

Projections

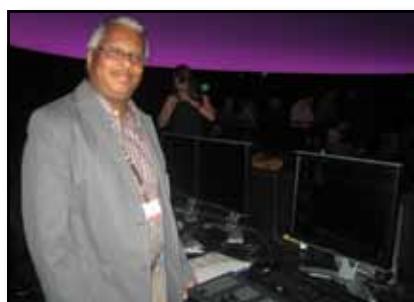
Summer Solstice 2011

Grand Reopening of Charles Hayden Planetarium in Boston:

On February 13, 2011 the Museum of Science Boston officially unveiled their upgraded theater with the premiere of their new show **Undiscovered Worlds: The Search Beyond Our Sun.**

The Planetarium's centerpiece is the state-of-the-art Zeiss Starmaster optical star projector, the first on the East Coast. The Starmaster replaces their older Zeiss Mark VI, and for the first time their star field is enhanced by fiber optics creating a stunningly realistic night sky. Each star has its own fiber so every star is a bright pinpoint of light, and with the new scintillation feature the stars can flicker as natural as the real thing. Another first is the Starmaster's ability to go forward and backward 10,000 years in seconds via computer-controlled independent planet projectors. For more information on the Museum of Science Boston please visit their web site at <http://www.mos.org/>

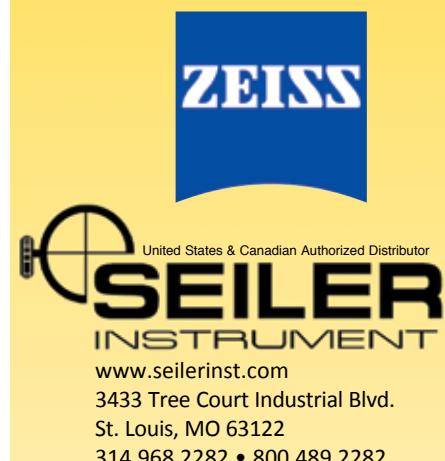
More information on the Zeiss Starmaster star projector can be found at zeiss.de/planetariums.



Darryl Davis
(Technical Coordinator, MOS)



From left to right: Laura Misajet (Seiler Instrument), Dr. Carter Emmart (AMNH), Chuck Wilcox (Lead Animator, MOS), Steven Savage (Pres. Sky-Skan Inc.), David Rabkin (Planetarium Director, MOS)



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A Note from Laura Misajet

I just returned from a trip to see the Zeiss Planetarium in Bochum Germany. Wow, I cannot tell you how impressed I was with not only the technology but how they used it. It was the perfect example of everything Zeiss has perfected and truly highlights their strengths. The Zeiss Universarium optical star projector provided the most amazing sky I've ever seen and the Zeiss VELVET video projectors produced stunning full-dome imagery. Because of the outstanding black levels of the Velvets, the full-dome video was on the entire time and you never saw any gray projection on the dome. It was totally black, so the Universarium stars shone beautifully along with the video in seamless harmony. It took my breath away. They even incorporated many Uniview sequences within their production. Congratulations go out to Prof. Dr. Susanne Hüttemeister, Helmut Schüttemeier, and Meike Weisner for producing magnificent programs that fully utilize the capabilities of such a combined system.

News & Notes

From Laura Misajet
Sales Manager
Seiler Instrument & Mfg. Co., Inc.
Planetarium Division

Planetarium Sales Manager
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Kind regards,

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UPCOMING SUMMER EVENTS

South East Planetarium Association (SEPA), O. Wayne Rollins Planetarium, Young Harris GA, June 21 - 25, 2011 <http://www.sepadomes.org/> Join Seiler for a demonstration of two Zeiss Velvet video projectors in the dome.

Uniview Users Group Meeting, July 25 and 26, 2011 at the Mayborn Planetarium in Killeen, Texas, with the WAC conference scheduled to start right after the user group! SCISS will publish the schedule, hotel-offers etc on their new uCare site. If you already plan to attend, please let SCISS know at [usergroup@sciss.se!](mailto:usergroup@sciss.se) <http://www.scalingtheuniverse.com/news.php#87>

Western Alliance Conference (WAC), Mayborn Planetarium, Killeen TX, July 26 - 30, 2011. Join Seiler and Zeiss for our Velvet digital video projection technology demonstration in the dome. <http://www.wacdomes.org/>

SIGGRAPH, Vancouver Canada, August 7 - 11, 2011. <http://www.siggraph.org/s2011/> Seiler will demonstrate two Zeiss Velvet digital video projectors in the H.R. MacMillan Space Centre Planetarium the evening of Thursday August 11th. We invite all of you in the area to stop by for the demo.

