

# Southern Skies

Volume 23, Number 4

Journal of the Southeastern Planetarium Association

(Late) Fall 2003

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The deadline for the next issue of *Southern Skies* is January 1. Send submission either on a 3.5" disk or *via* email attached file to <dteague2@midsouth.rr.com> or <teagued1@k12tn.net>.

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# President's Message

In this issue of *Southern Skies*, I have to begin my presidential message with some very important news. Former President-Elect, Duke Johnson, has been forced to relinquish his position due to a job change. Duke is moving out of this region and our SEPA By-laws indicate that by doing so, he must give up this position.

During his tenure as President-Elect, he has served well by offering his advice and views on issues dealing with our organization. Speaking for the entire Council, we are all going to miss Duke on both a personal and professional basis. I'd like to wish Duke the best of luck in his new job.

Because of this move, SEPA's Executive Council has decided to offer the position to Patsy Wilson of Woodson Planetarium in Salisbury, North Carolina. She has graciously accepted the position.

I look forward to working with Patsy and want to welcome her aboard as the newest Executive Council member. For more information on Patsy's background, see her biography located elsewhere in this issue.

I want to point out that the appointment of Patsy Wilson to take over the office of President-Elect doesn't affect our upcoming election at the 2004 conference in Richmond, Virginia. At that time, the membership will vote for a President-Elect to serve during calendar years 2005 and 2006.

If you are interested in running for this position, please contact our nominations committee chairperson, Kris McCall, at the Sudekum Planetarium in Nashville, Tennessee to let her know that you are interested in running.

I mentioned in my last message that I anticipated a big public reaction to Mars's opposition that happened earlier this year. I think we were all surprised by how much interest the public showed. For several weeks, our observatory that normally has an attendance of 20 people per evening was seeing crowds of over 500. Planetarium attendance was also greatly increased. I hope all this attention of Mars will spill over for at least the next several months and will mean increased attendance for all of our facilities.

I am looking for a volunteer to search for and solicit donations of door prizes for our conferences. Adam Thanz of Bays Mountain Planetarium performed this job for many years in an exceptional manner. Unfortunately for us, Adam has had to relinquish this responsibility due to other commitments.

I tried to fill Adam's shoes for last year's conference, and hopefully he wasn't too disappointed

in my performance. I am in the same position as Adam; I have too many other commitments to give this job adequate time and consideration.

If there is someone out there who thinks they can do this job, please contact me at your earliest convenience. Once again, Adam, thank you for your years of hard work.

I want to thank everyone who has been contributing to *Southern Skies* this past year. It seems we have had an increase in submissions, but please remember that we can never have too many.

Duncan Teague, our editor for the past eight years, is always grateful for articles that can be included. As I have stated several times before, our journal is a reflection of our organization, and we really like to have a good selection of articles to keep everyone informed of what's going on in our region.

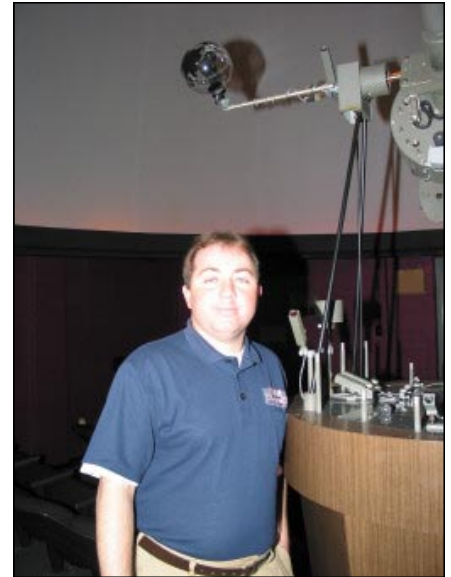
When I was elected President, one of the things I had hoped to do was to have facilities that had the capabilities to produce hand outs to possibly share with other facilities. Unfortunately, I haven't pursued this enough, but I would like to add that if your facility does have some type of hand out that may be useful to other facilities and you are willing to share, please submit these as well to the journal.

I know everyone is busy, but I would like to bring to everyone's attention the Paul Campbell Fellowship Award. This award is given each year to an exceptional SEPA member.

If you think there is someone who deserves this award, please fill out the form included in each issue of *Southern Skies*, and contact any of the SEPA Executive Council members. It is always good to get input on this from our membership, and I know there are several people out there deserving of our consideration.

I would again like to thank everyone who had wished me a speedy recovery from my hip replacement operation. As reported in the last journal, I was out of work for several months, but I have finally returned.

I am doing much better than when you saw me at the Baton Rouge conference, but I am still undergoing therapy and treatment for my condition.



**Michael Sandras**  
President  
Kenner Science Center  
Planetarium  
Kenner, Louisiana

# IPS Report

John Hare  
ASH Enterprises  
Bradenton, Florida

The International Planetarium Society Council conducted their annual meeting in Jena, Germany in October 2003. I was in attendance along with approximately 20 other delegates from the worldwide planetarium community. Zeiss hosted the meetings and furnished an interesting tour of their facilities in Jena in addition to furnishing major sponsorship of the meals and hotel costs.

The IPS Council conducted a variety of business including receiving reports from various affiliate regions, committees, officers, and future conference hosts.

IPS President Jon Elvert, now a fellow SEPA member, presided over the two-day meeting. Elvert proposed that an extensive review be conducted of the By-laws and committee structure of the organization.

John Dickenson has headed an effort to organize an in-depth study and review of the International Planetarium Society and its membership services. As a result of Dickenson's efforts, IPS has contracted the consulting services of Robert Ballantyne and Ian McLennan who, along with other efforts, will be conducting an online forum at Planetarium.net. The forum will take place shortly after the first of the New Year and will continue for several weeks.

An initial list of issues for your comment have already been posted in the "Management Issues" section of Planetarium.net. Among the various issues, you are invited to share your comments on why you are (or are not) a member of IPS. That will be particularly helpful to the process.

Based on input received from participants as well as expert input of their own, Ballantyne and McLennan will be making recommendations at the forthcoming IPS Conference in July 2004. If you have not yet joined Planetarium.net, please do so soon. Planetarium.Net is a new service of Dome-L. It is open and online now at <<http://planetarium.net/phpBB2/>>

Planning for the July 4 – 8 IPS Conference in Valencia, Spain is well under way, and registration materials will be arriving in the mail soon.

It is not too early to begin making your travel arrangements for the conference as well as for the pre- and post-conference tours. The pre-conference tour schedule is outlined below for those of you wishing to mark your calendars and begin making plans. The post-conference tour to Granada and the Canary Islands will be 9 – 14 July. Costs for these tours will be identified in the registration materials.

## Pre-conference tour:

### Wednesday June 30:

Visit to the Madrid Planetarium. Night in Madrid.

### Thursday July 1:

Tour in Madrid. Buses depart to Pamplona. Night in Pamplona.

### Friday July 2:

Visit to Pamplona Planetarium. Tour in Pamplona. Buses depart to Valencia. Night in Valencia.

### Saturday July 3 and Sunday July 4:

Council meeting. Non-council members tour in Valencia and City of Arts and Sciences.

Please note: Pricing for this tour will not include the hotel nights in Valencia prior to the conference. This will be the responsibility of each delegate when booking hotel accommodations for the conference.

