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*Chinese Art in the Sky:
A Journey into the Unknown*

Page 14

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On the Cover: The azure dragon from *Written in the Stars: Chinese Art in the Sky*. The program, from Thinktank in the United Kingdom, was reformatted from Digistar 3 to *definiti* by the Williamsville Space Lab Planetarium in New York in a transatlantic collaboration; high school students did much of the work. Image by Pak-Keun Wan (used with permission); digital starfield created by Digistar 3 from Evans & Sutherland. Story on page 14.

(*Mobile, continued from Page 56*)

I found that the lessons that sometimes seemed plagued with what I thought was idle student chatter were very interesting. When I listened to them later it was clear that most of the students' comments were on task and it was easy to hear that pupils were processing experiences and learning from them. I could hear statements such as, "Oh, I get it. When the sun is low in the sky it is cooler."

The classes that I thought were really focused (and quietly working on task) were frequently not as exciting. However, I also discovered that many times I responded appropriately to that quiet little voice of a child who asked herself something like, "What happened to my star?" or, "I wonder what would happen if we went to midnight!" I am flexible and the lesson "plan" does not drive my lessons—the learning and questioning does. It is gratifying to notice when you do the right thing by instinct!

It is also helpful to learn about the part of your teaching style that needs to be fine-tuned, for example, what phrases are repeated too frequently. In short it helps you to grow and keep your lessons fresh.

Invest in a decent microphone or video camera, one that can pick up questions and comments from around the dome clearly.

Even though I like to avoid criticism (my internal voice is already strongly critical!), I tape my lessons because it is valuable to me and maybe to a novice planetarian. You can share your better tapes (none are perfect!) with someone who needs your help.

- When developing any curriculum, lessons and activities it is best if they correlate with and enhance national, state and/or school district standards, goals and objectives.
- It is not only all right, it is critical to keep your presentations entertaining and to have fun! Share your enthusiasm for the subject matter and show interest in the audience's response. Again, their responses should help drive the lesson and make each session unique.

Gadgets for parties or just you

Try out the new Star Walk app for iPhone and iPad. "Star Walk is an award-winning education app that allows users to easily locate and identify 20,000+ objects in the night sky. The 360-degree, touch control star map displays constellations, stars, planets, satellites, and galaxies currently overhead from anywhere on Earth. Highly praised and the winner of a 2010 Apple Design Award, the latest update adds a Spectrum Bar to view frequencies other than visible light. *No Internet connection required**"

I found this part particularly intriguing: "... Stargazers can slide their finger up or down the Spectrum Bar to change the wavelength and move along the spectrum. Each wavelength is represented by a different color on the star map." Learn more at vitotechnology.com/star-walk.html.

If you have an Android device, then try Google Sky Map.

Padlett handle strap for iPad

Need to manipulate your phone in ways it wasn't designed for? This might help: "The Padlette is a simple silicone rubber handle that quickly installs on the iPad and makes it easy to hold with one hand. Padlette comes in seven different colors: black, green, pink, gray, yellow, orange, and glow-in-the-dark blue." Learn more at www.theipadguide.com/sections/padlette.

If it is not available on the Padlette website, you can get a "glow-in-the-dark" version from Amazon (www.amazon.com/Padlette-Glow-in-the-Dark/dp/B004DLUSKE).

American in Italy 2011: final report

This year's winner was Joseph E. Ciotti from Hawaii.

Here is the report of his intense and exciting trip. He provides a wonderful description

of an amazing adventure that he and his wife experienced as a result of winning this trip to Italy! It sounds like Joe, his Italian colleagues and students made an incredible impression on each other and have formed memories and bonds that will last a lifetime! Thank you for sharing your experience with us, Joe.

The winner for 2012 is being decided as I write this column. If you are an American planetarian and you want to have the same kind of amazing experience, contact me for an application. The application deadline for the experience in 2013 is September 15, 2012. Hey, you never know!

Signing off with a few reminders:

Check the IPS Portable Planetarium Committee web page for newly posted documents. Kindly send me any additions, corrections or suggestions for the committee page.

