NASA
Lyndon B. Johnson Space Center

Space News Roundup

Vol. 20 No. 18 September 11, 1981 National Aeronautics and Space Administration

Shuttle Update

Final preparations are underway both at Kennedy Space Center and here at JSC for the second flight of Columbia, now scheduled for October 9. The launch date was slipped nine days as a result of a series of minor problems during the turnaround process.

The last long-duration simulation in Mission Control was held August 31 through September 2, followed by an interface test with KSC which was completed last Friday.

Engineers at the Cape also have completed the Pad Validation Test to make certain the configuration of the Shuttle has not changed since it was moved to the pad and to verify the connections between the launch pad and the Mobile Launcher Platform.

Back-up astronauts Ken Mattingly and Henry Hartsfield also participated in an emergency egress test, getting briefed on the slide wire system and driving the armored personnel carriers which would be used to transport the crew from the vehicle in the event of an emergency escape before launch.

The dry Countdown Demonstration Test was scheduled for this week, taking the launch sequence up through ignition without cryogenic propellants onboard. A cryogenic loading test is scheduled for Monday.

The last few tiles to be bonded were placed on the vehicle a week ago.

Today at Teague Auditorium:
Employees & contractors honored

The largest number of JSC employees ever honored following a space flight will be spotlighted for their work in the Teague Auditorium, September 11, at 2 p.m.

NASA's Deputy Administrator, Dr. Hans Mark, will lead the ceremony. The program will honor 275 employees for their outstanding contributions to the historic first flight of the Space Shuttle Columbia.

Eight persons will receive the agency's highest award given to government employees, the NASA Distinguished Service Medal.

The medal will be presented to Dr. Christopher C. Kraft, Center Director; George W. S. Abbey, Director of Flight Operations; Arnold D. Aldrich, Deputy Manager, Space Shuttle Program Office; Aaron Cohen, Manager, Orbiter Project Office; Lynwood C. Dunseith, Director of Data Systems and Analysis; Maxime Faget, Director of Engineering and Development; Eugene F. Kranz, Deputy Director of Flight Operations, and Robert F. Thompson, retired Manager of the Space Shuttle Program Office.

Astronauts John W. Young and Robert L. Crippen, the crew on Columbia's first flight, were presented the Distinguished Service Medal by President Ronald Reagan at the White House May 19.

The corresponding award given to non-government employees is the NASA Distinguished Public Service Medal. For their contributions to the Space Shuttle Program, NASA is honoring Charles W. Feltz, Space Transportation System Development and Production Division, and Seymour Z. Rubenstein, Shuttle Orbiter Division, of Rockwell International Corporation, and John B. Jackson, Federal Systems Division of IBM Corporation.

Eleven civil service employees will receive the agency's second highest medal, the Outstanding Leadership Medal. The recipients are: Aleck C. Bond, Clifford E. Charlesworth, Sidney C. Jones, Jr., Kenneth S. Kleinknecht, Richard H. Kohrs, Allen J. Louviere, Owen G. Morris, Richard P. Parten, Ralph S. Sawyer, Scott H. Simpkinson, Donald K. Slayton.

A new award, the NASA Exceptional Engineering Achievement Medal, for advancing the state of the art engineering, will be given to 14 individuals. The recipients are: John W. Aaron, Kenneth J. Cox, Robert L. Dotts, Philip C. Glynn, Dorothy B. Lee, Lubert J. Leger, Clarence T. Modlin, Jr., Thomas L. Moser, William L. Swingle, James A. Chamberlin (Posthumous), Robert G. Minor, Norman E. Sears, Edward P. Smith, Tommy D. Steele.

Other awards to be presented include the NASA Exceptional Service Medal to 93 JSC employees, the NASA Public Service Medal to 24 non-government employees, the NASA Public Service Group Achievement Award to 44 contractor organizations, the NASA Group Achievement Award to 13 groups of civil service employees or teams composed of both civil service and contractor employees, and certificates of appreciation to 65 individuals.

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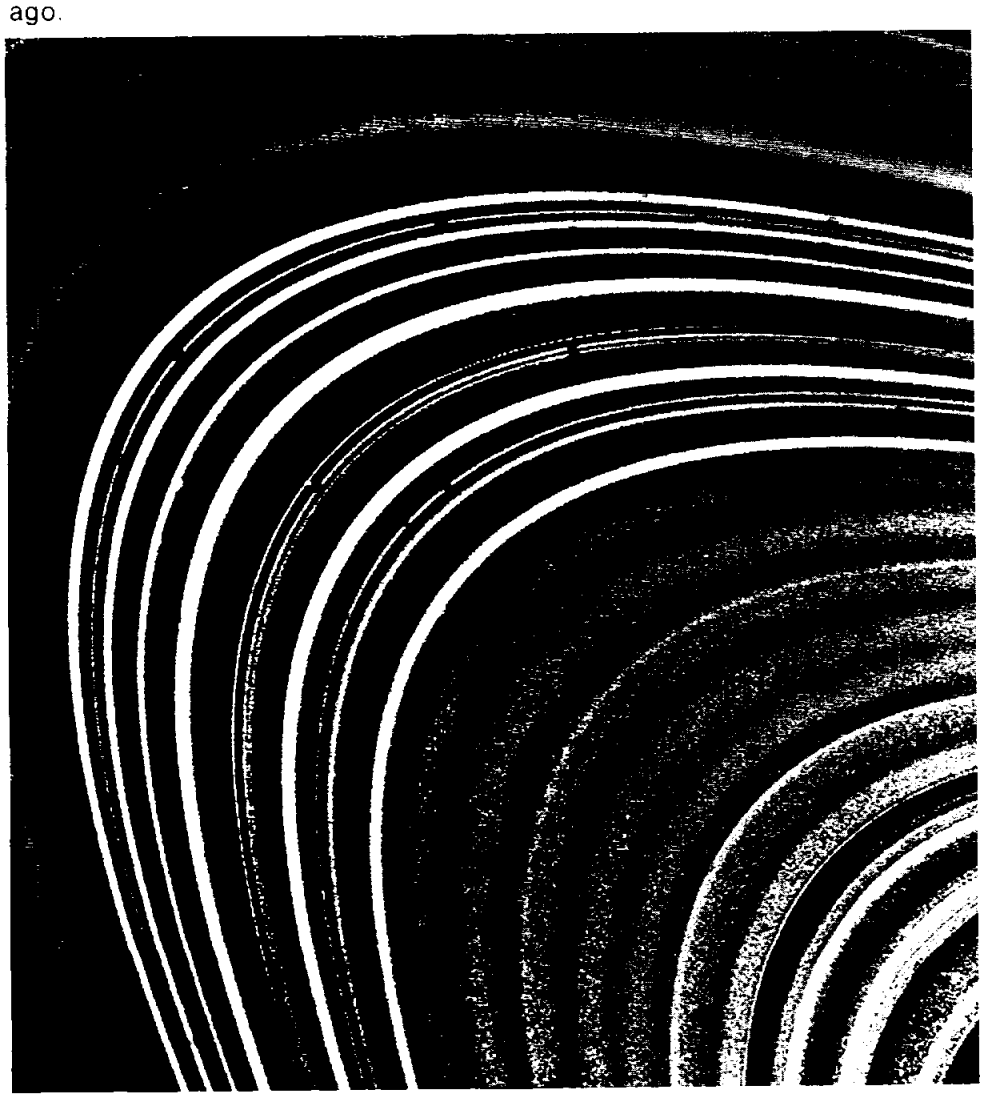


