

1-24-1990

## Avion 1990-01-24 (B)

Embry-Riddle Aeronautical University

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## Aeronautica

### MD-11 offers efficiency, range, and new technology



Photo courtesy of McDonnell Douglas Aircraft Corp.

**Rollout...**

Replacing the aging fleet of DC-10s, the new MD-11 employs winglets for improved stall characteristics and fuel efficient, high bypass fans.

by Brett E. Messmer  
Aeronautica Editor

On December 30, 1986, the latest long range, wide-body transport aircraft was launched by McDonnell Douglas Aircraft Corporation. Three years later, on January 10, 1990, their efforts came to life with the first flight of the MD-11, after roll-out in October 1989.

Flying over the Pacific Ocean and Edwards Air Force Base, the first flight took the MD-11 to 25,000 feet and 300 knots. The first test of the MD-11 was powered by the General Electric CF6-80C2 engines, with the Pratt & Whitney PW 4460 and Rolls-Royce Trent 650 engines being offered as substitutes for the CF6.

The crew for the first flight consisted of pilot John Miller, former RAF test pilot; copilot Tom Melody, ex-Air Force test pilot, group leader Fred Schreiner, ex-De Havilland Canada/Boeing test coordinator, and senior technical specialist Jack Boman, an ex-Army fixed wing and helicopter pilot.

The flight program is to last for 2000 hours, with four aircraft flying 1600 hours to certify the basic airframe and CF6 installation, with a fifth MD-11 flying for 400 hours to certify the PW 4460 engine.

The MD-11 is the result of redesign work on the DC-10 series, with many improvements over the older design. Most notable among the improvements are winglets, redesigned wing trailing edge with more camber, a smaller horizontal tail with integral fuel tanks, and an extended tail cone.

The most important improvement of the MD-11 is the winglet attached to each wingtip, which extends above and below the wing. The winglet, which has been extensively tested in the wind tunnel and test flown 250 hours on a DC-10, was designed to obtain the most performance for the least drag.

The most radical redesign of the MD-11 is the all glass cockpit. A two-man digital flight deck has replaced the three man crew of past, by automating most of the flight engineer's duties. The new cockpit was designed by a team of pilots, flight engineers, and human relations experts.

The instrument's information is displayed on six 6x8 inch color CRT displays developed by Honeywell's Air Transport Systems Division. The CRT's display primary flight, navigation, engine, and system data.

The new cockpit utilizes "dark cockpit" technology. The term "dark cockpit" refers to the fact that while all systems are running properly, no annunciator lights are lit. When a problem arises, the proper annunciator light comes on and a corresponding message is displayed on the system data CRT, and since all checklists are performed automatically by the computers, the pilot is informed as to what actions were taken.

The autopilot has been replaced with a Flight Control Computer, which is completely digital and combines the functions of autopilot, flight director, autothrottle, and longitudinal stability augmentation system into a single system.

By using the Flight Control Computer, the MD-11 is

certified for automatic landings in Category IIIB weather, which has a runway visual range of 150 feet and no decision height.

The Flight Control Computer also contains a wind shear detection and guidance system that informs the pilot when the aircraft has entered a wind shear condition and gives him commands on how to fly the aircraft out of the wind shear condition.

Dual Flight Management Systems are fitted which automatically control the navigational radios. All the pilot has to do is input the frequencies at the beginning of the flight and the FMS automatically switches frequencies. The FMS also stores any fault information during flight for mechanics to use to minimize down-time due to finding elusive system faults.

The design of the MD-11 is for a wide-body aircraft capable of carrying over 400 passengers 8000 statute miles, cruising at 588 mph at 43,000 feet. The MD-11 will have a range of 8039 statute miles with 323 passengers, and 8234 statute miles with 293 passengers.

The MD-11 is being offered in three different versions: all passenger, all freighter, or combi, which is a combination of passenger and freight. In the freighter version, the maximum weight the MD-11 can carry is 205,700 pounds.

Since the MD-11 offers such versatility, the interior is designed to be easily interchanged between different configurations in the least time, without compromising the high quality of passenger interiors.

McDonnell Douglas expects to finish flight testing and obtain FAA certification in the fall of 1990, with customer orders beginning late this year.

With 312 firm commitments on the order books, airlines definitely believe that this airliner will live up to its predecessor's reputation and then some.

**McDonnell Douglas expects to finish flight testing and obtain FAA certification in the fall of 1990, with customer orders beginning late this year.**



**WANTED:**

Willing and dedicated individuals to write aviation oriented articles for AERONAUTICA



McDonnell Douglas photo

**Progress...**

The new MD-11 cockpit, with its state-of-the-art avionics, is a far cry from airliner cockpits of the past

### Beechcraft's Starship makes a brief stop at ERAU

by Ron Young  
Aeronautica Writer

One of aviation's newest and most sophisticated business aircraft recently made a special appearance at the Embry-Riddle flight line. The aircraft, a Beechcraft Starship, flew in on Friday January 19 at approximately 9:45 and departed roughly one hour later.

President Tallman, Chancellor Dotson, and several other school officials were on hand to greet the arrival of the Starship and its occupants. One of the passengers, Mr. Wayne Densche, is the owner of the first production Starship and the only one to officially accept his aircraft. His plane, Starship number 4, was delivered at the 1989 Paris International Air Show, but immediately leased back to Beech for further testing. As of now no customer is yet operating the Starship.

The particular aircraft flown in, the fifth Starship built, is currently being used by Beechcraft as a factory demonstrator and utilized extensively on a nationwide sales and public relations tour.

The Beech Starship offers its customers an unusually large cabin, a very low noise level and a relatively high cruising speed. The cost is \$3.88 million per Starship. Cur-

rently 40 orders have been placed, of which 28 are now in various stages of completion. Extra options include the addition of a stereo and/or TV. All other features are standard.

The cockpit in the Starship is one of the most sophisticated and thought out in the world. The avionics package includes 14 CRT's, 12 of which are full-color displays. There is full redundancy for ease of use by both pilot and copilot. The heart of the instrumentation consists of two 6x7 inch electronic flight instrumentation system (EFIS) CRT's in front of each pilot.

Additional CRT's provide navigational information and other vital displays. The Starship's comprehensive electronics package is 40% lighter than that used in similar aircraft. It has 65% fewer wires and it occupies just half the space of a conventional installation. A process known as human factors engineering played a large part in the cockpit design.

The Starship's principle structure is that of composite materials. In fact composites comprise 95% of the

airframe components. These composites are formed by using graphite impregnated with epoxy and sandwiched around a nomex honeycomb core. They are then cured in the autoclaves at Beech's Wichita, Kansas plant. The main autoclave, one of the largest in the world, measures 25 feet in diameter and 60 feet long. It has the capability to cure a Starship wing, fuselage, and assorted other parts all at one time. After curing every structural part is tested and cut to fit.

Upon assembly, the Starship appearance is one of an unconventional configuration. The most notable differences include a small forward wing, the placement of the main wing aft of the cabin and the two rearward mounted pusher engines. This arrangement allowed Beech to design a cabin with large capacity and volume. The cabin measures 5.5 feet wide, 5.3 feet high and 16.3 feet long to the beginning of the aft baggage compartments. The composite construction contributes to the roominess of the cabin, since there are only two and one half inches of distance between the outer skin and the interior finish panels; comparable aluminum aircraft require around twice the thickness.