If you are not an IPS member and wish to join the organization or to renew your membership, contact Shawn Laatsch, IPS Treasurer/Membership Chair at <[102424.1032@compuserve.com](mailto:102424.1032@compuserve.com)>. Go to the IPS web site at <[www.ips-planetarium.org/](http://www.ips-planetarium.org/)> for more information. The site has been updated and plans for a redesign are under way.

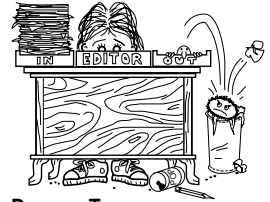
The 2006 IPS Conference will be held in Melbourne, Australia. Bids for the 2008 IPS Conference need to be received no later than the date of the 2004 Council meeting, July 3. So far, only one bid has been received: Glasgow, Scotland. If you or your institution is interested in hosting an IPS Conference, contact either IPS or this author to obtain specific information about the bidding process. Council will vote on the 2008 site next summer.

**'City of Arts and Sciences' in Valencia, Spain, features planetarium and science museum that make extensive use of laminated glass**



# Editor's Message: Busyness as Usual

This is a really thin issue of *Southern Skies*, isn't it?  
I guess we've all been too busy, lately.



**Duncan Teague**  
**Secretary-Treasurer**  
**Craigmont Planetarium**  
**Memphis, Tennessee**

## SEPA Membership Form

Please send your check for \$25 (or \$15 if outside the SEPA geographical region) to  
SEPA, c/o Craigmont Planetarium, 3333 Covington Pike, Memphis, TN 38128-3902

Name \_\_\_\_\_

Organization \_\_\_\_\_

Planetarium \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_

Voice Phone \_\_\_\_\_

Fax Phone \_\_\_\_\_

E-mail Address \_\_\_\_\_

Staff Position \_\_\_\_\_

IPS Member? Yes \_\_\_\_\_ No \_\_\_\_\_

Contribution to Scholarship Award Account: \$ \_\_\_\_\_



Elizabeth Wasiluk  
 Hedgesville High School  
 Planetarium  
 Hedgesville, West Virginia

# Small Talk

I think I should change the name of Martinsburg, West Virginia to disaster central—not the entire town, just small pockets. We’ve been having weird weather.

While I was in Baton Rouge, there was a flood at my apartment building that had everyone evacuated for 12 days, due to no electricity, gas or phone and water completely filling the basement. The Red Cross gave us food vouchers for the nearby Denny’s and put us up at Super 8. We all went looking for new places to live, but with the management not giving security deposits back or letting us out of our leases and a shortage of rental housing in the area, we all stayed put, figuring that after four years the chances of another flood of that magnitude was probably nil.

Then came September 3. After finally unpacking the boxes that I hadn’t for two years since moving there, after midnight, we were all evacuated once again. Since there was no place to go, and there were more people this time, 55 individuals, we ended up on cots in the Red Cross Offices.

The Red Cross set up a shelter at the Armory at the local Air Guard, crosstown, everyone in a gym on cots. Still no power or phone as I write this on September 15 and everyone is hoping to have a new place to move their stuff to before the remnants of hurricane Isabel

hits and destroys whatever we have left.

Actually I was fortunate, just a few soggy record album jackets, that were dried out in the Sun, with records removed, of course. But I have to agree with Steve Pelot from Ash Enterprises who did service on my star projector while I was engaged in my search for a higher, dryer place to live, “You must be going through Hell.” At least I don’t own and can walk away.

Before the flood, got a chance to observe Mars with the Shenandoah Astronomical Society at Andy Guest, Shenandoah Regional River Part in Front Royal, Virginia. It looked fabulous.

Despite being homeless, I managed to kick off the school year with a solar system program for a small group of special education students. Is that dedication or what?

On another disparaging note, Rod Martin, long the director of the William Brish Planetarium in Hagerstown, Maryland was sent to a sixth grade science classroom, and the planetarium is now staffed part time by aides. The Tri-State Astronomers no longer have a place to meet, with this change in management. The reason given: budget cutbacks and lack of certified teaching personnel in science classrooms.

## Paul Campbell Fellowship Award Nomination Form

Nominees must have been a member of SEPA for at least ten years, and they must display qualities in each of five areas, as represented by the five-pointed star shaped award: integrity, friendship, service, knowledge, and vision. Please submit this form to any SEPA Council member.

Nominee’s name: \_\_\_\_\_

Qualifications: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Astro Video Review:

## *The Standard Deviants: Astronomy, Part 1*

Ah, Monty Python meets astronomy in this quirky educational video by the Standard Deviants bunch. This VHS tape, released in 1998, runs an hour and 45 minutes and is packed full of information. Aimed at college level students, this program takes you through the nuts and bolts of astronomy to give you a good foundation for understanding the universe.

The program starts off with a review of astronomy history, revealing who got what right and who got it all wrong. From there, they begin with the basics such as gravity and the properties of light. There are explanations of Newton's laws, Kepler's law, Wien's and many others. With an offbeat presentation style, The Standard Deviants manage the perfect blend of holding audience attention and educating them at the same time.

Other topics covered by this first half of the series include, how a telescope works, the physical makeup of both the Earth and the Moon, rotations of the Earth and the Moon, along with tougher topics such as retrograde motion and the Doppler effect. Unlike some other introductions to astronomy, this program keeps you close to home. While you may walk away wondering, "Am I ever going to

get to look at the stars?" this presentation enables you to begin your adventure into astronomy well grounded.

The program is broken down into individual segments that tackle specific topics. For the most part, however, the show builds upon itself, limiting the option of skipping around the tape. One note of caution about the series; the humor is adult. I would suggest that you review the tape before showing it to insure that it is compliant with the tolerances of your institution.

In a classroom setting this series would be an excellent asset to an instructor. Most of the information is presented in such a way that students should quickly understand the topic or get enough of a glimpse into the principles to enable them to ask a more relevant question than, "Huh?"

The way in which the information is presented could be used as a guideline for developing shows and exhibits. This style is also the same reason you could not use direct footage in a planetarium show or exhibit even if you could obtain the rights. The Standard Deviant format is in a class by itself. Blending campy, cheesy, goofy and witty, they manage to arrive at captivating and intriguing.

While I hope to be able to get my hands on a copy of part two in the series, I may have to wait a bit. Our local library's copy is MIA, which I can only say, must attest to its popularity.

