



ECLIPSE



The Newsletter of the Barnard-Seyfert Astronomical Society

June 2002

Remembering the Anniversary of the Soyuz 11 Tragedy

by Robin Byrne

This month, we look back to a tragic event in the history of space exploration. On June 6, 1971, the back-up crew of Georgi Dobrovolsky, Vladislav Volkov and Viktor Patsayev were launched aboard Soyuz 11 to dock with the Salyut space station. They replaced the original crew only four days prior to launch. The prime crew consisted of Leonov, Kubasov, and Kolodin, but they were grounded after Kubasov was suspected of having contracted tuberculosis. The mission to Salyut would be the first time man lived on a space station.

On June 7, Soyuz 11 successfully docked with Salyut. With a total living space of 100 cubic meters, the cosmonauts had room to freely move around and conduct several experiments. Since this would be the first time man had been in space for more than 2 weeks, many of the experiments had to do with the effects of weightlessness on the human body. In addition to these, they also did experiments in astronomy, biology, and Earth observation. Not everything went beautifully, though. A fire in a cable bundle caused a brief crisis, although it was dealt with quickly. And there was apparently some tension between two of the cosmonauts, Volkov and Dobrovolsky, which isn't surprising for a long-duration mission in close quarters. But, despite these small glitches, the mission was considered an unqualified success.

While the crew were aboard Salyut, a delegation of Soviet space officials were in the United States, touring some of the NASA facilities. Since the United States had already beaten the Russians to the Moon, the Soviets had changed their priorities toward putting up a space station, which would serve as a launching point for further space exploration. Salyut was a way for the Soviets to chalk up another first for the Russian space program.

On June 29, after setting a new record for number of days in space, the Soyuz 11 crew undocked from Salyut to head back home. Reentry would take place the following day, on June 30. Everything was going as planned, until an error occurred while separating the descent module from the instrument module. Rather than firing sequentially, the pyrotechnics all fired at once. This caused a pressure equalization valve to open prematurely. With the valve open, the cabin quickly lost pressure. Due to the small size of the Soyuz capsule, there was not enough room for the cosmonauts to wear pressurized suits during reentry. Although they tried to close the valve manually, there simply was not enough time. The three cosmonauts died of asphyxiation within about 30 seconds. Because most of this occurred during the normal communications blackout of reentry, the ground recovery crew did not know what had happened until they open the capsule and found the cosmonauts. Attempts were made to revive them, but it was too late. After this tragedy, all Soviet crews were required to wear pressure suits during launch, reentry and docking activities.

It was more than two years before another manned crew was sent to the Salyut station.

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MAGAZINE SUBSCRIPTIONS FOR BSAS MEMBERS 2001

We are always able to accept requests for new and renewal yearly subscriptions to **SKY AND TELESCOPE** and **ASTRONOMY** from our members in good standing.

The current yearly rates are as follows:

SKY AND TELESCOPE : \$29.95

ASTRONOMY : \$29.95

Checks or Money Orders should be made out to the Barnard-Seyfert Astronomical Society (BSAS) and sent to the Treasurer at the following address:

BSAS
Dyer Observatory
1000 Oman Drive
Brentwood, TN 37027

DUES INFORMATION

On your Eclipse mailing label is the expiration date for your current membership in the BSAS. There will be a two month grace period before any member's name is removed from the current mailing list. You will be receiving a number of warnings informing you that your membership is expiring.

Dues are \$20.00 per year for Regular and Family membership and \$15.00 per year for Seniors (over 60 years of age), and \$10.00 for Students (under 22 years of age). Please call the Dyer Observatory (373-4897) if you have questions. Dues can be sent to:

BSAS c/o Dyer Observatory
1000 Oman Drive
Brentwood, TN 37027

THE ECLIPSE NEWSLETTER

Editor: Rocky Alvey
r.alvey@vanderbilt.edu

BSAS Officers:
Powell Hall, President
John Bradford, Vice President
Evelyn Wright, Secretary
A.G. Kasselberg, Treasurer
Board of Directors
Kris McCall, Ch.
Mike Benson
Douglas Hall
Joe Boyd
Lloyd Watkins
Logo Photograph:
Francisco Diego