Those mysterious rings

This view focusing on Saturn's C-ring (and to a lesser extent, the B-ring at top and left) was compiled from three separate images taken through ultraviolet, clear and green filters. On Aug. 23, when it acquired these frames, Voyager 2 was 1.7 million miles from the planet. More than 60 bright and dark ringlets are evident here: the small, bland squares are caused by the removal of reseau (reference) marks during processing. In general, C-ring material is very bland and gray, the color of dirty ice. Color differences between this ring and the B-ring indicate differing surface compositions for the material composing these complex structures.

JSC History office moves archives to Rice Univ., asks employees for material

Beginning in September, the JSC History Office will begin transferring portions of its archival holdings to the Woodson Research Center at Rice University's Fondren Library. The agreement to move these documents, the Memorandum of Understanding, was signed by JSC and Rice University on July 31. These documents were used in the preparation of project histories for Mercury, Gemini, Skylab and the Apollo Soyuz Test Project.

The JSC History Office Archival holdings consist of non-record copies of correspondence, reports, interviews and related materials that have been collected for nearly 20 years. Although these materials are exempt from preservation under the terms of the federal records management program, JSC and Rice University decided they represent a unique collection of many aspects of early years of manned spaceflight.

After an initial review of the JSC History Office Archives, Rice proposed the establishment of a campus-based Manned Spaceflight Archives. The basic collection will be housed on the fifth floor of the Fondren Library in a secure section of the stacks with a humidity and temperature controlled environment.

Rice will also provide personnel to index and arrange the collection while NASA will retain title to the documentation under the conditions of their previous agreement.

This transfer of JSC History Archives' materials will permit easier access by scholars and other interested persons.

University personnel will index the collection with a Word One Key Search computer using the same program as the JSC History Office's inventory of Apollo and Shuttle documents.

The JSC History Office will continue to maintain large document collections relating to Apollo, the Space Transportations System, space stations, and JSC institutional history.

Rice University staff members will be contacting industrial firms that participated as contractors to the program and retired NASA employees to see if they have documents or related items that would contribute to the collection.

Here at JSC, employees are asked to consider contributing any Mercury, Gemini, Apollo, Skylab or ASTP items that they think may have some value to the JSC History Office or to the new collection at Rice.

Materials including mission documents and reports, spacecraft familiarization manuals, test reports or notes on tests, professional publications relating to manned spaceflight, correspondence, photographs, and drawings are all needed.

The History Office will determine if the materials are suitable for the collections. Persons having potential materials for the collection are encouraged to call Dr. Ed Ezell at x2838 or drop him a note, BE4.

JSC and Rice University hope the collection will grow into a valuable historical resource for scholars and other students interested in the contribution of the people of the Johnson Space Center and the National Aeronautics and Space Administration to this era of manned space flight.

Exchange awards scholarships

Kathleen D. Kirkpatrick

Each year the JSC Exchange awards three $4,000 ($1,000 per year) college scholarships to children of NASA employees. This year 72 applicants competed for selection on the bases of academic achievement, school/community activities, and financial need. Winners may apply the money for study at any college or university.

Hibi A. Pendleton

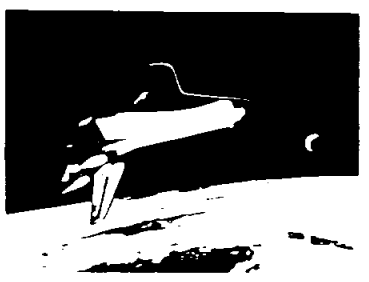
This year's winners are Kathleen Kirkpatrick, daughter of Ms. Caroline Kirkpatrick, Space Shuttle Systems Integration Office. Hibi Pendleton, daughter of Mr. and Mrs. Tom Pendleton. Tom Pendleton works in the Earth Resources Applications Division. Rhonda Nichols, daughter of Mr. and Mrs. Lee Nichols. Lee Nichols works in the Institutional Data Systems Division.

Kathleen Kirkpatrick is a freshman at San Jacinto Junior College studying Physical Therapy. Hibi Pendleton is beginning her first year at the University of Houston. Rhonda Nichols is a sophomore at Texas A & M University studying Chemical Engineering.

The application period for next year's scholarships will be announced February 1982.

Rhonda R. Nichols

Roundup deadline is the first Wednesday after publication.



The *Roundup* is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for all space center employees.

Editor Eddy Wittry

Bulletin Board

JSC Bicycle Club's Century Ride

As a part of National Century Month the JSC Bicycle Club will give you a chance to earn a League of American Wheelmen patch on Sunday, September 20. Bikers may earn a quarter century patch (25 miles in three hours), a half century patch (50 miles in six hours), or a full century patch (100 miles in 12 hours). The ride will start at 7:00 a.m. at parking lot B, Bayou Building, UH/CLC. Maps and cue sheet will be furnished. No SAG service will be offered so bring your own tools, pump, tire kit, and water bottle. Fee for the optional patch award is $1.50. For more information call Brian Morris, x5293 or 481-3900.

JSC Scuba Club

Jess Stark will speak to the Lunarfins Wednesday, September 16 at 7:30 p.m. at the Clear Lake Park Building, Nasa Rd. 1. Mr. Stark will talk about professional and salvage diving. He will explain the methods used in commercial diving, and will show professional hard hat diving gear. The Lunarfins are an active sport diving club that not only sponsors trips, but also teaches basic and advanced courses for diving certification. Everyone is invited. Call 480-1340 for more information.