**The cockpit in the Starship is one of the most sophisticated**

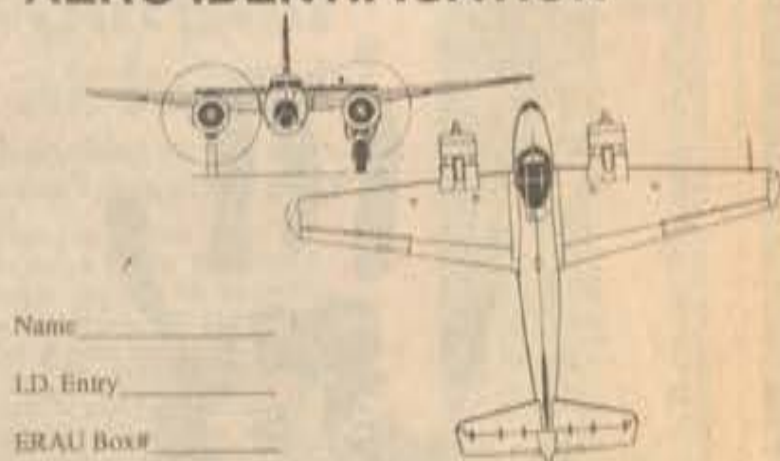


Photo by Ron Young

**The Starship has landed...**

Beechcraft brought the fifth Starship built here to the Riddle flight line. The Starship was designed by Burt Rutan, of Scaled Composites, Inc. Beech uses this aircraft as a factory demonstrator on an extensive public relations tour.

**AERO IDENTIFICATION**



Return this form to the Avion. The exact answer drawn, as the identity of this aircraft, will win a free submarine sandwich of their choice from Sorrento's Deli. The student publication staff, previous winners, and their families are not eligible.

# Arianespace to stretch launch vehicle

by Michael Fried  
Space Technology Writer

Arianespace flight 35 was successfully completed last Sunday at 8:35 p.m. in a long delayed mission because of technical problems.

The mission was scheduled for a Saturday launch, however, weather delayed the mission.

The original launch date, last month, was missed as a problem with the Ariane launch vehicle kept it on the ground. That problem with the navigation system has been fixed, clearing the way for last weekend's launch.

The payload, a SPOT satellite, also experienced a problem during the normal verification tests. The problem with the tape recorder was resolved, and the satellite was successfully placed in orbit.

The Spot 2 joins the Spot 1 which was launched in February of 1986.

The Ariane 35 mission also placed into orbit six small piggyback satellites. It was the first use of this kind of system called the ASAP (Ariane System for Auxiliary Payloads).

Four of the small payloads were microsat spacecraft and the other two were UoSAT satellites.

In other news, *Aviation Week and Space Technology* has reported that Arianespace will be modifying its Ariane 4 rocket for improved performance.

The 3rd stage will be stretched to increase its propellant



ariane 4

### Bigger...

The Ariane 4 launch vehicle has had another successful launch.

capacity by about 300 kg. This, along with previous weight saving modifications will increase the Ariane 44L payload lift capability by 200 kg.

The modifications will be applied to the new launchers just ordered which is for 50 Ariane 4's through the year 1999. The first flight of the modified launcher will occur in 1992.

Arianespace has scheduled a total of nine launches for 1990.

# Atlantis moves towards lift off

by Derrick Seys  
Space Technology Editor

The preparations are continuing for *Atlantis'* upcoming mission which is dedicated to the Department of Defense.

If the stacking procedures go as planned, the entire system, known as the Space Shuttle, will reach Launch Pad 39-A tomorrow. The three mile journey is to begin from the VAB Thursday morning at 8:00 a.m.

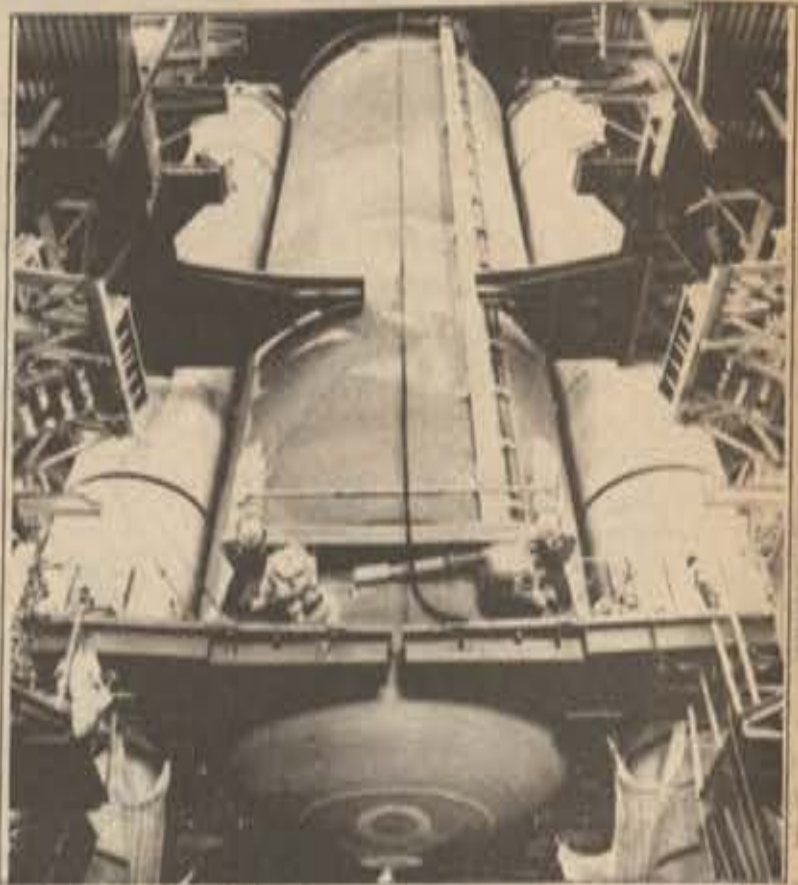
The 6.3 million pound crawler transporter will slowly carry the orbiter and its rocket propulsion systems to the pad. The trip will take approximately eight hours from initial movement.

The orbiter *Atlantis* was moved from the Orbiter Processing Facility (OPF) into the Vehicle Assembly Building (VAB) last week. In the VAB, the orbiter was mated to the external tank and solid rocket booster assembly already stacked atop a mobile launcher platform.

The second Space Shuttle mission of the year will carry one of the few remaining defense payloads committed to its manifest.

The crew consists of J.O. Creighton, John H. Casper, David C. Hilmers, R.M. Mullane, and P.J. Thout.

The five day mission is scheduled to lift off in mid-February.



### Coming together...

The stacked external tank and solid rocket boosters were mated to the Shuttle *Atlantis* last week. The assembly is scheduled to roll out to Pad 39-A today.

# Astronomers find distant star

by Joshua S. Mussaf  
Space Technology Writer

On a clear night, you can often view stars as far as the eye can see, and until now, no one knew the distance to outermost galactic body.

Recently, astronomers accidentally discovered the most distant known star that belongs to our Milky Way Galaxy. The star is located 160,000 light-years from Earth in the direction of the constellation Virgo. This newly discovered star is an isolated member of an immense but thinly populated spheroidal "halo" that surrounds the pancake-shaped disk of the Milky Way.