**Minutes of Regular Monthly Membership Meeting of Barnard-Seyfert Astronomical Society
on Thursday, 16 May 2002**

Vice President John Bradford called the meeting to order on Thursday, 16 May 2002 at 7:40 pm in the library of Dyer Observatory, following the agenda provided by President Powell Hall who is steadily recovering from recent heart bypass surgery. Two visitors introduced themselves, and approximately 22 members were present. As the "Eclipse" for May had not yet been published, Secretary Evelyn Wright read aloud the minutes of the April membership meeting, and the minutes were approved as read. Treasurer A.G. Kasselberg was on his way back from Maine, so there was no Treasurer's report.

Regarding ALCon 2003, Mike Benson reported that July 8-13, 2003 is the proposed date for the convention, and the Maxwell house is most likely the location, although some questions are still being resolved via email.

Rocky Alvey discussed TNSP 2002 next. Camp Nakanawa's (nuh KON a wuh) contract has a "hold harmless" clause which the camp insist means nothing, and that no one has questioned in the past. Joe Boyd recommended against signing a contract that means nothing but is legally binding. One situation Joe brought up is that the camp insists on being the sole provider of meals, and the contract provides no recourse in the case of food poisoning. Rocky will bring the contract problem up before the board. Steven Balay suggested another possible site called Max's Patch near Knoxville. Rocky noted that Richard Berry will be at TNSP 2002 no matter where it is held, and that Dyer Observatory is the backup site if Camp Nakanawa's contract problems cannot be resolved.

No old business was discussed.

Under new business, John Bradford noted that a little-publicized result of adopting the amended bylaws at the last membership meeting required the BSAS to elect another director to the board of directors, bringing the total number of directors to 11: the 5 current directors, the 4 officers, the immediate past president (if not serving as a current board member or officer, else the total number of directors is 10), and an additional director to be elected. Joe Boyd nominated Bill Griswold for the new director position. Rocky Alvey seconded the nomination. John Bradford made sure Bill Griswold was willing to accept the directorship before a vote was called. No other candidates were nominated, and the vote was unanimously in favor of Bill Griswold becoming the sixth director.

Steven Balay brought to the club's attention some telescope mirrors, binoculars, and eyepieces that Bill Burgess (Burgess Optical of Knoxville) has for sale.

The meeting's program was scheduled to be by A.G. Kasselberg on the ISS-AT Alpha Scope. As A.G. was not due in from Maine until later that night, it was decided to take a break at 8:00 pm to look at the sky while some objects were visible and reassemble for a presentation later. Rocky Alvey set up the Seyfert telescope to look at the moon, and binoculars on a tripod were set up on the roof to view the moon and Jupiter.

At 9:10 pm back in the library, Rocky presented slides and video on sunspots, "A Day in the Life of Mars", and the computer generated Orion Nebula fly-through.

At 9:30pm, Steven Balay displayed more telescope parts for sale by Bill Burgess including 6" mirrors. Steven also showed sono tubes and two types of mirror cells.

The meeting adjourned at 9:40pm.

Respectfully submitted,
Evelyn Wright, Secretary

Robin Byrne, Continued from page 1,

Dobrovolsky, Volkov and Patsayev were given a hero's burial. Soviet leaders, including Brezhnev, were among the honor guard. President Nixon sent condolences to the people of the Soviet Union, and astronaut Thomas P. Stafford attended the funeral as the official representative of the United States. Coming only four years after the tragic Apollo 1 fire, American's could sympathize with this horrible loss.

Despite this tragedy, the Soviet Union remained committed to being at the forefront of space station technology. This pride was a driving force behind their reluctance to let the Mir space station come to an end. However, the International Space Station has replaced nationalistic goals with an international goal of cooperation for the good of all countries. And while the Expedition Four crew continue to work in space (and even play host to a visiting space tourist), it is still understood that space exploration is a very dangerous endeavor. Meanwhile, it is a little distressing to realize that 31 years later, we haven't moved beyond the space station. What was supposed to be a launching-off point has become the destination. Our horizons have narrowed. I am sure Dobrovolsky, Volkov, Patsayev, and all the other astronauts and cosmonauts who lost their lives early on in the space race, would have expected us to have traveled much farther by now. We owe it to their memory and their sacrifice to push ourselves farther.