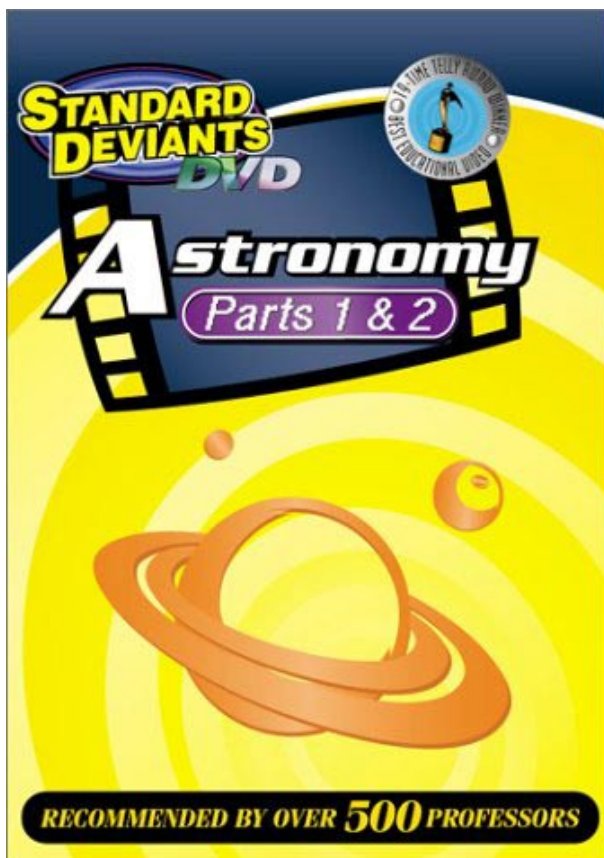
According to the product information, part two continues the journey with an exploration of the planets, the Sun, asteroids, fusion, and more over the course of an hour. Though I reviewed the VHS copy (\$19.95, Amazon), it is available on DVD (\$15.95, Barnes and Noble). This format includes interactive testing and practice exams along with additional footage.

A two pack offered by Amazon includes both parts one and two for \$32.39 on DVD. If you like this presentation, keep in mind that The Standard Deviants are not just limited to Astronomy. They also use their talents to present topics from Languages to Physics, to Shakespeare, to the Dinosaurs. Professors from top universities write all of the scripts and you can find all the topics available at <http://www.standarddeviants.com/pls/brain/cerebellum.home>. The Website also contains free teacher aides, homework, and home school resources along with quizzes and games.



Priscilla Bernardo  
Orlando Science Center  
Planetarium  
Orlando, Florida

*The Standard Deviants:  
Astronomy, Part 1*



After I read Priscilla's glowing review, I bought the two DVD set from one of Amazon.com's partner vendors for less than \$27. I ordered it on Tuesday, and I received it on Thursday.

I did notice a content error and a few grammar problems. Part 1 confuses the sidereal day with the solar day. The Standard Deviants know a lot about astronomical topics, but they also think "a lot" is one word.

I've only skimmed through Part 2, so I'm unable to say whether there are any content or grammar problems on that disk.

—Ed.



# News from SEPA States



George Fleenor  
Geographics Imaging  
Bradenton, Florida

## Alexander Brest Planetarium, Jacksonville

Patrick McQuillan reports: We're recovering from "Mars Mania" here in Jacksonville. We ran *The Mars Show* this summer. On the evening of the closest-Mars-in-60,000-years, we had over 1,200 visitors from 8:30 p.m. – 11:00 p.m. We ran seven 20-minute programs in the theater. The first six programs were full houses (200 seats plus 30 extra chairs), and the last was half full.

On the following Saturday we had over 1,500 visitors from 8:30 p.m. – 11:00 p.m. We did six full houses (200 seats plus 50 extra chairs). It was great. We didn't leave either night until around 1:00 a.m. That was how long it took to give everyone a chance to view Mars through a telescope.

We had six 8 – 12 inch telescopes on the roof of the museum, along with about ten on the grass next to the museum. The local amateur astronomy club was very helpful in making the viewing a success.

We are now beginning plans for the November total lunar eclipse. I hope it is as big an event.

Fall public planetarium programs include *Explorers of the International Space Station* from the Bishop Museum in Hawaii and *Fall Skies* (the live night sky tour).

Laser shows, while popular, are currently on hold while the laser power supply is out in California for minor repairs caused by normal wear and tear. The summer programs *Elvis's Greatest Hits* and *Pink*

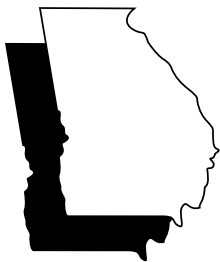
*Floyd: The Wall* (the entire CD) were very well received. We hope to be up and running soon with all new fall programs including *New Wave '80s* as a family offering.

School shows are in full swing. Two new offerings this year include *Explorers of the International Space Station* that replaces another ISS show that we have presented for a few years, and *Friendly Stars* from the folks at Bays Mountain. *Friendly Stars* replaces a show called *All About the Planetarium*, which while well received, needed more graphics. *Friendly Stars* fit the bill exactly. Both children and teachers enjoy this program. It is a lot of fun to have 200 kindergarten children in your theater singing *Twinkle, Twinkle, Little Star* in unison. It certainly reminds you why you do what you do in this business.

## Buehler Planetarium & Science Center, Davie

Susan J. Barnett reports: The Buehler Planetarium & Observatory is running public shows four days a week. The weekend shows and monthly specials include *Comets Are Coming*, *Teddy's Quest*, *MoonWitch*, *The Search for Life in the Universe*, and *The New Cosmos*.

We continue to rotate shows on Wednesdays, and these shows include *The People*, *Ancient Horizons*, *The Explorers*, *The Mars Show*, *The Voyager Encounters*, *The Secret of the Cardboard Rocket*, and *The Alien Who Stole Christmas/A Star for Santa's Tree*.



David Dundee  
Fernbank Science Center  
Atlanta, Georgia

## Fernbank Science Center, Atlanta

Fernbank has been busy with eager Mars viewers—over a thousand a night for about three weeks six nights a week—and then the crowds now are down to only a few hundred a night for our twice weekly normal viewing nights. Our new Mars show opened: *Visions of Mars* and we opened *Friendly Stars* for our children's show.

April Whitt just got back from Chicago from a four day cosmology symposium. Angela Sarrazine is on her way to her next observing run on Kitt Peak. We hosted a NASA event to say farewell to Galileo. Our Christmas shows open November 28, and yes we are open Thanksgiving weekend.

## Emory University Planetarium

Emory astronomy has been busy with our usual barrage of Emory students happily immersed in our fall astronomy courses. However, additional programs spawned by the close passage of Mars as well as several other special events are worthy of note.

Our Mars Nights for the Emory community drew

about 1000 each time. The first was the night of closest approach which coincided nicely with the return of our students, many of whom drifted in on their way home at three or four a.m.

The last was our Farewell to Mars open house of October 1. Our setup for the Mars events had our 24-inch reflector on the roof close circuiting a remarkably well defined RGB image, about a meter in diameter, into the theater. We were then able to point out features such as the Eye of Mars, and the eyebrow (Vallis Marineris) to the audience before they drifted upstairs to the observatory for their live look.

Crowd control was absolutely no problem, and the astronomer in the theater could answer questions and tell a few Mars stories which everyone could hear. We also had programs to honor the return of the mummy of Ramesses I to Egypt (The return of the grateful dead?) in which we presented Egyptian sky lore. And finally, Emory hosted a Scandinavian weekend which gave me the excuse to present the Emory Planetarium, including Viking sky lore, to our Scandinavian guests.



### Dupont Planetarium, Aiken

The close encounter with Mars in August of 2003 had a significant impact on astronomy awareness and interest. The media highlighted the closest approach in 50,000 – 60,000 years, and the fanfare grew as the date of the encounter approached. The Dupont Planetarium at the University of South Carolina-Aiken hosted a special viewing night on August 27. A number of local, amateur astronomers set up their telescopes on our lawn for public viewing. The Bechtel Telescope, a 16-inch, Meade LX-200, in the Ruth Patrick Science Education Center Observatory was also open.