The star was discovered while astronomers of the National Optical Astronomy Observatories in Tucson, Arizona, were carrying out a survey of the giant elliptical galaxy M49, located 50,000,000 light-years from the Earth in the Virgo cluster of galaxies. The observations showed that the new star, which happens to lie in the line-of-sight to the Virgo galaxy, has a variable brightness.

At 160,000 light-years from Earth, the star appears to be an outlying member of the Milky Way system. Its distance is exceeded only by a few previously known star clusters in the Milky way's outer halo, and is comparable

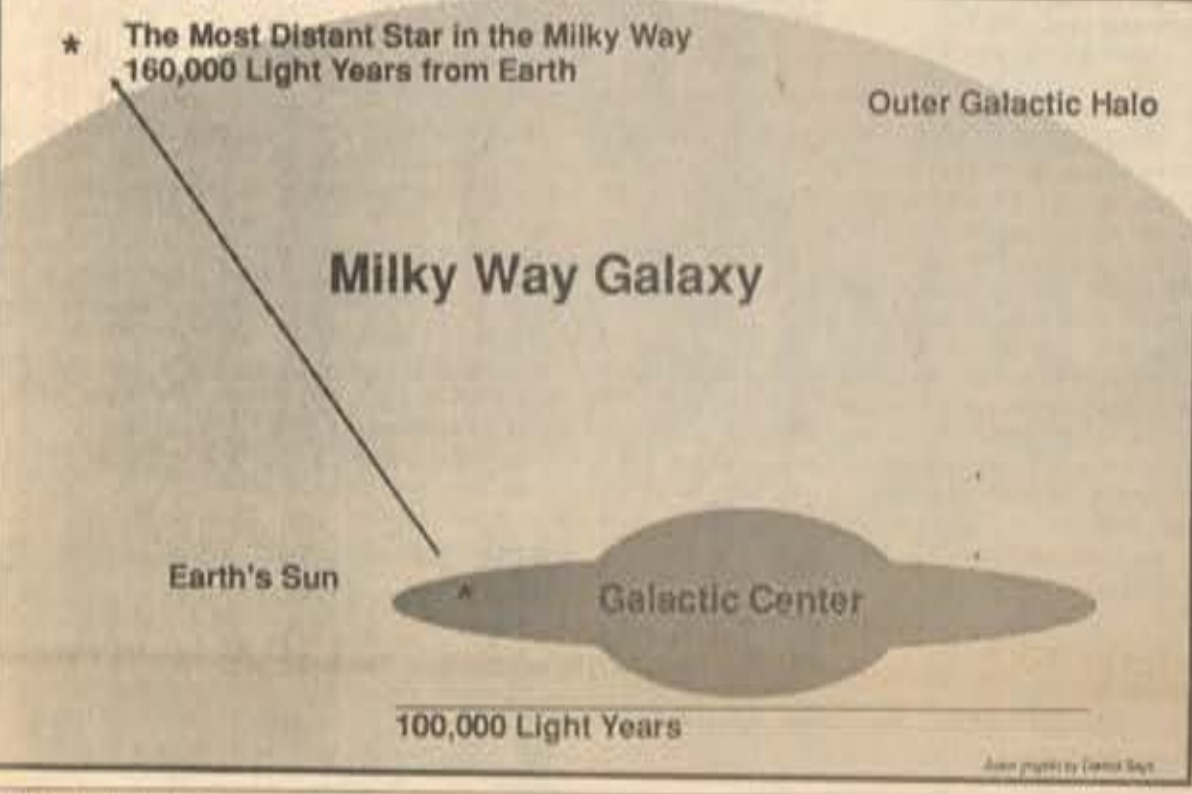
**At 160,000 light years from Earth, the star appears to be an outlying member of the Milky Way system. Its distance is exceeded only by a few ...star clusters...**

to the distance of the Milky Way's two satellite galaxies, the Magellanic Clouds.

Aside from helping to define the outer limits of the Milky Way's domain, the new star may help determine the total mass of the galaxy.

Astronomer Howard Bond of the Space Telescope Science Institute noted, "by measuring the speed of this new, distant star, we could estimate the escape velocity from the entire Milky Way, which in turn would tell us the total mass of the Milky Way, including both the visible and the dark matter."

Even though we are at the gateway to the twenty-first century, our civilization is just at the beginning of determining where we have come from and where we are headed into the deep reaches of our galaxy.



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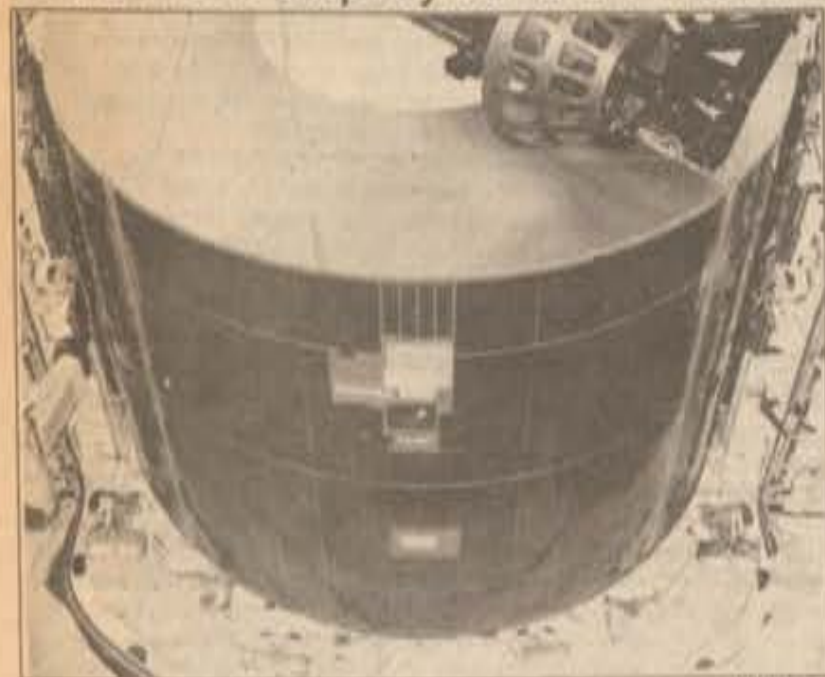
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# Navy's LEASAT system complete

## Columbia deployed a SYNCOM satellite prior to LDEF retrieval



**In orbit...**  
Columbia deployed a SYNCOM satellite and retrieved LDEF with the remote arm seen in the lower left corner.

by Chip Zadrow  
Space Technology Writer  
Kennedy Space Center -- Columbia and its STS-32 flight had a dual purpose mission. The orbiter and its crew not only retrieved a satellite, but they also deployed the last of the Navy SYNCOM satellites.

SYNCOM IV-5, also known as LEASAT 5, is the fifth in a series of communication satellites for the U.S. Navy. The \$85 million satellite was built by Hughes Communications Company.

The satellite was deployed from Columbia by mission specialist David Low during the second day of flight. A perigee kick motor then fired 45 minutes later to carry the satellite up to its geostationary parking orbit.

After moving the orbiter to a safe distance, the astronauts photographed the deployment and the kick motor firing.

51-A on Nov. 8, 1984 from Discovery on its third day of its mission. The mission also included the retrieval of two malfunctioning satellites.

SYNCOM 2 was deployed on STS 41-D on August 31, 1984 from Discovery and its six person crew. This mission was troubled by many mechanical breakdowns and led to a delay of over two months in its launch.