Alley Theatre ticket discount

The Nina Vance Alley Theatre Corporate Subscription Program is again being offered to NASA employees and contractors. Season tickets are available for next year's series of six performances for $36. Brochure order forms explaining the program are available at Bldg. 11 and from your EAA representative. Enclose a check payable to the Alley Theatre or indicate a charge plan and send to Doris Wood, SN1 (x4464); the deadline has been extended to Sept. 11.

Flu shots

Flu immunizations are available at the JSC Clinic for badged NASA and on-site contractor personnel. Annual routine flu immunization is not recommended for healthy adults, but is recommended for persons who have chronic conditions like heart disease, respiratory ailments, diabetes mellitus or other chronic disorders. Innoculations will be available on a drop-in basis, beginning Sept. 1, Monday through Friday from 10:00 - 11:30 a.m. and 2:30 - 4:30 p.m.

Project Mercury Reunion Picnic

On Saturday, October 24, at the Kars Park-Complex 99 at Kennedy Space Center participants from Project Mercury will be getting together for an afternoon of talking, eating, and drinking. The picnic is open to all people who worked on Project Mercury. For more information contact either Deke Slayton or Ron Kubicki, x5931.

Hispanic Heritage Week at JSC

As a part of the observance of Hispanic Heritage Week and in conjunction with the Fiestas Patrias activities, JSC will host "Un Dia En La NASA," Saturday, September 12. Starting at 1:00 p.m., three Hispanic JSC employees will make presentations at the Teague Auditorium, Bldg. 2. Astronaut/Mission Specialist Dr. Franklin Ramo Chang will participate in the event. Special tours and entertainent is also planned. For more information, call Carlos Ramirez, x4831.

Texas Hunter Safety Course

The Texas Parks and Wildlife Department will sponsor a "Texas Hunter Safety Course" from 1:00 - 5:00 p.m. Saturday and Sunday, September 19 - 20 in the North County Building on FM 646 in Dickinson. The class is limited to 30 students (at least 12 years old) and a fee of one dollar is required. Presently this standard course is required in 30 states before the hunter can purchase a hunting license. The course is not yet manditory in Texas. For further information call J. T. Kilpatrick, x4626 or 534-4603.

NASA honors employees

From page 1

NASA Exceptional Service Medal

Thomas J. Adams, Jr., Stephen D. Armstrong, Stephen G. Bales, Richard L. Barton, Ronald L. Berry, James W. Bilodeau, Ronald K. Blilie, Karol J. Bobko, Robert E. Bobola, Aldo J. Bordano, Jr., and Raymond H. Bradley.

Also, Hubert J. Brasseaux, Irvin J. Burtzlaff, Norman H. Chaffee III, Thomas V. Chambers, Michael A. Collins, Jr., Richard A. Colonna, Norman R. Cooper, John T. Cox and Mark K. Craig.

Also, Philip M. Deans, Robert E. Ernull, Lewis R. Fisher, M. P. Frank III, George C. Franklin, John R. Garman, David W. Gilbert, Claude A. Graves, Jr., Jay H. Greene, and George E. Griffith.

Also, Walter W. Guy, James L. Hall, John F. Hanaway, Jon C. Harpold, Robert K. Holkan, Tommy W. Holloway, Ivy F. Hooks, Neil B. Hutchinson, Bruce G. Jackson, James Bert Jackson, Jr., and John H. Johnson.

Also, Robert L. Johnston, Enoch M. Jones, Jesse C. Jones, Witalij Karakulko, Zach D. Kirkland, Thomas R. Kloves, Wayne E. Koons, Paul C. Kramer, Pat M. Kurten, and Howard C. Kyle, Jr.

Also, Joseph H. Levine, Charles R. Lewis, Edgar C. Lineberry, Jr., Reginald M. Machell, Hunboldt C. Mandell, Jr., Stanley P. Mann, Joseph E. Mechelay, Edward D. Mendenhall, Robert W. Moorehead, Daniel A. Nebrig, Richard W. Nygren, Charles C. Olasky, Jr., and William H. Peters.

Also, William W. Petynia, Henry O. Pohl, Sam. L. Pool, Andrew E. Potter, Jr., John G. Presnell, Jr., R. Norman Prince, Donald R. Puddy, Rita M. Rapp, Bass Redd, Barney B. Roberts III, Rodney G. Rose, Rudolph L. Saldana, Joe W. Schmitt, William C. Schneider, Carl B. Shelley, Herbert E. Smith, Jr., Harold S. Stall, James C. Stokes, Jr. and Jack S. Stradling.

Also, William A. Sullivan, Joseph G. Thibodaux, Jr., Paul G. Thomas, Richard A. Thorson, James W. VanArtsdalen, Donald C. Wade, James D. Watkins (Posthumous), Dwayne P. Weary, William B. Wilson.

NASA Public Service Medal

Roy H. Beat, Roland L. Benner, Robert T. Benware, James F. Berry, Joseph A. Bost, Henry N. Bowes, James F. Burke, Harry P. Clagett, Dan David, Kevin J. Forsberg, Bruce A. Gerstner, Fred H. Greenwood, and Andrew J. Hoffman.

Also, Charles A. Jacobson, Samuel E. James, Ervin T. Kisselburg (Posthumous), Albert C. Martin, George B. Merrick, Lloyd E. Munson, Walter D. Salyer II, B. Larry Sarahan, Richard Schwartz, Peter R. Smith, Garland B. Whisenhunt.

NASA Public Service Group Achievement Award

A-V Service Corporation, Aircraft Maintenance/Modification Support Team Northrop Worldwide Aircraft Services, Incorporated, Boeing Aerospace Company, Mission Control Center Development, Test, and Operations Team Ford Aerospace and Communications Corporation, Orbiter Closed Circuit Television Development Team Astro-Electronics, RCA Corporation, Orbiter Development and Certification Test Support Team; Lockheed Engineering and Management Services Company, Inc., Northrop Services, Incorporated, and Shuttle Astronaut Training Equipment Team Nelson and Johnson Engineering, Incorporated.

Also Shuttle Avionics Software Development and Test Team Federal Systems Division, IBM Corporation, Shuttle Crew Equipment Team, Hamilton Standard Division, United Technologies Corporation, ILC Space Systems, Shuttle Mission Simulator Development Team Link Flight Simulation Division, The Singer Company, Space Shuttle Orbiter Subsystem Development Team, Aerojet Liquid Rocket Company, Aerospace Avionics, Incorporated, and Aerospace Electrical Division, Westinghouse Electric Corporation.