Giant Screen Cinema Association, Austin TX, September 20 - 22, 2011 and "Dome Day" Friday, September 23, 2011, Fort Worth Museum of Science and History, Fort Worth, Texas, US <http://www.giantscreencinema.com/>

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Science Community Center

Opening Fall 2012

Welcome to the Science Community Center!

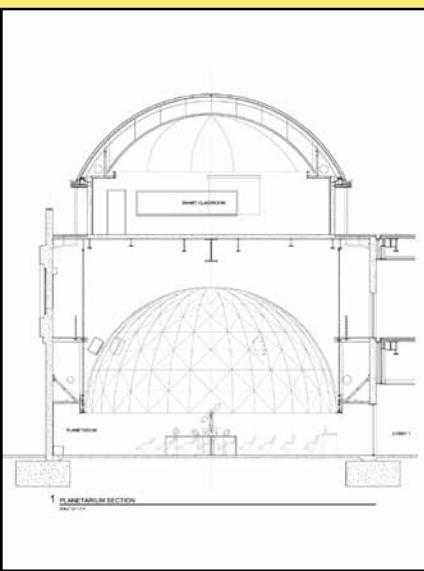
The Science Community Center located in Modesto, California on Modesto Junior College's West Campus will integrate college instructional facilities with the Great Valley Museum, a planetarium, an observatory, and an outdoor educational area



with a native American exhibit, native plants, and a pond ecosystem. The Science Community Center is an 110,000 square feet three-story building with a fourth floor observation deck. Water features in the front of the building include numerous physic lessons which will teach as well as entertain young and old alike. Designed by Lionakis, this facility will be used for the instruction of college students, elementary students, elementary school teachers, and will allow MJC to provide the leadership needed by the community in science education, literacy, and outreach.

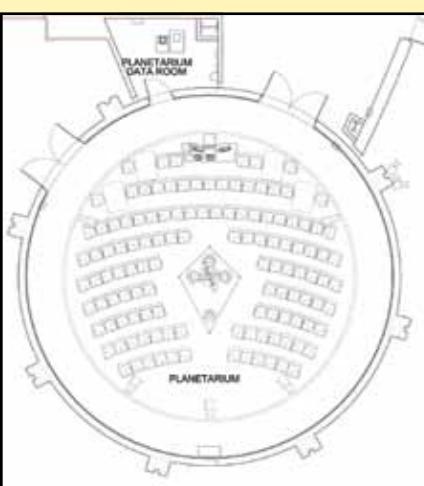
The sciences at Modesto Junior College offer a comprehensive program that allows students to transfer to four-year universities and vocational programs, complete associate degrees, and offers general educational core requirements in the physical and life sciences.

The Museum



The Great Valley Museum (GVM) is a comprehensive learning center established in 1970 to further the understanding of science and natural history, especially of the Great Valley region of California. While operated by Modesto Junior College, the museum is open to the public, and is utilized greatly by local K-12 schools, as well as college students. The GVM educates the public with educational exhibits, displays, programs, activities, and other forms of information and communication. The efforts of the GVM focus upon the examination and interpretation of the sciences, natural history, natural resource conservation and related areas of study. It provides experiences that inspire curiosity, discovery, creativity and responsibility for our natural world through its collections, exhibits, and educational programs. The GVM will engage students with activities through the usage of two laboratories, the Discovery Room for the younger students, and a conventional lab setting for older students; both laboratories are adjacent to the main exhibit floor. Approximately 40,000 students a year participate in the GVM's programs. We expect this number to grow considerably with the added capabilities of a planetarium and a professional observatory, both open to the public as well.

The Planetarium



With a 40-foot dome and a hundred seats the planetarium will accommodate large science classes as well as bus-loads of visiting smaller students. The planetarium will enrich our already popular astronomy courses by simulating the night sky and demonstrating complex concepts and allow MJC staff to help convey requirements of the California Science Framework to neighboring elementary students. Some of the planetarium seating will be removable allowing intimate tables to be placed

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under the dome for those who may enjoy a Night Under the Stars with friends or family.

The heart of the planetarium will be the Zeiss ZKP4 and SPACEGATE Quinto projection system. The projector system can create beautiful and realistic views of the night sky with its star projector. Furthermore, with modern digital projectors, the Zeiss system can also display planets or comets or overlay traditional outlines of constellations and asterisms. Loaded with UniviewTheater from SCISS, the digital projection system will allow students to navigate the Digital Universe databases in real time, making the planetarium experience a dynamical and memorable one!

