



## Marshall to Host Conference on Gamma-Ray Burst Research

by Kelly McFalls

The latest developments from research efforts to unravel one of the biggest mysteries of the universe — gamma ray bursts — will be presented in Huntsville Sept. 15-20 at a conference sponsored in part by the Marshall Center.

These perplexing bursts of gamma radiation sweep past Earth on an almost daily basis — releasing in seconds perhaps as much energy as our Sun will emit in its 10-billion-year life — but their genesis remains a mystery.

The Fourth Huntsville Gamma-Ray

Burst Symposium will bring together world-renowned scientists in the discipline, including the astrophysicist who led the team that first discovered gamma-ray bursts in the late 1960s, Dr. Ray Klebesadel. The symposium, to be held at the Huntsville Hilton, will allow researchers to debate the causes of gamma-ray bursts — a field developing so rapidly that even the experts find it difficult to keep up with discoveries made almost daily.

“There will be presentations on observations made only in recent weeks.

We’ve even had papers submitted on observations that astronomers expect to make just before the conference,” said Dr. Tom Koshut, a Marshall Center astrophysicist on the conference organizing committee. “One special session will be devoted to these last-minute discoveries that are capable of changing how we view gamma-ray bursts.”

Since a Los Alamos team headed by Klebesadel serendipitously discovered bursts in the late 1960s, the gamma-ray

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## Marshall Center Community Service Day Scheduled for Sept. 13

The third annual Marshall Center Community Service Day, which is part of the Combined Federal Campaign (CFC), is scheduled for Sept. 13 from 9 a.m. to 1 p.m. Projects include assisting Christmas Charities, Hope Place, CASA, Habitat for Humanity, and the Boy Scouts.

“The previous two Community Service Days were a great hit with the local CFC recipient agencies,” said Jeff Hamilton, this year’s Community Service Day coordinator. “They are excited about working with Marshall employees and their spouses this year.”

Meanwhile, the Marshall Center’s 1997 CFC bus tours to recipient agencies will begin on Sept. 15.

Marshall employees, including on-site contractors, will be able to tour Christmas Charities, Family Services, the Association for Retarded Citizens, the American Red Cross, United Way in Athens, Boy Scouts, Girls Incorporated, YMCA, Tennessee Valley Rehab Center in Decatur, the Food Bank of North Alabama and the American Cancer Society.

Two buses (A and B) will stop at Building 4610 at 8:15 a.m.,

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## Barbeque Picnic Tickets Now on Sale

by Carole McLemore, Picnic Committee

Meal tickets for the Oct. 4 Marshall Center picnic go on sale today and can be purchased from Administrative Officers. Tickets are \$5 each with a choice of barbeque pork or chicken with all the trimmings; however, the chicken plates are limited. New this year, for those “EARLY BIRDS” who purchase meal tickets by Sept. 26, is a special door prize drawing for a JVC VCR, which will be held during the lunch hour. So buy your tickets now to be eligible for this additional door prize!

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Center Director Dr. Wayne Little's purchases the first barbeque meal ticket from Dennis Keim, this year's Marshall picnic chairperson. Little's has a chance to win a special door prize for purchasing his ticket prior to Sept. 26.

*Photo by Dennis Olive*

**The 10th Annual  
Von Braun Exploration Forum  
presents  
“Chroniclers of Exploration”  
Oct. 10, 1997 — Von Braun Center  
Details to be announced**

# Cassini Mission to Survey Worlds of Saturn and Titan

The planet Saturn, its famous icy rings, and its enigmatic moon, Titan, are the prime scientific targets of the international Cassini mission, the most ambitious and far-reaching planetary exploration ever mounted. Final preparation of Cassini is now underway for a launch from Cape Canaveral tentatively scheduled for the October/November timeframe.

The mission marks the first time a space probe has attempted to land on the moon of another planet, providing the first direct sampling of the Earth-like atmosphere of Titan and the first detailed pictures of its previously hidden surface. Titan is Saturn's largest moon, nearly the size of Mars and bigger than either Mercury or Pluto.

