O.S.O.
O.G.O.
Pegasus
O.A.O
Bio-Sat.
ERTS
Echo
Telstar
Relay
Syndom
Intelsat
Oscar
Tiros

Nimbus, ESSA, IDCSP
ATS, Discoverer, Mjolnir

FORT CANAVERAL MAR 7 P.M. 1962 FLA.

4c U.S. MAN IN SPACE PROJECT MERCURY

THE STORMY SURFACE OF THE SUN

TODAY
SOLAR
OBJECT

O.S.O.7

CAPE CANAVERAL FL SEP 29 PM 1971 32920

8c

- To Study Solar Corona At 5 Million Miles From Sun
- Measure X-Ray & Ultra-Violet Radiation From Plasma Explosions Causing Disruptive Communications In Earth's Atmosphere For Re-Entering Astronauts.
- Piggyback Test & Training Satellite-D Orbited.

O.S.O. 3

CAPE CANAVERAL MAR 8 A M 1967 32920

5c

- To Monitor Zodiacal Light
- To Scan Solar Corona In White Light
- To Measure Cosmic Gamma Ray Radiation
- To Map Sun's Ultra-Violet Light

-Launched by Delta
June 21, 1975 7:43 AM EDT

NASA

348 x 338 mi. orbit

-HUGHES

CAPE CANAVERAL FL JUN 21 A M 1975 32920

MARINER 10 * VENUS/MERCURY

US 10c

-DESIGN FEATURES "SAIL" SECTION THAT CAN BE CONTINUALLY POINTED AT THE SUN
-SPECIAL STUDY OF CURRENT MINIMUM PHASE OF ELEVEN YEAR SUNSPOT CYCLE

OSO-8

Prime Goal:- To Obtain Better Spectral Data On Energy Transfer Between Different Layers of Sun

-MOST ELABORATE ARRAY OF X-RAY TELESCOPES EVER LAUNCHED

OSO 3
ORBITING SOLAR OBSERVATORY

CAPE CANAVERAL FL MAR 8 A M 1967 32920

5c

SOLAR SAIL

DRUM

OSO-3 will study the structure and composition of the Solar Corona through X-rays, and attempt to discover the origin of sun spot explosions to protect our future space travelers.

CLYDE J. SARZIN
PORT WASHINGTON, L. I.,
NEW YORK, U.S.A.

SOLAR SATELLITE OSO-8

2300 Lb. Spacecraft •
Carries 8 Experiments

CAPE CANAVERAL FL JUN 21 A M 1975 32920

MARINER 10 + VENUS/MERCURY

US 10c

- 8th and Final Orbiting Solar Observatory
- Primary Objective : To Investigate The X-ray and Ultraviolet Radiation in The Chromosphere/Corona Interface, A Turbulent Gaseous Band Around The Sun.
- Will Provide Better Understanding Of Energy Transfer In The Sun's Atmosphere.

• AFETR Test No. 5300

Launched by Delta III
Complex 17 • 7:43 A.M. EDT • 21 June, 1975

C.C.P.S. Gen. Del. 32812

Christmas

CAPE CANAVERAL FL JAN 15 AM 1970 32920

6c UNITED STATES

INTELSAT 3, A SUCCESS
Jan. 15, 1970 Cape Canaveral Commercial Communication Satellite fired into a giant elliptical path ranging from 165 to 22,700 miles above the earth. Before being kicked into final stationery orbit above the Pacific.

C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050

Pacific Station

COMSAT

KENNEDY SPACE CENTER JAN 24 AM 1972 FL

KSC

8c

Launched by Centaur, Jan. 22, 7:12 pm EST

3rd
INTELSAT IV

-to transmit President's trip through special 50 ton station in China

INTELSAT III

CAPE CANAVERAL FL JAN 15 AM 1970 32920

In the beginning God...

APOLLO 8
SIX CENTS · UNITED STATES

INTELSAT III
UNITED STATES
EUROPE
INTELSAT I
ACSAT I
JAPAN
SOUTH AMERICA
INTELSAT II
USS HORNET
ATS I
ATS III

Hovering Communications Satellite 22,300 mi Over Atlantic Ocean
Radio Relay Between Earth and Moon-Bound Astronauts

INTEL SATELLITE 4

KENNEDY SPACE CENTER JAN 24 AM 1972 FL

US 8c

UNITED STATES IN SPACE

Dieter Körner
Auf der Bleiche 18
D 4795 Delbrück
West Germany

INTEL SAT 3 ATLANTIC

KENNEDY SPACE CENTER JAN 15 AM 1970 FL

In the beginning God...

APOLLO 8
SIX CENTS · UNITED STATES

CAPE CANAVERAL FL JAN 23 AM 1972 32920

8c

Intelsat 4 can carry 5000 Telephone or 12 Color TV Circuits simultaneously. A temporary earth station, 2 moving vans with a giant antenna on top is already set up in PEKING. Intelsat 4 links stations from Australia, Hong Kong, Taiwan, Korea, Japan, Siam, NZ, Phil. Isls and USA.

INTELSAT 4 Jan 23 1972
New Communication Satellite 22,300 miles in space. In time to carry newspaper and TV reports OF PRESIDENT NIXONS TRIP TO CHINA

C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050

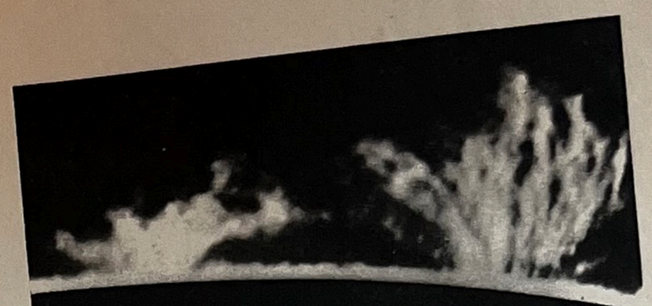
ORBI

TODAY
SOLAR
OBJECT

O.S.O.
O.G.O.
Pegasus
O.A.O.
Bio-Sat.
ERTS
Echo
Telstar
Relay
Syncom
Intelsat
Oscar
Tiros

Nimbus, Essa, IGS, Noaa
ATS, Discoverer, Midas

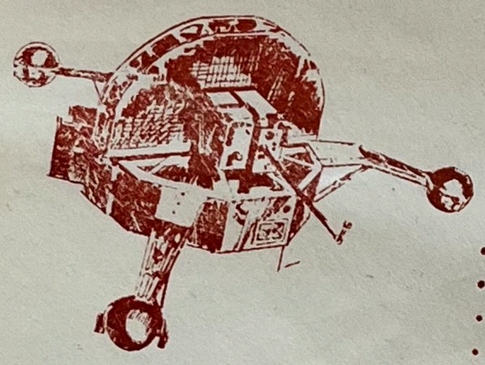
PORT CANAVERAL
MAR 7 P.M. 1962
FLA.



THE STORMY SURFACE OF THE SUN

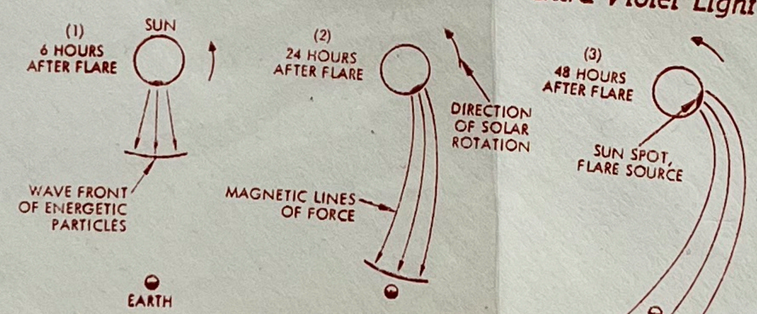
15

O. S. O. 3



CAPE CANAVERAL, FL
MAR 8 A M 1967
32920

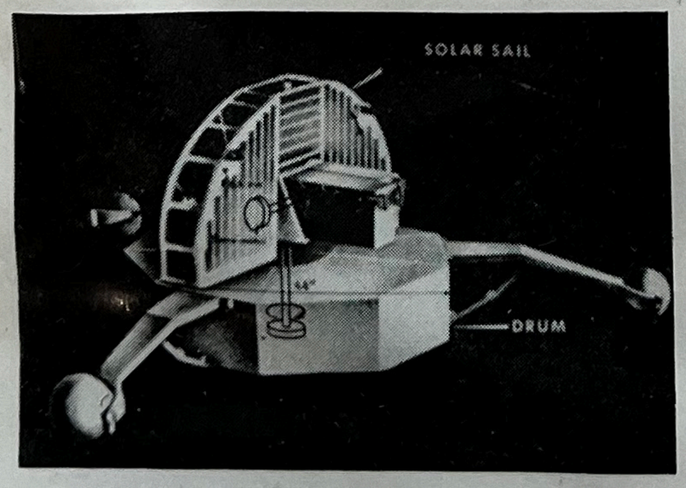
- To Monitor Zodiacal Light
- To Scan Solar Corona In White Light
- To Measure Cosmic Gamma Ray Radiation
- To Map Sun's Ultra-Violet Light



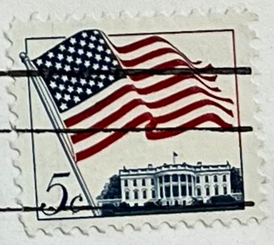
ORBIT COVERS

OSO 3

ORBITING SOLAR OBSERVATORY



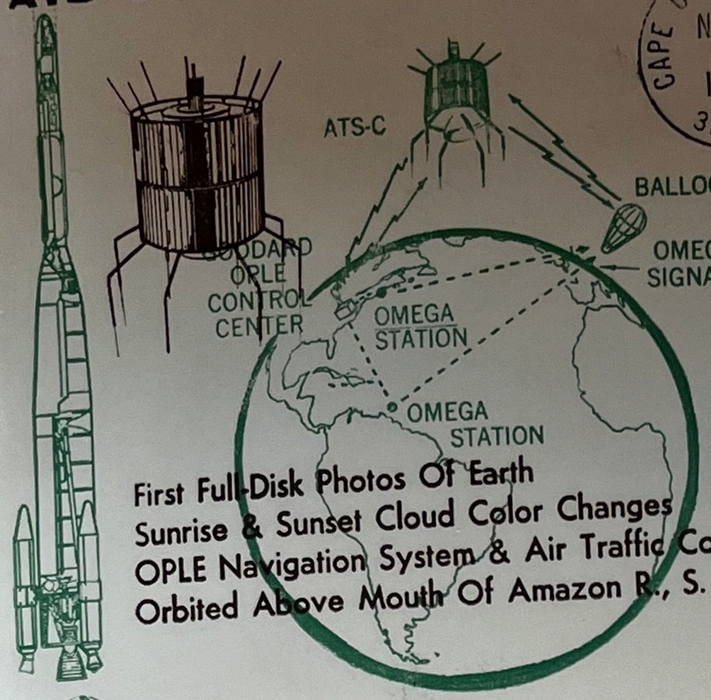
CAPE CANAVERAL, FL
MAR 8 A M 1967
32920



OSO-3 will study the structure and composition of the Solar Corona through X-rays, and attempt to discover the origin of sun spot explosions to protect our future space travelers.

CLYDE J. SARZIN
PORT WASHINGTON, L. I.,
NEW YORK, U.S.A.