References:

The Death of 3 Cosmonauts on Soyuz 11 Web Page <http://www.jpl.nasa.gov/calendar/soyuz11.html>

Soyuz 11 Web Page <http://www.terra.es/personal/heimdall/eng/soyuz11.htm>

Soyuz 11 Web Page by Neon Ngo <http://courses.cs.vt.edu/~cs3604/lib/Safety/soyuz11.html>

The Soyuz-11 disaster Web Page by Sven Grahn <http://www.users.wineasy.se/svengrahn/histind/Soyuz11Land/Soyuz11land.html>

The Partnership - ch5-6 Web Page <http://www.hq.nasa.gov/office/pao/History/SP-4209/ch5-6.htm>

Barnard-Seyfert Astronomical Society Board of Directors Meeting on June 6, 2002

BSAS Board Vice Chair Joe Boyd called the regular meeting of the Board of Directors to order at 7:10 pm on June 6, 2002 in the Clubhouse of Jefferson Square. A quorum of board members was present (Mike Benson, Joe Boyd, John Bradford, Bill Griswold, Dr. Douglas Hall, Lloyd Watkins, and Evelyn Wright). Club members Bill Collins and Larry Southerland were also present. Board Chair Kris McCall was on her way to Houston returning the moon rock loaned to Cumberland Science Museum. President Powell Hall (recovering from heart surgery) and Treasurer A.G. Kasselberg were absent.

None of the officers present had any reports to make. It was noted that Powell Hall has returned home to continue his rehabilitation, and A.G. Kasselberg is on his way to Alaska.

Mike Benson reported on ALCon 2003, noting that the contract with Maxwell House Hotel had been modified to relieve either side of responsibility if something made it impossible for the convention to proceed. Mike discussed room rates and other details of the contract. Doug Hall noted that IAPPP would be willing to provide up to \$2500 toward initial expenses, to be reimbursed by BSAS over time. Mike expressed his appreciation for the IAPPP offer, noting that the contract with the Maxwell House Hotel is probably the best deal available. Doug Hall made a motion that Mike Benson proceed with the contract with the Maxwell House Hotel which Bill Griswold seconded. The vote was unanimously in favor of the motion.

Joe Boyd asked if there were any additions or corrections to be made to the April and May board meeting minutes. There were none, and the minutes stood approved as read.

Lloyd Watkins was just back from negotiations with Camp Nakanawa for TNSP 2002. The camp owners have agreed that their insurance should cover incidents such as a camp building roof falling in, while BSAS insurance should cover incidents such as tripping over an electrical cord to a telescope. Lloyd discussed other details, and passed around an addendum to the contract that Rocky Alvey authored. Bill Griswold made a motion that Lloyd go ahead with the contract, getting the appropriate officers to sign it for the BSAS corporation. John Bradford seconded the motion which passed with a unanimous vote.

Joe Boyd reported on 501(c)(3) status, noting that Treasurer A.G. Kasselberg had provided the financial report. Joe advised that the club may have taken in too much money to be classified the way the club wanted to be classified. Doug Hall and Lloyd Watkins mentioned expenses and donations that might be included to offset income. Joe plans to go ahead with filing since the financial report is probably as accurate as possible.

Joe Boyd asked for a resolution of the editorship of "The Eclipse" since Rocky Alvey has too much to do and needs to turn it over to someone else. Bill Griswold expressed interest in assembling it, but he does not want the editorship. Bill Collins volunteered to be a collection point for articles. Evelyn Wright volunteered to test the email list if it was provided to her. John Bradford volunteered to take over getting "The Eclipse" printed. Joe Boyd asked Bill Griswold, Bill Collins, and John Bradford to get together with Rocky next week to learn how to publish the June issue.