Companion Seating Provided = 4 Seats



Semi Ambulant Seating Provided = 4 Seats

Aisle W/ No Armrest Seating Provided = 4 Seats

Accessible Seating Provided = 4 Seats

Removable Seats – First Two Rows And Side Isle Seats = 34

Total Seat Count = 127

Dressing the circumference of the planetarium you will find twelve well known constellations laser-etched into steel. MJC Art Professor Dr. Richard Serros provided the superb art work. LED lights will illuminate the panels at night in the star pattern found in that constellation.

The Observatory

The roof of the Science Community Center will be an observation platform for astronomy lab courses or public viewing. Viewing will be done with 12-inch Dobsonian telescopes or 8-inch Schmidt-Cassegrain telescopes, with go-to technology. Student imaging will be done with a 12-inch PlaneWave Corrected Dall Kirkham telescope. The observatory will be accessed from the roof and will house a PlaneWave CDK 700, a wonderful 28-inch telescope designed for imaging and public viewing. The CDK 700 will be piggy-backed by a 4-inch Takahashi imaging telescope and a Santa Barbara Instruments high resolution spectrograph. The ob

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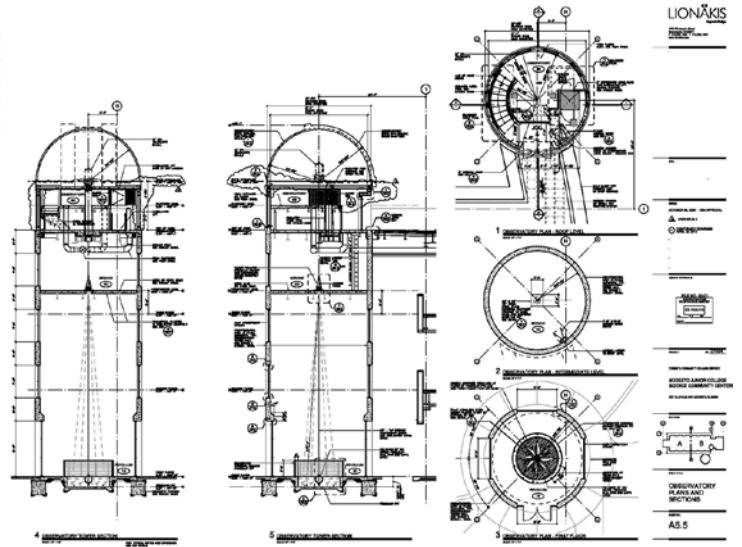


servatory telescope can be viewed in a lecture room and the planetarium, opening the study of the night sky up to a larger audience.