Don't forget to look for relevant papers and workshops at the IPS 2012 Conference in July 2012 and at the next...Live, Interactive Planetarium Symposium (LIPS), August 2012 (Consult IPS Calendar and Website for details)

Consider collaborating with me in updating the IPS Portable Planetarium Handbook. It was distributed in 2002 and although much information remains valid a lot has changed in ten years! ☆

American planetarian in Italy also finds his roots



Joe Ciotti embracing statue of Marziano Ciotti, Gardisca d'Isonzo, Gorizia. photo by Nancy Heu

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My participation in the 2011 American Planetarium Operator in Italy program has been a unique opportunity to extend my outreach efforts internationally and form closer associations with colleagues in the field.

In the circle of life, this experience was also personally meaningful to me, since both my parents were born in Italy. It was an exciting and intensive undertaking: 24 lectures and interviews in four cities spanning 14 days.

Lesson plan

The planetarium lesson and hands-on workshop that I presented for this 2011 program were based on a Polynesian voyaging course I team-teach and a planetarium program I produced. The three main objectives were:

1. To introduce students to the motions of the sky, especially as they relate to navigation.
2. To compare non-instrument wayfinding techniques of the Polynesians with instru-

ment-based navigation used by western sailors like Columbus.

3. To reveal the sky mythology of ancient Polynesia as a means of describing the physical universe.

The planetarium was used to illustrate how the positions of stars change with latitude and how Polynesians used the zenith passage of bright stars to determine their location. Capella (Hökū Lei) conveniently marked the zenith for the cities I visited in northern Italy.

The seasonal movement of the sun was also demonstrated in the planetarium and used to find direction at sea. The Hawaiian story of why Maui snared the sun was told as a cultural explanation for these seasonal changes. Other myths, including Maui's fishhook (Scorpius) and the Makali'i (Pleiades), were told to enrich the students' appreciation of different cultures.

Star alignments, like the staff of the Southern Cross, were presented as wayfinding techniques for determining compass direction. Special attention was devoted to locating Polaris (Hökū Pa'a) using multiple alignments besides the traditional pairing of Dubhe and Merak, since cloud conditions in the real sky could limit a navigator's view.

The planetarium experience was supplemented by a classroom workshop involving the construction of a simple magnetic compass. This hands-on activity blended science, art and technology. Students explored the science of geomagnetism, designed their own compass rose and assembled a simple magnetic compass from two sewing needles, card stock, film canister, push-pin and snap-on fastener. The materials were compact enough to pack 150 kits for the trip. The full activity can be found at aerospace.wcc.hawaii.edu/Curriculum_Voyagers/magnetic%20compass.html.

My wife Nancy and I began



Workshop on constructing a magnetic compass in Gorizia. photo by Nancy Heu



Simonetta Ercoli and Joe Ciotti dining in Perugia. Photo courtesy Simonetta Ercoli.



Polynesian Voyaging seminar by Joe Ciotti at Planetario Ignazio Danti. Photo by Simonetta Ercoli.

our travels across Italy in early April with a multi-day tour of Rome. That was followed with a scenic bus trip across the Apennines to the picturesque town of Vasto, a popular beach resort on the Adriatic coastline, where my father was born.

Travels to Perugia

We then traveled by train to the ancient Etruscan city of Perugia, where we met Simonetta Ercoli, the coordinator of the Planetario Ignazio Danti. That first night, she treated us to a family-style dinner with her staff at a cozy Italian restaurant. The joy of eating is a must in Italy.

Over the next two days, Simonetta and I joined forces to conduct lessons for the visiting high school students. Simonetta operated the Gambato projector under the theater's 8.4-m dome, while I lectured. This was the first time I had ever relinquished control of the projector while speaking. After an initial practice session together, we soon got in sync for the live shows with the students. We preceded each planetarium talk with a brief lecture in the adjacent classroom and returned there for the magnetic compass workshop.

Throughout my trip, I discovered that the students had a fair command of English. As expected, their listening skills appeared more advanced than their speaking skills. Some were obviously more fluent than others, or perhaps more outgoing. I intentionally slowed my normal speaking pace and avoided American idioms as much as possible.

Encouraging students to speak can be a challenge. One successful technique I used was to ask, "How do you say that in Italian?" That not only gave me a chance to check whether they were listening and comprehending, but also afforded them a more comfortable zone in which to start speaking in Italian first, then in English. I could sense that their English was fairly well developed whenever they laughed at my jokes. That higher language skill indicated

not only comprehension, but also trans-cultural understanding.