Also, Albany International Research Company, Boulder Division, Beech Aircraft Corporation, Brunswick Corporation, Carleton Controls Corporation, Controls Division, Moog Incorporated, Convair Division, General Dynamics Corporation, Electronic Systems Division, TRW Defense and Space Systems Group, TRW Incorporated, Fairchild Industries, Incorporated, Federal Systems Division, IBM Corporation, Grumman Aerospace Corporation, Hamilton Standard Division, United Technologies Corporation, Harris Corporation, and Honeywell Incorporated.

Also, Kearfott Division, The Singer Company, Lockheed Missiles and Space Company, Incorporated, The Marquardt Company, McDonnell Douglas Astronautics Company, Power Systems Division, United Technologies Corporation, Sperry Flight Systems, Sperry Rand Corporation, Sundstrand Corporation, and Vought Corporation.

Also, Space Shuttle System Engineering and Operations Support Team McDonnell Douglas Technical Services Company, Incorporated, Space Shuttle System Integration Management Team Rockwell International Corporation, STS-1 Flight Crew/Flight Controller Training Team Ford Aerospace and Communications Corporation, Taft Broadcasting Corporation, White Sands Test Facility Operations Team Lockheed Engineering and Management Services Company, Inc.

NASA Group Achievement Award

Facility Test Support Team, Flight Operations Support Team, Mission Control Center Development, Test, and Operations Team, NASA Structures Team, Orbiter Vehicle Systems Design and Development Team, Shuttle Avionics Software Development and Test Team, and Shuttle Mission Simulator Development Team.

Also, Space Shuttle Launch and Landing Operations Team, Space Shuttle Orbiter Project Management Team, Space Shuttle Orbiter Subsystem Management Team, Space Shuttle Program Management Team, STS-1 Crew Training Support Team, STS-1 performance and Analysis Integration Team.

NASA Certificate of Appreciation

Anne L. Accola, Stephen M. Andrich, Albert F. Behrend, Jr., Floyd V. Bennett, William J. Bennett, Alfred A. Bishop, Daniel A. Bland, Jr., James E. Bone, Jr., Warren L. Brasher, James H. Chappee, Edward S. Chevers, Edward T. Chimenti, and James L. Cole.

Also, Milton C. Contella, Phillip E. Cota, Jr., William K. Creasy, John E. DeFife, William H. Douglas, Wilbert E. Ellis, William C. Fischer, John A. Frere, Jr., Joe D. Gamble, Clarence C. Gay, Jr., Allan D. Gist, Jesse F. Goree, Jr., David H. Greenshields, John E. Grimaud, Charles R. Haines, Clarence E. Humphries, Fred D. Koons, Ronald W. Kubicki, and C. Kenneth Land.

Also, Richard E. Lindeman, John K. Lottinville, James E. Mager, Bill J. McCarty, Jerry E. McCullough, Thomas U. McElmurry, James C. McLane, Jr., Larry B. McWhorter, James A. Miller, John T. Milton, William T. Mulcahey, Jr., Robert L. Myers, Alexander S. Paczynski, and Chris D. Perner.

Also, Malcom C. Perry, Robert W. Polifka, Charles R. Price, Donald E. Rhoades, Robert R. Rice, Philip Shannahan, Vernon Shields, and James A. Smith, Jr.

Also, Leonard T. Spence, Clyde J. Stoker, Charles L. Stough, William H. Taylor, Jr., Charles Teixeira, Arthur D. Travis, Robert G. Voss, Rodney O. Wallace, John F. Whiteley, Carroll H. Woodling, James C. Young.

Cookin' in the cafeteria

Week of September 14 - 18

Monday: Cream of Celery Soup; Braised Beef Ribs; Chicken a la King; Enchiladas w/Chili; Italian Cutlet (Special); Brussels Sprouts; Navy Beans; Whipped Potatoes. Standard Daily Items: Roast Beef; Baked Ham; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday: Beef & Barley Soup; Turkey & Dressing; Country Style Steak; Beef Ravioli; Stuffed Cabbage (Special); Corn Cobette, Okra & Tomatoes; French Beans.

Wednesday: Seafood Gumbo; Catfish w/Hush Puppies; Roast Pork w/Dressing; Chinese Pepper Steak (Special); Broccoli; Macaroni & Cheese; Stewed Tomatoes.

Thursday: Cream of Tomato Soup; Beef Tacos; BBQ Ham Slice; Hungarian Goulash; Chicken Fried Steak (Special); Spinach; Pinto Beans; Beets.

Friday: Seafood Gumbo; Liver w/Onions; Deviled Crabs; Roast Beef w/Dressing; Seafood Platter; Tuna & Noodle Casserole (Special); Whipped Potatoes; Peas; Cauliflower.

Week of September 21 - 25

Monday: French Onion Soup; Beef Chop Suey; Polish Sausage w/German Potato Salad; Breaded Veal Cutlet (Special); Okra & Tomatoes; Green Peas. Standard Daily Items: Roast Beef; Baked Ham; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday: Split Pea Soup; Shrimp Creole; Salisbury Steak; Fried Chicken (Special); Mixed Vegetables; Beets; Whipped Potatoes.

Wednesday: Seafood Gumbo; Fried Catfish w/Hush Puppies; Braised Beef Ribs; BBQ Plate; Weiners & Beans; Shrimp Salad; Stuffed Bell Pepper (Special); Corn O'Brian; Rice; Italian Green Beans.

Thursday: Chicken Noodle Soup; Beef Stroganoff; Turkey & Dressing; BBQ Smoked Link (Special); Lima Beans; Buttered Squash; Spanish Rice.

Friday: Seafood Gumbo; Broiled Turbot; Liver w/Onions; Seafood Platter; Fried Shrimp; Meat Sauce & Spaghetti (Special); Green Beans; Buttered Broccoli; Whipped Potatoes.

At Gilruth Rec Center

Garage Sale - Bring all your useful, not so useful, and useless items. $2.00 per table, September 19 at 9:00 am to 3:00 pm, Gilruth Center Parking lot.

Children's Movie - Walt Disney's production of "Song of the South" will be showing on September 26. Admission $1.00 including popcorn and coke. Tickets available at Building 11.

Basketball Registration - Fall basketball league registration begins Sept. 4 and ends on Sept. 25. The categories will be: Women's, Men's A, Men's B, Men's C and Men's 35 and over. Cost for the season is $100.00 for EAA teams and $150.00 for non-EAA teams.