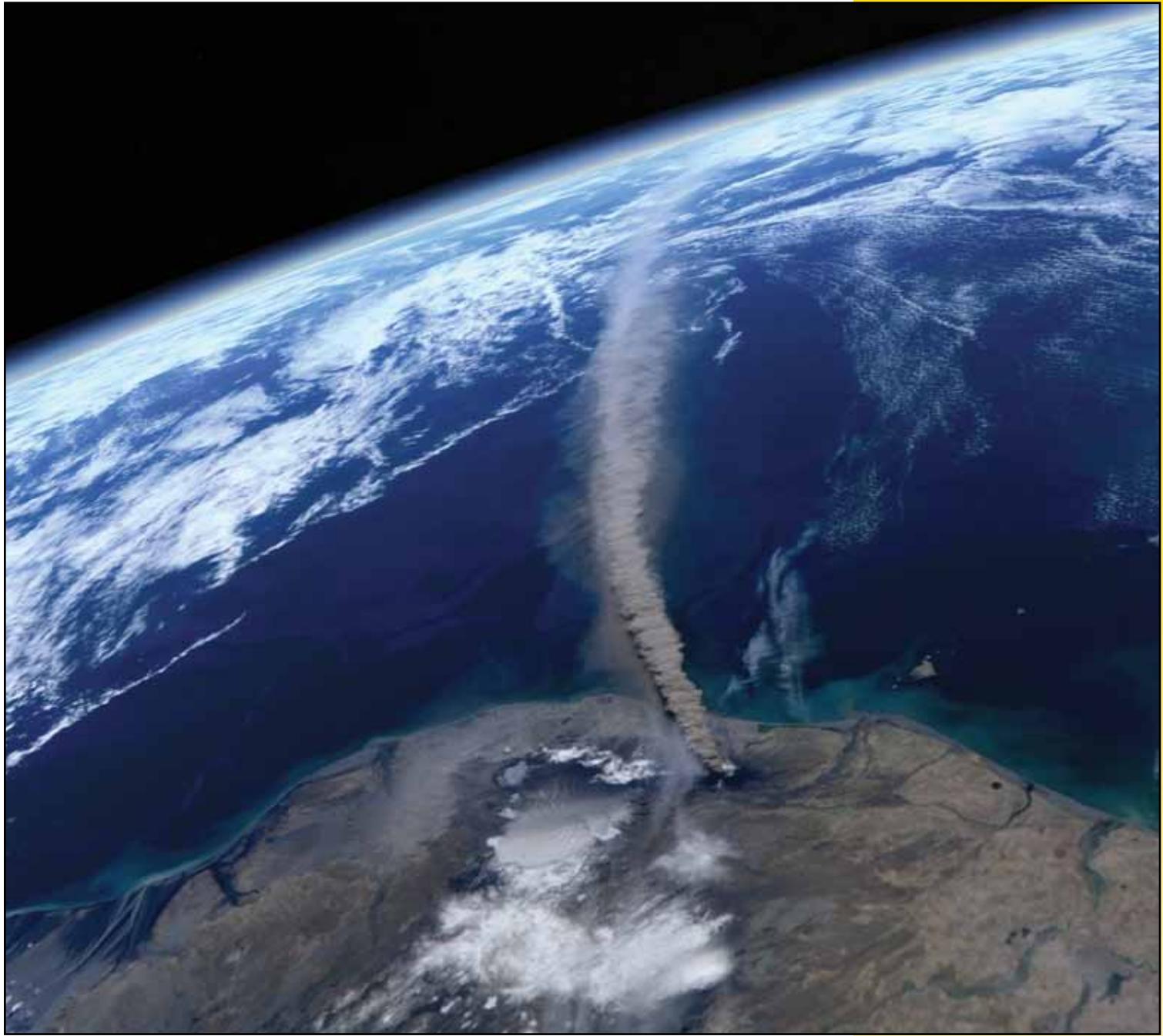
The installation of a Foucault pendulum, located on the first floor below the observatory, will entertain while teaching science and math concepts and demonstrating that the Earth rotates!

The Science Community Center is scheduled to be open for Fall of 2012. Come visit!

Ken Meidl
Sandra Vanwey
William Luebke
Drawings From Lionakis (architectural firm)



Uniview 1.4 Unveiled at IPS in Alexandria Egypt: Daniel Arnberg, SCISS



The Eyjafjallajokull Volcano Eruption, Iceland May 11, 2010.

Since the opening of the first Carl Zeiss planetarium in 1925, generations of children and adults have been inspired to learn more about science and astronomy, but also to understand the mechanics and optics generating these visual wonders. As the digital technology has advanced more rapidly the last decade, many of these planetariums are looking towards digital planetarium solutions to provide new content. With the installation of state of the art hardware projectors and hardware, the demand for matching high quality software has grown.

As such, the Uniview Theater software was developed by SCISS and introduced to the market in 2005. Honoring the inventive tradition of the planetarium industry,

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Uniview Producer Graphical User Interface



Satellite image of Deepwater Horizon Oil Platform on fire April 21, 2010.

Uniview Theater featured four major innovations; Scalegraph, Flightassist, Geoscope and Octopus – all accessible through the first script-free and most intuitive interface on the market.

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Uniview's interface has enabled many planetariums to arrange unique live shows, where a presenter could guide the visitors to anything from a flyover of Valles Marineris to exploration of the farthest reaches of known space and instantly visualize new datasets to meet questions from the audience. "Some users even allow their visitors to fly Uniview and explore interactively through a wireless gamepad", says Johan Öhlund, Director of Sales at SCISS. "Presenting with Uniview, the science and presentation skills become more important than being a good programmer"

The reception in the community has been a resounding success and the last few years have seen over 80 installations of Uniview across all continents. With prestigious customers such as NASA and ESA, there are high expectations on scientific accuracy, stability and graphical output. "But the most exciting part in having such great institutions as customers is their willingness to share their data through servers accessible with our Geoscope innovation", Johan explains. "It gives our users something very unique and binds new data and new discoveries closer to the planetarium visitors. For example, just this year, many of our users have shown the MODIS data from NASA just hours after they become available, pro

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viding great teaching opportunities ranging from the oil spill in the Mexican Gulf to the spreading of ashes from the Eyjafjallajökull volcano. It is very exciting for the visitors when the science becomes so tangible".