Cassini, in development since October 1989, is a cooperative endeavor of NASA, the European Space Agency (ESA) and the Italian Space Agency, or Agenzia Spaziale Italiana. The mission will send a sophisticated robotic spacecraft equipped with 12 scientific experiments to orbit Saturn for a four-year period and study the Saturnian system in detail. The ESA-built Huygens probe that will parachute into Titan's thick atmosphere carries another six scientific instrument packages.

"With its bright, complex rings, 18 known moons and magnetic environment, Saturn is a lot like a solar system in miniature form," said Dr. Wesley T. Huntress, NASA's associate administrator for space science. "Saturn's family of rings and moons is a one-stop treasure trove, offering countless clues to the history of planetary and solar system evolution. Cassini and the

Huygens probe represent our best efforts yet in our ongoing exploration of the solar system."

The launch period for Cassini's nearly seven-year journey to Saturn opens on Oct. 6 at 4:39 a.m. CDT and closes Nov. 15, 1997. A U.S. Air Force Titan IVB/Centaur launch system, the most powerful launch vehicle in the U.S. fleet, will loft Cassini onto the interplanetary trajectory that will deliver the spacecraft to Saturn almost seven years later on July 1, 2004. Cassini's primary mission concludes in July 2008.

Saturn is the second-largest planet in the solar system and is made up mostly of hydrogen and helium. Its placid-looking, butterscotch-colored face masks a windswept atmosphere where jet streams blow at 1,100 miles per hour and swirling storms roll just beneath the cloud tops. Spacecraft passing by Saturn found a huge and complex magnetic environment, called a magnetosphere, where trapped protons and electrons interact with each other, the planet, rings, and surfaces of many of the moons.

Saturn's best known feature -- its bright rings -- consists not just of a few rings but of hundreds of rings and ringlets broad and thin, composed of ice and rock particles ranging in size from grains of sand to boxcars. "Shepherd moons" found orbiting near the edges of some of the rings gravitationally herd in ring particles that would otherwise spread out into deep space.

On Nov. 6, 2005, Huygens will descend by parachute into Titan's sky, providing our first direct sampling of Titan's atmosphere and the first detailed photos of its hidden surface.

## Lunch-N-Learn Seminar Scheduled for Sept. 18

The Marshall Center's Employee Assistance Program will present a Lunch-N-Learn Seminar on Alzheimer's Disease Sept. 18, from noon to 12:45 p.m., in Morris Auditorium, Building 4200.

Kim Holbrook, executive director of the North Alabama Chapter of the Alzheimer's Association, will be guest speaker.

Holbrook is also a Dementia Education Trainer for the State of Alabama's Bureau of Geriatric Psychiatry, working closely with families who are struggling with the disease. Her presentation will cover such areas as overview of the symptoms and behaviors; the services available; an open discussion regarding caregiving; and the impact of the disease on the primary caregiver, family, and friends.

All interested Marshall employees, contractors and family members are invited to attend.



*SIMCO employee Charles Yow, left, and Jimmy Guarin of the Facilities Office observe and record the applied pressure indications of a pressure transducer calibration system in the newly renovated Metrology and Calibration Facility. The recently completed project at building 4650 provides approximately 17,000 square feet of new laboratories and support areas. Special features include a seismically isolated laboratory area with stringent temperature and humidity control and electromagnetic impulse/radio frequency shielded environments.*

*Photo by Terry Leibold*

# Gamma-Ray Burst Symposium to Offer Recent Observations

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burst phenomenon has been — and still is — one of the most heavily debated topics in astronomy. “Dr. Klebesadel will be able to offer a unique historical perspective on these bursts because he’s been involved with them from day one,” said Koshut.

One debated topic is how bursts are created. The currently favored theory suggests bursts are created by a tremendous explosion, possibly due to merging neutron stars, triggering shock waves that interact with the surrounding matter.