Volleyball Registration - Fall volleyball league registration begins Sept. 4 and ends on Sept. 25. Will have mixed recreational league on Friday night, October 9 and Saturday, October 10. Cost for the season is $45.00, and $90.00 for non-EAA fees.

Basketball Officials - We are in need of basketball officials. If you are interested in calling games, call x3944.

Aerobic Dance - Part dance, part exercise, all fun, this course is designed to get you in shape and keep you that way. Daytime classes meet from 9:00-10:00 AM on Mondays and Wednesdays beginning on Sept. 14. Afternoon classes from 4:15-5:15 pm on Tuesdays and Thursdays will be beginning Sept. 15. These sessions will last 12 weeks and cost $54.00.

Basic Automotive Mechanics - Learn to perform your own preventative maintenance and beat inflation. Class meets on Thursdays beginning Sept. 17, 7:30-9:30 pm for 3 weeks. Savings on labor alone pays for the cost of this course. Fee $16.75.

Defensive Driving - Learn to drive safely and qualify for a 10 per cent reduction in your auto insurance for the next 3 years. Class meets on Saturday, October 31 from 8:00 am to 5:00 pm. Cost is $15.00 per person.

Adult Beginning Tennis - Sharpen up your game. Beginners class meets on Tuesdays from 5:15 - 6:45 pm beginning Sept. 22. An intermediate class meets at 5:15-6:45 pm on Thursdays beginning Sept. 24. This course will last 8 weeks and cost $24.00 for each class.

Ballroom Dance - Learn the fine art of ballroom dance steps, class begins Sept. 16 for a 12 week period, on Wednesdays. There will be two classes offered. Introduction classes and high intermediate start at 7:15 pm while intermediate and advanced classes start at 8:45 pm. Cost will be $60.00 per couple.

NAUL Advanced Diving Course - This is a 6 week course which will begin Sept. 15, with the last 2 weekends dedicated to open water work. Course cost is $75.00 and students will provide their own equipment. Register at the Rec. Center.

Scuba Class - The JSC Scuba Club will offer a six week class leading to NAUL certification. Classes meet at the Gilruth Rec Center on Tuesdays from 6:30-9:00 pm beginning on Sept. 29. Students perform in the pool at La Porte High School. Cost is $90.00.

Wilson is enthusiastic

Susan U. Wilson's enthusiasm and competence as the lead secretary in the Program Operations Office contributes to its smooth daily operation. This, combined with her warm personality, make Wilson the Secretary for the Month of September.

"The four adjectives that best describe Wilson are enthusiastic, efficient, competent, and cooperative."

Earlier this year she coordinated the Program Operations Office KSC travel more efficiently so that the Gulfstream was more fully utilized. Travelers were kept more informed of changes in the airplane's busy schedule, advised on suggested rental car arrangements and kept in touch with other pertinent developments.

Wilson effectively records key decisions and follows up with distribution of that information to proper personnel. This function has become even more important at the launch of STS-2 draws near.

Last September, Wilson volunteered to help the Management Assistant in securing documentation in the PO Office. Without formal training, she learned how to operate the CPT 8000-T, a new word processor in the PO office. With this new knowledge, she assisted the Management Assistant and effectively expedited the recording of basic documents.

Susan U. Wilson

Roundup Swap Shop

Ads must be under 20 words total per person, double spaced, and typed or printed. Deadline for submitting or cancelling ads is 5 p.m. the first Wednesday after publication. Send ads to AP3 *Roundup*, or deliver them to the Newsroom, Building 2 annex. No phone-in ads will be taken. Swap Shop is open to JSC federal and on-site contractor employees for non-commercial personal ads.

Property & Rentals

For rent: Galveston By-The-Sea Condominium. Two bedroom furnished apartment for rent by day, week, or month. Clements 474-2622.

Rent: Lake Livingston 3 bdrm waterfront cottage all amenities by weekend or week 554-6093.

For Sale: Pearland contemporary 3-2 1/2 low equity. Assume VA load. 2 yrs. old 485-2919.

For Rent: Tree Condominium, one bedroom ground floor, washer dryer and covered parking wood burning fireplace, built in alarm system $325 plus deposit 471-1432 eve.

For Rent: 3-2-2 brick, Dickinson, $425 p.us dep., near schools, no flooding. Marsha 2431/543-2836.

For Sale: Cape Royale lake lot at Lake Livingston. Must sell, owner financing available or will negotiate price. Excellent investment. 488-3246 or 480-5502 after 5 p.m.

Cars & Trucks

'73 Ford station wagon, air, auto transmission, pwr. brakes and steering, radio, htr; good condition $1350, 488-5564

'77 Pinto wagon, 4 speed, a/c, lugage rack, 32,000 miles, exc. cond., $2750. Larsen x3035/538-1477.

'78 Camaro, 28,000 mi. extra clean, ac/ps/pb, 17-18 mpg $4100. Call Mitchell x5961/333-2881 after 6 p.m.

'68 Ford Ranchero GT. 4-speed 302 cu. clean $1000 x3481/488-8569.

'77 Omega V6 eng. excellent cond. body needs little work, asking $1500 Marlin 334-7041/x3801.

'75 Ford Gran Torino, 4 dr. a/c. pwr, clean, exc. condition. $1475, 334-1639.

'81 Renault 18i, 8700 mi., all options, 5spd ac/ps/pb/pw & locks, blk/silver, must sell $10217 sell $7200/best offer. 529-1826.

Household

Full size 1" slate Brunswick pool table good price call Chuck x4730/4739.

Recliner chair, Sears best, burnt gold, A-1 condition, $75. Trebes x6313/333-4374.

25" color T.V. table model good condition $50, 488-4188.

GE electric dryer good condition GE washer with leaking gasket both for $75 Blucker x3533.

French Provincial full-size bed w/mattress and box springs, $75, Nancy x3136.

Sears best L-shaped bunk beds with closet, 4 drawers & shelves 1 yr. old like new. Cost $600 will sell for $375, 482-4279.

8 ft. blue and red couch; comfortable and great for overnight guests; $70 w 480-1889, h 484-6780 Danny.

JSC Exchange Store
(Store Hours 10AM to 2PM)
Plitt Theatre tickets $2.25 each
General Cinema tickets $2.40 each
Astroworld/Six Flags tickets $9.50 each
Postage Stamps/18 cent Books $3.60 each

Any persons that are still holding tickets for the cancelled June 30th Astros baseball game can still receive a refund for their tickets. Please come by as soon as possible so that we can close this account. JSC Exchange Store in Building 11.