ATS- 3- "Everybody's Satellite



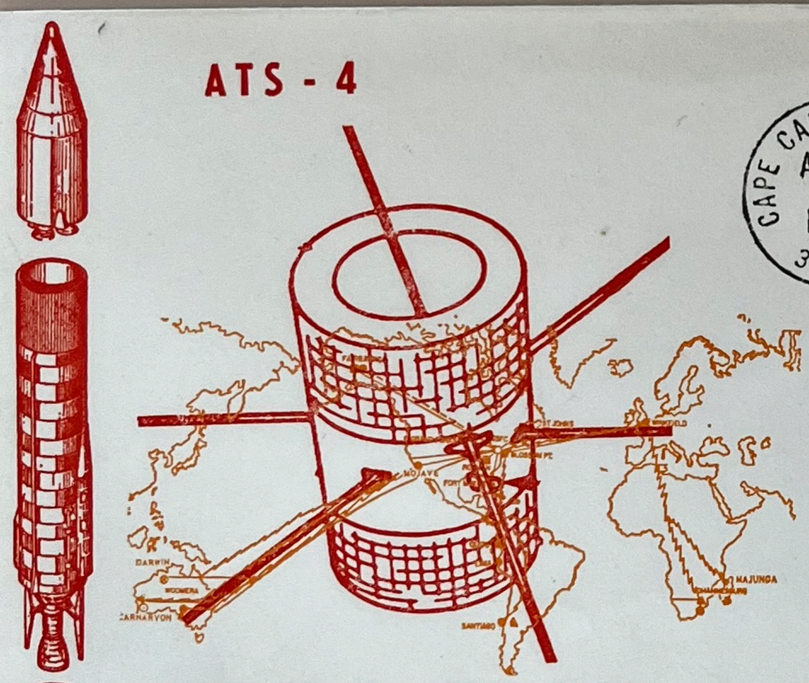
CAPE CANAVERAL, FL
NOV 6
AM
1967
32920

First Full-Disk Photos Of Earth
Sunrise & Sunset Cloud Color Changes
OPLE Navigation System & Air Traffic Control
Orbited Above Mouth Of Amazon R., S. America

2,50

ORBIT COVERS

ATS - 4



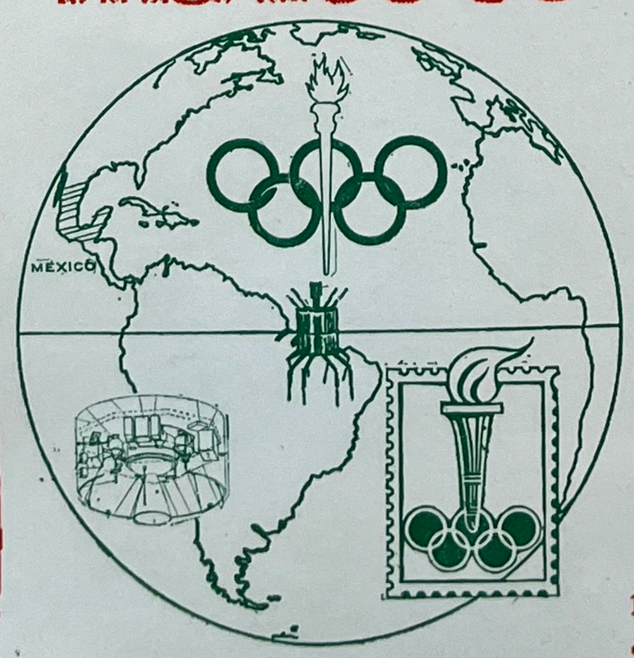
CAPE CANAVERAL, FL
AUG 21
AM
1968
32920

10.8.68

1st Satellite Test Of Ion Engine
Meteorological & Communications Test
Gravity Gradient Stabilized
270 Ft. Long Spacecraft

ORBIT COVERS

MEXICO 68



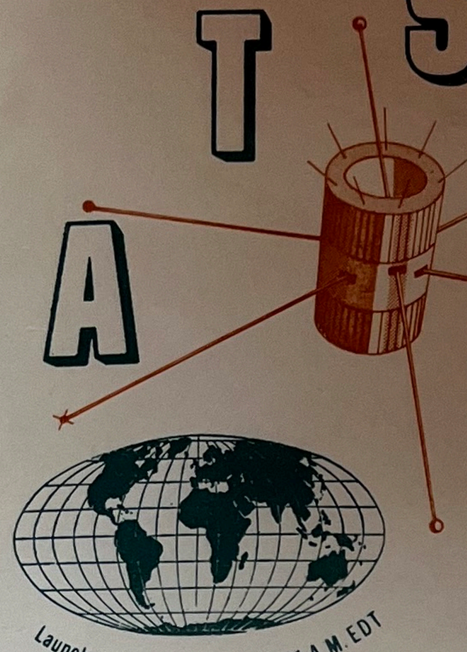
CAPE CANAVERAL, FL
OCT 12
AM
1968
32920

2 ~ ATS 3 ~ Intelsat-4

1968 Olympics via ATS-3 Launched Nov. 6, 1967
& To Pacific via Intelsat-4 Launched Sept. 28, 1967

ORBIT COVERS

ATS 5



- Primary experiment is a gravity-gradient stabilization system
- Other experiments include microwave communications, an ion engine test

Launched by Atlas-Centaur 7:01 A.M. EDT

Swanson

BOX 2296, HUNTINGTON, W. VA. 25724

CAPE CANAVERAL, FL AUG 12 AM 1969 32920

UNITED STATES 6c

5¢

Launched by Titan 3C, May 30, 9:00 a.m. EDT

EDUCATIONAL and MEDICAL broadcasts to remote areas of Earth —20 communication experiments for U.S. agencies

ATS-6

(ATS-F)

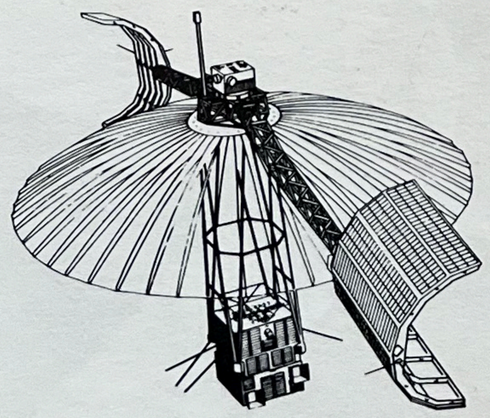
Applications Technology Satellite

SATELLITE IN RARE SYNCHRONOUS DRIFT WILL SPEND ONE YEAR OVER U.S. ONE YEAR OVER INDIA then over U.S. for life

CAPE CANAVERAL, FL MAY 30 AM 1974 32920

US 10c Skylab

NASA/GODDARD SPACE FLIGHT CENTER STAMP CLUB



Developmental and demonstrative communications mission using technology applicable to terresttrial and space needs.

ATS-F

EASTERN TEST RANGE - KENNEDY SPACE CENTER, FLORIDA

OFFICIAL COVER

GREENBELT, MD MAY 30 AM 1974 20770

US 10c Skylab

APPLICATIONS ATS-F TECHNOLOGY SATELLITE

INTEGRATED SATELLITE DE

KENNEDY SPACE CENTER
MAY 5
AM
1971
FL

1800 lb. Early Warning Satellite
in synchronous orbit
over Russia & China

2

10th Anniversary
First U.S. man in space

Launched by Titan 3c, 3:43 am EDT

Project 647

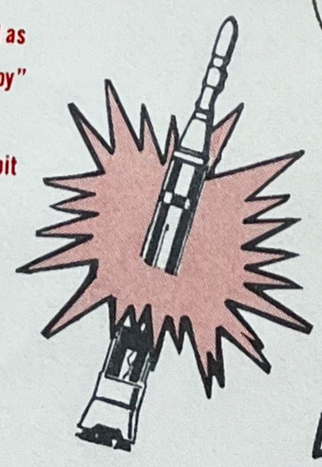
3c

Research & Development
MIDAS, Fails to Orbit

KENNEDY SPACE CENTER
DEC 6
AM
1971
FL

Intended as
"Super Spy"
for
Sino-Soviet Synchronous Orbit

LAUNCHED: DEC. 4, 1971, p.m. EST



USAF
Launch

Atlas-Agena Explodes

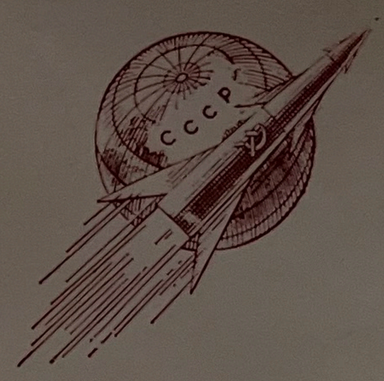
USAF SECRET SATELLITE

ATLAS-AGENA

Midas

CAPE CANAVERAL, FL
MAR 6
A M
1973
32920

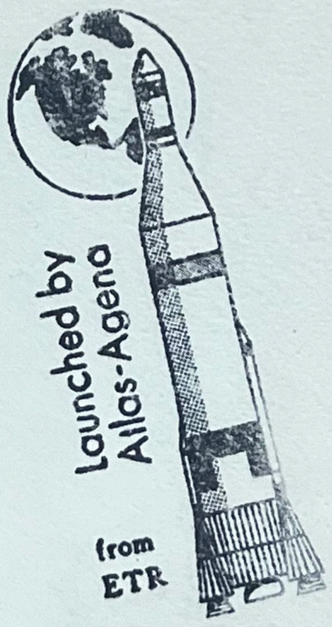
8 U.S. ANTARCTIC TREATY ~~1961-1971~~



To Observe Missile Tests From Lake Baikal
Monitor New Computer Aboard Russian SS-17
Onboard Computer Important For MIRV Accuracy
Spy Sky 22,300 Mi. Over S.W. Pacific Ocean

ORBIT COVERS

Experimental Payload



CAPE CANAVERAL, FL
MAR 6
P M
1973
32920

US 8c

UNITED STATES IN SPACE...

MRS. W. FICK
509 AUDUBON AVE.
THOROFARE, N. J. 08086

O.S.O 5

MISSILE

FIRED FROM..

CAPE KENNEDY

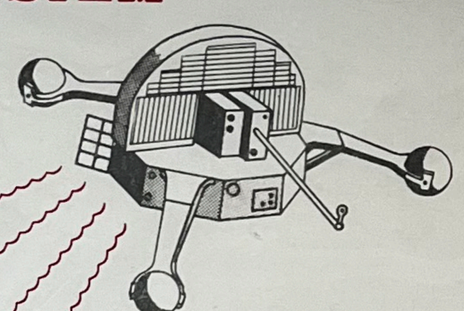
R. DUBEAU

KENNEDY SPACE CENTER JAN 22 AM 1969 FL

'Searching Eye'

OSO 5

EXPLORATION OF THE SOLAR SYSTEM



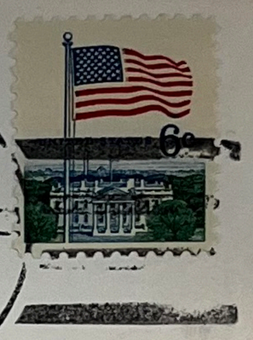
To study how the Sun controls our weather, interferes with communications and alters the composition of the globe-circling radiation belt.....

Launched by DELTA 11:48 A.M. EST

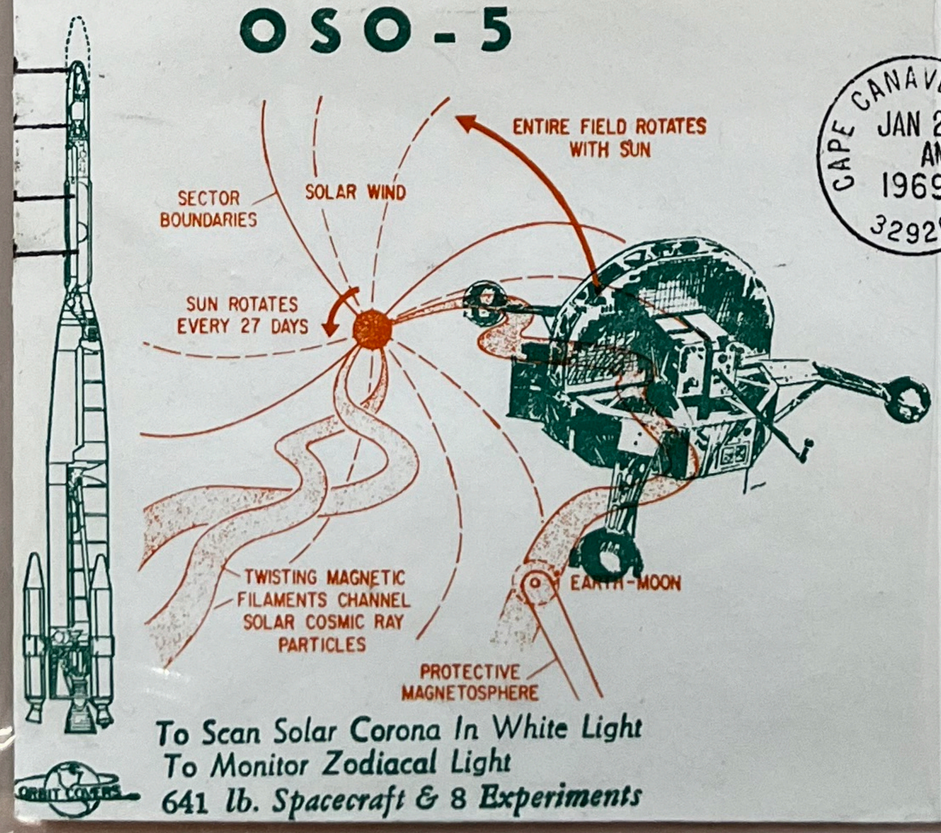
Spacecraft Swanson

BOX 2296, HUNTINGTON, W. VA. 25724

CAPE CANAVERAL, FL JAN 22 A M 1969 32920



OSO-5



To Scan Solar Corona In White Light
To Monitor Zodiacal Light
641 lb. Spacecraft & 8 Experiments

CAPE CANAVERAL, FL JAN 22 AM 1969 32920

2 25

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE MAIN ENGINE

TEST 002 ENGINE 004

Printed Matter

Mr. Josef BAIER
a/Wingert 19
6301 KROFDORF
W-Germany

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 064 ENGINE 001

7.8[illegible] SECONDS

AIR MAIL

John Sloan
American Artist 1871-1951
United States 8 cents

PIONEER JUPITER
USA 10¢

CIVIL WAR CENTENNIAL
GETTYSBURG
1863 1963
UNITED STATES POSTAGE

Christmas
8c U.S.