Another debated topic is the origin of gamma-ray bursts, which some astronomers argue “is fairly local, just outside our own galaxy,” said Dr. Gerald Fishman, a Marshall astrophysicist and principal investigator of the Burst and Transient Source Experiment. “But most now believe that bursts come from remote parts of the universe, at cosmological distances of billions of light years.”

Data from orbiting satellites have shed light on the origin of gamma-ray bursts, but all of the votes are still not in.

“We hope after the latest and greatest gamma-ray burst observations are revealed at the conference, the astronomy community will be closer to solving the mystery,” said Fishman.

More information about the Fourth Huntsville Gamma-Ray Burst Symposium, including the workshop agenda, can be found on the World Wide Web at the following URL: <http://www.batse.msfc.nasa.gov/information/4hgrbs/>

One of the key presentations to be given at the conference is by Dr. Charles Meegan, Marshall Center astrophysicist and co-investigator of the experiment, who will present the latest results from the 6 1/2 year duration Burst and Transient Source Experiment, the experiment that positioned the scientific community for the breakthroughs of 1997.

Other conference sponsors include TRW Space and Electronics Group in Redondo Beach, Calif., University Space Research Association, in Huntsville and the University of Alabama in Huntsville.

## Marshall Center Picnic

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### Stepping Stones to Aviation

This year the Marshall picnic will feature a new edition of educational entertainment as part of the Aircraft Association Display. A mini-airport will be set up with pedal airplanes for children to ride. This program, designed to stimulate interest in aviation, consists of aviation training with parent participation.

### Rescue 911

The Huntsville Rescue Squad will once again provide a demonstration of their ability to rescue automobile accident victims. Listen for announcements during the day of the picnic for times of the demonstrations.

### Softball Solicitation

The Sept. 19 deadline for one-pitch softball competition is fast approaching. Only three teams have signed up and there must be a minimum of eight teams to hold the tournament. Schedules will be out on Sept. 22 so call Rhonda Pepper at 4-5432 to sign up today!

### Very Valuable Volunteers (VVV)

Have you volunteered an hour of your time for the picnic yet? If not, its time to do so!! The success of the picnic depends on you! Volunteers will be eligible for a special drawing for a \$50 gift certificate.

Check us out on <http://pscinfo.pscni.nasa.gov:80/msfcpicnic/home.html>

## Astronaut Story Musgrave Retires

Veteran astronaut F. Story Musgrave has retired from NASA to pursue private interests in the communications industry.

Musgrave's NASA career spanned the Apollo era to the Space Shuttle program into initial development of spacewalk strategies for the International Space Station.

Musgrave, 62, joined NASA in 1967 and is a veteran of six Space Shuttle flights, having spent more than 1,281 hours in space. He first flew on STS-6 in 1983, the maiden voyage of Challenger.

## Combined Federal Campaign

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and Building 4203 (north loop) at 8:30 a.m. on Sept. 15, 17, 22, 23, 24, and 25. On Sept. 16 and 18, there will be only one bus to Decatur or Athens. The tour schedule is:

**Sept. 15 Bus A** — Christmas Charities and Family Services Center; **Bus B** — Association for Retarded Citizens and American Red Cross

**Sept. 16 Athens Tour** — United Way in Athens

**Sept. 17 Bus A** — Boy Scouts and Girls Incorporated; **Bus B** — YMCA, North and South side

**Sept. 18 Decatur Tour** — Tenn. Valley Rehab Center, Limestone/Morgan Counties

**Sept. 22 Bus A** — Food Bank of North Ala., and American Cancer Society; **Bus B** — YMCA, North and South side

**Sept. 23 Bus A** — Family Services Center and Girls Incorporated; **Bus B** — Association for Retarded Citizens and American Red Cross

**Sept. 24 Bus A** — American Cancer Society and Christmas Charities; **Bus B** — YMCA, North and South side

**Sept. 25 Bus A** — Hope Place and Arts Council

The CFC kickoff will be Sept. 29.