In the planetarium, a special Mars presentation was produced to highlight the exploration of the red planet. The show also included a discussion and visual presentation of the orbit dynamics that produced the close encounter. At the end of the Mars presentation, our audience was engaged in our entertainment show, *Digistar 'Laser' Fantasy*.

The special Mars Party was planned in late spring, and we conducted our typical advertising campaign. A few weeks before an event, we send public service announcements to the local media outlets. Additionally, Planetarium Director, Dr. Gary J. Senn, is a regular guest on the local noon and early morning news programs. He appeared on all three major network affiliates in the Aiken, South Carolina and the Augusta, Georgia area on the days preceding the close encounter. On the day of the encounter two of the local stations came to the planetarium to conduct special interviews about the events to be held that night.

With all of the media coverage and the fairly clear skies that were forecast, we were optimistic that we would have a nice crowd at the event. The planetarium hosts annual, spring and fall star parties. Average attendance is 150 – 500. The low end of the average

occurs on overcast nights. With the extra media attention surrounding the Mars event, we expected to have as many as 750 people.

The first planetarium show was scheduled for 8:00 p.m. with viewing beginning after dusk at about 9:00 p.m. When the ticket collector arrived at 7:15 to open the ticket office, there were already 1,000 people waiting. Before the night was over, we had more than 2,000 people. We were unable to accommodate a crowd that large. The people with the most endurance waited up to three hours to look through the telescope. The last person looked through the telescope at 2:10 a.m.

Because of the large crowd, we decided to hold five other Mars Parties over the following two weeks. We had from 300 – 500 people at each of those events, which we were easily able to handle. On three of those nights, people stayed until after midnight.

In September, the planetarium offered *Journey into the Living Cell* to the public and school groups. In October *The Voyager Encounters* was presented and in November our new production, *Dark Shadows* was presented. *Dark Shadows* is a show about eclipses and moon phases. We look forward to December when we present the annual favorite, *'Tis the Season*.

### Settlemyre Planetarium Rock Hill

We here at the Settlemyre have had a successful summer as well as early fall. The schools are pouring in and the numbers of visitors on weekends is continuing to climb. The Mars hype by the media almost drove us crazy, but we had to very successful star parties from the event. Our Christmas show will be *Season of Light*, and then we begin preparing for Black History Month. I have been ill since early June but am now well on the road to recovery and looking forward to a great school year.



Glenn Dantzier  
Settlemyre Planetarium  
Rock Hill, South Carolina

### Bays Mountain Planetarium, Kingsport

Miike Chesman reports: August saw Mars Mania hitting our area, and with the help of our astronomy club, we managed to show nearly 3,000 people telescopic views of the red planet. After four days of intense public outreach, the staff and club members wanted some relief, so we spent Labor Day weekend at the Pisgah Astronomical Research Institute near Rosman, North Carolina. The staff there gave us a fantastic tour during the afternoon, and we had the entire facility to ourselves for nighttime observing.

In early September, Bays Mountain Planetarium opened *RingWorld*. We find it to be one of the best planetarium show packages we've ever received. Audiences enjoy the show, the animated graphics are spectacular, the soundtrack music and narration is near perfect... and it's free! Brian Sullivan and all those who worked on this NASA/JPL underwritten program have our allocates for a job superbly done.

Next it was time to host our annual weekend

for amateur astronomers around our region. A few planetarians like George and Jane Hastings have become regular attendees at the event. This was a major milestone for us as it marked our 20th Bays Mountain StarFest. In celebration of the event we added two atypical activities this year. First, we hosted a gallery and auction of limited edition space art prints. The event was quite fun and done in a mocking style which we called South-A-Bees Auction Mart. The auction was preceded by a short introduction to the field of astronomical art and the artists involved. Folks got some tremendous bargains! The highest winning bid went for a print by SEPA's Joe Tucciarone. It even beat out a Chesley Bonestell print by a wide margin. Way to go, Joe!

The evening was just getting underway, because at dusk we gathered in our outdoor amphitheater for a live musical performance by Jonn Serrie. Our staff provided a backdrop of Hubble video images rear projected during the concert, but it was Jonn's music



Jim Greenhouse  
Sharpe Planetarium  
Memphis, Tennessee



**Jim Greenhouse  
Sharpe Planetarium  
Memphis, Tennessee**

that enthralled the audience. Jonn had great rapport with the audience as he fielded questions about his music throughout the set. For more than an hour, our group was entertained and inspired by gorgeous and ethereal synthesizer music. Our Astronomy and the Arts evening celebration turned out to be a rousing success. I would encourage you to consider Jonn for a special event performance at your facility. It was truly unique.

As fall continues we are anticipating the arrival of a SkyLase setup for a series of holiday music laser shows and the Perseus and Andromeda sky legends program. Joanne Young at AVI, Inc. has been a delight to work with in making all the arrangements for our first time effort. We expect that this will be a popular offering at the planetarium during the Christmas season and have some plans for future SkyLase programs if this goes over well.

#### **Sharpe Planetarium, Memphis**

On July 22, a severe storm blew through Memphis, knocking down thousands of trees and leaving most of the city without power for several days. The Pink Palace was out of business for ten days right in the middle of the busiest time of year for tourists. The storm blew a huge oak tree onto the Pink Palace Mansion, damaging a corner of the roof and smashing an air conditioning unit. The wind also blew down all the Bradford pears that we used to enjoy out of the planetarium office windows. The satellite dish on the roof of the museum was flipped over and turned into a modern art sculpture.

We had just found out about the ViewSpace exhibit at the SEPA conference. In an attempt to turn our problem around, we contacted John Stoke about displaying the program on the monitors that used to show NASA TV. We got everything hooked up, and it turned out to be a real crowd pleaser. We were able to install the Internet version of the program just before Mars's close approach, so our visitors were able to see the latest Hubble images of the planet.

Speaking of Mars, we had huge crowds here to see it through a telescope. About 2,500 people came to two observings at the end of August and another 900 came to one in early September. We made lots of money on donations and drink sales. The museum store sold out of some Mars related items. The red planet was good for business! We should make it come close more often.

Elvis fans from all over the nation and several countries came to the 21st annual *Elvis: Legacy in Light* laser show in August. *Stars of Jade* was the fall planetarium feature. *Holiday Laser Spectacular* begins on November 26. We also ran the seasonal programs and *Our Place in Space* as the family show.

#### **Sudekum Planetarium, Nashville**

Kris and Drew had a hectic summer running shows. Kris took several weeks of much needed

vacation and has decided to make vacation a more frequent event in her schedule. School programs are starting to increase along with camp-ins and other types of events. Drew has been very busy updating and improving the Web pages for the Planetarium and Science Center <[www.SudekumPlanetarium.com](http://www.SudekumPlanetarium.com)> and <[www.adventuresci.com](http://www.adventuresci.com)>.