Fritz Bohnet
Kleinfeld Str. 54-1
7012 Fellbach, Germany

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
MAY 19 PM
19 76

ONE NATION INDIVISIBLE E PLURIBUS UNUM
USA 13

TEST 055 ENGINE 001

6.82 SECONDS

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

GULFPORT, MS 395
PM
1 FEB
1976
GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE
FIRST MAINSTAGE
TEST
NSTL
U.S.Postage 10c
FRANCIS PARKMAN AMERICAN HISTORIAN U.S.POSTMER

NSTI.

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 002 ENGINE 002
27.85 SECONDS

AIR MAIL

See Inside

Gisela Nünke
Lortzingstr. 3
7053 Rommelshausen
West - Germany.

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 003 ENGINE 002
2.36 SECONDS

AIR MAIL

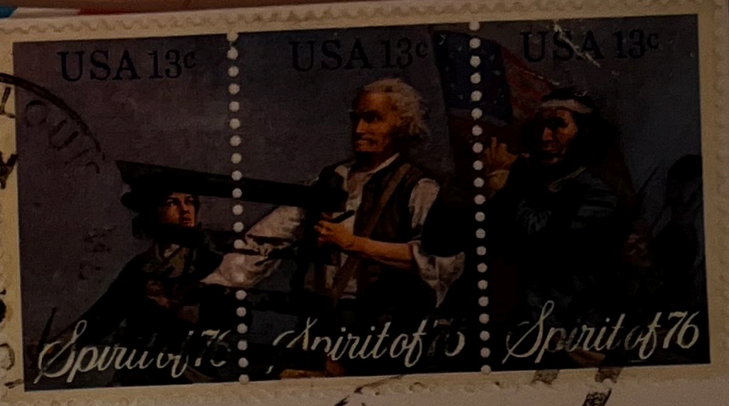
Gerd Pfisterer
Bruckstr. 8a.
7012 Fellbach
West - Germany.

See inside

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS
MAY
20
P M
1976
39520



BAY SAINT LOUIS
MAY
20
P M
1976
39520

TEST 010 ENGINE 002

2·35 SECONDS

AIR MAIL

Fritz Bohnet
Kleinfeld Str. 54-1
7012 Fellbach, Germany

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS
MAY
20
P M
1976
39520

TEST 010 ENGINE 002

2·35 SECONDS

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096 U.S.A.

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
JUN 24
PM
19 76

13¢ USAirmail

TEST 064 ENGINE 001

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
JUL 16
PM
19 76

13¢ USAirmail

TEST 018 ENGINE 002

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

13c USAirmail

BAY SAINT LOUIS, MISS.
JUN 7 PM 1976
39520

TEST 058 ENGINE 001

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MISS.
JUN 14 PM 1976
39520

13c USAirmail

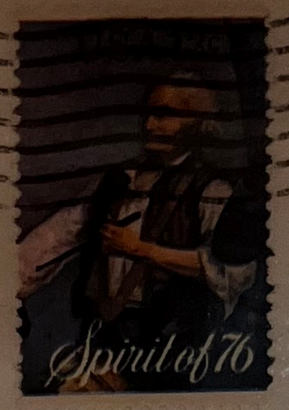
TEST 061 ENGINE 001

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
SEP 20
PM
1976



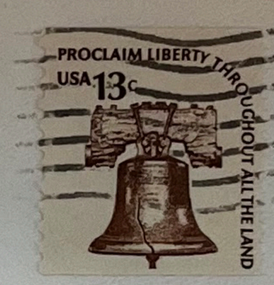
TEST 006 ENGINE 003

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
OCT 12
PM
1976



FIRST 650 SECOND TEST
TEST 012 ENGINE 003

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N.J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS 39520
NOV 1
P.M.
1976

TEST 013 ENGINE 003

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.

SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS
AUG 18
PM
19 76
39520

United States 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

TEST 023 ENGINE 002

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.

SPACE SHUTTLE
MAIN ENGINE

BAY ST LOUIS, MS
AUG 2
PM
19 76
39520

13c USAirmail

Robert Boudwin
1119 Harker Ave
Woodbury, N.J.
08096

TEST 025 ENGINE 002

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
APR 14
PM
1977
39520

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

ENGINE 004 INSTALLED

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS

WASHINGTON 5c
UNITED STATES

TEST 006 ENGINE 004

Printed Matter

Mr. Josef BAIER
a/Wingert 19
6301 KROFDORF
W-Germany

FIRST TEST ENGINE 004

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
MAR 18
PM
1977
39520

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

1ST 60 SEC. RPL TEST

TEST 042 ENGINE 003

TEST 004 ENGI

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
PM 1
JUL 12
1977
39520

United States 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096 U.S.A.

ENG. 2001 INSTALLED MPTA

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY
PM
1977
39520

Printed Matter

Mr. Josef BAIER
a/Wingert 19
6301 KROFDORF
W-Germany

TEST 022 ENGINE 004

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 007 ENGINE 004

BAY SAINT LOUIS, MS
PM
JUL 1
1977

PIONEER ★ JUPITER
US 10c
UNITED STATES WASHINGTON 5c

Printed Matter

Mr. Josef BAIER
a/Wingert 19
6301 KROFDORF
W-Germany

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 008 ENGINE 004

BAY SAINT LOUIS, MS
PM
JUL 6
1977

LIBERTY FOR ALL
US AIR MAIL 15c

Printed Matter

Mr. Josef BAIER
a/Wingert 19
6301 KROFDORF
W-Germany

NSTL

NASA - JOHNSON SPACE CENTER
ROCKWELL INTERNATIONAL SPACE DIV. - MARTIN MARIETTA
SPACE SHUTTLE – ORBITER – EXTERNAL TANK

BAY SAINT LOUIS, MS
PM
JUN 24
1977

United States 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096 U.S.A.

ORBITER/MPTA ARRIVES

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE MAIN ENGINE

PIONEER ★ JUPITER
MARINER 10 ★ VENUS/MERCURY
US 10c
FIFTH INTERNATIONAL PHILATELIC EXHIBITION
NEW YORK COLISEUM 1976
ON THIS FIRST DAY OF CHRISTMAS MY TRUE LOVE SENT TO ME

BAY SAINT LOUIS, MS
JUN 11
1976
PM
39520

TEST 060 ENGINE 001

AIR MAIL

Fritz Bohnet
Kleinfeld Str. 54-1
7012 Fellbach, Germany

NSTL

GEORGE C. MARSHALL SPACE
ROCKWELL INTERNATIONAL RO
SPACE SHUTTLE
MAIN ENGINE
DIV.

TEST 023 ENG

ENGINE DAMAGE

NSTL

GEORGE C. MARSHALL SP
ROCKWELL INTERNATIONAL
SPACE SHUTT
MAIN ENGINE

TEST 093-002/364
ENG 0101 REMO

NSTL

NASA - JOHNSON SPACE CENTER
ROCKWELL INTERNATIONAL SPACE DIV. - MARTIN MARIETTA
SPACE
SHUTTLE
-
ORBITER
-
EXTERNAL
TANK

ENG 2001 INSTALLED MPTA

SAINT LOUIS, MS
PM
SEP 28
1977
39520

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

TEST 079 ENGINE 002
FIRST TEST SINCE FIRE

BAY ST. LOUIS, MS
DEC
6
PM
1977
39520

USA-13c
50th Anniversary Solo Transatlantic Flight

A.Schuh
Bahnstr.1o6
D 4156 Willich 1

dokumentenecht-umweltschonend
Milan 804

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
PM
NOV 11
1977
39520

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY N J 08096

TEST 092 ENGINE 002
ENG. 2002 REMOVED MPTA

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
PM
NOV 15
1977
39520

United States 13c

VIA AIR MAIL

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

TEST 093-002/364 SECONDS
ENG. 0101 REMOVED MPTA

MAF

NASA - JOHNSON SPACE CENTER
INTERNATIONAL SPACE DIV. - MARTIN MARIETTA
ROCKWELL
SPACE SHUTTLE – ORBITER – EXTERNAL TANK

NEW ORLEANS, LA
SEP 9 1977
70113

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

ROLLOUT MPTA/ET NO. 1

NSTL

NASA - JOHNSON SPACE CENTER
INTERNATIONAL SPACE DIV. - MARTIN MARIETTA
ROCKWELL
SPACE SHUTTLE – ORBITER – EXTERNAL TANK

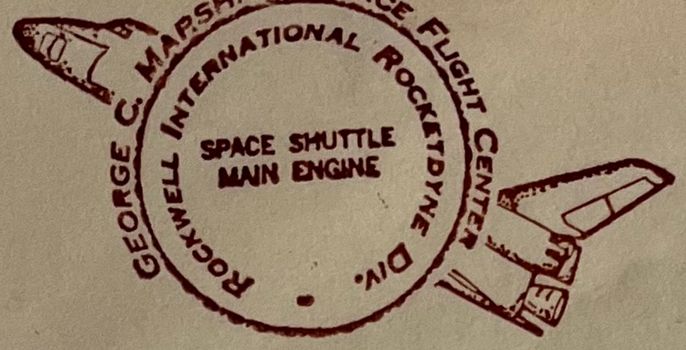
SAINT LOUIS, MS
PM
SEP 13
1977
39520

13c USA airmail

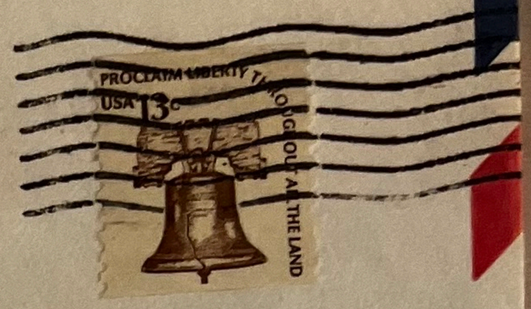
ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096 U.S.A.