### Obituaries

**Theodore Lewis, 87**, Huntsville, died Aug. 17. He retired from Marshall in 1976 where he worked as a metallurgist.

**Trucks, Judy, 52**, Fayetteville, Tenn., died Aug. 15. She retired from Marshall in 1995 where she worked as a program analysis officer.

## Employee Ads

### Miscellaneous

- ★ Snare Drum, Ludwig with case, music stand and music books \$150. 881-4748
- ★ Baby bedding ensemble: sheets, comforter, bumper pads, dust ruffle, wall hangings, mobile, pillow \$100. 859-4156
- ★ 14.4 modem, us robotics \$10. Trident SVGA card, 1MB RAM \$15 o.b.o. 828-9651
- ★ 386 DX/33 motherboard, cpu, 1meg (4x256K), manual \$20; Seagate 89M-HD \$35; Juki 6100 daisywheel printer, manual \$45. 721-0617
- ★ John Deere 212 garden tractor/mower \$990; air compressor \$135; tiller \$75; lawn sweeper \$175. 539-6114
- ★ Dresser w/hutch mirror \$300; kitchen table and chairs \$150. 539-6114
- ★ CD player \$30; Papa-san chair w/cushion \$20. 536-8951
- ★ Sauder student desk, 20x40x28 inches high \$30. 883-2982
- ★ Powermac 6100, 84mhz, 40MB RAM, 2GBHD, 1MDL2 cache, 8xCD, software \$650.00. 880-2145
- ★ AKC Shih Tzu puppies 2 males \$150 each, shots and wormed. 882-1242
- ★ 22qt Presto pressure cooker/canner. used one season \$50; stainless folding slicing machine \$30. 881-2027
- ★ Home security system \$150; gasoline pressure washer \$140; scanning auto C.B. radio \$45. 852-6952
- ★ IBM/Mac RAM, 72 pin simm, 4-MB \$15; 16MB \$45 each. 882-1780

### Vehicles

- ★ 1990 Grand-Am, quad-4, automatic, 2-door, 93K miles, alloy wheels, tilt, cruise, a/c \$3,450. 753-2278
- ★ 1991 Mazda RX-7, Coupe, 57K miles, dealer serviced, security, sunroof, alloys. 881-0645
- ★ 1977 GMC Jimmy. 350-0275
- ★ 1988 Cutlass Supreme, FWD, 112K miles \$2,900. 539-6114
- ★ 1984 Nissan 300 ZX \$2,800; flatbottom 5.5hp trailer \$700. 539-4526
- ★ 1988 Olds Delta 88, Royale Brougham, 4-door, V-6, power, one owner, white. 881-2027
- ★ 1991 Ford Explorer, XLT, 138K, \$7,400. 859-4156
- ★ 1988 Toyota Corolla, 94K miles, 4-door, single owner, full records \$2,500 o.b.o. 539-8406
- ★ 1994 Honda Passport LX, 2wd, 5-speed, V-6, 61K miles, Red w/gray interior, \$12,800. Call 880-2645 after 5 p.m.
- ★ 1984 Cutlass Supreme Oldsmobile, 4-door, 108K miles, one owner, \$1,650. 773-6427 after 5:30 p.m.

### Wanted

- ★ Compressor, belt sander, doll press. 837-8907 (Rm. 1322)

### Free

- ★ Swingset, pickup required. 539-7834

### Found

- ★ Keys found on Anderson Road north of Martin Road, call 4-4758 to identify.