Joe Boyd reported that Kris McCall has enough volunteers to go ahead with the two star parties for the Girl Scout Jamboree in August. Lloyd Watkins made a motion that the club take on the Girl Scout Jamboree star parties as a club project since it fits the educational outreach goal of the club and would provide an opportunity to work with other clubs in the Middle Tennessee area. Doug Hall seconded the motion. In the discussion, Lloyd Watkins volunteered to be the contact to make sure enough volunteers show up. The vote was unanimous in favor of the motion.

Under new business, the next two board meetings have scheduling conflicts. John Bradford moved that the next board meeting be on Tuesday July 2, 2002 at 7:00 pm at the Jefferson Square Clubhouse. Mike Benson seconded the motion which passed unanimously. No definite decision was made on the August Board meeting.

Next on the agenda was FOTO, Friends of The Observatory. Since Rocky Alvey could not attend this board meeting, Doug Hall mentioned the goal to renovate the house on the observatory grounds for hosting conferences and visiting astronomers, leaving FOTO for Rocky to discuss at a later time.

Mike Benson noted that the proposed Astronomical League insurance policy would not recognize clubs as individual chapters of the Astronomical League. The club's insurance policy will remain as it is now.

Mike also mentioned that Mark Wagoner is selling telescopes that "telescope" from 30 to 55 inches. Also, there is a 10 day summer camp at the Mount Wilson Observatory August 12-24 for \$1550 per person.

Bill Collins asked for input on TNSP 2002 that he can put on the BSAS website. He also needs direction on the ALCon 2003 website. Mike Benson noted that the Astronomical League site does not handle credit cards. Joe Boyd asked that those with input on the websites meet after the board meeting.

Joe Boyd reported that the offices of President, Vice President, Secretary, Treasurer, and two board member seats currently filled by Doug Hall and Lloyd Watkins are up for re-election this year, and that Powell Hall will set up a nominating committee for candidates for these positions.

Joe Boyd reported that a phone tree has not been set up, and that while it is not an easy thing to come up with, it would be helpful in getting club members in addition to the "regulars" to show up for events such as the public and youth nights at Dyer Observatory.

Lloyd Watkins will make a list of tasks for TNSP 2002 that club members can volunteer for, and Mike Benson will make a similar list for ALCon 2003. Joe Boyd expressed the board's appreciation for their efforts on these projects.

The meeting adjourned after 9:00 pm.

Upcoming events are:

2002

Tues	July	2	7pm	Jefferson Sq. Clubhouse	board meeting
Fri	Aug	2,3	8-12pm	Camp Sycamore Hills	public star parties
	Aug	?	7pm	Jefferson Sq. Clubhouse	board meeting
Sat	Aug	10	8-10pm	Warner Park (Perseids)	public star party
F-Su	Oct	4-6		Camp Nakanawa	TNSP 2002
Fri	Dec	13	730-930pm	Warner Park(Geminids)	public star party
<u>2003</u>					
Fri	Feb	7	8-10pm	Warner Park(Jup,Sat)	public star party
Fri	Apr	25	8-10pm	Warner Park(Astro Day Eve)	public star party
T-Sa	Jul	8-13		Nashville	ALCon 2003
Sa	Aug	23	8-10pm	Warner Park (Mars)	public star party

Respectfully submitted,
Evelyn Wright, Secretary

The Bergquist C-14 Telescope Steward List

Our club telescope is available for use by club members on a first-come basis. To use the telescope please call the person who is assigned for that night you choose. Please give the stewards as much notice as possible.

- Monday - Mike Benson 615-883-6571
- Tuesday - Lonnie Puterbaugh 615-661-9540
- Wednesday - A.G. Kasselberg 615-661-0231
- Thursday - Lloyd Watkins 615-824-3005
- Friday - John Bradford 615-871-9542
& Powell Hall 615-872-0162
- Saturday - Jim Reid 615-595-6589
- Sunday - Tom Murdic 615-794-6029
- Alternate - Dudley Pitts 615-837-2696

HOT FLASHES

by Jerry Lappin

There's been a lot in the papers recently about politically correct writing and it got me thinking about this column. Geriatric is certainly an ageist word and, equally certainly a Hot Flash is a sexist condition. To stay out of trouble I may have to change the title to something like MISCELLANEOUS RAMBLINGS OF A BIRTH-CENTURY CHALLENGED ASTRONOMER. On second thought, the word astronomer might offend any astrologers who happen upon this piece. Perhaps OBSERVER OF THE HEAVENLY SPHERE might be less offensive. No, that might offend flat earthers and also has forbidden religious connotations. Oh, well, you can't please everybody so I guess I'll just keep the old title and go on with some miscellaneous ramblings.