And with the imminent release of Uniview 1.4, there is plenty to excite both current and future users. "Uniview was created to be a real-time software for live interactive data visualization, but since it is so easy to directly record a flightpath many used Uniview Theater for cinematic productions", Johan explains. "With the introduction of Uniview Producer, we give our users the very best of two worlds; an easy to use script-free interface together with the power to manipulate all parameters available in Uniview Theater. Of course, there are many ways to use your flightpaths. It can be a short snippet explaining a certain astronomical concept that you want to use in your real time presentation, or it can be a longer flight that you'll want to tweak and render. Of course, you can also share these with the rest of the Uniview community. I think Uniview Producer will reinvent the way content is created, much like Uniview Theater reinvented the live planetarium show."

The AMNH production "The Known Universe", has been seen by six million viewers on Youtube. Check it out at:

<http://www.youtube.com/watch?v=17jymDn0W6U>

Seiler offers Uniview Theater and Uniview Producer with all our Zeiss power-dome® systems.



Io and Jupiter.

Zeiss for SEATTLE:

We are proud to announce the Pacific Science Center in Seattle is now a member of the Zeiss family. The Willard Smith Planetarium began phase one of their renovation by removing their old Spitz star projector, replacing their carpet and bench seating and installing the Zeiss powerdome®SPACEGATE Duo full-dome projection system with Uniview. Next year they will add the Zeiss ZKP4 Skymaster star projector.



Zeiss SPACEGATE Duo
Photo Credit: Alice Enevoldsen



Alice in her newly renovated planetarium with the
Zeiss SPACEGATE Duo.
Photo credit: Jason Enevoldsen

Adding a digital system has completely changed the way the staff produces shows. Plus the addition of a production workstation with powerdome® and Uniview Producer production software has certainly made it easier and frees up the theater for public and school shows. Planetarium Supervisor, Alice Enevoldsen, says that audience feedback is a big part of learning the system and they like to involve the visitors as early as possible. After the public reaction they go back and tweak the show.

Zeiss included the ZKP4 computer and the manual control panel as part of the SPACEGATE Duo installation so that they can control the digital planetarium within powerdome® in live mode using the manual operating panel.

As part of Seiler's expanding training options, the Pacific Science Center ordered extra Uniview training by SCISS. Part of this training took place via Internet and two days on site with a follow-up via Internet. This extra intensive training occurred about three months after opening. Alice Enevoldsen felt this was perfect timing because they had a chance to use the system for a few months, knew what questions to ask, and where to concentrate the training, and were therefore more prepared, and without the pressure of preparing an opening program.

And speaking of new family members; congratulations to Alice Enevoldsen on the birth of her daughter Vera Vega, born April 9th at 7:50am, shortly after the Sun, Mercury and Jupiter rose. Sounds like a promising start.

SEILER COMPANY NEWS

2 VELVET PROJECTORS NOW IN THE U.S. AVAILABLE FOR DEMOS!

Seiler Instrument now has 2 Zeiss VELVET projectors with powerdome® IG and Uniview in St. Louis for the year, and they are available for demonstration in your dome upon request. Please contact us for scheduling.

Dear Planetarians,

As some of you are already be aware, I have been reassigned to other duties at Seiler Instrument Company and will no longer be involved with our Planetarium Division. Brian Wirthlin and Laura Misajet have taken over my planetarium-related responsibilities, so please contact either of them for spare parts, maintenance and all other issues for which you would have previously contacted me. I'm sure they will serve your needs as well or better than I have.

It has been a pleasure and a privilege to meet and interact with many of our friends and customers over the last 2-1/2 years. Never have I met a group of people who are as uniformly intelligent, friendly and welcoming as the planetarium community, and I sincerely appreciate everyone's willingness to share their knowledge, experience and expertise with me as I learned about the industry.

I'm leaving the Seiler Planetarium Division at a very exciting time, and with the firm belief that the new products that Zeiss has recently introduced will allow us to better serve a larger segment of the planetarium industry than we ever have before. Though I will no longer be directly involved, I will remain interested in the planetarium field and in our continuing efforts to serve our customers within it.

