g., another CD teachers don't have time to use), information technology for its own sake, or more "noise" in the system. What we do need, they say, is coherent curricula, well-trained teachers, solid resources for learning specific ideas, and assessment. Much of this could apply to informal education as well, where our efforts and audiences may be more casual in many instances, but where we can still provide real learning and experiences capable of enhancing people's lives and understanding of the world.

With all of this percolating in my brain, I joined the group for an evening at the Adler Planetarium during the conference, providing a chance to wander through its profusion of exhibits, to see a "traditional" planetarium program in the Zeiss theater with the Model VI projecting its glorious sky and recorded narration and slide projectors carrying the story, and to see a couple of programs in the StarRider theater--its full-dome computer-generated video the current technological epitome of astronomy show presentation.



*The Modern World  
The skyline of Chicago...*

In the StarRider theater, we whisked past planets, dodged monstrous prominences over the surface of the sun, wafted through diaphanous nebulas--and occasionally pressed buttons allowing the audience to guide a glider through the canyons of Mars or to navigate a submarine among the cones of thermal vents in the postulated ocean of Europa. It was all most impressive--but the most fascinating thing to me was the evidence of learning going on--and by whom.

In a previous performance I'd attended of the Europa ocean show a few years back, as the console operator talked about oceans and possibilities of life, the audience had cumulatively man-

aged to steer the submersible into the base of the largest thermal vent. As we banged into it, backed up and banged into it again and again, audience members began giggling. Someone began to shout "push the orange one!" in an attempt to get others to hit the "up" button and steer above the vent. But we just kept banging, the audience noise level rising toward the level of the narration--and suddenly the show seemed to transform into a video game. And I wondered what people learned.

*This* performance, though, the show operator deftly provided instructions about which buttons to hit to steer us above the Europa vent, through the Martian canyon, and in fact provided button-pushing instructions throughout, guiding us smoothly through the interactive sections of the show. And it struck me that it was the *show operators* who had done the learning since the last performance I had seen. They learned that they needed to instruct the audience on the manipulation of the buttons in order to keep the interactive sections from becoming a distraction. It was a case where someone had to assess how best to mix button technology with human nature to make the technology support learning goals rather than to detract from them. Thus are the risks of technology and the need to take into account the human factor--our human tendencies and reactions (in other words, Mother Nature in ambulatory mode) in applying technology effectively. And thus, one example of the need for the teachers to continue learning if we are to be most effective in our jobs--and to not let the technology tail wag the education dog.

After a brief sojourn in the technological Mecca of Chicago and Adler, communing with colleagues about the nature of learning and our assorted and related businesses, I headed back to the wilds of Montana. And not two weeks after gazing upon the man-made skyline of the Big City, I was in nearby Yellowstone National Park in equally wild Wyoming, with the sky framed instead by craggy ridges and lodgepole pines.



## Here's the Sites!

### **RMPA:**

Rocky Mountain Planetarium Association

<http://www.RMPADomes.org>

### **MAPS:**

Middle Atlantic Planetarium Society

<http://www.maps-planetarium.org>

### **SWAP:**

The South-West Association of Planetariums

<http://www.tyler.cc.tx.us/SWAP/>

### **SEPA:**

The South-Eastern Planetarium Association

<http://www.sepadomes.org/sepapage/sepa.html>

### **GPPA:**

The Great Plains Planetarium Association

<http://www.spacelaser.com/gppa>

### **GLPA:**

The Great Lakes Planetarium Association

<http://www.pa.msu.edu/abrams/GLPA/index.html>

### **PPA:**

The Pacific Planterium Association

<http://www.ccsn.nevada.edu/planetarium/PPA/>

### **IPS:**

The International Planterium Society

<http://www.ips-planetarium.org>



I was there to conduct the first of our summer public observing weekends in the park--a little project we began a few years back that has become a popular addition to the experiences available to the visiting public wanting to experience something of Mother Nature for real. We offer safely-filtered solar observing on Saturday afternoon at Old Faithful, present the ranger talk at one of the campground outdoor amphitheaters as an astronomy talk on Friday and Saturday night, and afterward observe the magnificent dark sky through telescopes ranging up to 20 inches of aperture. It's a great time, the crowds are appreciative, and we keep our learning goals simple: to show people something they perhaps haven't seen before, to get them to appreciate something of the universe above, and to leave them with a good memory about the sky that may spark some later flame in them to learn or do more.