SYNCOM 3 was deployed on April 13, 1985 from Discovery again. After deployment the perigee kick motor used to carry the satellite to a higher orbit failed. The crew made several unsuccessful attempts in and out of the orbiter to repair the satellite. The spacecraft was repaired after over 12 hours of extravehicular activity on STS 51-L and is currently operational along with SYNCOM 1 and 2.

SYNCOM 4 was deployed on STS 51-L and reached geostationary orbit but then failed to operate.



**Lift off...**  
A Martin Marietta Commercial Titan lifted off from Cape Canaveral New Year's eve entering them into the commercial launch business.

# Fallen Astronauts still remembered

by Jose L. Vazquez Jr.  
Space Technology Writer  
It was another hectic day, like many others, at the Cape on January 27, 1967. NASA was going to hold a countdown for Apollo 1 that afternoon. The space program had advanced greatly since the beginning of the decade when President Kennedy guided the American nation towards space exploration.

The early Mercury and Gemini projects had been successful and now it was time to test the Apollo craft that would take man to the moon and back. Before the actual manned launch on February 1967, the three astronauts that would fly were to take part in a simulated countdown to test all the equipment and sort out any bugs on the system.

Astronauts Virgil Grissom and Edward White from prior Gemini and Mercury missions along with rookie Roger Chaffee entered the Apollo command module atop the Saturn IB on launch Complex 34 at about 1 pm.

Fully suited up and breathing pure oxygen the three astronauts had to solve many communication

problems and other difficulties. Then at 6:31 pm the controllers heard news of fire in the cockpit. Within seconds the pure oxygen atmosphere inside the cabin burned like an inferno. The astronauts were engulfed and swallowed by the voracious flames. "We are burning up" was the last agonizing cry heard from one of the astronauts before the cabin ruptured under the pressure that had built up from the hot flames. And so the space program took the lives of the three men that where in the waiting list to go to the moon.

Nineteen years later to the day, seven shuttle astronauts, Ellison Onizuka, Christa McAuliffe, Greg Jarvis, Judy Resnik, Mike Smith, Dick Scobee, and Ron McNair awaited full of anticipation for their historic "Teacher-in-Space" flight. On the morning of January 28, 1986, the seven astronauts suited up and under the cold spell of the Florida winter, the temperature was 25 F, drove to the launch pad where Space Shuttle Challenger awaited eagerly. Their flight had been delayed three times previously.

As millions observed, 74 seconds after it's 11:38 am lift-off, Space Shuttle Challenger exploded in mid-air killing all of the crew aboard. The explosion of half a million of liquid hydrogen and liquid oxygen ripped the shuttle apart with such a fury that debris from the tragic accident was still falling from the bright blue sky an hour later. There was no hope of survivors.

It will be 23 years this coming Saturday, January 27, since the Apollo 1 tragic accident took the nation by surprise. It will be four years this Sunday, January 28, since the fatal accident of Challenger. These are the only ten astronauts that have been killed on the line of duty, but there are others that have also died while training, experimenting, or just putting the space program together. After the Challenger accident a group of companies and private citizens along with some family members of the astronauts killed in the accident created the Astronaut Memorial Foundation to honor all those astronauts that have perished while in the space program. The Astronaut Memorial Foundation will recognize the Americans that fell. They are:

- T-38 pilots
  - Theodore Freeman
  - Charles Bassett II
  - Elliot See Jr.
  - Clifton Williams
- Apollo I crew members
  - Virgil Grissom
  - Edward White II
  - Roger Chaffee
- Challenger seven
  - Francis (Dick) Scobee
  - Michael Smith
  - Ronald McNair
  - Ellison Onizuka
  - Judith Resnik
  - Gregory Jarvis
  - Christa McAuliffe

There are no words that can give comfort to their relatives or erase the mistakes, intentional or unintentional, within the space program. As we all await for better management and technology to take us to the stars and beyond, lets take time out these coming weekend and pay tribute to all those Americans that as President Ronald Reagan said, "...slipped the surly bonds of Earth to touch the face of God."



**Remembering...**  
The remaining structures of Launch Pad-34 remind us of the three astronauts who lost their lives testing the Apollo spacecraft systems. Edward White, Virgil Grissom, and Roger Chaffee died January 27, 1967.

## Embry-Riddle Aerospace Society

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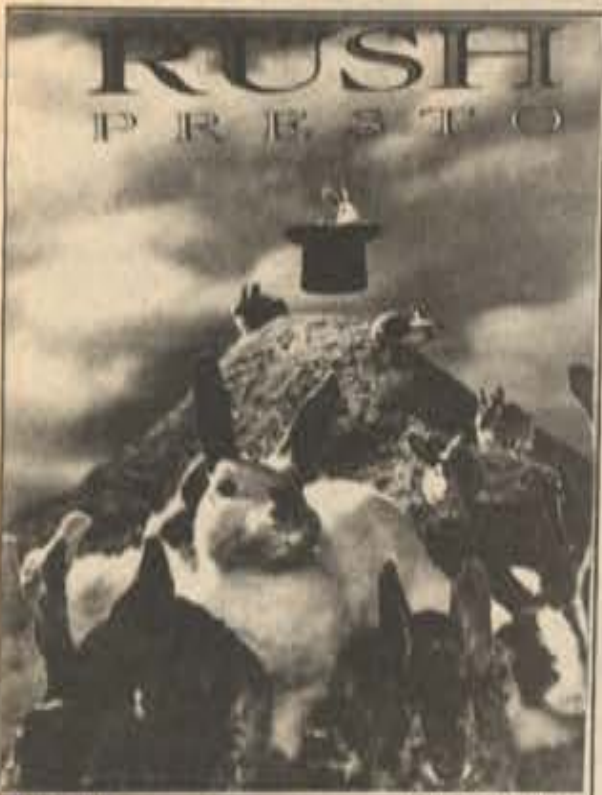
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# Rush enters the new decade with a blazing CD



By David Fekke  
Diversions Editor

Rush is one of the few bands still around from the mid 70's that is still going strong. Not many bands have been able to transition from the 70's to the 80's and now the 90's.

They have proven this with their new release, *Presto*, and now with the upcoming release of *Chronicles*, this trio will be unmistakable as a band with a great future and a great past.

Rush changed hands from Polygram records to Atlantic this past year. This is why Polygram is probably releasing *Chronicles*. They want to get as much money out of the deal they had with Rush. The due date for this new album should be February, but it has already been moved back since October of 1989.

The trio is made up of Geddy Lee, on the bass guitar, synthesizers, and vocals; Alex Lifeson, on electric and acoustic guitar; and Neil Peart on the drums and percussion.

Both Lifeson and Lee have received notoriety for being excellent musicians (and the two original members of the band), but the member of the band that gets almost all the talk is Neil Peart. Besides the fact that Peart is thought of if not the best, one of the best drummers in the recording industry, he also writes all of the lyrics for their songs. Peart is an English Major. All these members are from the bordering country of Canada.

In making this album, Rush went back to look at some of their original music they had done in making their first couple of albums. The last couple of albums that Rush has done have been more orientated towards the synthesizer. On this album the music is more geared towards rhythm guitar, and a little less soloing.

"Show Don't Tell Me" demonstrates this new attitude

in the band. This song starts out with a little bit of tommy percussion and then the guitar kicks in. This is one of the most rockin' tunes on the album. The song looks at the controversy in the classrooms of creationism over evolution. The song also features a very good base solo.