Research continues, and plans are being developed for the proposed construction of a new, state of the art Sudekum Planetarium along with an Astronomy and Space Science wing that will house 12,000 square feet of exhibits and other facilities. This is truly a monumental task that we undertake with great trepidation. While we know what goes in a Planetarium, designing exhibits that meet specific criteria is a challenge. Exhibits should integrate and correlate with a variety of curriculum standards, provide for individual and group involvement, offer a variable experience affected by the user, and allow for easy updating and changeability. In other words, we are seeking to blow up the "box." Then there are the complexities of fundraising, running the governmental gauntlet, pressing the right buttons, and ultimately communicating our vision to the right funders. Keeping the project moving forward could be a full time job in and of itself, but we still have a Planetarium to run. We hope to be able to share details some time next year.

The Sudekum Planetarium at the Adventure Science Center in Nashville, Tennessee, will be hosting a winter gathering of the Planetarians of Tennessee (POT) January 12 – 13, 2004. Of course, anyone in the larger planetarium community is invited to join us. The meeting will start Monday morning, the 12th, and conclude after lunch on Tuesday. This will be a relatively informal event. Attendees are *strongly* encouraged to bring something to show and tell. Please let us know ahead of time what you plan to do so we can develop a schedule and make any other necessary arrangements. We will also check into having a local speaker address the group. Greg Henry from Tennessee State University is doing great work on extra-solar planets, and there are several other possibilities. To keep costs down, attendees will be able to sleep and shower at the Science Center; otherwise, there are a variety of hotels within a short drive of the Planetarium. Registration will be \$25 to cover snacks and beverages. Please make checks payable to Kris McCall. If you have questions or suggestions, please contact Kris at 615-401-5077 or <[krisimccall@adventuresci.com](mailto:krisimccall@adventuresci.com)>. Your early registration would be appreciated. See you next year.

#### **Craigmont Planetarium, Memphis**

New to our theater is the Halloween season star show *Moonwitch* from Bowen Productions. We've also added some new special effects from Sky-Skan for our annual *Star of Bethlehem* production. Their Christmas Star projector is a nice improvement over a similarly named projector from the now defunct Talent, Inc.

## Avampato Discovery Museum ElectricSky™ Theater, Charleston

The new facility is off to a great start and great reviews. I can hardly believe we've been open two and a half months now.

Over the summer our planetarium shows have been running at 61% capacity (two shows a day, 175 seats per show, six days a week). Our first show *Oasis In Space*, is tagged with a live star talk. However until the software arrives for the laser, it's still basically me waving my trusty laser pen, Mavin the Martian around. Our second planetarium show, *Legends of the Night Sky: Orion*, is in final production at Spitz and should be arriving soon.

Our first large format film, *The Living Sea* has been

running at 41% capacity—well over our projections. On November 8, our second film, *Journey Into Amazing Caves* begins. I'm especially anxious for that. As principal master of ceremonies, I've watched *Living Sea* so much I can recite every line.

The laser shows, new in this market, are steadily building an audience. Much credit goes to our laserist Belinda who took to them like a woodchuck to a tree. The bad news: the contractor installed much too small a water pump in our circulation system. Until it gets upgraded, we're dumping three gallons of water down the drain every minute. It's a good thing the contractors haven't turned the building over to us yet.

There have been glitches, but overall, it's a splendid dome. I hope to see some of you here!



**Curt Spivey**  
Avampato Discovery  
Museum Planetarium  
Charleston, West Virginia

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# SEPA's New President-Elect: Patsy Wilson

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I became interested in astronomy education when I started working at Horizons Unlimited in the fall of 1991. Prior to that, I was a classroom teacher in the upper elementary grades. In 1994, I began assisting in the Margaret C. Woodson Planetarium, and two years later I became the director.

Our operation is a "one-woman show" with the exception of one trained staff person who can substitute as the need arises. For the most part, I teach all the space science programs at Horizons Unlimited. The opportunity to do something I love—teach—and expand my knowledge in a field that holds great interest for me—astronomy—is a rare gift.

I first joined the Southeastern Planetarium Association in 1994, and I have enjoyed getting to know my fellow planetarians in the southeast. I have attended five SEPA conferences throughout the area, and I presented a paper at one of them. I always take away much information that is important as I strive to enhance astronomy education in my school district. It is energizing to be a part of such a dynamic group.

My participation in SEPA has primarily been in the role of quiet observer. I am, by nature, an organized person with a flair for tending to the details, but my leadership style includes working hard for an organization without drawing a lot of attention to myself. If I were to be elected President of SEPA, I would spend a great deal of time asking questions and preparing myself to fill the role adequately. It is important to me that SEPA continue to be a source of renewal, information, and expansion for its membership. There are several projects that I would promote:

1. Update of our member's guidebook
2. Web page enhancement
3. Production of another star show for SEPA members
4. Using CD-ROM media to record and distribute materials from SEPA conferences.

Thank you for your support of my candidacy and to Executive Council for appointing me to this position. Even being considered is a humbling experience. Best of luck to Duke Johnson as he pursues his new challenges.



**SEPA President-Elect**  
**Patsy Wilson**  
Margaret Woodson  
Planetarium  
Horizons Unlimited

# HST's Greatest Hits '96

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38134-8454

The Space Telescope Science Institute (STScI) provided slides of Hubble images to individuals within regional affiliates who arranged to duplicate and distribute them. At our '96 conference, I was designated to receive and coordinate STScI materials and make them available to SEPA members.

Below you'll find a brief description of all 40 images distributed in 1996. Numbers next to the descriptions are shortened versions of STScI press release numbers, *e.g.*, 21a refers to PR 96-21a.

The entire set of 40 slides is \$50.00, including postage and handling. Send your check or purchase order to the address at the left.

- 01a\_\_\_ Hubble's deepest ever view of the universe, revealing 1,500+ extremely faint galaxies in various stages of their development
- 01b\_\_\_ Sample galaxies from the same Hubble deep field
- 02\_\_\_ The inner region of a warped dust disk around Beta Pictoris once hidden because of the star's glare
- 03\_\_\_ An image of the Egg Nebula taken by WFPC2; it shows the emergence of some mysterious searchlight beams emanating from behind a dying star
- 04\_\_\_ The first direct image of a star other than the Sun: Betelgeuse.
- 05\_\_\_ In more detail than has ever been seen before, the process a star like the Sun goes through when it dies
- 09a\_\_\_ In clear, detailed pictures the first ever images of Pluto's surface; four views
- 09b\_\_\_ Pluto surface map
- 10\_\_\_ Gravitational lens effect captures image of primeval galaxy
- 11\_\_\_ Images of the globular cluster Mayall II, consisting of 300,000 old stars, in orbit around the Andromeda galaxy
- 13a\_\_\_ The Helix Nebula, NGC 7293 showing the collision of gases near a dying star
- 13b\_\_\_ Helix Nebula detail with cometary knots surrounding the dying star
- 14\_\_\_ A view of Comet Hyakutake that focuses on the near-nucleus region of the comet
- 15\_\_\_ Three layers of Uranus's atmosphere taken with infrared filters; both clear and hazy layers created by a mixture of gases
- 16\_\_\_ Image taken of Saturn where its rings appear edge-on because of the position of the Earth in Saturn's orbital plane
- 17\_\_\_ A view of several star generations found in the central region of the Whirlpool Galaxy
- 18a\_\_\_ A rare view of Saturn's rings seen just after the Sun had set below the ring plane
- 18b\_\_\_ A series of 10 images of several small moons orbiting Saturn
- 21a\_\_\_ NGC 1365, a barred spiral galaxy located in the Fornax cluster
- 21b\_\_\_ NGC 4639, a spiral galaxy located in the Virgo cluster
- 22a\_\_\_ The Crab Nebula and a detail of the pulsar in its center
- 22b\_\_\_ Sequence of three images showing changes in the Crab Nebula pulsar
- 23a\_\_\_ Huge, billowing pair of gas and dust clouds in Eta Carinae
- 23b\_\_\_ Expansion of Eta Carinae debris
- 25\_\_\_ Hubble's 100,000th exposure captures an image of a distant quasar
- 27\_\_\_ A vast nebula, NGC 604, which is known for a great starbirth region
- 29a\_\_\_ 18 gigantic star clusters which may be building blocks for a new galaxy
- 29b\_\_\_ Blue sub-galactic clumps which may be galaxies under construction
- 30\_\_\_ Jupiter's moon Io passing above turbulent clouds
- 31\_\_\_ Clusters of stars and a fishhook-shaped cloud of gases found in NGC2366, a giant star forming region
- 32\_\_\_ Changes in Jupiter's auroral emissions
- 33\_\_\_ Views of weather on opposite hemispheres of Neptune
- 34\_\_\_ A Martian dust storm around the edge of the north polar cap
- 35a\_\_\_ A survey of quasar host galaxies
- 35b\_\_\_ A quasar caught in the act of colliding with its companion galaxy
- 36a\_\_\_ Supersonic comet-like objects in the Cartwheel Galaxy
- 36b\_\_\_ Cartwheel Galaxy composite image
- 36c\_\_\_ Cartwheel Galaxy illustration
- 38a\_\_\_ M8, the Lagoon Nebula showing giant "twisters" and star wisps
- 38b\_\_\_ M8, the Lagoon Nebula detail showing eerie funnels and twisted-rope structures