ET 1 ARRIVES/INSTALLED

NSTL



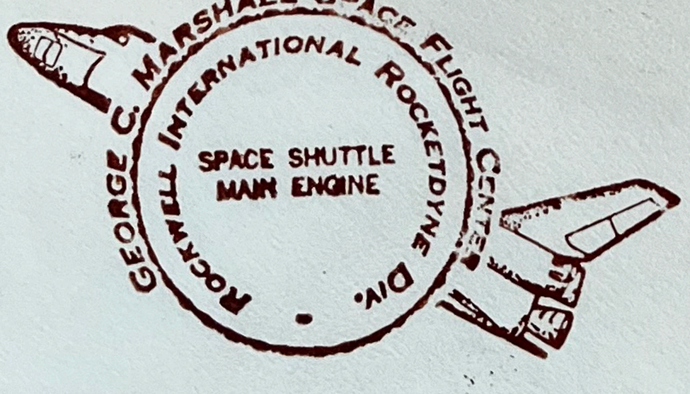
BAY SAINT LOUIS, MS
PM
MAY 12
1978
39520



TEST 004 ENGINE 005
520 SECONDS AT RPL

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL



BAY SAINT LOUIS, MS
PM
OCT 4
1978
39520

TESTS 29 & 30 ENG.005
1ST 2 TESTS 1 ENG.1 DAY

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

BAY SAINT LOUIS, MS
PM
AUG 10
1978
39520

A
US Postage

NASA • JOHNSON SPACE CENTER
INTERNATIONAL SPACE DIV. MARTIN MARIETTA
ROCKWELL INTERNATIONAL
SPACE
SHUTTLE
–
ORBITER
–
EXTERNAL
TANK

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096 U.S.A.

ENGINE 2002 INSTALLED A-2

LEITZ 4781

NSTL

BAY SAINT LOUIS, MS
PM
JUN 26
1979
39520

15¢
OLIVER WENDELL HOLMES

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.
SPACE SHUTTLE
MAIN ENGINE

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

TEST 015 PFC ENG.2004
1ST 520 SEC 102% RPL

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.

SPACE SHUTTLE
MAIN ENGINE

EAST TEST 002

BAY SAINT LOUIS, MS
PM
APR 6
1978
39520

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

TEST 122-002/201 SEC.
1ST LOX/LH2 TRANS. BARGE

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

GEORGE C. MARSHALL SPACE FLIGHT CENTER
ROCKWELL INTERNATIONAL ROCKETDYNE DIV.

SPACE SHUTTLE
MAIN ENGINE

BAY SAINT LOUIS, MS
PM
APR 20
1978
39520

PROCLAIM LIBERTY THROUGHOUT ALL THE LAND
USA 13c

FIRST TEST ENGINE 0101

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

NSTL

NASA • JOHNSON SPACE CENTER
INTERNATIONAL SPACE DIV.-MARTIN MARIETTA
ROCKWELL
SPACE SHUTTLE – ORBITER – EXTERNAL TANK

SAINT LOUIS, MS
PM
JAN19
1978

United States 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08093

FIRST TEST ENGINE 2001
1ST PRODUCTION ENG TEST

NSTL

NASA • JOHNSON SPACE CENTER
INTERNATIONAL SPACE DIV.-MARTIN MARIETTA
ROCKWELL
SPACE SHUTTLE – ORBITER – EXTERNAL TANK

SAINT LOUIS, MS
PM
JAN31
1978

United States 13c

ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

ENGINE 2001 REMOVED A-2

'Super Samos'

FINDS TWENTY
NEW SILOS

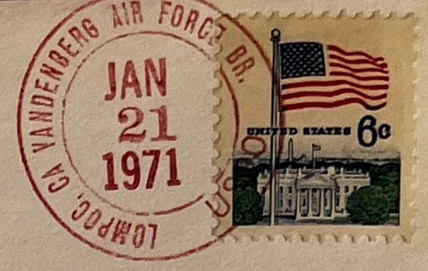
Eccentric
Altitude
Surveillance
Satellite

Launched by Titan 3b,
Jan. 21, 10:20 am PST

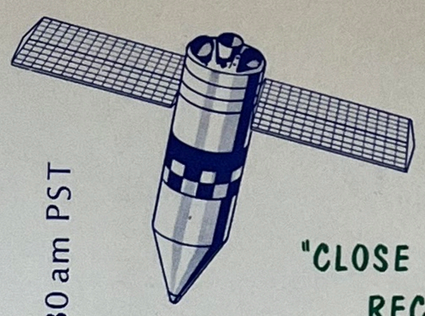
· Continues Samos 80
Observation of New
Larger Soviet ICBM
Silo Construction

Satellite & Missile
Observation System

SAMOS 81

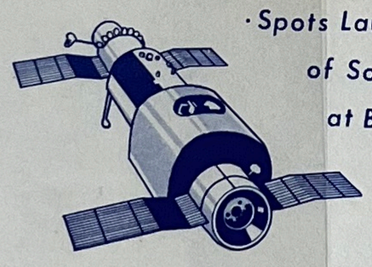


SAMOS 82



"CLOSE LOOK"
RECON SATELLITE

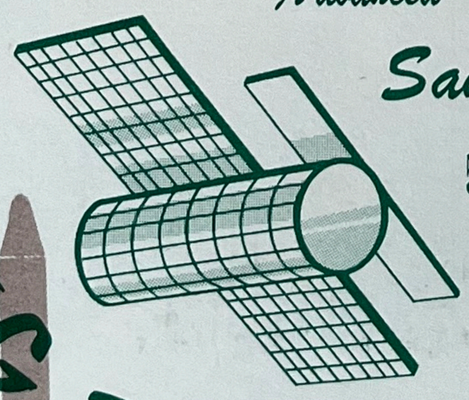
Launched by Titan 3b,
Apr. 22, 7:30 am PST



· Spots Launch
of Soyuz
at Baikonur

FINDINGS REVEAL TOTAL of
60 LARGER SOVIET MISSILE SILOS

New High Resolution
PERKIN
ELMER
Cameras



A dvanced

Samos

52 days
in orbit

'BIG BIRD'

Launched by first Titan 3d, 11:41 am PDT

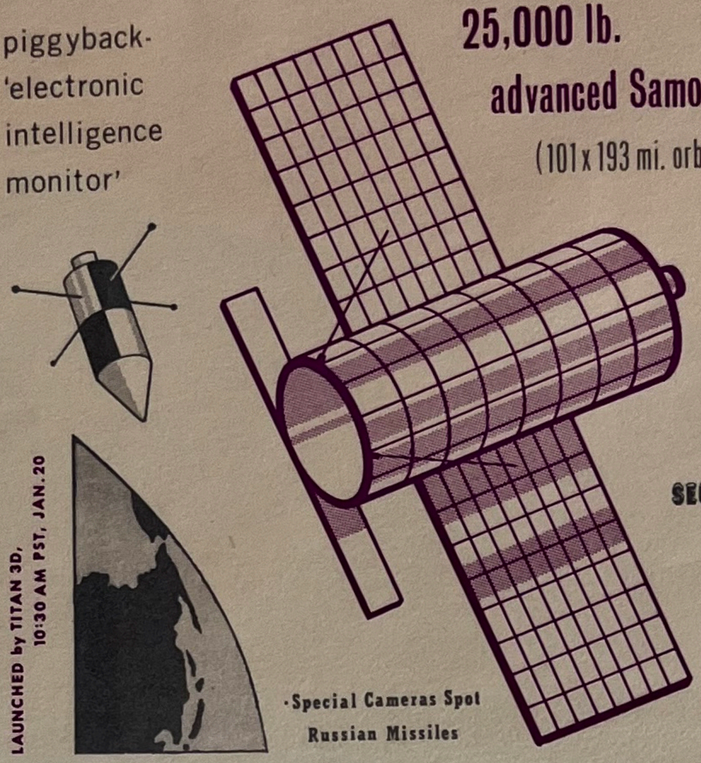
LASP-
467 program
Low altitude surveillance platform

· 2 Recon Missions
to photograph latest
Soviet ICBM silo construction

· first orbit - 112 by 186 mi.
· second orbit - 164 by 180 mi.

· Reentry Aug. 6th

piggyback-
'electronic
intelligence
monitor'



25,000 lb.
advanced Samos
(101 x 193 mi. orbit)

Re-entry Feb. 27

LAUNCHED by TITAN 3D,
10:30 AM PST, JAN. 20

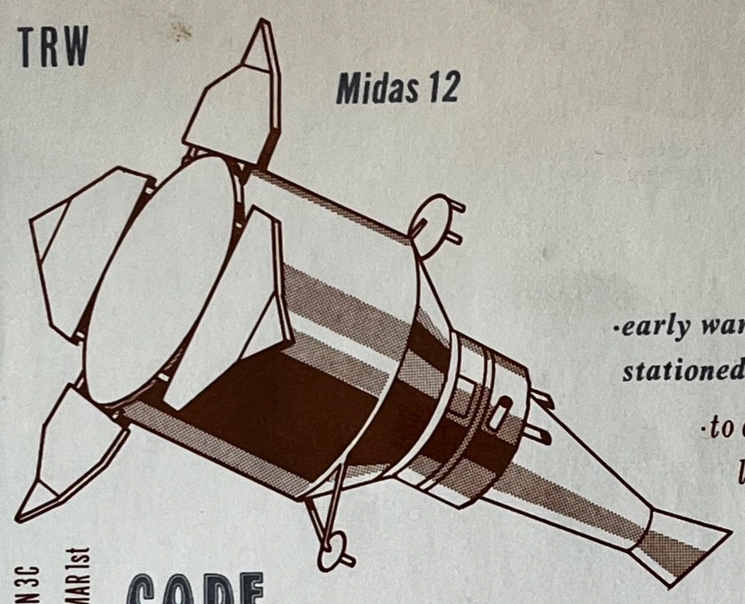
·Special Cameras Spot
Russian Missiles

SECOND **BIG BIRD**

-HOMES IN ON
SIBERIAN AREA

TRW

Midas 12

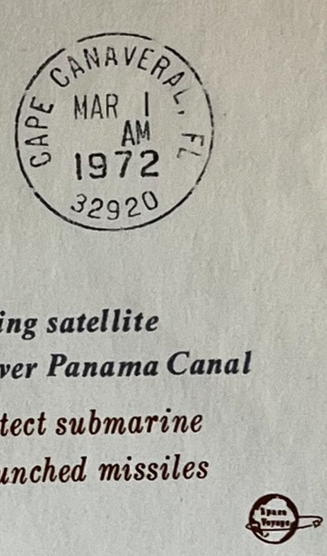


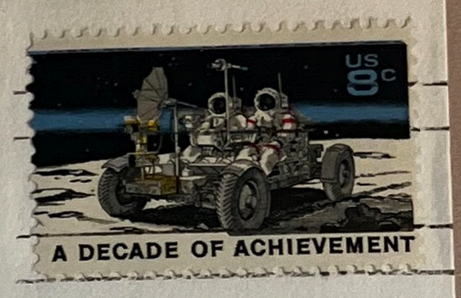
LAUNCHED BY TITAN 3C
4:38 AM EST, MAR 1st

CODE 647

3RD INTEGRATED SATELLITE (BMEWS 2-3)

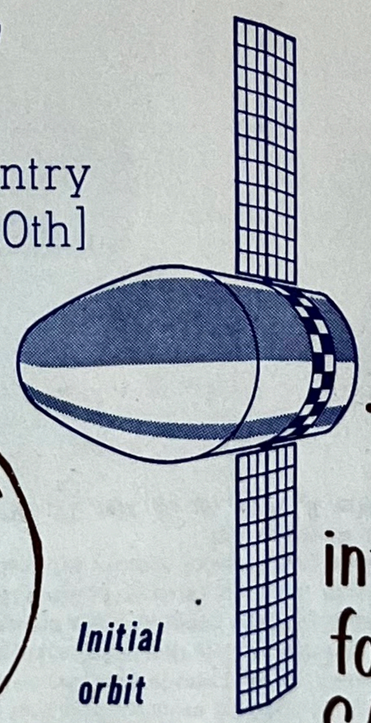
·early warning satellite
stationed over Panama Canal
·to detect submarine
launched missiles





SAMOS 87 [Re-entry Apr. 10th]

Photographic Sweep
Over Soviet ICBM Fields

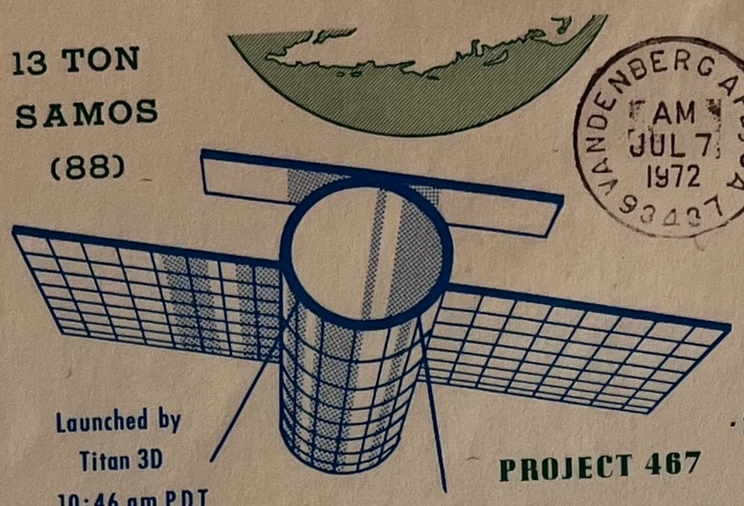


Launched by Titan 3b,
Mar. 17, 9:00 am PST

Initial
orbit
80 x 259 mi.