The next track on the album is "Chain Lightning." It has a much different format than the first song. This song also has the best guitar solo on the album. The chorus in this song is very interesting. respond/vibrate/feed-back/resonate. This track has very unique rhythms in it.

"The Pass" has a great base line on it. This song might be called a ballad. The song has a very melodic background, while continuing to maintain a sharp, gripping front sound.

"War Paint" is also a very exciting track. This song is a little more upbeat then you would think it would be from the lyrics. The music in this is well written along with the lyrics.

"Scars" is a little more funky than the rest of the songs on this album. With the very quick beat, the guitar line feeds in and out of the song. This track has many different tones throughout the song. The one line in the song that repeats over and over is "I get this feeling."

The title track, "Presto" starts out with Geddy singing and Alex on the acoustic guitar, and then moves into a more progressive mode. This is probably the prettiest song on the record.

"Superconductor" is packaged like a Rebel, just the first line states. This another really rockin track on the album.

The guitar is gut-wrenching and moving at the same time. It shows the trio's move from their previous albums.

"Anagram" has the same quality as "Superconductor." The keyboards and guitar however successfully intertwines throughout the track. About half way through the song there is a bizarre keyboard solo.

An electric piano kicks off "Red Tide." The lyrics mention many of the environmental problems that we are experiencing in both Canada and the U.S. This song has a very good guitar line from Lifeson along with a burning guitar solo.

"Hand Over Fist" is very conceptual in both music and words. This song combines the usual keyboards with intertwining acoustic and electric guitars. This definitely the best song on the record.

The last song, "Available Light," is probably the most technical one. It combines all the musical factors together making it more fusion oriented. They have been leaning this way for many years now. This song is highlighted by a very rhythmic drum track, making the song very precise.

A lot of the different sound on the album comes from their producer Robert Hine. Some Rush fans will be unhappy to hear that Hine plays some background keyboards, and some additional background vocals.

All in all, Rush fans should be pleased by the new album. All of the Rush albums have been good, but this album is better than the past couple of albums.

Rush will be coming to the Orlando Arena February 23. It should prove to be an exciting concert considering the new vitality of their new album.

*In making this album, Rush went back to look at some of their original music they had done in making their first couple of albums*

**Presto...**  
Rush's new CD, *Presto*, is soon to be followed by *Chronicles*, a new compilation of works being released by Polygram Records.

## Movie Rating System

- \*\*\*\*\* **In Flight**  
An excellent, movie worth seeing twice
- \*\*\*\* **Takeoff**  
A good movie, worth the money
- \*\*\* **Taxiing**  
A fair movie, worth seeing
- \*\* **At the Gate**  
Wait for the videotape
- \* **Crash and Burn**  
Not worth time or money

## Top videocassette rentals:

- |                 |                  |
|-----------------|------------------|
| 1. Working Girl | 6. Beaches       |
| 2. Roger Rabbit | 7. Dream Team    |
| 3. Rain Man     | 8. Naked Gun     |
| 4. Major League | 9. Her Alibi     |
| 5. Pet Semetary | 10. Tequilla Sun |

## New videocassette releases:

- |                  |               |
|------------------|---------------|
| 1/25             | 1/31          |
| Karate Kid III   | Indiana Jones |
| UHF              | Last Crusade  |
| New York Stories | Pink Cadillac |
| Turner and Hooch |               |

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# Stone releases another movie about the Vietnam Era

by Joe Cambron  
Managing Editor

What is perhaps the last decade's finest film is now in theaters. The film may seem dated by that description, but *Born on the Fourth of July* could never be more pertinent than it is today.

Tom Cruise holds the lead role in what could only be described as an epic. Oliver Stone's (*Platoon*) rendition of the moving novel is no less startling, and at times simply sickening. Its truth is its virtue, and its theme as well. The film charts the real life of now Congressman Ron Kovic.

The film's gripping beginnings are to be found in the mind of a child. Honor, glory, and patriotism are all simple concepts, but they are much less simple to a child, and sometimes even to a teenager.

Oliver Stone sets the scene of a small boy playing soldier, watching the veterans parade, all the while longing to be in uniform. The child, a winner and a loser, is not extracurricular,

but he takes pride in his efforts and tries hard to live up to his potential.

All these same values blend with those offered to him by the Marines. The appearance of an apparently disciplined and decorated recruitment (Tom Berringer) officer at his high school assembly pushes him into committing to the war in Vietnam.

Kovic's mother supports his "patriotic decision" to be willing to pay the highest price for the deterrent of Communism's spread. His father, however, is more reluctant.

Kovic's day comes as his last homecoming dance bleeds into a view of his second tour "in country." Now a Sergeant on patrol near the beach in Vietnam, his brigade stumbles upon a small, quiet village. His Commanding Officer (CO) hands him a pair of binoculars, and asks, "You see those rifles?" Carefully surveying the area, he only sees a few villagers running amongst broken down buildings. He responds negatively.

Again he is asked, "You see those rifles?" Still not seeing them, he begins to reply "no" to a stern faced CO. Giving in to the pressure, Kovic gives in, responding "Yes, sir..." "Tell the boys to fire on my command," responds his commander.

After firing a barrage, a small group of Marines moves forward to inspect the spoils of their victory. All they find, however, is a small hut emitting a baby's terse cries. Inside lay the bodies of a dozen dead or dying women and children, slain by the Americans' bullets.

This moment haunts him for the rest of his life, and is only made less gruesome by the scenes that follow. While trying to help the wounded, the Viet-Cong begin an artillery barrage on their position, forcing his fellow Marines to scatter. Cruise's CO pull's

him from his work and orders him to seek cover elsewhere.

Under fire, he runs and crawls through the dunes. Jumping over one particularly large dune, he lands on his side and rolls down to the bottom of a small valley. There, he is forced to fight enemies in the distance that are obscured by a blinding glare caused

by the setting sun.

After firing round after round, an armed figure comes at him from atop a dune towering over him. Immediately he fires, only to discover the now dead figure was his CO.

The guilt caused by his actions cover Kovic like a suffocating blanket. He tries to report his mistaken murder of a superior officer, but the same attitude he encountered before is prevalent.

He is ordered to conclude that he did not kill his friend. Probably for the first time in his life, he did not follow orders.

In what he feels is punishment for his indiscretions on the battlefield, he suffers severe wounds the next day that nearly kill him. The stinging and hauntingly realistic portrayal of the MASH hospital to which he was airlifted casts such dire dispersions on the authenticity of the TV show.

Though given his last rites while waiting for surgery, Kovic survives albeit permanently crippled.

The remainder of the film contains its point. As Ron Kovic becomes more and more jaded with his situation, he begins to sympathize with the anti-war demonstrators that he originally thought of as dead-beats and "conies."

*Born* documents the plight of all veterans who feel betrayed, lied to, or used by the government for a mission which it had no means of salvaging.

The more than 150 minute film is unparalleled in the modern cinema, and the awards it garners may outnumber its minutes. The evolution of character is difficult to watch for many reasons. The extremes are stretched to the maximum.

Those who are easily offended will, quite frankly, most assuredly find whatever it is they least desire to see. Nevertheless, even those patrons may take solace in the film's authenticity. It is an autobiography of truth, at least from Kovic's perspective.

Appearances by William DaFoe as another crippled veteran, the late Abbie Hoffman as a professor, and Edie Brickell as an anti-war vocalist all help weave a gruesome tapestry of twisted truths.