Boats & Planes

Membership available super decathlon $50 hr/wet, Piper Seminole (twin) $55 hr/day Cherokee six $62 hr/wet. Aerobatic and multi engine instruction available. Mark Evert x2435 or 482-9103.

FAA pilot ground school $10 instructors/2 seat trainer available, low rates, Gulf Coast Aero Club, w 483-4436 or H 480-2634, ask for Mark.

LIDO-14 sailboat: boat, sails & trailer in new condition, sloop rig, galv-tilt trlr, popular boat, active fleet, large comfortable cockpit with seats, pivoting c.b. & kick-up rudder, easy to rig and sail, $2995 (1k less than new price) R. Hoover 334-2392.

Custom made covers for Glastron GTI500 ski boat & motor, but will fit other 15' boats. Like new $40 call John Mason 5281/333-4144.

16 ft. Glastron sportster XI bowrider ski boat, 75hp Evinrude, galvanized big wheel trailer skis, rope, ladder, cooler, etc., fully equipped, excellent condition, $3960, 337-1840 after 5:30.

Sailboat, 22 ft. Santana with 6 hp. Evinrude and many extras, $6000 Ted x4641/482-8806.

18' Wellcraft fisherman, deep V, cc, 85 hp. Evin., VHF, depth finder, top, trlr, all perfect, $3950, 333-2373/x2267 (Wood).

Baja '79, '18 ski boat, 150 hp. Johnson, ski tow, with equipment, excellent buy. Russ 5851/480-2417.

16' boat-no eng/trlr. 14' 1976 Seacrest boat without engine sportsman trailer $625. 337-1938.

Windsurfer, good condition. Call Jeff Hoffman 583-1643/x4241.

888 Merc-cruiser outdrive, call 482-6660.

For Sale: Bass/ski boat w/'78 VIP 115 HP motor. Must sell. $3200 or any reasonable offer will be considered. 488-8246/480-5502 after 5 p.m.

Lost & Found

Car keys (Ford and Subaru) about 7 keys on ring. lost 8/5/81 between Bldg. 16 and Bldg. 2. If found, contact L. McWhorter/EH2, x4405.

Found: Jewelry in parking lot in front of building 1, describe and its's yours, x5934.

Wanted

Upright piano good shape reasonable priced or will trade full size 1" slate Brunswick pool table for piano. Call Chuck x4730/4739.

Carpools

Carpool wanted from downtown/Allen Pkwy/River Oaks. Ron Cohen x3035.

Want to join or form carpool from Glenbrook Valley/Hobby Airport area. 7:30-4:15 Gil Smith x4235.

JUST FILL OUT A COST REDUCTION REPORT ON A JSC FORM 1150 AND SEND IT TO COST REDUCTION OFFICE BE-3 !

Cartoon by Russ Byther

Stereos & Cameras

Minolta 35mm SLR camera, SR-7 w/1.4 lens, also 85-210 zoom lens, elec. flash, 2x converter, $225; Bays, x4031/488-6465.

Miscellaneous

Atari video computer game system, like new. 488-2822.

Large dog house, suitable for Collie or other large dog. Cedar construction, good condition. $25, 334-1267 after 5.

Roommate needed for house in Bayridge, $200/mo. plus electric, call Dave, x6371/538-2163.

Franklin Mint Serialized collection of 101 Medallions Picturing Great Art Masterpieces. Each 2 in. med. is 24K gold plate on sterling silver, issued from 1973 to 1981. Good investment possibilities. 665-5215 after 5.

"Psychology Today", from beginning to present, missing 2 yrs, box holders. $25. Trebes x6313/333-4374.

Survival foods-be prepared-call 488-4089 after 5 p.m.

Sell IBM typewriter $175. Schwinn girls small bike $25. Mercury 12 HP motor $125. Ice Cream x2761/482-7698.

Ping Pong table $45; Rotisserie/broiler $25; King bedspread $15; scales $8; outdoor phone jack $8; 2 decorator wall lites. Diane, x2646/333-5883.

Extension ladder, aluminum 16', $30 or trade w/cash for 24' or 28' ladder of same type. Bays, x4031/488-6465.

Police/fire scanning monitor radio, Radio Shack Pro-47, VHF-lo/VHF-hi/UHF, 10 channel, like new, $60, Ron Cohen x3035.

Electric Typewriter w/self-correcting feature. Regular automatic keys. Carrying case included. For information call Henderson. 333-7487, $90.

Aerobatic decathlon $55/hr dry free aerobatic and reasonable multi-engine instruction available. Bay Area Aero Club. Mark x2435/482-9103.

Double wall gas furnace w/thermostat ready to install. $100 Ron Gibson x2438/339-2507.

Poker/Game table never used, $30 Michele x3213/554-6107.

Five 15 x 7 white spoke wheels (new) with fair h78 x 15 tires for Jeep $125 Don x2962/585-5391.

Pair of steel belted radial tires GR-60-15 (less than 500 mi.) $150 also good spare $25 R. Casey x4905/334-1410.

Sears 10" radial arm saw, $400 terms 3 good blades. 3 drawer stand. Hardly used 482-5153 eve.

Sears exercise bike. Like new $80 Gail x4952.

John Deere 830 tractor 1974 35 hp PTO, Wilson tilt-deck trailer 16 ft., bushhog mower 5 ft., $6500; R. Sykora x3940/944-9029.

90 % chlorine tablets in 25 lb. plastic pails $75. Francis Smith, x5421/479-8141 after 6 p.m.

New First Flight Persimmon Woods; 1, 3, 4, 5. $160, x3803. Jones.

Cycles

Husky, less engine, $225. Phone: 488-8246/482-6888.

1981 Kawasaki KZ-305-CSR, low mileage, high mpg., extras: carrier rack, sissy bar, engine guard $1500 488-3124 after 6.

1979 Yamaha 125cc motorcross bike, excellent condition 482-5432 David Loftus.

750 cc Kawasaki, windshield, sissy bar, 11,500 mi. Needs clutch cable. $1200 Ken Kuder, x3346/554-6871 after 4.