But here of all places, we have to take Mother Nature into serious account. And this particular weekend, she provided plenty of learning experiences of her own.

Friday night we played peek-a-boo with clouds, but Saturday was clear and hot. We showed geyser watchers at Old Faithful sunspots bigger than Earth all afternoon, battling fierce winds in the process as we hung onto our hats and telescopes and distributable star maps and brochures. The wind proved fateful, for in the mid-afternoon it toppled a tree onto a power line, and the entire Madison Junction area, where our evening program and observing were to take place, was powerless. That meant that there was no power to run the slide projectors or microphone for my evening talk at the amphitheater. And to cut off a planetarian from his slides is to cut off his hands. Mother Nature was throwing me a curve.

But the show must go on, and so at 9:30 PM, as dusk began to descend, the ranger on duty got up and gave his safety talk--and then it was my turn.



### *The Real World*

Mounting the stage and looking out at a crowd of expectant campers in the dimming evening, I suddenly realized how far I was from Chicago, both literally and figuratively. No all-dome video, no interactive exhibits, no buttons, no microphone, no slides. The only tools I had at my disposal were my own voice in the growing darkness, my audience's imaginations, and the deepening sky above. All I had was what our species started out with, back when the epitome of technology was a good stone axe.

And I used them. As the sky went dark and the first stars popped out, I plied the audience with an impromptu version of the search for life in the universe--and why it was a good thing to think about in this place. I used Venus blazing steadily in the west as a prop--a planet once thought to be a suitable habitat for Tarzans, now known to be a deadly

hot, volcanic, infernal place. I talked of Mars (and that wormy meteorite), and how not unlike Yellowstone, it may once have been a place where volcanically heated water led to hot springs that could, some think, have supported flourishing colonies of bacteria as we find in Yellowstone's thermal features today--including cyanobacteria, those tiny planetary engineers that exhaled our oxygen atmosphere into the sky. I talked about Titan, a refrigerated organically-sludgy environment that could tell us how the Earth started out. And about Europa and its potential for an undercrust ocean and those thermal vents, and perhaps simple life.

I spoke of how scientists, by watching tiny, regular wavelength shifts in the light of stars, could identify the presence of Jupiters and Saturns orbiting those stars. And how Hubble showed us cocoons surrounding newborn stars that might develop into planetary systems, and how a prevalence of planets might mean there are Earth-like planets, and that some of those might be right for life.

And when I was done, and there was still time to kill before it was dark enough for the scopes, I shifted into telling Native American sky tales as the stars began to twinkle. When a pack of coyotes yapped across the meadow from the rocky ridge that held their den, I delved into my memory for the Hopi story of how Coyote scattered the stars, and the Apache story of how Coyote acquired the sun and put it in the sky, and the Spokane story of how Arcturus was Coyote's eyeball, caught in the sky when he juggled his eyes to impress some girls. As the Big Dipper twinkled out high over my left shoulder, I told of the seven brothers of the Assiniboine who, growing tired of being human beings, decided to become the stars we see there this night. And as the curl of Corona Borealis appeared over my right shoulder, I spoke of the Pawnee Circle of Chiefs, the Blackfeet Spider God, and of the Shawnee story of the circle of dancing star maids who leave a space for their sister who married a chief of the land below.

And when I was done, and the audience applauded warmly in the cool evening, I was reminded again of the lesson, taught by Mother Nature and her afternoon winds, that in the end, technology is only a tool. The secret is to tell a good story, whatever the means. And though I could measure and assess my effectiveness only by the strength of the applause in the darkness, it was enough to suggest that my goal had perhaps been achieved.

But the best was yet to come, for what Mother Nature had taken away with her afternoon wind, she gave back in bountiful measure in a perfectly clear, black, pristine sky for observing. After masking flashlights with red cellophane secured by rubber bands, the crowd filtered down in streams of bobbing red lights to the meadow where the telescopes waited, and we told them another story written across the sky.