Every student I interacted with was respectful and attentive. In fact, when I entered my first class in Perugia, the students stood up and remained standing until told to sit by their teacher. I haven't seen that sign of respect since my younger days in Catholic parochial school.

Wherever I lectured, I confirmed—not surprisingly—that students thrive on hands-on activity. This provided them an opportunity to listen to simple instructions in English, while actively handling the manipulatives.

After assembling their magnetic compasses, I noticed several students gazing at their cell phones with displays set to a magnetic compass app. There in front of them was irrefutable proof that their low-tech compass yielded identical readings as their expensive gadget. I couldn't have devised a more rewarding follow-up to their self-discovery.

Besides the morning lectures, I also conducted a seminar comparing Polynesian seafarers with modern spacefarers for a select group of students. Afterwards, I participated in their videotaped project called *intervista con la scienza*. The students set up a makeshift video studio in the classroom, where they interviewed me as one of 10 scientists in a video documentary designed to encourage young students to enter careers in science.

Travels to Brescia

Our next stop brought us farther north to Brescia and into the highly-energetic world of Loris Ramponi. We first visited Loris at the Natural Science Museum, where he engages school groups with a plethora of hands-on activities. Afterwards we toured the Specola Cidnea Observatory located at Brescia's famous castle and visited the Piazza della Loggia to view an elaborate astronomical clock constructed in the 1540s.

Each morning Loris and I would set up his portable planetarium in the high school library at Liceo Scientifico di Stato A. Calini, where I gave 10 lectures over the course of three days. Several of the students were quite outgoing and asked questions throughout the presentation. One teacher later wrote that her students thoroughly enjoyed and understood the lecture and that some were even dreaming of coming to Hawai'i to admire its night skies.

One girl clearly had her sights on becoming an astronomer. She stayed after her lesson to ask about colleges in the USA. She was ecstatic to hear that Marco Micheli, a graduate student from Brescia, was already studying at the Institute for Astronomy in Hawai'i. She was so excited that she forgot her backpack in the library and had to return later to retrieve it.

Coincidentally, upon returning to Honolulu, I had the opportunity to work with Marco



Loris Ramponi advising Calini student about studying astronomy in Hawai'i. Photo by Joe Ciotti.



A meeting with the vice mayor of Lumezzane (left to right): Joseph Ciotti, Ivan Prandelli, Andrea Soffiantini, Tarcisio Zani, and Vice Major Lucio Facchinetti; seated: Wladimiro Marinello. Photo courtesy Joe Ciotti.

on a stellar occultation project involving Pluto and its moons Charon and Hydra.

Loris and I have already begun collaborating on various projects. I revised an English version of one of Loris' planetarium stories called "Islands of Stars" and recorded its narration.

I quickly discovered that Loris is very fond of inventing games. Before class one day, he and I spent time under the inflatable dome devising a constellation game based on the Polynesian star naming system I had introduced in my lessons.

One evening Loris treated us to a home-cooked dinner with his family. And, true to his planetarium teaching style, he created a variety of games as part of our dinner activities.

We later visited the Serafino Zani Astronomical Observatory and Planetarium in Lumezzane just outside of Brescia. Following that excursion we met with the city's vice mayor and local press. After I gave a PowerPoint talk on the purpose of my trip, the local

observatory staff outlined their ambitious plans for constructing a solar system walk.

I am extremely impressed with the active role that amateur astronomy plays in Italy. Every observatory I visited there was well equipped and designed with a craftsmanship that paid close attention to functionality and aesthetics.

On next to Padov

Train travel throughout Italy is inexpensive, scenic and fairly easy to negotiate, as long as you remember to validate your ticket prior to boarding. It was a short rail ride to my next engagement at the National Meeting of Italian Planetaria in Padova.

We took the opportunity to visit the Università di Padova, where Galileo was chair of mathematics and Elena Piscopia graduated as the first woman to receive a university degree.

Equally as impressive was the Scrovegni Chapel, where Giotto painted his famous fresco, the Adoration of the Magi, with its

comet-like Star of Bethlehem.

The first day of the National Meeting included a full-dome festival at the Planetario di Padova, which features a Sky-Skan definiti projector system under an 8.5-m dome. On the following day, the conference moved countryside to Crespano del Grappa. Participants boarded at the retreat complex of Centro di Spiritualita e Cultura Don Paolo Chiavacci, which manages the Specola Astronomica Observatory and Planetario Chiavacci. Besides presenting a summary report of my activities in Italy at this meeting, I was able to send IPS President-elect Thomas Kraupe dual greetings of aloha and ciao via Skype conference call.