With Americans' so willing to go to war, as witnessed by the impudently supported of the Panama invasion, this film should harken at least some thoughts of war's ugliness to America's collective conscience. Films such as this one have the power to change people's minds, and this is what set them apart. (\*\*\*\*\*)

**The more than 150 minute film is unparalleled in the modern Cinema...**

# A trip to see Letterman becomes an odyssey for one fan

by Joe Cambron  
Managing Editor

For those unmotivated, or lacking commitment to *Latenight with David Letterman*, the following tale may only seem farcical, but to Dave's devoted minions it is a tale recounted often-though with subtle differences. This *Latenight* pilgrimage began only a few days into Winter break, but is definitely more memorable as a result.

### Making preparation

For those who have attempted to obtain tickets to the hip talk-show "there will be a wait" is a familiar refrain. In fact, the wait for tickets now stands between two and three years. Undaunted, this reporter soon began exploring other avenues from which to obtain tickets.

Other than begging, borrowing, or stealing; there is but a single option... "Stand-By". Although troublesome enough when forced to "Stand-By" for something as simple as airline tickets, the process becomes expensive and quite possibly fruitless in this case.

With transportation taken care of (a friend at an airline) and accommodations wrapped up (a friend in Connecticut) things seemed set. A 10:30p.m. arrival in Bridgeport, a train to Manhattan, and a wait in the notorious Letterman "Stand-By" line (arriving at 3 a.m. is not unusual).

### The Manhattan adventure

Things started out fine, the plane was on time and the last train left at 11:45 pm, but from there things went awry. After arriving in decorative Grand Central Station, and trodding over the frozen refuse and their accompanying bodies, New York offered a cold welcome (8° F). Eight blocks later it was in sight, 30 Rockefeller Center. The NBC/General Electric Building. Its warmth welcomed us,

and we took a seat outside a door marked "Letterman Tickets distributed at 8:15 am. It was 1:45 am.

Settling down "for a long winter's nap", we were awakened by diminutive guard straightening his cap. The guard informed my partner and I that the building had recently been bought by Japanese investors. A meaningless transaction, right. Apparently not.

Forced out into the cold, literally, we trodded the New York streets looking for warmth and safety, neither are prevalent at anytime in New York City.

Plotting a course towards Times Square, and what the guard described as "reasonable accommodation", we visited several places that dishonor the word "establishment". Others were simply unreasonable. Holiday Inn was \$275 a night. Feeling sheepish, being that we were two guys in Times Square looking for a room at 2 am in the morning.

After several other hotels offering accommodation in a higher price range, we returned to the Hotel Consulate. The heat was now working, but the elevator was not. Feeling confident, the door opened to exhibit a hall with peeling doors and pipes hanging from the ceiling and the walls. Settling in, a plethora of noises made of difficult to sleep. Two doors down was a man playing a tuba. Above, it sounded as if a man were tossing bowling balls at his floor bound love slave. In the hall, an occasional hard knocking on the door would crop up occasionally, with some ap-

parantly lude comment. It definitely made the mourning more exciting.

### Waiting in line

At 5:15am we woke and returned to our vigil outside the NBC ticket office, where seven others had arrived just before us. Three hours later, my hand grasped a blue printed ticket numbered eight. With orders to return at 5:00 pm for "the possibility of attending a taping." Satisfied, we headed back to our beds and slept into the afternoon.

The line began reassembling at about 4:30pm, and having little else to do, we took our place. After an anxious 45 minutes, NBC pages took us past security and into the elevators leading to the studio. We were directed to the left-most side of the audience and took our seats a row above the balcony.

### In the Studio

Bill Wendell (the announcer) then informed us of our responsibilities, and we welcomed Dave for the pre-show warm-up which consisted mostly of Christmas gifts for Dave from two dozen audience members. Putting them aside, Dave generally made fun of selected audience members as the band began to play the opening theme. Exiting prior to the opening montage's completion, Dave reappeared almost instantly to perform his monologue and return to his desk. After mentioning Bjorn Nimo a few times and announcing "Ms. Noriega's Top 10 Pet Peeves",

the show broke for a commercial and the band played as Dave wandered around the set speaking to Paul Shaffer and producer Robert Morton. During the commercial, a still picture or "bumper" which is seen before and after breaks on TV was shown on studio monitors.

Coming back from the commercial, Tracey Ullman visited with Dave for a few minutes. During the next break, Tracey's manager "pow-wow'd" with Robert Morton, Tracey, and Dave.

Tracey's final segment preceded the double long commercial that occurs in the middle of the show. During this time, the band stopped playing and Dave taped the short promotional ad that shows during the *Tonight Show*.

The lights came up as the commercial ended and "Ask Mr. Melman" offered the audience a chance to be on national television. Happily, my party was lucky enough to be sitting in a particularly advantageous position. One that placed our unbelieving faces on camera for several minutes.

Coming off this high, Dr. Buzzard, the author of *Who Do You Voodoo, You Do*, unintentionally entertained us with his anebriated escapade. With the cameras off, Letterman threw down his arms and stormed off.

Back on again with a poor comedian, the camera failed to capture Letterman slumped over on his desk, apparently bored out of his mind. He returned to life, however, as his spotlight flicked on and he uttered the standard comedian accolade, "Good job, good job."

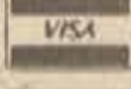
One more commercial and the show was over. Dave exited quickly only saying, "Thanks for coming." Our odyssey was over nineteen hours after it began.

**Letterman hopefuls are no longer allowed to place themselves in 30 Rock's hallowed halls until 5:30 am**

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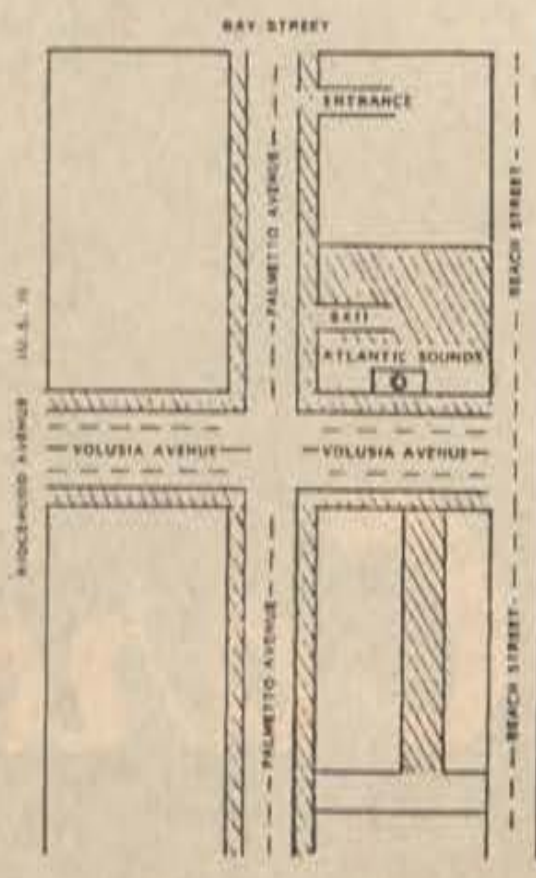
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Wednesday-Legs contest  
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by Bill Waterson