We revealed Venus in its gibbous phase until it set behind the mountain ridges, and focused on Albireo, its components lovely in shades of pastel blue and gold. The Hercules Cluster was a thick burst of stars, the Ring Nebula an intensely blue doughnut, the Lagoon Nebula a bright glow clearly split by its dark lane of dust. The adjacent galaxies M81 and M82 were striking in their different shapes, and the Whirlpool Galaxy easily showed the swirls of its spiral arms. The Milky Way was a glorious river of clotted starclouds, and it was a joy just to run the 20-inch down the rich scatters of sparkling diamonds along its span.

It is always the case at these Yellowstone soirees that after an hour or so, the crowd, tired from its long day and the hour being late, drifts away until only a few are left, eager to see everything we have to show. And so we stick around, answering questions and showing some of the more exotic treasures the sky has to offer. Often these last couple of die-hards are fellows, but on this night, one of them was a young female college student named Bethany from North Carolina. She marveled at the star-bristled sky as she bubbled over with questions about black holes and worm holes and other esoterica, proclaiming each new

sight through the telescope as beautiful. These are the people we especially enjoy, for we can feed their interest and reach them in significant ways. It can offer gratifying rewards, and it did this night as,



*The Real Sky*

toward the end of our session, Bethany uttered those words we love to hear: "When I get home, I'm gonna have to look this stuff up and find out more."

Eventually, well after midnight, as the pine-prickled eastern horizon began to gild at the coming rise of the moon, it was time to pack up. Bethany and our other diehards wandered off toward their tents, lonely red lights bobbing up the slopes. And not longer after, I and my crew huffed up those same slopes, carrying and wheeling and all but dragging our equipment back to the waiting trailer for storage. As I get older, this becomes hard work, but it's easier to bear the burden when it's a labor of love.

On that Saturday at the end of June, far from the high-tech, digital world of the Big City, Mother Nature had stripped us down to the essentials: to the voice, the imagination, and the glorious sky above, with a few good scopes to show it off. And our message still resonated, our educational goals remained intact. It taught me the lesson that I never tire of relearning: that it's the connection with people that matters most in education, and there are many ways to build that bridge. Sometimes, all it takes is a story in the wilderness, and the real sky.

I'm reminded of another story about a modern couple camping in the forest with their guide. On the last night of the trip, around a crackling fire in a clearing, the sounds of the night forest all about, the husband remarks about how much he's enjoyed the trip, but how good it will be to get back home, to all the modern conveniences, to the hustle and bustle of their jobs and leisure pursuits--how nice it will be to get back to the "real world."

The guide pauses, gazes into the night forest with the wind gently swaying the dark forms of the pines, listens to the skitter of a creature in the underbrush and the yip of a coyote in the distance, looks up at the night sky bristling with uncounted stars, and replies: "This *is* the real world."

Sometimes it's important to push away from the computer, the TV, the hustle and bustle of modern life to remind ourselves that for all of our modern and technological pursuits, people still do crave the real world--and we have a chance to introduce them to it every day in the form of the real sky. We create our simulations, using our planetarium projectors and slides and microphones and soundtracks and pointers and all-dome videos to help them make that connection, but sometimes people want to see the real thing--and can be just as inspired--probably more so--*by* the real thing. There's still nothing like looking up into a magnificent night sky and knowing that if your arm were long enough, you could reach up and touch a star. If we can touch that chord in others, we will be on our way to providing life-long learning experiences that can change people's lives.

It's work of which even Mother Nature would approve!

- Jim



### ***A Tip from the Alliance...***

Deadlines for reserving hotel rooms and signing up for the conference are coming up and leaving us behind, so register today!

To register right now, just log on and go to the conference website for the forms!

***<http://www.hmns.org/space2002>***

The Warwick Hotel  
5701 Main Street  
Houston, Tx 77005  
PH: 713-526-1991  
FAX: 713-526-0359

Marriott Residence Inn  
7710 South Main Street  
Houston, Texas 77030  
PH: 713-660-7993  
FAX: 713-660-8019

Remember to mention the Western Alliance of Planetariums Conference or the Houston Museum of Natural Science to get the right rate!

The Warwick is a block from the Museum. Each room is unique and beautiful and the public spaces are elegant. A room is \$109 per night.

The Marriott Residence Inn is about a mile from the Museum, but we will run shuttle vans for the conference. Marriott has three room types: single (\$76), double (\$86) and penthouse (\$116). Each room comes with a free full hot breakfast including bacon, eggs, and pancakes.