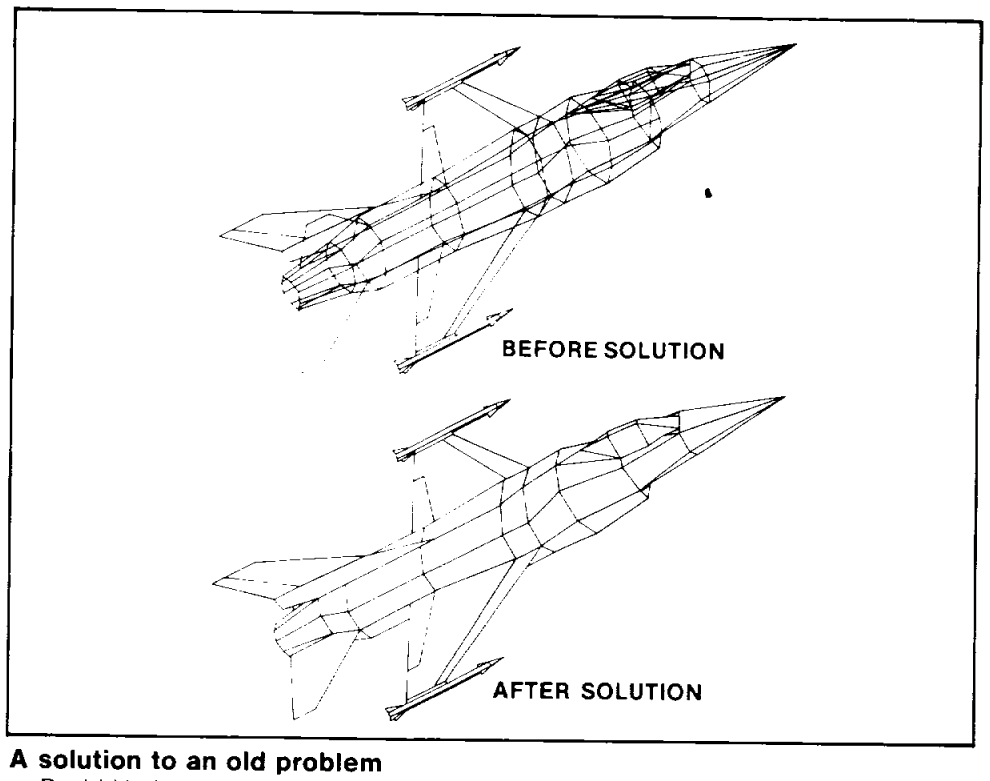
1979 Honda XL75, $400, 1977 Suzuki RM80, $300; both in very good condition, McNeely 482-1549.

1972 TM Suzuki, 125cc, 2 new wisco pistons 2 heads. Needs clutch plates $200 R. T. x2525.

1981 Kawasaki 750-LTD 2000 miles, like new, sacrifice, $2800, 331-2214 Lloyd.

'75 Harley Sportster XLCH, excellent condition, $2150, 488-3265.

1974 Honda XL 100 motorcycle, $325, 488-4915.



A solution to an old problem

David Hedgley, a NASA Dryden mathematician, has solved the solid object computer graphics problem. The top view shows how a computer normally represents a solid object. It shows every line and angle regardless of viewer perspective. But the lower view, Hedgley's solution, shows how a computer has been instructed to delete all but angles and lines visible from the viewers perspective. This is a solution that computer experts have been trying to solve since the early development of computer graphics.

NASA employee solves solid image computer graphic problem

A problem that confounded computer graphics experts since the technology of computer-aided designing began; has been solved by mathematician David Hedgley of NASA's Dryden Flight Research Center, Edwards, Calif.

Hedgley's efficient and effective solution is a new computer program which can be applied to computer-graphic designing of any solid objects and surfaces regardless of complexity, including automotive design, architecture, metallurgy, and anything that can be expressed as a function of two variables.

The problem is that a computer does not "see" a solid object the way a human sees it. The computer defined the whole object at once without regard to one particular or perspective.

Consequently, when asked to produce a picture of the object, the computer would show all the object's surfaces, angles, and curves regardless of whether they are located on the side facing the viewer or on the back, which the eye cannot see. This resulted in cluttered, confusing and ambiguous pictures.

Hedgley's solution permits the computer to depict an object from a specific viewpoint just as the eye would see it, and does so efficiently. Futhermore, the solution works with any object or group of objects, no matter how complex. "We needed to make it general and make it very fast," says Hedgley. "That's what I've done."

Mathematicians around the world have worked the problem for years. Some achieved partial solutions. But until Hedgley's new program, none could be applied to any three-dimensional scene and few were reliably accurate. In fact, specialists considered the hidden-line problem to be the most difficult in the field.

Hedgley's program has just undergone computer testing at Lawrence Livermore Laboratory in California by experts Bruce Brown and Steve Levine. The test verified the solution's workability with respect to speed, accuracy and generality to all cases. Brown and Levine found the speed to be surprisingly high. Previous solutions broke down when dealing with complex scenes because execution time increased with the square of the number of polygons. Hedgley's solution avoids this problem, so it is not hampered when rendering complex objects.

Dryden researchers are starting to use Hedgley's solution in aircraft experimentation. They are finding it highly effective for analyzing wing flutter problems in unsteady aerodynamics. In addition, they have begun creating simple structures on small computers and expect to expand this into simulated aircraft flight — a task requiring a more sophisticated computer. Such simulated flight will enable a pilot to practice chasing a synthetic target airplane by watching the image on a TV-like cathode ray tube. Speed becomes an essential ingredient in this sort of exercise, where the program must be executed rapidly.

1981-82 Federal Campaign begins at JSC this month

Sometimes it's not easy being human. Medical libraries are filled with diseases of the body and mind. And, as if that weren't enough, we humans tend to create many of our own problems. It's all part of being human, and all part of why there's a United Way.

The United Way is an organization devoted to making it easier to deal with the problems of being human. An organization dedicated to making humanity more humane. And since each of us is responsible for keeping the United Way successful, it's like a gift we give to each other for being human.

The JSC 1981-82 Combined Federal Campaign (CFC), an annual fund raising drive for Federal Agencies, began with a kickoff meeting on September 8, 1981. The campaign supports the United Way, the National Health Agencies, the National Service Agencies, and International Service Agencies. The CFC eliminated the old system of several drives a year and provided the use of the Government approved payroll deduction plan which spreads the donation over the year in small convenient installments.

JSC personnel have traditionally given whole-hearted support to the CFC drive. Contributions to this year's campaign will not only help the community, but could possibly help a neighbor, a friend, or a loved one - when they need it most.

Thanks to you it works for all of us.

NASA studies launch impact on environment

Airborne concentrations ranged from 16 parts per million (ppm) peak at 10 minutes to 2 ppm at 2 hours after launch, levels which are not considered excessive. Aluminum oxide dust was deposited from the cloud in areas several miles to the north of the launch pad. Close to the pad, the dust was acidic and caused some localized spotting of vegetation. The area affected by the dust deposits did not exceed four miles in any direction.