Visiting Gorizia

Luciano Bittesini was our gracious host in Gorizia. He literally welcomed us into his immediate family and home with open arms. Luciano is widely respected in Gorizia as the major driving force behind the city's top-notch observatory, which includes a high-tech control room, user-friendly classroom and unique

planetarium. The Farra d'Isonzo Planetarium consists of an 8-m inflatable dome that is enclosed inside a semi-permanent geodesic exterior shell. The theater is outfitted with a Digitalis projector and 52 lounge chairs. This facility is operated by dedicated club members of the Circolo Culturale Astronomico di Farra (CCAF), who are credited with discovering over 140 asteroids, including the first Italian-discovered Apollo NEO.

My first lecture in Gorizia was appropriately given to students enrolled in a pre-captain's navigation program in Trieste. Later that day, they took flying lessons at Luciano's flight club. My wife and I also took turns flying with Luciano in his Pioneer 200, which offered a bird's eye view of Gorizia's spectacular countryside. We even flew across into neighboring Slovenia. As a private pilot who constantly negotiates the high-density air traffic control space surrounding Honolulu, this type of unrestricted flying was a joy.

After a lecture one evening, we took the audience outside onto the spacious observation deck to identify the stars and review the Polynesian navigational techniques just covered in the planetarium.

During one of our free days, we drove out to Aiello, renowned as the town of sundials. Over 70 elaborate sundials currently decorate this community. That number continues to grow with Aiello's annual sundial festival in mid-spring.

The CCAF members surprised us one evening during a stroll through the town of Gardisca d'Isonzo. There in the central square was a larger than life statue of my ancestor—Marziano Ciotti, an Italian patriot who fought under Giuseppe Garibaldi. That evening we toasted our newfound friendship at a restaurant on Via M. Ciotti. This was typical of the warm welcome we received throughout our stay in Italy and the cherished memories we brought back to Honolulu. ☆



Farra d'Isonzo Planetarium and Circolo Culturale Astronomico di Farra (CCAF) members (left to right): Joseph Ciotti, Nancy Heu, Franco Piani, Franco Bressan, Enrico Pettarin. Photo courtesy Nancy Heu



Aerial view of Farra d'Isonzo Planetarium, Gorizia. Photo by Joe Ciotti.



Ogrefish, based in Judenburg, Austria, was founded in 2010 to bring new and different topics into the dome. Its first full-dome theater festival, TOWERdome, was held in September at the Star Tower Planetarium in Judenburg.

The top three entrants were awarded cash prizes and a "tower," with a Golden Tower going to first, Silver Tower to second and Bronze Tower to third. Entries were rated on content, image and sound, along with entertainment value. A total of 15 points was possible.

The winners were:

First, *Into the Deep*, Ogrefish, Austria, 13.80 points

Second, *Nanocam*, El Exilio, Spain, 13.33 points

Third, *Hysteria United*, VJs, Brazil, 12.67 points

Fourth, *Across The Universe*, Procyon, Austria, 12.57 points

Fifth, *Darwin and His Fabulous Orchids*, Ralph Heinsohn, Germany, 12.56 points

Sixth, *Natural Selection*, Mirage3D, The Netherlands, 12.46 points

Seventh, *Realm of Light*, Reef Distribution, Germany, 12.06 points

Eighth, *Film No. 217*, Julia Wiesner, Germany, 12.00 points

Ninth, *Kaluoka'hina*, Reef Distribution, Germany, 10.40 points

Tenth, *Life: A Cosmic Story*, California Academy of Sciences, United States, 9.50 points

Eleventh, *Alien Action*, Ralph Heinsohn, Germany, 8.57 points

You can learn more about Ogrefish at www.ogrefish.at. ☆

MISSION REPORTS

from Mario Di Maggio

The planetarium is a great place for fooling around in public. Cute smart chicks and everyone's looking straight up!

Planetarium is my fave museum! say whaaaat?! The Planetarium is awesome! The dark early morning sky is so clear right now it's like I'm about to go run around in a planetarium. Amazing!

i skip tuition today to go to the Planetarium. omg. i met with the hot astronaut ;D i'm sorry mama ;)