·obtain
crucial
information
for US-USSR
SALT Talks

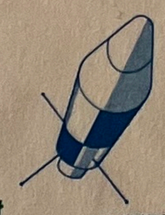
13 TON
SAMOS
(88)



Launched by
Titan 3D
10:46 am PDT

PROJECT 467

- first close-in look at Soviet missiles since arms agreement



'ELINT'
Companion

SALT Recon Satellite
BIG BIRD 3

-Reentry
Sept.13

Samos 89

Launched by Titan 3B
10:36 a.m. PDT

"CLOSE LOOK"
Reconnaissance Over
Soviet Missile
Fields

'National Technical
Means of
Verification'
-Salt Treaty

90 to 238
mi. orbit

SALT
Verification
Orbiting "Super Spy"

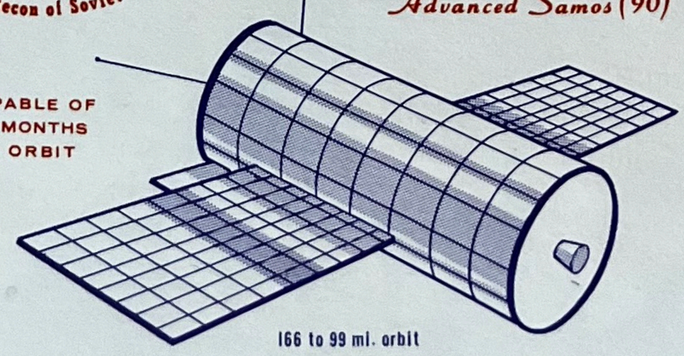
BIG
BIRD
4

Continue SALT Recon of Soviet Missile Fields

Launched by Titan 3D,
11:03 a.m. PDT

25,000 lb.
Advanced Samos (90)

CAPABLE OF
3 MONTHS
IN ORBIT



166 to 99 mi. orbit

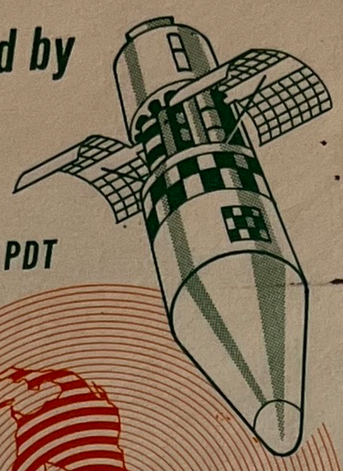
Project
467

-carries
'cameras
of fantastic
resolution'

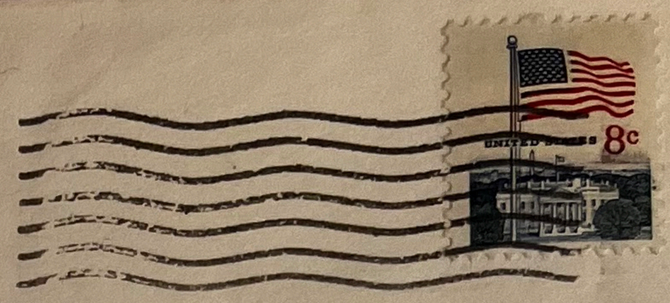
Launched by

Titan 3b

May 16,
9:40 a.m. PDT

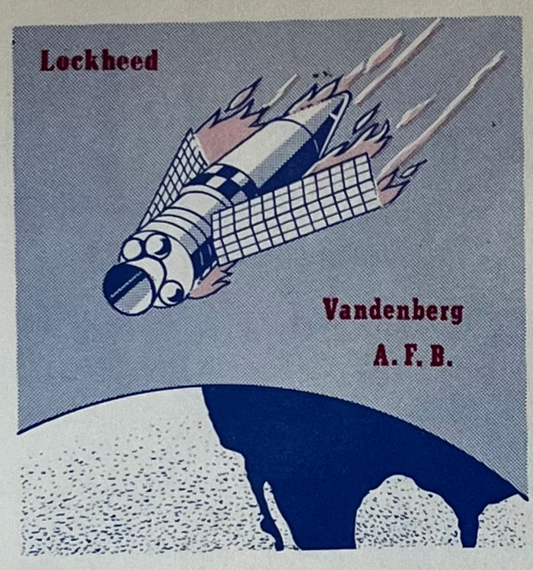


VANDENBERG AFB, CA
AM
MAY 16
1973
93437



"SALT" Check-up of USSR missiles

Samos 93



VANDENBERG AFB, CA
AM
JUN 26
1973
93437

-launched by Titan 3b,
10:00 am,
PDT

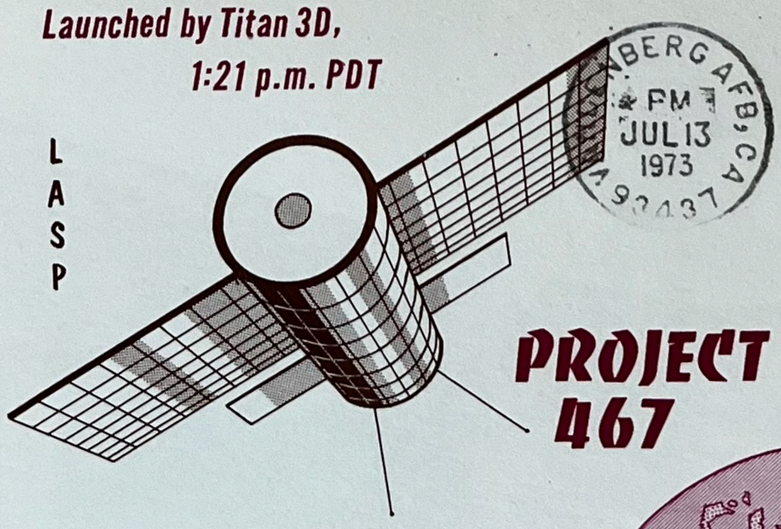
-*SALT mission to photograph Russian missile sites*

INTER SPACE COVER

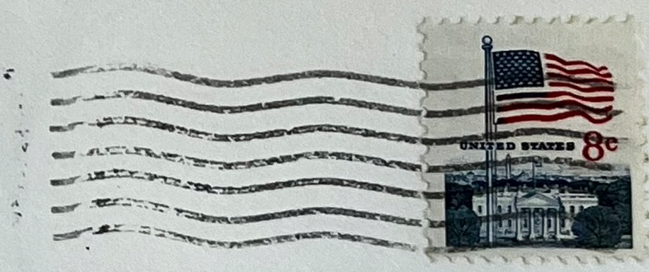
Recon Satellite Plunges Into Pacific Ocean

SAMOS FAILS TO ORBIT

Launched by Titan 3D,
1:21 p.m. PDT



VANDENBERG AFB, CA
PM
JUL 13
1973
93437



PROJECT 467

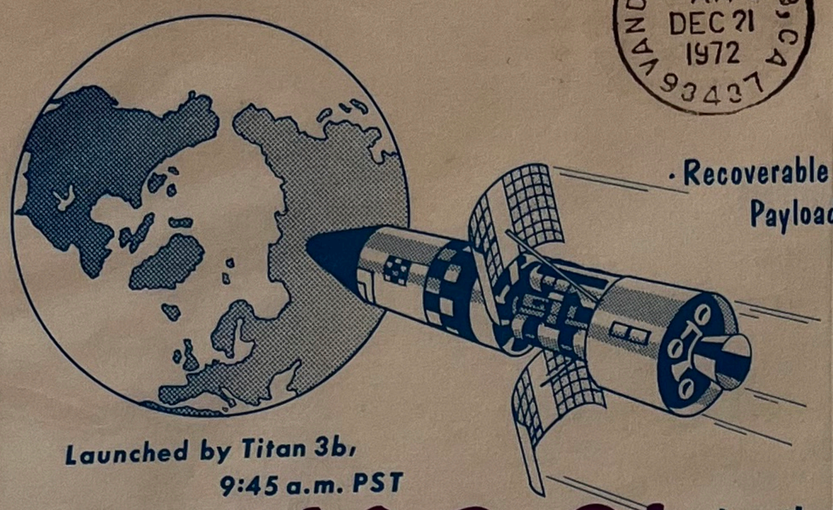
Low Altitude
Surveillance Platform

BIG BIRD – 6

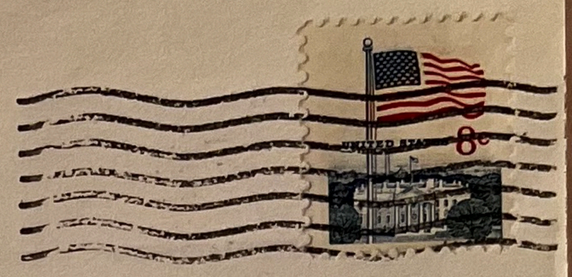
Advanced Samos (94)