## Far Side

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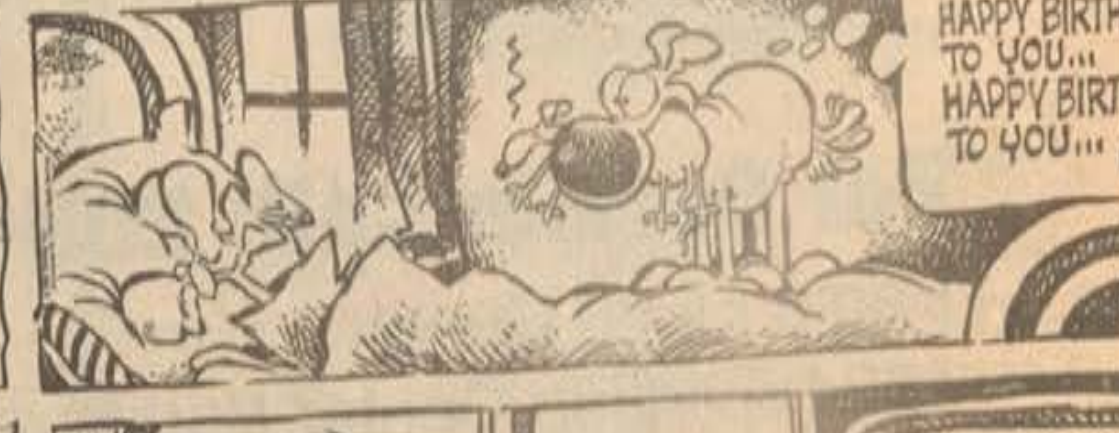
## Mother Goose and Grimm

by Mike Peters



## Mister Boffo

by Joe Martin





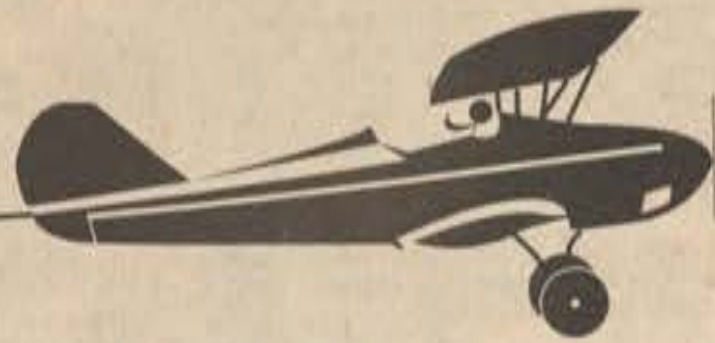
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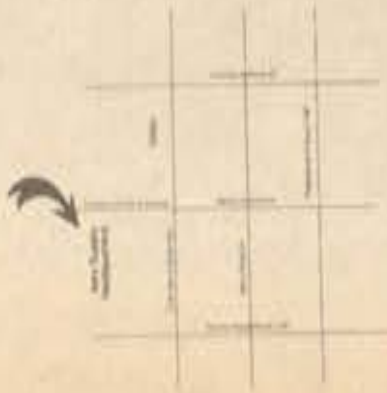
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**Notices**

**Counseling Center Programs Spring 1990**

*Experience+Plus!*

We are looking for "non-traditional" students who are interested in getting with other such students to join our group called "Experience +". Here at ERAU, a "non-traditional" student is defined as someone who initially entered college after a break of four years or more from academic studies. The purpose of this group is to form a supportive social network as well as to discuss issues that affect the non-traditional student. The group will meet for monthly luncheons.

If you are interested, please contact Lynne Norris or Patty Ruddy in the Counseling Center, 239-6035 for further information.

*Improve Your Reading Memory*

Tuesday, January 23, 1990 from 1:30 to 2:30 pm in the John Paul Riddle Student Center, Conference Room. Approaches to reading that can cut down the time spent and increase your comprehension.

*Communicate! An Experimental Group*

One of the largest pitfalls in today's relationships occurs because of the misperceptions that cause conflict between people. Statements such as "I can't understand my girlfriend/boyfriend/the other sex..." will be addressed through viewing video clips from current popular television programming. The group will meet weekly for four two hour sessions, during the weeks of February 5 - February 26, 1990. The group size is limited. Interested persons need to make an appointment, to discuss the group, in the Counseling Center during the week of January 29 - February 2, 1990.

*Test Taking Tips*

Tuesday, January 30, 1990 from 1:30 to 2:30 pm in the John Paul Riddle Student Center, Conference Room. Learn ways to prepare for tests, combat anxiety, and take exams efficiently.

*Self-Management and Motivation*

Tuesday, February 6, 1990 from 1:30 to 2:30 pm in the John Paul Riddle Student Center, Conference Room. Learn how manage to your time so that you can relax without guilt. Also learn how to get going when your get up has gone and went.

*Passion Panel*

Tuesday, February 6, 1990 at 8 pm in Dorm I Lobby. Relationship counselors, medical professionals and students will address questions regarding sexuality, dating, love, communication, and related issues.

**Orientation leader position**

Applications for Orientation Leader are now being accepted. Position descriptions and applications are available in the Counseling Center. Deadline to apply is Wednesday, February 7, 1990.

**Flight Deck announcement**

In order to allow Career Day to take place in the Student Center. Services will resume as usual on Friday, Jan. 26, 1990.

**Degree completion and commencement**

According to University Academic Policies and Procedures, every student must make formal application with the Registration and Records Office for degree completion. Due to the fact that there are now two commencement ceremonies per year, new procedures have been devised. Formal application for degree completion may be made with the Registration and Records Office. A second form designates which commencement ceremony the student will attend, information for ordering cap and gown and information for commencement program. Both forms must be completed and submitted to the R & R Office no later than the application deadline published in the University calendar and the AVION "Notice" section.

Forms are now being accepted for April '90 and August '90 degree completion. If you are requesting April ceremony attendance, there is a separate form to fill out. Any Summer '90 degree completion people desiring Fall '90 ceremony attendance should so notate it on this form. If you do not wish to attend either ceremony, only fill out the "Degree Completion" form. Forms will be left with the R & R Office and checked for eligibility. If you are found ineligible for degree completion or ceremony attendance, you will be asked for degree completion or ceremony attendance, you will be asked to re-apply at a later date.

Applications received after the published deadline may cause the prospective graduate to relinquish privileges for participation in commencement exercises, publication of student information in the program, eligibility for Chancellor's Award and announcement of Graduation Honors. Diplomas will not be available will not be available after the ceremony for "Late" applicants.

Anyone who has already applied to the R & R Office for April '90 degree completion (and ceremony attendance) and received a Preliminary Evaluation need not re-apply.

Please be aware of your responsibility for application in order that your degree completion may be a smooth one.

**Career Day 1990**

The Career Center will sponsor Career Day '90 on Thursday, January 25 from 9:30 a.m. to 4:00 p.m. in the John Paul Riddle Student Center (formerly the University Center). All students and alumni are invited. Following is a list of employers who will attend to talk about career opportunities: Aeronautical Radio (ARINC); AIG Aviation; Air-Sur; ALPA; America West Airlines; American Eagle; AMR Combs Florida, Inc.; Atlantic Aviation Corp.; AVIALL; The Boeing Company; Calocerinos & Spina Engineers, P.C.; Continental Airlines; Cross Continent Aircraft Services; Eastern Airlines; Elsinore Aircraft Services, Inc.; ERAU Graduate Studies & Research; FAA; FAA Technical Center; FBI; Federal Express; F.N. Wolf & Co., Inc.; General Electric Co.; Greater Orlando Aviation Authority; LoPresti Piper; McDonnell Douglas; Nassau Flyers; Naval Aviation Engineering; Northwest Airlines; Northwest Airlin; Pratt & Whitney; Sales Partner Systems; The Space & Rocket Center; U.S. Air Force; United Airlines; U.S. Aviation Underwriters; U.S. Office of Personnel Management; World Airways.