# **aily Motion!**

**Mike Murray**  
**Assistant Director**

Montana Space Grant Consortium  
Dept. of Physics  
Montana State University  
Bozeman, MT 59717  
(406) 994-7309  
*murray@physics.montana.edu*

The Montana Space Grant Consortium is a partner in the new Space Science Network Northwest (S2N2), one of seven regional Broker/Facilitators (B/F) of NASA's Office of Space Science (OSS) Education and Public Outreach Program. S2N2 members are the Space Grant Consortia of Washington, Oregon, Idaho, Montana, Wyoming, Alaska and Hawai'i. The Association for Women in Science and the Astronomical Society of the Pacific are also partners on S2N2 projects.

## What is "S2N2"?

The goal of S2N2 is to increase awareness of and participation in OSS missions and Education/Public Outreach (E/PO) programs by creating collaborative pipelines between educators, scientists, and anyone who works with E/PO. S2N2 will facilitate cross-support of various groups (formal and informal education, space scientists, general public, clubs, service organizations, etc.) and provide opportunities for them to work together. S2N2 will also be a clearinghouse for OSS mission information and related education products throughout the northwest. OSS is the branch of NASA responsible for solar system missions, astrobology and space science research satellites

such as the Hubble Space Telescope and the Chandra X-ray Observatory.

The S2N2 approach is to have a strong B/F presence in each of the partner states. The Space Grant programs in each of these states are hosts to S2N2 operations and activities. Thus it is possible to match up the needs and desires of educators and space scientists in each state with the opportunities available from OSS E/PO.

## How You Can Use S2N2

The types of services S2N2 provides are quite diverse. Space scientists interested in E/PO can contact S2N2 to learn about opportunities and possible partners. Educators can use S2N2 to make contacts and learn about possible sources of funds for curriculum development and reform, special events, and professional development opportunities in space science. Museums, science centers, schools, libraries, planetariums, clubs, community groups and other organizations that desire to bring the excitement of space science to a wide audience can count on S2N2 for help in defining and implementing projects and finding resources to carry them out.

## To Find Out More

Julie Lutz  
Director, Space Science Network Northwest  
Washington Space Grant Consortium  
University of Washington  
401 Johnson Hall, Box 351310  
Seattle, WA 98195-1310  
206-543-0214  
*nasaerc@u.washington.edu*  
*<http://www.waspacegrant.org/s2n2.html>*

To see more of what the Office of Space Science is doing in the realm of education and public outreach, you can access the latest copy of Voyages, their E/PO Newsletter at:  
*<http://spacescience.nasa.gov/education/news/index.htm>*  
*-Mike*



## *From the Editor*

**Cory Stone**

**RMPA Treasurer/ Editor**

**The Gene Roddenberry Planetarium  
*coryls@aol.com***

### **All Good Things...**

They say that all good things must come to an end... After thirty two and a half years, the High Altitude Observer will be no more. The Rocky Mountain Planetarium Association has been putting out this newsletter for all that time. Some might say, "why break with tradition?" While others are saying, "out with the old and in with the new..." From a distance this might sound like an argument from "Fiddler on the Roof"!

Well, all nostalgia aside, a number of folks from all over the Western Alliance got together at the last conference (in Eugene, Oregon) and came up with a radical new idea.

Since the four western U.S. regionals always meet together each year, this has caused a realization among a number of us that we, of the western United States planetarium community, have a great deal in common. In many ways, our four sepa-

rate regional organizations are a lot closer in thought and deed than the memberships of some single eastern regionals! So, it was proposed that we collect those thoughts together into an open forum. Hmm. How to do this? Create another Dome-L (Western-L)? Nah. Dome-L is confusing enough! Besides, we already have the RMPA and Western Alliance lists.

No. We need a venue where the minds of the members of each of the regional organizations belonging to the Great Western Alliance can speak to each other clearly and usefully. So, the question was raised, "why not combine our newsletters and journals into one super mega journal?"

At first, the idea sounded kind of scary. I can tell you from personal experience, creating a journal like the HAO is not a task for the faint of heart. One has to get used to the heart rending cries of one's young children begging their father to come away from the computer for just a few minutes...

Okay, so that's a bit melodramatic. However, it does take some time to put all this together. Now we are talking about putting something together for every planetarium west of the Mississippi River!