Sincerely,
John LaRosa

Seiler trip to Carl Zeiss in Jena Germany, May 2011



From left to right: Ann Wagner, Nikkie Schaper, Louise Schaper, Laura Misajet, Rick Seiler, Wilfried Lang

There have been significant happenings behind the scenes at the Planetarium Division.

Brian Wirthlin has been settling into his role as the "go to guy" in all things technical. Brian is a man with a "past" in Planetarium industry. He got his start at the McDonnell Planetarium in St. Louis as a high school freshman, and climbed through the ranks to become chief technician. Next he joined Laser Images during the glory days of Laserium and climbed from Laserist to Production and Special Projects Director. Ten years in the computer graphics industry came next. Brian joined Seiler instrument's military manufacturing division 18 years ago. Since joining Seiler's planetarium division Brian has made three trips to train with Zeiss in Jena, and accompanied Zeiss technicians on field service visits here in the states. Brian is looking forward to performing the demonstrations of the Zeiss Velvet Video Projection System across the U.S. and Canada this year, and several more trips to Jena for advanced training.



Rick Seiler, Laura Misajet, and Wilfried Lang with the beautiful city of Jena Germany in the background.
May 2011.

ZEISS INNOVATIONS

INTRODUCING SKYMASTER ZKP 4 with LED illumination:

Launching the fiber-optic SKYMASTER ZKP 4 Small-Dome Planetarium meant no less than a revolution for those who appreciate a beautiful optical sky, now Carl Zeiss is about to set a new performance record with SKYMASTER ZKP 4. Finally, LEDs (light-emitting diodes) are available as the light source for the starry sky, sun, moon and planets. As a result, the new ZKP 4 sky is 2.5 times brighter, and the stars are white! With a color temperature of 6500 K, Carl Zeiss, for the first time, accomplishes a completely white star field that is even more realistic than from previous small planetarium models. In addition to the high light yield and the natural colors, LEDs have other notable advantages: Their service life of far more than 10,000 hours (3-5 years) cuts operating costs, and the 35 Watt LED means less energy consumption, 66% of the energy consumption before LED. SKYMASTER ZKP 4 with the new LED illumination is available for domes with level horizons and 6 to 15 m in diameter. This model is the ideal optical-mechanical companion to team up with Carl Zeiss fulldome systems, such as powerdome®SPACEGATE and powerdome®VELVET. Those with the original ZKP 4 will be happy to know that an LED upgrade is available. Please contact us for more information.

Zeiss VELVET News:

Zeiss introduces a two projector Velvet System for smaller domes! Now the same black projection technology is available for domes up to 13 meters. The projectors will come in a single-lamp or dual-lamp option depending on dome size. The two Velvet projectors can be installed in either the dome center or the dome periphery allowing for lots of flexibility. Special Zeiss fish-eye lenses are being manufactured now in preparation for the next Texas Instrument chip generation. The brightness of the two Velvets on the dome will be about three times that of the SPACEGATE Quinto. The system will project about 2.4 million gross pixels, approximately 2K. The earliest delivery will be Spring of 2012, in time for all orders placed now.

Hybrid upgrade for ZKP3s!

Great news for all you ZKP3 operators! The ZKP3 can now be controlled with the latest SKYPOST Software allowing the ZKP3 star projector to work in sync with the powerdome® image generator. This means if you add a Zeiss full-dome system to your theater, you will be able to use the beautiful ZKP3 stars along with your Zeiss digital system. The daily motion as well as the polar altitude motion can drive the optic mechanical sky and the digital powerdome® planetarium precisely and congruently. The new SKYPOST software is much more user-friendly and is timeline based and allows for easy and clear settings. The time now is typed in as time of the day, no longer as local sidereal time. Thanks to the digital powerdome® Planetarium it is now possible to display the exact position of moon and planets as well as their phases. It also provides animated trails for all optical planets, all 88 constellation figures (stick figures as well as outlines), borders of the 88 constellations as well as some helpful Asterisms (like the summer triangle, winter hexagon etc.) and grids and scales that are linked perfectly with the ZKP3 star field and automatically follow its movements. Even far distant dates can now be simulated with the digital powerdome® planetarium. Please contact Seiler Instrument for more details and information on our Zeiss full-dome digital systems.



The Best of Both Worlds!

The Zeiss ZKP4 star projector delivers fiber optic stars, the same technology in the larger Starmaster and Universarium, for domes 20-46 feet.

The Zeiss powerdome®SPACEGATE projectors attached to the base of the ZKP 4 to provide full-dome digital video projection. The two projection types work together as one providing a complete planetarium solution.



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