Sound levels from the launch were measured at 111 decibels at about three and a half miles from the launch pad. These levels are similar to those produced by passage of a large truck nearby and about 10 decibels less than the sound level experienced at a rock music concert. These levels are very close to the predicted values and are similar to the sound produced in the Apollo launch program. No significant effects on wildlife behavior were observed by U.S. Fish and Wildlife Service personnel.

For STS-2, a more detailed study is planned of the particle fallout from the cloud by aircraft and additional ground collectors to obtain samples. Also, the model used prior to launch to predict cloud travel will be modified to predict the location of maximum dust deposits. Based on more than 12 years of meteorological data, fall winds occur predominently from the east to northeast.

Deposition is not expected to be a problem in areas of the community surrounding the Center, based upon the STS-1 experience and the extensive prelaunch studies.

Until additional information is collected, precautions are planned to protect the public who come into the center to view the launch from any unforeseen effects of the launch cloud. The visitor locations northwest of the Vehicle Assembly Building and in the vicinity of the barge basin south of the Vehicle Assembly Building will not be used during the STS-2 launch. Visitor operations will be centered on the NASA Causeway between Kennedy Space Center and Cape Canaveral Air Force Station and other locations outside a four mile radius of the launch pad.

The launch cloud effect will not be a launch constraint. An extensive monitoring program emphasizing launch cloud fallout will be undertaken for the STS-2 launch in order to enhance the capability to predict the cloud direction, movement and diffusion. An evaluation of the STS-1 data for determination of any long term effects is continuing.

The launch of the first Space Shuttle mission on April 12, 1981, from the Kennedy Space Center, Fla. was the most completely investigated launch in the Center's history from the standpoint of its impact on the local environment.

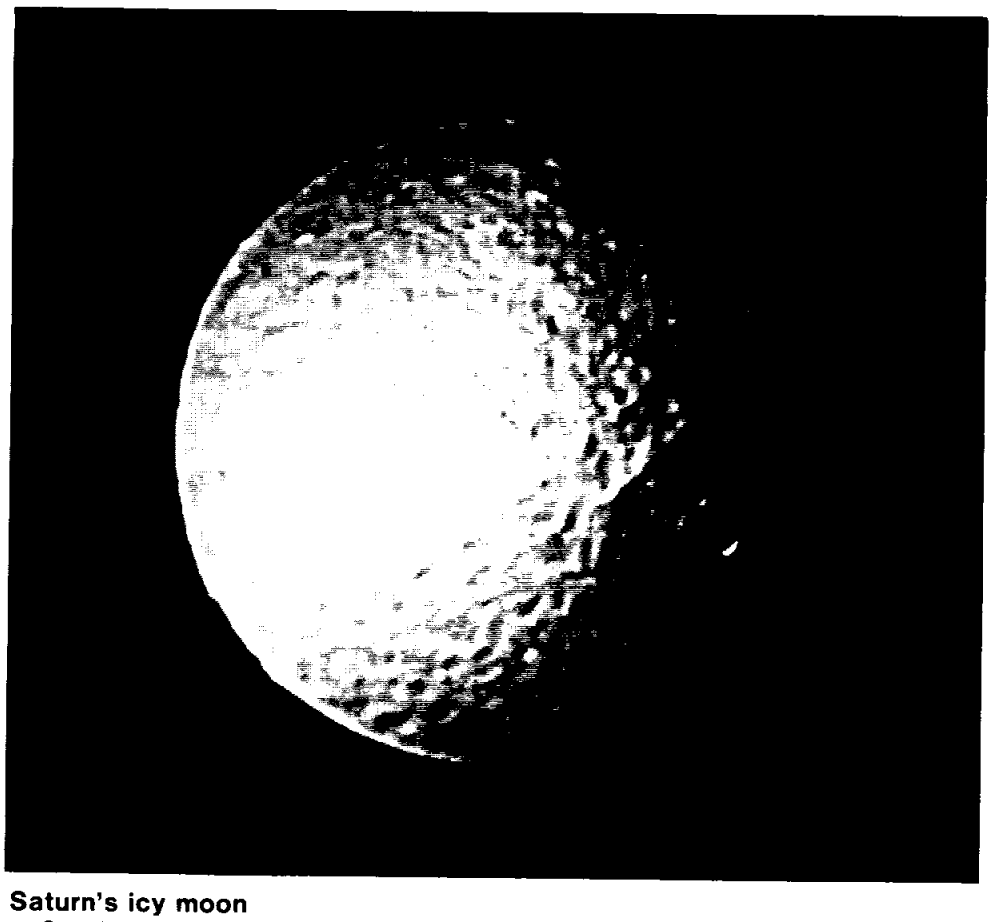
Launch of the Space Shuttle produces a cloud of exhaust products which causes a temporary and localized degradation in air quality near the launch site areas. These areas are also subjected to moderately elevated sound levels of mostly low frequencies for a few minutes.

The direction, movement, and diffusion of the ground cloud have been the subject of an intensive analytical study during the past several years.

A mathematical model was developed which uses the characteristics of the rocket exhaust products and launch site meteorology to predict rise, growth, and dispersal of the ground cloud. To validate the model prior to STS-1, seven Titan launches were monitored at the Kennedy Center using aircraft, ground, and seabased instrumentation to measure cloud concentration and fallout of hydrogen chloride, and aluminum oxide particles. These are the primary exhaust products of the solid rocket motors which are of concern. In all cases, there was reasonable agreement between measurements and the model predictions.

As part of the first Space Shuttle launch operation, monitoring was performed on selected environmental areas to determine ecological effects. These effects were measured by a team of specialists drawn from NASA, the Merritt Island National Wildlife Refuge, the Canaveral National Seashore, the Air Force and several universities.

As predicted, the STS-1 ground cloud travelled north of the launch pad. Hydrogen chloride and dust from the exhaust cloud were measured with a variety of instruments both at ground level and inside the cloud, using aircraft. Gaseous hydrogen chloride concentrations measured at the surface were essentially zero.



Saturn's icy moon

Special processing has brought out surface detail in this Voyager 2 image focusing on the large crater on Tethys. The spacecraft took this photograph Aug. 25, when it was 513, 000 miles from the icy moon of Saturn. Here, resolution is about nine miles. the crater has been flattened by the flow of softer ice and no longer shows the deep bowl shape characteristic of fresh craters in hard ice or rock. It appears to have been formed early in Tethys' history, at a time when its interior was still relatively warm and soft.