# HST's Greatest Hits '97

The Space Telescope Science Institute (STScI) provided slides of Hubble images to individuals within regional affiliates who arranged to duplicate and distribute them. At our '96 conference, I was designated to receive and coordinate STScI materials and make them available to SEPA members.

Below you'll find a brief description of all 39 images distributed in 1997. Numbers next to the descriptions are shortened versions of STScI press release numbers, *e.g.*, 09a refers to PR 97-09a.

The entire set of 39 slides is \$48.75, including postage and handling. Send a check or purchase order to the address at the right.

- 01\_\_\_ Central supermassive black holes in galaxies NGC 3377, NGC 3379, and NGC 4486B:
- 03\_\_\_ SN1987A Fireball: One tenth light year long dumbbell structure expanding at six million miles per hour in supernova 1987A
- 08\_\_\_ Changes in the nucleus of Comet Hale-Bopp as it moved closer to the Sun beginning in the September of 1995
- 09a\_\_\_ Transition from spring and summer in Mars's northern hemisphere; photo taken shortly before opposition
- 09b\_\_\_ Three photos of Mars taken six hours apart with 90° difference between images; photos taken shortly before opposition
- 11\_\_\_ The Egg nebula in which stars are born and die violently; the photo shows jets of gas being blasted into space
- 12\_\_\_ A supermassive black hole located in galaxy M84
- 13\_\_\_ NICMOS captures a region of the Orion nebula filled with action as a center for the birth of new stars
- 14\_\_\_ Supernova 1987A: different colors represent different elements in the ring
- 15a\_\_\_ A view of Mars's cloud cover
- 15b\_\_\_ Seasonal changes in Mars's northern polar ice cap
- 15c\_\_\_ Four views of Mars rotated 90° between images during summer in Mars's northern hemisphere
- 16\_\_\_ The Cone Nebula: six baby sun-like stars surround their mother
- 17\_\_\_ A collision between two spiral galaxies in the heart of galaxy Arp 220
- 18\_\_\_ Fireworks near a black hole in the core of Seyfert galaxy NGC 4151
- 19\_\_\_ STIS reveals an invisible high-speed collision around a supernova
- 20\_\_\_ Hubble pinpoints the optical counterparts of a  $\gamma$ -ray burst in a distant galaxy
- 21\_\_\_ Hubble captures a volcanic eruption plume from Jupiter's moon Io
- 22\_\_\_ A gamma-ray burst blazes from a titanic explosion in deep space
- 23\_\_\_ Hubble's look at Mars shows a canyon dust storm, cloudy conditions for Pathfinder's landing in July 1997
- 24a\_\_\_ Dissipation of a large dust storm on Mars
- 24b\_\_\_ Hubble shows dust and water ice clouds that exhibit substantial daily variations
- 25\_\_\_ Powerful telescopes discover the largest galaxy in the universe
- 26\_\_\_ Hubble separates components in the Mira binary star system
- 27\_\_\_ Hubble reveals a huge crater on the surface of the asteroid Vesta
- 28\_\_\_ Hubble finds a bare black hole pouring out light
- 29\_\_\_ Hubble shows blobs of gas formed by some nova outbursts
- 30\_\_\_ Hubble keeps track of a fading  $\gamma$ -ray burst
- 31\_\_\_ Mars at the beginning of autumn in the Martian northern hemisphere
- 32\_\_\_ Hubble sees a neutron star alone in space
- 33\_\_\_ Hubble identifies what might be the most luminous star known
- 34a\_\_\_ Hubble reveals some stellar fireworks accompanying galaxy collisions
- 34b\_\_\_ Detailed images of colliding galaxies
- 35\_\_\_ Hubble shows images of a blue straggler star
- 36a\_\_\_ Hubble tracks clouds on Uranus
- 36b\_\_\_ Hubble spots northern hemispheric clouds on Uranus
- 37\_\_\_ Hubble shows infrared view of a moon, the ring, and the clouds of Jupiter
- 38a\_\_\_ Hubble sees a supersonic exhaust from a nebula
- 38b\_\_\_ Hubble's planetary nebula gallery

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Below you'll find a brief description of all 40 images distributed in 1998. Numbers next to the descriptions are shortened versions of STScI press release numbers, *e.g.*, 26a refers to PR 98-26a.

The entire set of 40 slides is \$50.00, including postage and handling. Send your check or purchase order to the address at the left.