·25,000 lb.
Recon Satellite
Over Sino-Soviet
Missile Sites

SALT check on Soviet strategic missile activity



VANDENBERG AFB, CA
AM
DEC 21
1972
93437



· Recoverable Payload

INTER SPACE COVER

·swoops to within 100 miles

Launched by Titan 3b, 9:45 a.m. PST

SAMOS 91 -detailed examination of objects of interest

Recon for SALT check

-photos relayed by the new

USAF

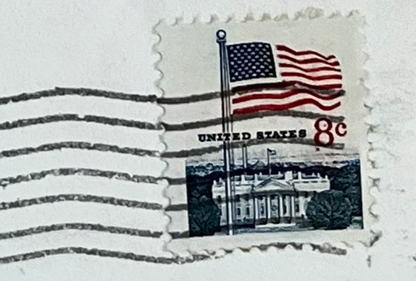
Data Relay Satellite

Launched by· Titan 3b, 1pm PST

Swoops to within 100 miles

Samos 92 -Spy Reconnaissance

LOMPOC, CA VANDENBERG AFB
PM
MAR 9
1973
USPO



Recon for SALT check

-photos relayed by the new

USAF

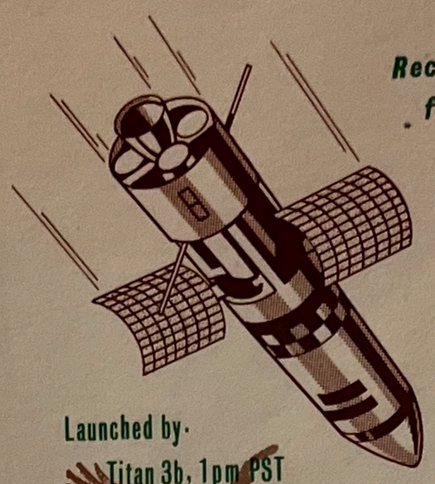
Data Relay Satellite

Launched by· Titan 3b, 1pm PST

Swoops to within 100 miles

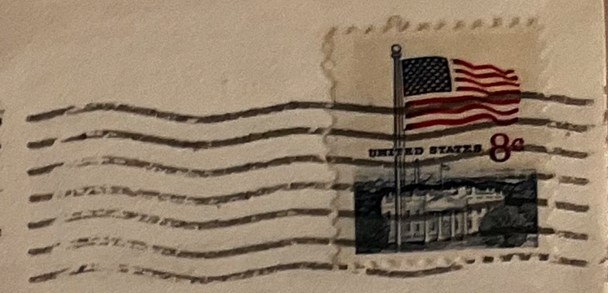
Samos 92 -Spy Reconnaissance

INTER SPACE COVER



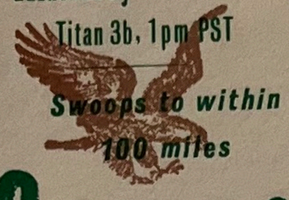
Recon
for
SALT
check

VANDENBERG AFB, CA
PM
MAR 9
1973
93437



INTER SPACE
COVER

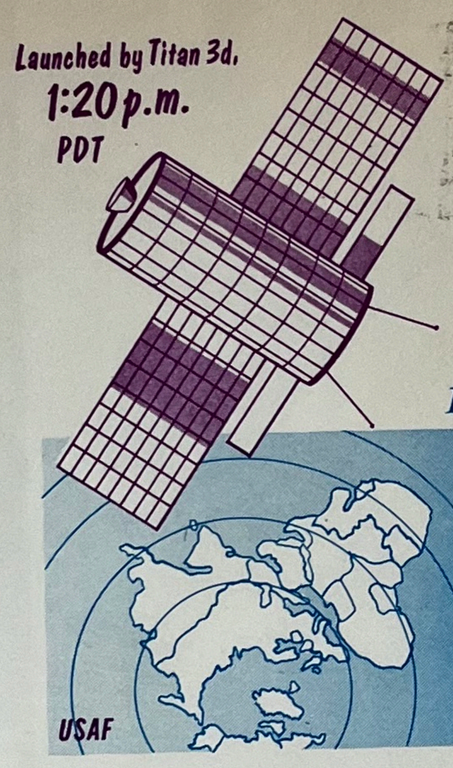
Launched by
Titan 3b, 1pm PST



Swoops to within
100 miles

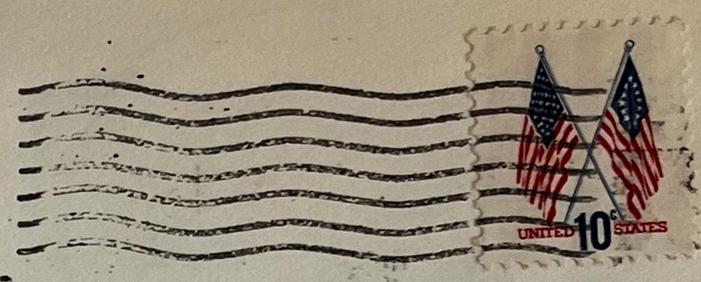
-photos relayed
by the new
USAF
Data Relay
Satellite

Samos 92 -Spy Reconnaissance



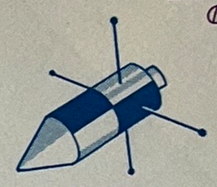
Launched by Titan 3d,
1:20 p.m.
PDT

VANDENBERG AFB, CA
PM
APR 10
1974
93437



INTER SPACE
COVER

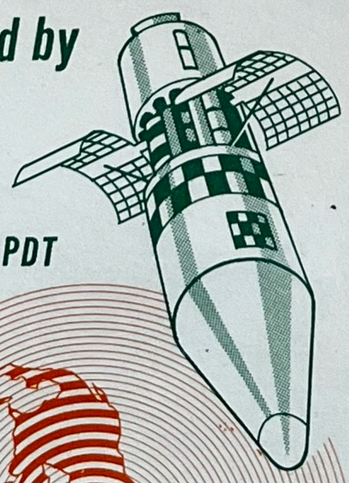
94 by
181 mi. orbit



COMPANION
MONITOR

SAMOS (98)
"SALT Watch Dog"
BIG BIRD-8
-Reconnaissance-Surveillance
Over Sino-Soviet Missile Sites

Launched by
Titan 3b
May 16,
9:40 a.m. PDT



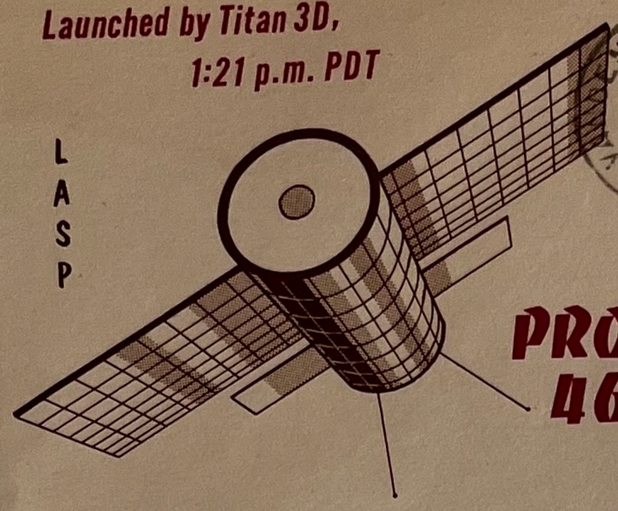
VANDENBERG AFB, CA
AM
MAY 16
1973

INTER SPACE
COVER

"SALT" Check-up
of USSR missiles

Samos 93

Launched by Titan 3D,
1:21 p.m. PDT



LASP

Low Altitude
Surveillance Platform

BIG BIRD – 6

Advanced Samos (94)

·25,000 lb.
Recon Satellite
Over Sino·Soviet
Missile Sites

INTER SPACE COVER

Big Bird·7

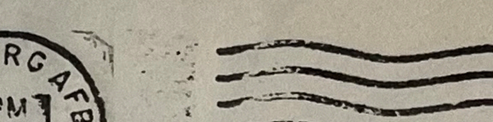
SAMOS·96

Launched by Titan 3D,
12:09 p.m.,
PST

159 to 271
km. orbit

·will return
several photo
payloads
over three months

·Surveys Russian
& Chinese missile
fields



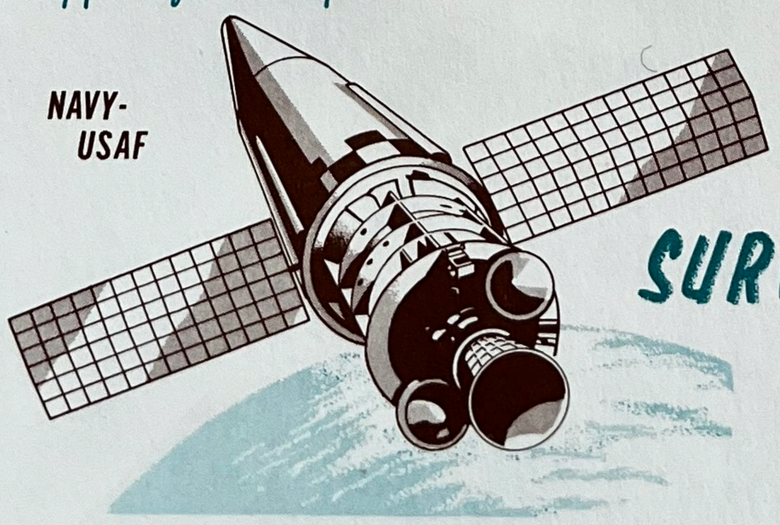
Elint
Monitor

INTER SPACE COVER

"OSS"–

Satellites & Aircraft
for direct, real-time,
support of tactical operations

NAVY-
USAF



-Launched by Titan 3b, Feb.13

OCEAN SURVEILLANCE SYSTEM

SAMOS (97)

INTER SPACE COVER

LAUNCHED BY TITAN 3B OCT. 9, 1975

VANDENBERG AFB, CA PM OCT 9 1975 93437

PIONEER ★ JUPITER US 10c

"search & find lower resolution satellite for missile detection by photo

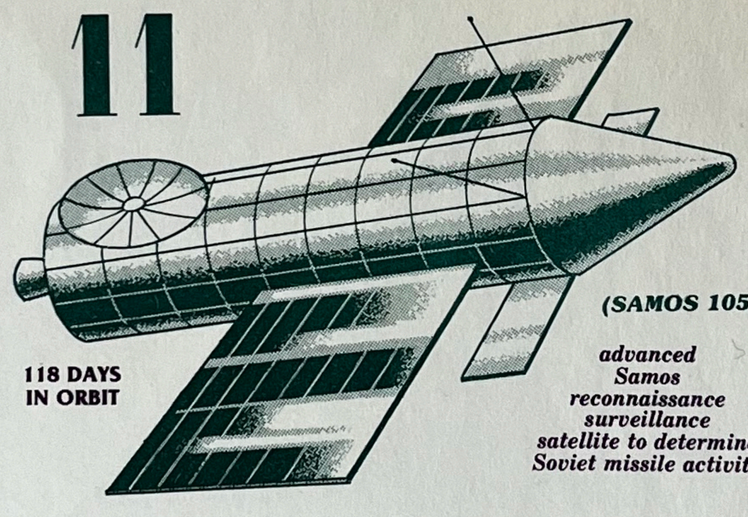
SAMOS 104

—357 by 119 km orbit

BIG BIRD 11

VANDENBERG AFB, CA PM DEC 4 1975 93437

MARINER 10 ★ VENUS/MERCURY US 10c



launched by Titan 3D Dec. 4, 1975 241 by 157 km orbit

118 DAYS IN ORBIT

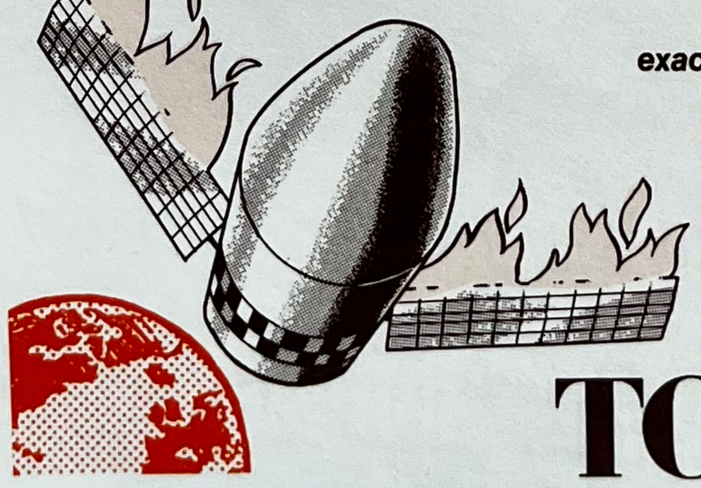
(SAMOS 105)

advanced Samos reconnaissance surveillance satellite to determine Soviet missile activity

—launch by Delta Feb. 18, 1976

VANDENBERG AFB, CA PM FEB 18 1976 93437

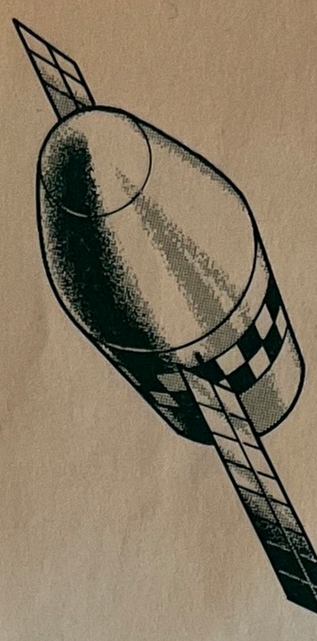
ONE NATION INDIVISIBLE • E PLURIBUS UNUM USA 13c