It seems that there may be a lot of ice on Mars which is good news for future Mars explorers. With all that ice they can make real ice cream rather than choke down that synthetic stuff designed by NASA. That's supposing there are cows on Mars but why not?

Science has now learned what Dr. Zarkov suggested quite a while ago; that black holes are extremely efficient energy generators. You may remember he suggested a small black hole might be found near our solar system and that we could dump all our garbage and trash into it, thus generating huge amounts of energy from useless matter. Observations now confirm that an unlimited supply of energy would be available from this scheme. However, there are a few problems not yet solved even by Dr. Zarkov. The energy is in the form of intense X-ray emission and would fry us earthlings to a hard brown crisp. A few miles of lead between it and us might do the job but where do we get the lead. The other, more serious, problem is how to keep a greedy black hole from swallowing us along with our garbage. Dr. Zarkov would welcome any solutions you might have.

HAPPENINGS & EVENTS**June 2002**

6/1 Conjunction, Moon & Uranus
 6/3 LAST QUARTER MOON; Conjunction, Venus & Jupiter
 6/6 BSAS Board Meeting 7:00 P.M.
 6/7 Pluto at opposition
 6/8 Private Star Party - Natchez Trace Site
 6/9 Conjunction, Moon & Mercury
 6/10 NEW MOON; Annular Solar Eclipse
 6/12 Conjunction, Moon & Mars
 6/13 Conjunction, Moon & Jupiter, Moon & Venus; Dyer Observatory Public Night 8:00-10:00 P.M.
 6/18 FIRST QUARTER MOON
 6/20 BSAS Meeting, Dyer Observatory 7:30 P.M.
 6/21 Summer Solstice
 6/24 FULL MOON; Penumbral Eclipse
 6/27 Conjunction, Moon & Neptune; Dyer Observatory Youth Night 8:00-10:00 P.M.
 6/29 Conjunction, Moon & Uranus

Sudekum Planetarium at the Cumberland Science Museum**June 1 through August 11, 2002****Monday through Friday**

11:30 Rusty Rocket's Last Blast
 1:00 Lunar Odyssey
 2:30 Rusty Rocket's Last Blast
 3:30 Lunar Odyssey

Saturday

11:30 Rusty Rocket's Last Blast
 1:00 Skies Over Nashville
 2:30 Rusty Rocket's Last Blast
 3:30 Lunar Odyssey

Sunday

1:30 Rusty Rocket's Last Blast
 3:30 Lunar Odyssey

What on Earth are these shows about ???

Skies Over Nashville Many people are intimidated by astronomy and the night sky. This show highlights those constellations and planets that can be seen from backyards throughout Middle Tennessee and across the United States. If you can "connect the dots", you can draw star pictures. Skies Over Nashville is an excellent way for the entire family to get ready to go out and look at the real sky.

Lunar Odyssey From myths that tried to explain its changing appearance to the first telescope views of its rugged face, observers have long wondered: where did the Moon come from, and what would it be like to visit there? Climb aboard Trans Lunar 4 as experts discuss the mythology, history, geology, origin theories, and unique features of Earth's nearest neighbor in space.

Rusty Rocket's Last Blast Join a class of rocket rookies, learn a few rocket basics, relive great moments in space exploration, discover how far it really is to the moon and planets, and tour the solar system with Rusty Rocket.

upcoming astronomical events

NOTE: Our monthly star charts and related articles can be downloaded from www.SudekumPlanetarium.com

Warner Park star party 8:00 to 10:00 pm Saturday, 10 August 2002

For additional and updated information:

call AstroLine at 615-401-5092 OR go to

www.SudekumPlanetarium.com

**The Barnard-Seyfert Astronomical Society Web
 address - www.bsasnashville.com**