- 01\_\_\_ COBE's infrared view of the Universe: three maps of the full sky seen in infrared light
- 02\_\_\_ Distant supernovae: light sources determine the universe's expansion rate
- 03\_\_\_ Beta Pictoris: disk indicates planets, and possible brown dwarf companion
- 04\_\_\_ Jupiter aurorae: a "curtain" of light extends several hundred miles beyond Jupiter's limb
- 05\_\_\_ Saturn's aurorae: "curtains" of light extend 1,000 miles above cloud tops
- 08\_\_\_ Supernova 1987A: a collision between the expanding blast wave and its circumstellar ring
- 10\_\_\_ Serendipitous asteroids: HST images show curved trails of asteroids
- 11a\_\_\_ Planetary nebula NGC 7027: a brief stage in the evolution of a medium mass star
- 11b\_\_\_ The Cotton Candy Nebula and The Silkworm Nebula: phases of stellar burnout
- 12\_\_\_ Star birth in barred spiral galaxy NGC 1808 possibly due to interaction with NGC 1792
- 14a\_\_\_ Centaurus A: nearest active galaxy to Earth shows the turbulent firestorm of starbirth
- 14b\_\_\_ Centaurus A: tilted disk of gas at the galaxy's core surrounds suspected black hole
- 15\_\_\_ Stingray Nebula: Henize 1357, the youngest known planetary nebula
- 16\_\_\_ NGC 1818: globular cluster of over 20,000 stars in the Large Magellanic Cloud
- 17a\_\_\_ GRB 971214:  $\gamma$ -ray burst; most energetic event in the universe
- 17b\_\_\_ GRB 971214:  $\gamma$ -ray burst; comparison of Keck Telescope and HST views
- 18\_\_\_ Saturn: details of the clouds and hazes in the atmosphere of the ringed planet
- 19\_\_\_ Possibly the first extrasolar planet ever to be imaged orbiting about a newborn binary star
- 20\_\_\_ Four of NASA's proposed designs for the Next Generation Space Telescope (NGST)
- 21\_\_\_ Galaxy NGC 4314: bright ring of starbirth around the galaxy's core
- 22\_\_\_ NGC7052: galaxy with 300 million solar mass black hole in its center
- 25\_\_\_ N81 in the Small Magellanic Cloud: a celestial maternity ward
- 26a\_\_\_ Galaxy Cluster MS1054-03321: thousands of galaxies eight billion light years from the Earth
- 26b\_\_\_ Supernova 1996CL: a March 1996 exploding star in galaxy cluster MS1054-0321
- 27\_\_\_ Distant galaxy clusters: left, in Virgo; upper right, in Andromeda; lower right, in Taurus
- 28\_\_\_ NGC7742: a small Seyfert 2 active galaxy probably powered by a black hole in its core
- 29\_\_\_ Saturn: pastel yellows, browns, and greys distinguish cloud differences
- 30\_\_\_ Sagittarius Star Cloud: HST peers into the heart of the Milky Way
- 31\_\_\_ NGC7635, the Bubble Nebula: shows an expanding shell of glowing gas surrounding a hot star
- 32a\_\_\_ Infrared views: left: faintest galaxies ever seen; right: objects 12 billion light years away
- 32b\_\_\_ Deep field galaxy: left: visible light areas of starbirth; right, infrared disk structure
- 34\_\_\_ Neptune: a look at the eighth planet's stormy disposition
- 35\_\_\_ Uranus, August 8, 1998: its four major rings and 10 of its 17 currently known satellites; false color image
- 36\_\_\_ NGC6210 planetary nebula described as looking like a turtle swallowing a sea shell
- 37\_\_\_ Quasar PG1115+080 and the gravitational lens effect:
- 38\_\_\_ Nebula M1-67 around star WR124: gas ejected into space at 100,000 mph
- 39\_\_\_ NGC3132: southern hemisphere's "Eight-Burst" or "Southern Ring" Nebula
- 41a\_\_\_ HST deep field south: thousands of galaxies in Tucana, near the South Celestial Pole
- 41b\_\_\_ HST deep field south: infrared, visible light, and ultraviolet views of distant galaxies
- 42\_\_\_ NGC253 galaxy: edge-on spiral galaxy just beyond our Local Group

# HST's Greatest Hits '99

The Space Telescope Science Institute (STScI) provided slides of Hubble images to individuals within regional affiliates who arranged to duplicate and distribute them. At our '96 conference, I was designated to receive and coordinate STSci materials and make them available to SEPA members.

Below you'll find a brief description of all 42 images distributed in 1999. Numbers next to the descriptions are shortened versions of STSci press release numbers, *e.g.*, 43a refers to PR 99-43a.

The entire set of 42 slides is \$52.50, including postage and handling. Send your check or purchase order to the address at right.

- 01\_\_\_M57 Ring Nebula: the sharpest view yet of this planetary nebula
- 02\_\_\_Combined deep view of infrared and visible light galaxies
- 03\_\_\_HD141569: stellar dust rings of a star in the constellation Libra
- 04\_\_\_SNH1987A: the self-destruction of a massive star in the Large Magellanic Cloud
- 05a\_\_\_Six images of a young stellar disk found in the constellation Taurus
- 05b\_\_\_Four images featuring disks around various young stars in Taurus
- 06\_\_\_NGC1316: the silhouette of dark clouds against a glowing nucleus of an elliptical galaxy
- 07\_\_\_Mars: visible, infrared light images; evidence of water bearing minerals
- 08\_\_\_Proxima Centauri: a detailed image of the Sun's nearest stellar neighbor
- 09\_\_\_GRB990123: fading visible light fire ball in a  $\gamma$ -ray burster
- 10\_\_\_Six images showcasing different views of spiral galaxies
- 12\_\_\_Tarantula Nebula: multiple generations of stars in the brilliant cluster of Hodge 301
- 13\_\_\_Jupiter: images of the volatile moon Io sweeping across Jupiter's face
- 14\_\_\_Copernicus: the 58 mile wide (93 km) impact crater on the Moon
- 16\_\_\_NGC4650A: a polar ring galaxy
- 18\_\_\_Rings, arcs, and crosses as seen in Hubble's top ten gravitational lens effect images
- 19\_\_\_NGC4603: magnificent spiral galaxy associated with the Centaurus cluster
- 20\_\_\_NGC3603: various stages of the life cycle of stars in a giant galactic nebula
- 21\_\_\_AB Aurigae: a swirling disk of dust and gas surrounding a developing star
- 22\_\_\_Mars: a colossal polar cyclone
- 23\_\_\_N159: a turbulent cauldron of starbirth in the Large Magellanic Cloud
- 25\_\_\_NGC4414: magnificent details in the dusty spiral galaxy
- 26\_\_\_NGC6093: a stellar swarm in a dense globular cluster
- 27\_\_\_Mars: the red planet at opposition during April – May, 1999
- 28\_\_\_MS1054-03: galaxy collisions in distant clusters
- 29\_\_\_Jupiter: an ancient storm in its atmosphere (The Great Red Spot)
- 30\_\_\_Giant star clusters near the galactic center
- 31\_\_\_HCG 87: a minuet of four galaxies
- 32\_\_\_HE2-104: small, bright nebula embedded in the center of a larger nebula
- 33a\_\_\_R136 in 30 Doradus: a grand view of the birth of stars
- 33b\_\_\_R136 in 30 Doradus: two detailed views of a highly active region of star birth
- 34a\_\_\_NGC1365: a barred spiral galaxy reveals a bulge in its center
- 34b\_\_\_Eight different views of the central bulges of spiral galaxies
- 35\_\_\_HH32: a magnificent example of a "Herbig-Haro object"
- 36\_\_\_NGC2261: Hubble's variable nebula illuminated by R Monocerotis (R Mon)
- 37\_\_\_NGC2346: a butterfly shaped nebula
- 38\_\_\_NGC2440: planetary nebula ejected from a dying star
- 39\_\_\_OH231.8+4.2: the "rotten egg" nebula
- 40\_\_\_M32: hot blue stars deep inside a dwarf elliptical galaxy
- 41\_\_\_NGC2207 and IC2163: two spiral galaxies passing by each other
- 42\_\_\_M20: Trifid Nebula reveals stellar nursery torn apart
- 43a\_\_\_M87: the jet near the galaxy's central black hole

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# JPL's Best Images of '98

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NASA JPL has sent us the following slides for the Galileo Mission and others. Slides are \$1.25 each on both the current page and the following page.