exact mission not known

SAMOS FAILS TO ORBIT

LEITZ 4781



—launched by Titan 3b
April 18, 1975

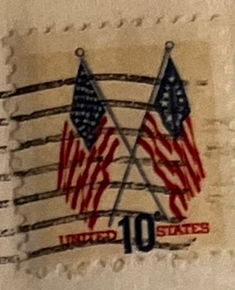
78 by 254 miles
orbit

—OCEAN
SURVEILLANCE
ORBIT

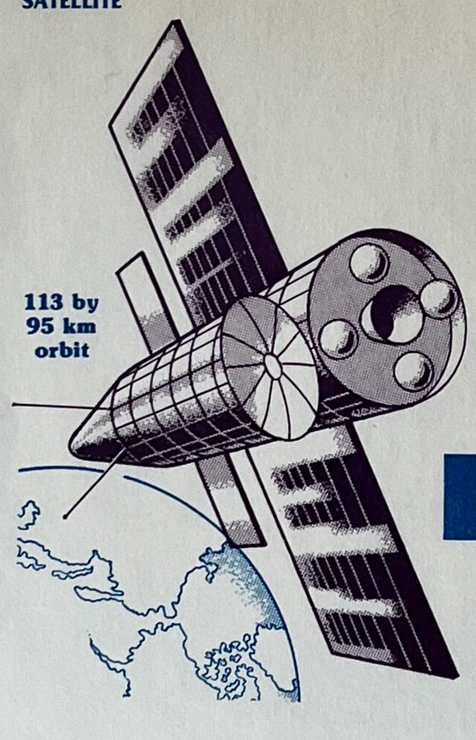
SAMOS 102

*"WIDE ANGLE" EYE
ON SOVIET
MILITARY ACTIVITIES
TO PROVIDE TARGETS
FOR BIG BIRD SAMOS*

VANDENBERG AFB, CA
AM
APR 18
1975
93437



RECON
MILITARY
SATELLITE



113 by
95 km
orbit

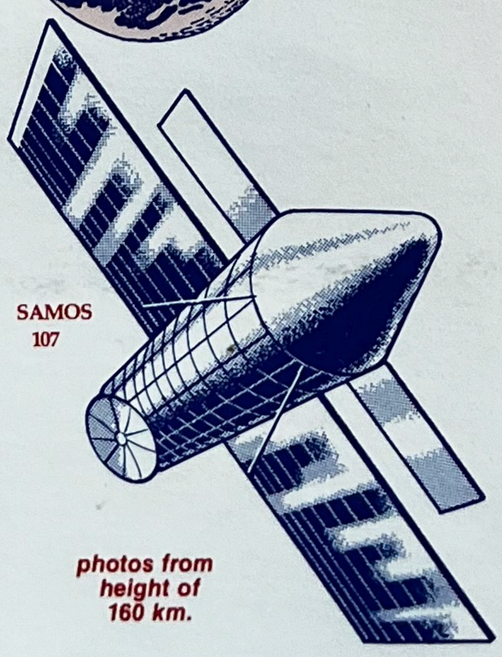
VANDENBERG AFB, CA
AM
JUN 8
1975
93437

launched by Titan 3D; June 8, 1975

—termed "microscope in orbit" due
to close photographs of outstanding quality

—photographs Soviet missile in detail

BIG BIRD-10
(SAMOS 103)



SAMOS
107

photos from
height of
160 km.

VANDENBERG AFB, CA
AM
JUL 8
1976
93437

*EJECTS PHOTO CANNISTERS
PERIODICALLY INTO EARTH'S ATMOSPHERE*

cannisters descend by parachute

BIG BIRD-12

Launched by Titan 3D
July 8, 1976

LAUNCHED
-by Titan 3b,
9:29 a.m.,
PDT

VANDENBERG AFB, CA
AM
JUN 6
1974
93437

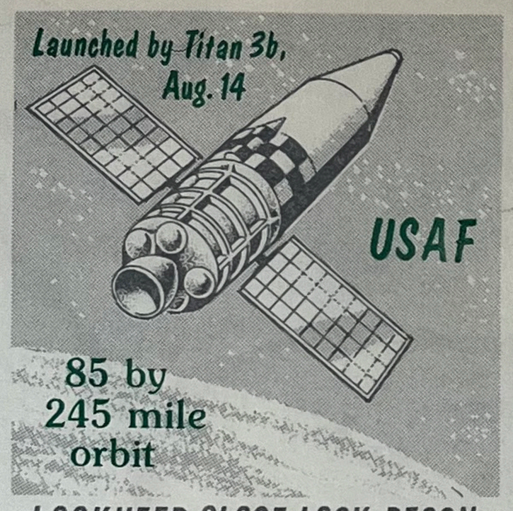
"close look"
84 mi. perigee

(NAVY, Samos 99)

Ocean Surveillance System

INTER SPACE cover

SATELLITES AND AIRCRAFT FOR DIRECT
REAL TIME SUPPORT OF TACTICAL OPERATIONS



VANDENBERG AFB, CA
AM
AUG 14
1974
93437

-LOCKHEED CLOSE-LOOK RECON-

SAMOS-100

-To observe Eastern Mediterranean and Sino-Soviet military activities

-DEVELOPS OCEAN SURVEILLANCE FOR NAVY

VANDENBERG AFB, CA
AM
OCT 29
1974
93437

(SAMOS-101)

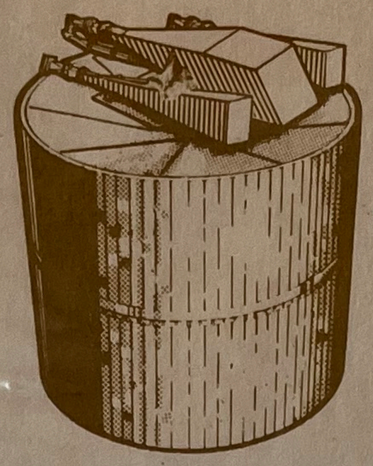
-multi-function recon satellite with long orbital lifetime

big bird-9

-REENTRY MAR. 19, 1975
SETS RECORD OF 141 DAYS

NATO III-A:

KSC Test J-2190

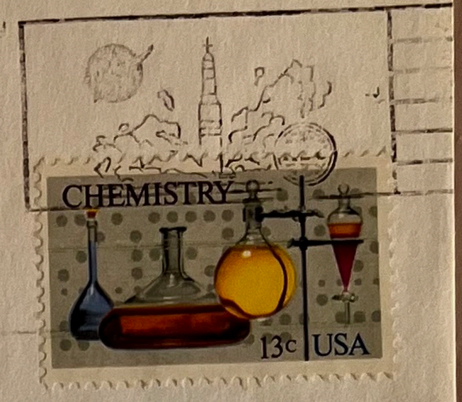


GEOSYNCHRONOUS ORBIT OVER ATLANTIC

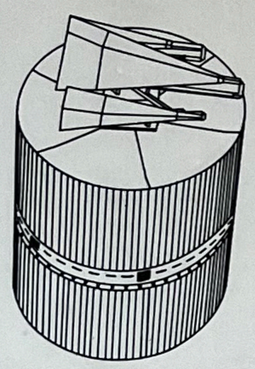
- First NATO III System Satellite
- NATO III Satellite System will provide coverage for the entire NATO Integrated Communications Network.

Launched by DELTA 122 from Launch Complex 17 April 22, 1976 - 3:46 P.M. EST.

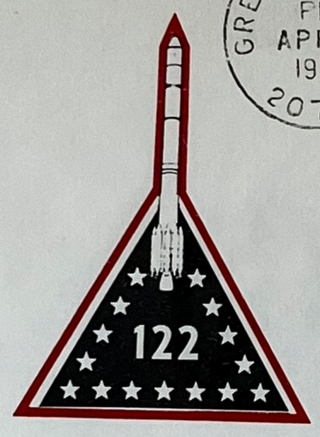
KENNEDY SPACE CENTER FL APR 22 PM 1975



NASA/GODDARD SPACE FLIGHT CENTER STAMP CLUB



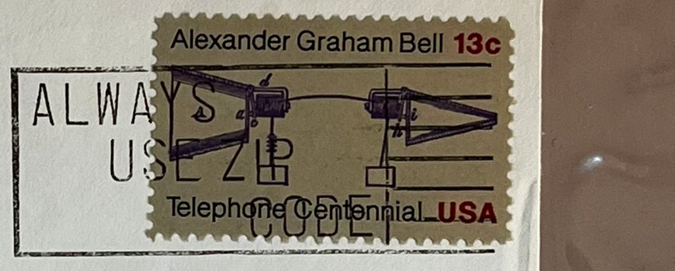
GREENBELT, MD PM APR 22 1976 20770



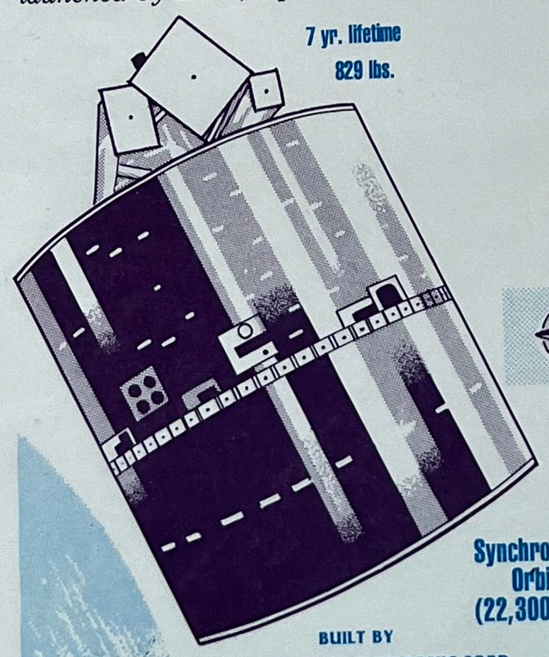
Designed primarily to perform communications relay for NATO.

NATO IIIA

EASTERN TEST RANGE - CAPE CANAVERAL, FLORIDA



-launched by Delta, Apr. 22, 1976



CAPE CANAVERAL, FL APR 22 PM 1976 32920

-First of Three Atlantic Station Satellites to Provide Rapid and Secure Communications Among NATO Member Nations

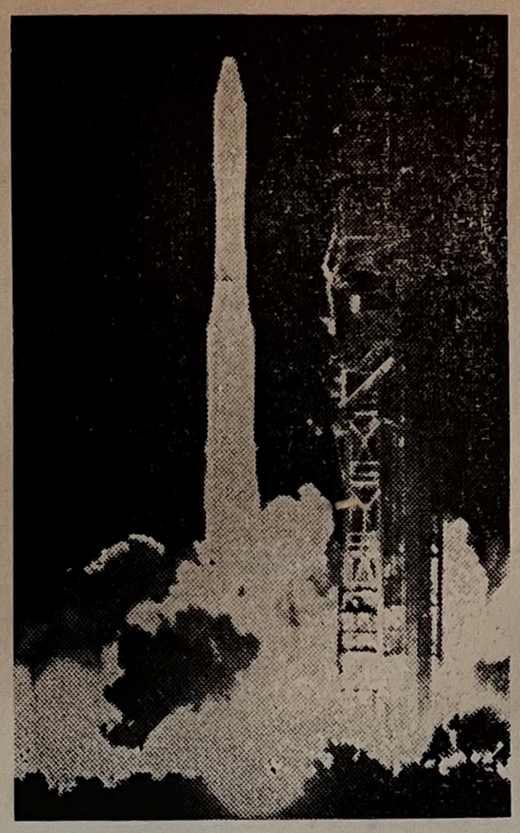
Nato 3A

-interoperable with U.S. Defense Satellite communications and British Skynet Satellite Systems

Synchronous Orbit (22,300 mi.)

BUILT BY AERONUTRONIC FORD

-STATIONED SOUTH OF WEST AFRICA

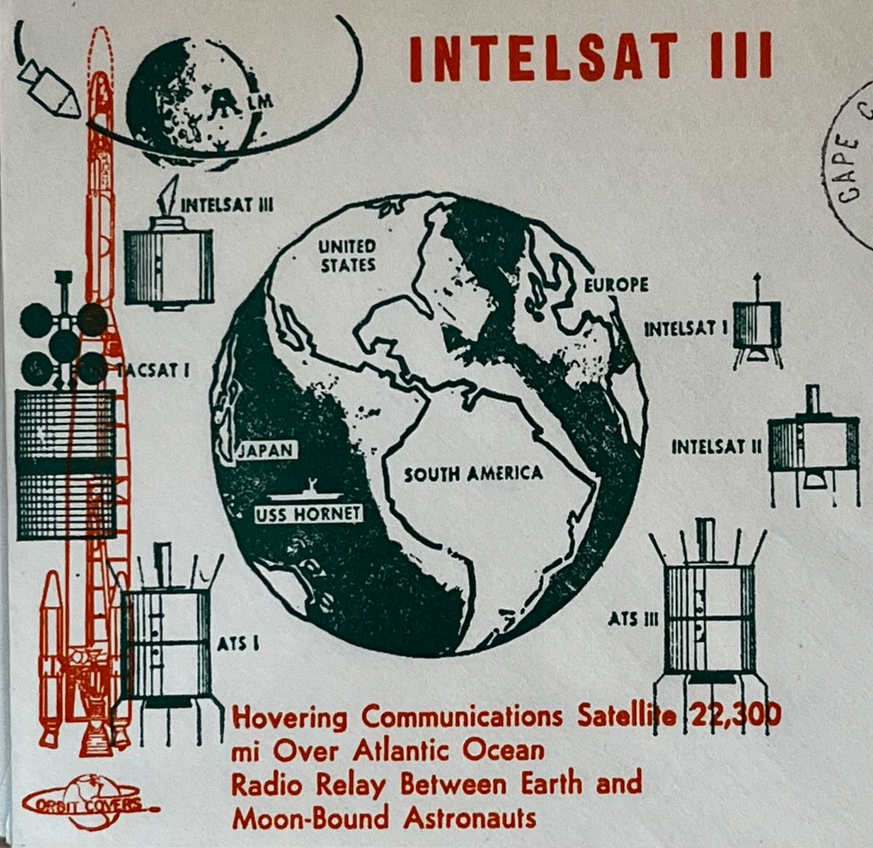


CAPE CANAVERAL, FL
JAN 15
AM
1970
32920

INTELSAT 3, A SUCCESS
Jan. 15, 1970 Cape Canaveral
Commercial Communication
Satellite fired into a giant
elliptical path ranging from
165 to 22,700 miles above the
earth. Before being kicked
into final stationery orbit
above the Pacific.