This is an excellent way to gain information and meet representatives from a variety of companies in a single setting. Many employers will remain on campus on Friday to conduct formal interviews with Seniors and Alumni.

**Spring 1990 housing still available**

Spaces are still available in University-managed housing. If you want housing or know of someone who wants housing, a contract can be picked up in the Department of Housing located in Rm. 278 of Residence Hall II.

**Attention April graduates**

The first meeting for April Graduates will be held in the Student Center at 8:00 p.m. on Wednesday, Feb. 7, 1990. Graduation information will be reviewed at that time. Elections for Seniors Class President and Vice President will take place.

If you are interested in running for Senior Class President or Vice President, please schedule an appointment to meet with Laurie Rabin by Friday, Feb. 2, 1990. The Senior Class Council will be selected after the meeting on Feb. 7, 1990. The group consists of 20 to 35 volunteers for graduate's guests, raise funds for the class party, keep the class informed of their progress, and socialize prior to Graduation. If you are interested in being on the Council, we will meet immediately after the Graduation meeting.

**Simuflite scholarship**

The Simuflite Corporation at Dallas, Texas has provided two scholarships per year to Embry-Riddle Aeronautical University students. The scholarship is composed of approximately \$8,000 in training in either the Citation or the King Air Phase II simulators and \$1,000 for expenses. To be eligible for this scholarship, the following criteria must be met: 1) Complete all degree flight requirements at ERAU, 2) Currently enrolled as a full time student at ERAU, 3) Have a minimum CGPA of 2.8 with a minimum GPA of 3.0 in Flight and in Aeronautical Science course work, 4) Possess Commercial Instrument and Multi-Engine ratings, 5) Recommendation from a previous flight instructor and the appropriate flight training manager, 6) Two letters of recommendation from Aeronautical Science faculty. Candidate must have had each of the faculty members for at least one upper level course.

Pick up applications at Aeronautics Office, 123 (New AWS building) Application data due into Aeronautics by end of day on Friday, Feb. 2, 1990.

**Creations editors and submissions needed**

All those who expressed interest in "Creations" in Fall 89 are requested to contact Ms. Berg ASAP so the staff can read and organize submissions.

Submissions are being accepted now at Rm. A-230, building A-111, or student box 5998.

Editors please contact Ms. Berg in Rm. A-230 right away, so we can get rolling with this.

**Sign up for fall 1990 housing**

New contracts for university-managed housing for Fall 1990 and Spring 1991 will be available in the Department of Housing during Feb. 5-16 in room 278 of Residence Hall II. If you are interested, you need to complete the contract, pay the \$150 prepayment, have the Cashier validate your contract, and then submit it to the Housing Office. You may complete this process anytime during this two week period; however, any contracts submitted after Feb. 16 will be placed on a secondary waiting list. Contracts for continuing students will be randomly selected for the available spaces. Therefore, this does not guarantee everyone a space.

Housing fees for the Fall 90 and Spring 91 terms are as follows:

Residence Hall I	\$860.00
Residence Hall II	\$860.00
Apartment Complex I	\$808.00
Apartment Complex II	\$960.00

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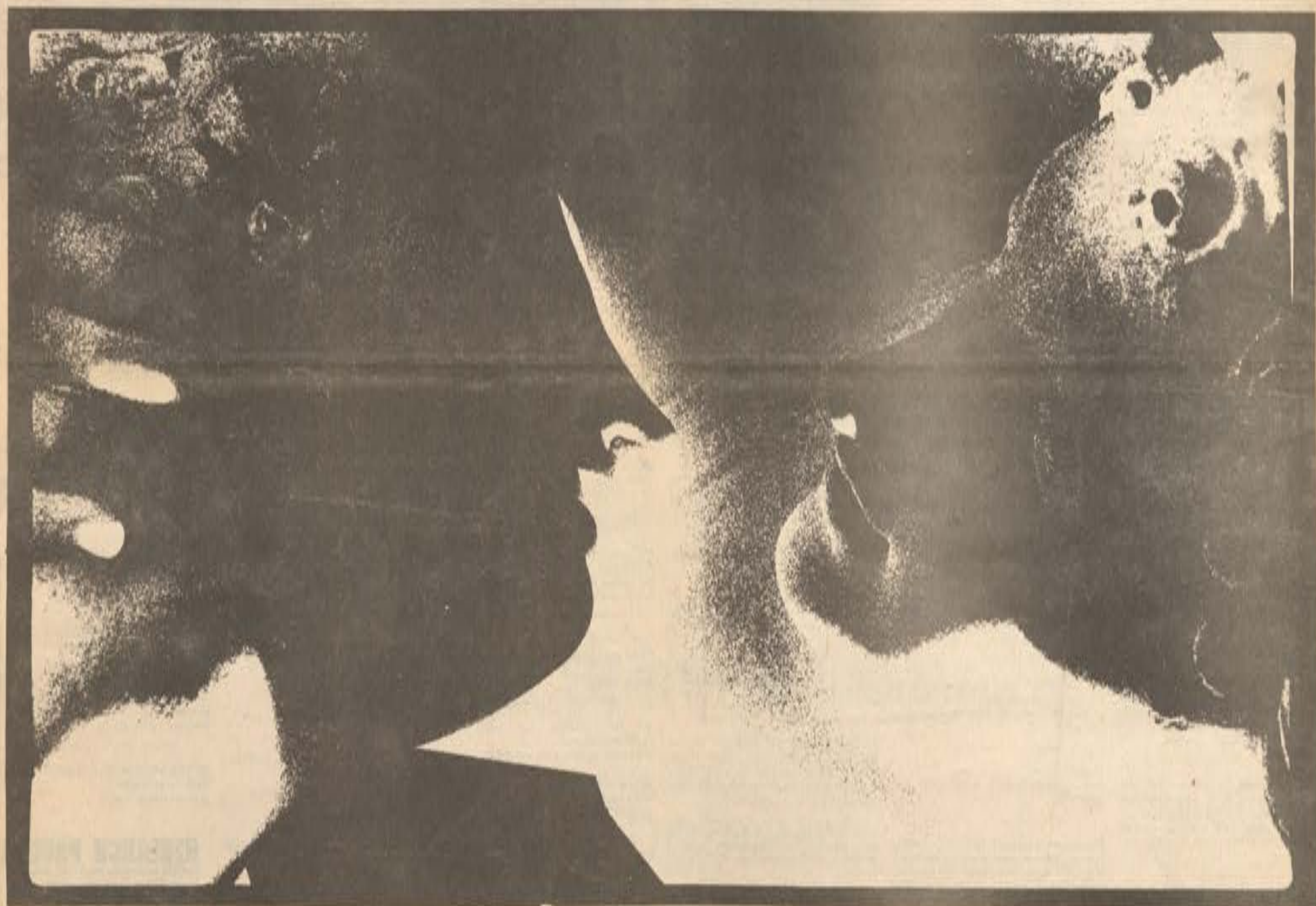


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