It was one of those precious moments like you see in the movies. We were sitting around talking about this idea and someone brought up the question of, "who would be the editor putting it all together?" The shear silence at the table was punctuated by the clearly audible tinkling of forks against teeth 10 meters away as all eyes at the table rested upon one person who was caught in the moment of attention in mid mouthful (which is a defining aspect of his life, by the

**Need a new show for the holidays?**



**Santa Snork**  
**Saves**  
*the*  
**Seasons**

**Planetary Investigator Sam Snork is at it again as he points out winter constellations, explains why Earth has seasons, and presents an alien interpretation of "A Visit From Saint Nicholas". *Santa Snork Saves the Seasons* provides festive seasonal treats for all ages.**

**For preparation and pricing options along with information about other Stellar Experiences program packages, contact**  
**[www.SudekumPlanetarium.com](http://www.SudekumPlanetarium.com)**  
**[krismccall@csmisfun.com](mailto:krismccall@csmisfun.com)**  
**615-401-5077**

**Cumberland Science Museum**



**& Sudekum Planetarium**

**800 Ft. Negley Blvd. / Nashville, TN 37203**

way). What did he do? Well, I finished chewing my mouthful, smiled and said, "uh, I'll do it?"

Suave... I know. Oh well. Sometimes from humble beginnings come great things. So, all the theatrics behind us, let's get to the "meat and potatoes" of this idea...

Starting in September of this year, we will be publishing The Great Western Observer. This document will be the official journal of RMPA, PPA, SWAP, and GPPA (the Great Plains Planetarium Association). This journal will be the place for the publishing of everything from your most simple ideas on how to make a common special effect work, to the most detailed summary of your Master's thesis and all that lies between. One journal will reach more of us with more detail. Our vendors will reach more of their potential customers through this journal. Many were cautious about advertising to individual regions; so, to many, their message was lost. Now, we can triple the readership and thus be more attractive.

Now all of that might sound familiar. Those are part of the original reasons for the four of us meeting for our conferences! Combining our effort has made for a better product. It is my personal hope (and it is shared by the other editors) that this will prove true for the journal as well. The only issue that remains in RMPA is the issue of how to send it.

I know some of you may have heard this before; but, bear with me here. We've been talking about this for some time; but, now it is actually time for it to become reality...

We will decide at the conference whether or not to go to an all electronic jour-

nal. PPA, SWAP, and GPPA have been doing their newsletters this way for some time now to rave reviews from their membership. So, I will be proposing this for an official vote during our business meeting at the Houston conference.

During the conference, I will be asking all of you to give your input on the changes in the newsletter, and I'll be asking several of you specific questions regarding formats, color, and ease of access. Thanks ahead of time for all your help. And as always, remember that the Great Western Observer has one very important thing in common with the High Altitude Observer... You! No journal is worth spit unless the membership contributes its thoughts, ideas, and dreams. The HAO has been a direct reflection of the state and health of RMPA. Thus the GWO will gauge the pulse of the Western Alliance. Will it flourish? That will depend on you and your brethren here in the west.

So, it is time to get this done. To receive the new journal electronically, you will need to be on the RMPA and/or the Western Alliance e-mail lists. To be a part of those forums you will need to e-mail Christine Shupla ([shuplac@azscience.org](mailto:shuplac@azscience.org)) and she will get you signed up ASAP. The first issue will be printed as well and a limited number of them will be available at the conference. We also need to know how many of you do not have e-mail at all. We don't want anyone to miss an issue, so please call us or write us a snail mail letter if you absolutely cannot receive e-mail. Thanks.

I hope to see most of you at the conference and on the web...

-Cory

# **O** *The Great Western* **OBSERVER**

The Journal of the Rocky Mountain Planetarium Association,  
the South West Association of Planetariums,  
the Pacific Planetarium Association, and the  
Great Plains Planetarium Association  
Vol. I, No. 1 Fall 2002



Here is one my concepts for the front cover of the GWO.  
What do you think?



**The Gene Roddenberry Planetarium  
6531 Boeing Dr.  
El Paso, Texas 79925**

***INSIDE THIS ISSUE:***

***President's Corner - Aaron McEuen***

***A Closer look - Jim Manning***

***Daily Motion - Mike Murray***

***Tools of the Trade - Mark Reed***

***From the Editor - Cory Stone***