## Center Announcements

- ☛ **Wanted** — Volleyball and softball teams to compete in the MSFC 1997 picnic. Registration is now open and tournaments begin Sept. 29th. Contact Rhonda Pepper at 544-5432 for softball or for volleyball contact either Dana Tipton at 544-7879 or Ketela White at 544-7179.
- ☛ **Wanted** — Volunteers of all types for the MSFC picnic on October 4. Check the picnic internet home page for points of contact and events.
- ☛ **Senior/NASA Day** — The EEO office is coordinating the High School Senior Day/NASA Day at Alabama A&M on Nov. 8 at 1:30 p.m. Asking for NASA and alumni volunteers to assist in giving the students and general public information about MSFC roles and missions. For additional information contact Alice Sams at 4-0374 or Willie Love at 4-0088.
- ☛ **NARFE** — The National Association of Retired Federal Employees (NARFE) will meet Sept. 13 at the Senior Center on Drake Avenue. Professional Dental Association instructors will cover current changes and improvements in adult dental care, as well as dental insurance coverage. Refreshments at 9:30 a.m. Program at 10 a.m. For more information call 837-0382 or 881-3168.
- ☛ **Mars Ballroom Dance Club** — Tickets for the Oct. 11 formal dinner dance are now on sale by the Mars Ballroom Dance Club. The event will be held in the VBC west hall and will feature ballroom music by the Paul Chambers Combo. Socializing will begin at 6:30 p.m., and buffet dinner will be served at 7 p.m., followed by dancing from 8 to 11 p.m. Tickets are \$18 per person with a \$3 discount for members; they can be purchased from Tamara Landers (544-6818), Pat Sage (544-5427), Ed Ogozalek (837-1486), Linda Kinney (544-0563 and Bob Williams (544-3998). Reservations for a table of 8 can be made by calling Woody Bombara at 650-0200.
- ☛ **Retired Senior Volunteer Program** — The Huntsville/Madison County Senior Center will participate in "Make a Difference Day" on Oct. 27 from 7 a.m. to 6 p.m. at the Senior Center.

Contact Darthy Barnett for more information.

- ☛ **Mail Handlers** — A federal representative from the Mail Handlers Benefit Plan will be at Marshall on Sept. 12, Bldg. 4202/Rm. 114, from 8:30 to 10:30 to assist employees with claims or questions
- ☛ **Big Spring Jam** — Three-day, discount tickets are available at the Marshall Exchange for \$15. Admission at the gate is \$10 a day or \$20 for a weekend pass. The Sept. 26-28 festival will celebrate the South's musical and artistic heritage.
- ☛ **American Express Cards** — The new American Express cards will be mailed at the end of September to employees who have government-issued cards expiring in October. For more information contact Tina Walker at 4-7291.
- ☛ **HATS** — The Huntsville Association of Technical Societies has arranged for Mary Allen, an experienced parliamentarian to conduct a procedures workshop on Sept. 10 at 6:30 p.m. to 9 p.m. in the HATS office. Free admission. For more information call 837-4287
- ☛ **Blood Drive** — The American Red Cross will be at Bldg. 4752 on Sept. 19 from 8 a.m. to 1:30 p.m. for the monthly Marshall Blood Drive visit. The following schedule should eliminate long waiting periods: A-B, 8 a.m.; C-E, 8:30 a.m.; F-H, 9 a.m.; I-L, 9:30 a.m.; M-P, 10 a.m.; Q-S, 10:30 a.m.; and T-Z, 11 a.m. Marshall employees who serve as blood donors without compensation will be authorized 4 hours of excused absence for this purpose. Contractor personnel must comply with the policy of their respective companies.
- ☛ **Blue Cross Representative** — The federal representative for Blue Cross/Blue Shield will be at Marshall on Sept. 16, bldg. 4202, rm. 108 from 9 to 11 a.m.
- ☛ **NASA Ski Week** — The 7th Annual NASA Ski Week will be hosted at Whisler-Blackcomb, January 24-31. All MSFC employees, on-site contractors, retirees, and dependents are eligible to participate. For information contact Tom Dollman at 544-6568 or by e-mail "tom.dollman@msfc.nasa.gov".
- ☛ **Toastmasters International** — Toastmasters International will meet Sept. 16 at 11:30 a.m. in bldg. 4610 cafeteria conference room.

## Job Opportunities

**CPP 97-121-JB, Security Specialist, GS-080-5,** Human Resources & Adm. Support Office, Management Operations Office, Security Division. Closes September 11.

**CPP 97-122-JB, General Supply Specialist, GS-2001-5,** Human Resources & Administrative Support Office, Management Operations Office, Property Management Division. Closes September 19.

# MARSHALL STAR

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