P-35036B	Launch of Galileo on STS-34 Atlantis	P-48040	Natural and False Color Views of Europa
P-35213	Deployment of Galileo and IUS	P-48063	Thunderheads on Jupiter
P-37218	Venus Colorized Clouds	P-48112	Ganymede Uruk Sulcus High Resolution Mosaic Shown in Context
P-37327	Moon: Western Hemisphere	P-48113	Ganymede Galileo Regio High Resolution Mosaic Shown in Context
P-37539	Infrared Image of Low Clouds on Venus	P-48114	Jupiter's Great Red Spot
P-37593	Earth: Ross Ice Shelf, Antarctica	P-48122	Two views of Jupiter's Great Red Spot
P-37630	Global Images of Earth	P-48127	Ridges on Europa
P-40449	Gaspra: Highest Resolution Mosaic	P-48145	Io: Volcanically Active Regions
P-41383	Gaspra Approach Sequence	P-48188	The Main of Ring of Jupiter
P-41432	Moon: North Pole	P-48231	Callisto Crater Chain at High Resolution Shown in Context
P-41474	Earth: Northeast Africa and the Arabian Peninsula	P-48236	Europa: Ice Floes
P-41493	Earth: False Color Mosaic of the Andes Mountains	P-48293	Callisto: Scarp Mosaic
P-41508	Earth: Moon Conjunction	P-48294	False Color Mosaic of Jupiter's Belt-Zone Boundary
P-42501A	South Polar Projection of Earth	P-48299	Asgard Scarp Mosaic
P-42964	Asteroid Ida: Five Frames Mosaic	P-48445	True Color Mosaic of Jupiter's Belt-Zone Boundary
P-44130	Asteroid Ida: Limb at moment of Closest Approach	P-48496	Color Global Mosaic of Io
P-44131	Ida and Dactyl: Enhanced Color	P-48526	Europa Ice Rafts
P-44297	High Resolution View of Dactyl	P-48527	Closeup of Europa's Surface
P-44520	Asteroid Ida Rotation Sequence	P-48532	Mosaic of Europa's Ridges, Craters
P-44542	Comet Shoemaker-Levy 9 Fragment W Impact on Jupiter	P-48584	Io's Sodium Cloud
P-47058	Ganymede: Comparison of Voyager and Galileo Resolution	P-48698	E4 True and False Color Hot Spot Mosaic
P-47065	Ganymede: Mixture of Terrains and Large Impact Crater in Unuk Sulcus Region	P-48700	Jupiter Equatorial Region
P-47162	Full Disk Views of Io (Natural and Enhanced Color)	P-48952	Jupiter's White Ovals, True and False Color
P-47179	Three Views of Io	P-48954	Ancient Impact Basin on Europa
P-47182	Jupiter's Great Red Spot	P-48956	Active Volcanic Plumes On Io
P-47183	Dark Bands on Europa	P-49344	Arizona-sized Io Eruption
P-47194	Live volcano on Io	P-49434	Europa: Ice Rafting View
P-47196	False Color Great Red Spot	P-49435	High Resolution Mosaic of Ridges, Plains, and Mountains on Europa
P-47903	NIMS Ganymede Surface Map	P-49436	Regional Mosaic of Chaos and Gray Band on Europa
P-47905	Five Color Views of Io		
P-47906	Europa In Color	P-48439A	The Mars '98 Lander
P-47935	Io Glowing in the Dark	P-48440A	The Mars '98 Lander
P-47961	Ganymede's Nippur Sulcus	P-48494A	The Mars 98 Orbiter/Lander
P-47970	Ganymede Color Global	P-48495A	The Mars 98 Orbiter/Lander
P-47971	Io in front of Jupiter	P-48567	Dr. Peter Tsou holds Aerogel
P-47972	Changing Volcanoes on Io	P-48589	Stardust Spacecraft
P-48035	Stereo View of Ganymede's Galileo Region	P-48691	Deep Space 1 Spacecraft

# JPL's Best Images of '99

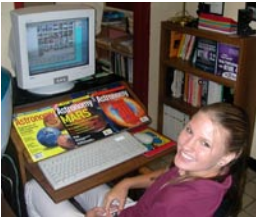
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P-48313BC	Cassini in the space center		

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# Pegasus, the Flying Horse

## Galaxies, first extrasolar planet accompany constellation

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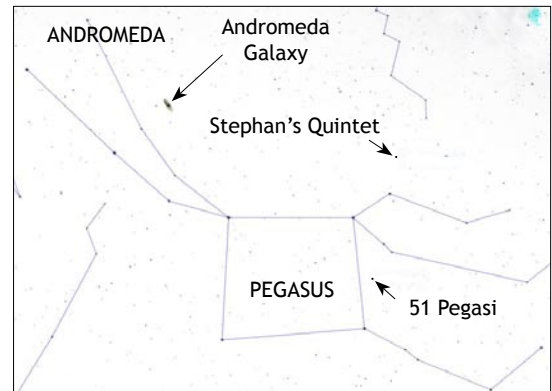
Pegasus, the mythological Winged Horse, sprang from the blood of Medusa to become the steed of Perseus, the Hero. Pegasus is a prominently positioned fall constellation. To find Pegasus, look for a great square of second magnitude stars high in the south. This square makes up the body of the mythological horse.

Pegasus flies upside down across the mid-autumn sky. Some artists depict Pegasus in drawings as only half a horse, but you can borrow some of the stars of Andromeda to serve as the horse's hind legs.

At the midpoint of fall, we can see Pegasus in the sky every night around 8:00 p.m. Each successive night he ambles one degree closer toward the western horizon.

Pegasus holds a variety of interesting stars and galaxies. One group of five galaxies is known as Stephan's Quintet, named after M. E. Stephan who discovered the group in 1877.

Four of the galaxies (A, B, D, and E in the photograph below) are interacting gravitationally. Two (A and B) are stripping gaseous material away from each other. The fifth (F) is actually in the foreground, one eighth as far from Earth than the other four but in the same direction in space. It probably shouldn't be included in the quintet.



**Above: The constellations of Pegasus and Andromeda contain extrasolar planets and an assortment of galaxies**  
**Below Left: Stephan's Quintet is actually six galaxies, including the intruder that disturbed some of the other islands of stars**

An "intruder" galaxy (C) has disturbed the other four galaxies by passing through their midst. It should more properly be included in the quintet, since it's the same distance from Earth as the farther group of galaxies.

Another interesting feature in Pegasus is the star 51 Pegasi. The Hubble Space Telescope discovered the first extrasolar planet orbiting 51 Pegasi. The planet, named 51 Pegasi b, is more than half the size of Jupiter.

This gigantic world is not a gas giant but a terrestrial planet that is only five million miles from its parent star. Strong tidal forces from its sun make 51 Pegasi b a volcanically hyperactive and extremely hot world. Its surface temperature may be 1300° C—hot enough to melt aluminum and vaporize some rocks.

Look high in the south around 8:00 p.m. this month to enjoy Pegasus's leisurely travels across the autumn sky, and recall the celestial wonders the winged horse carries across the heavens.