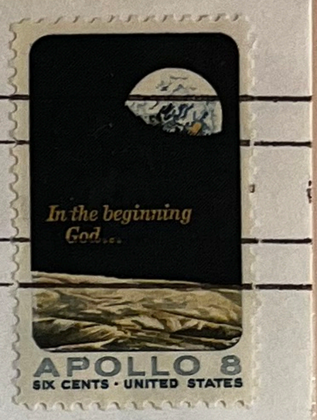
C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050

INTELSAT III



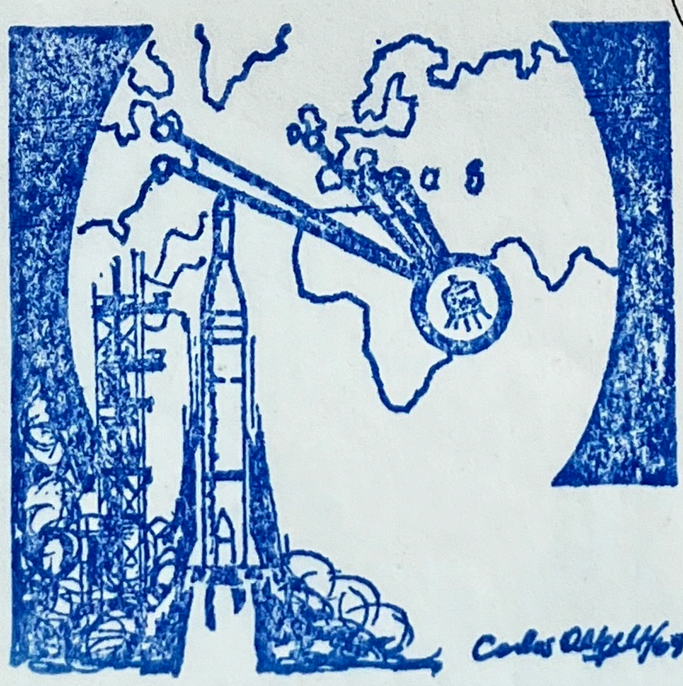
Hovering Communications Satellite 22,300
mi Over Atlantic Ocean
Radio Relay Between Earth and
Moon-Bound Astronauts

CAPE CANAVERAL, FL
JAN 15
AM
1970
32920



Trichs teite 184

INTEL SAT 3 ATLANTIC



KENNEDY SPACE CENTER, FL
JAN 15
AM
1970

Carlos Ohlfield/69

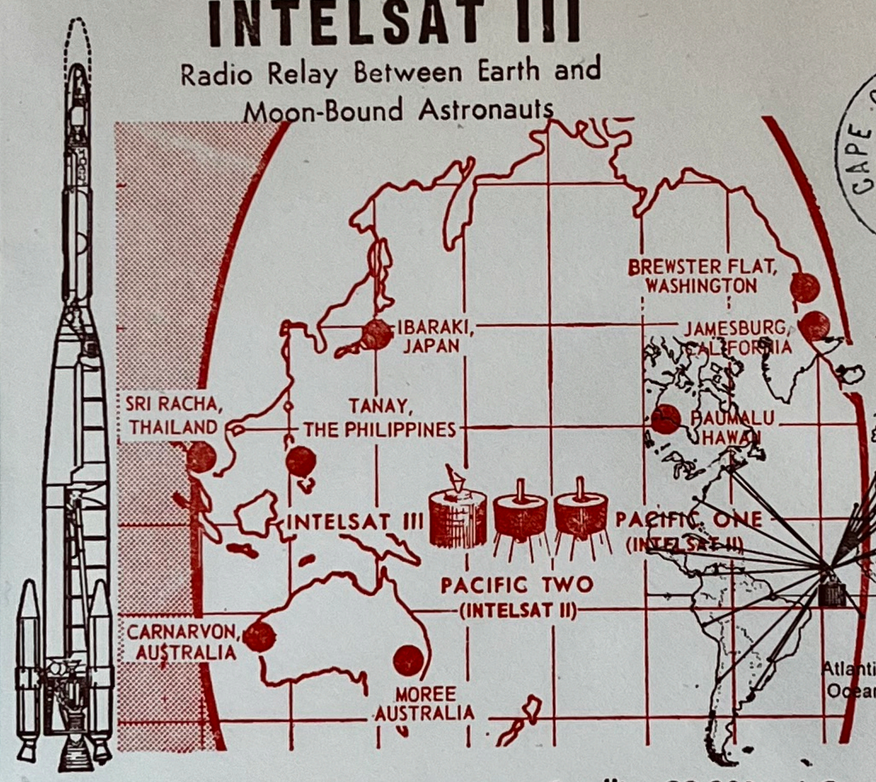
CAPE CANAVERAL, FL
APR 22
PM
1970
32920

RADIO SERVICE SATELLITE TODAY, LAUNCHED FOR COMSAT, BOOSTED BY 106 FOOT DELTA ROCKET. 644 POUND SATELLITE IS THE SEVENTH IN A SERIES OF EIGHT INTELSAT 3 SATELLITES, TO ESTABLISH A GLOBAL SYSTEM.

C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050

INTELSAT III

Radio Relay Between Earth and Moon-Bound Astronauts



CAPE CANAVERAL, FL
JUL 24
AM
1970
32920

ORBIT COVERS

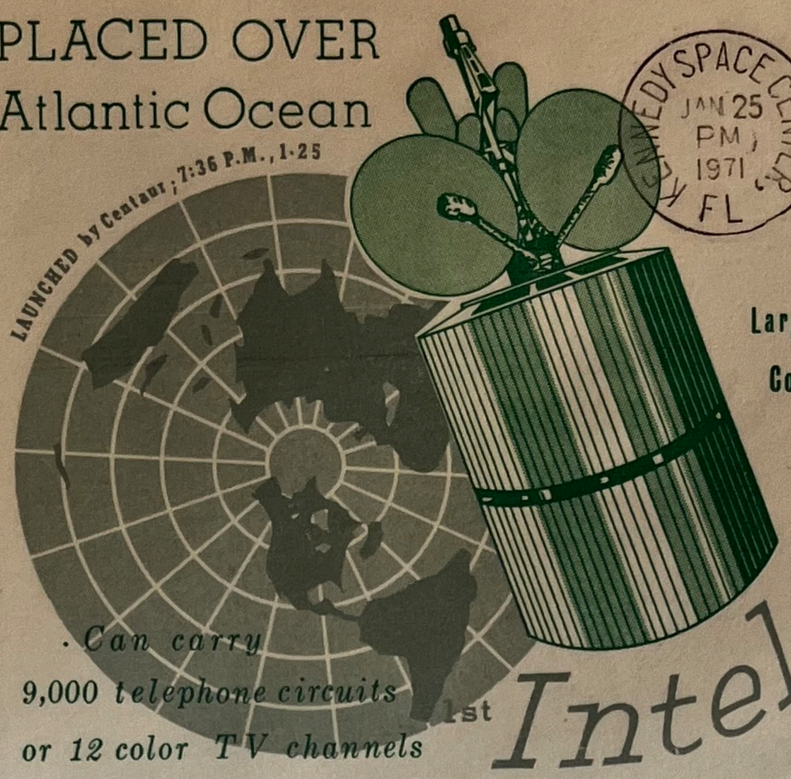
Hovering Communications Satellite 22,300 mi Over Pacific Ocean
Satellite Placed In Wrong Orbit

1ST INTEL SAT 4

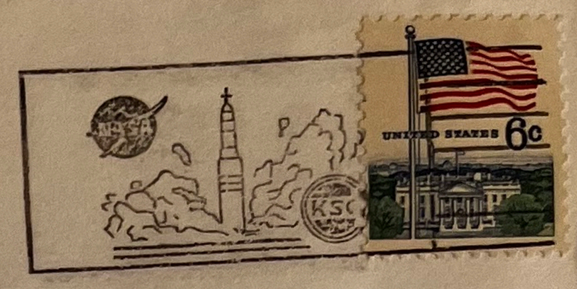
KENNEDY SPACE CENTER, FL
JAN 25
PM
1971

LEITZ 4781

PLACED OVER
Atlantic Ocean



KENNEDY SPACE CENTER
JAN 25
PM
1971
FL



Largest Commercial
Comsat Ever Launched
3,058 lbs., 17 ft. high

. Can carry
9,000 telephone circuits
or 12 color TV channels

Intelsat IV

INTELSAT - IV

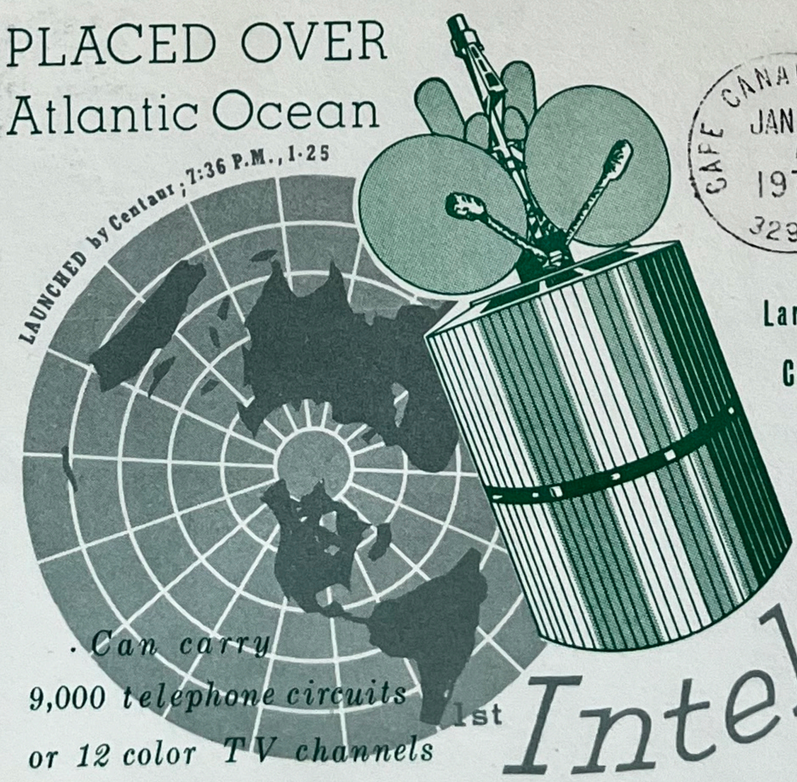
CAPE CANAVERAL, FL
JAN 26
AM
1971
32920

Ed Mitchell Al Shepard Stu Roosa

Carries 9,000 Phone Calls At One Time
Or 12 Color TV Channels. Weighs 1,587 Lbs.
For Apollo 14-Moon Landing Mission

ORBIT COVERS

PLACED OVER
Atlantic Ocean



CAPE CANAVERAL, FL
JAN 26
AM
1971
32920

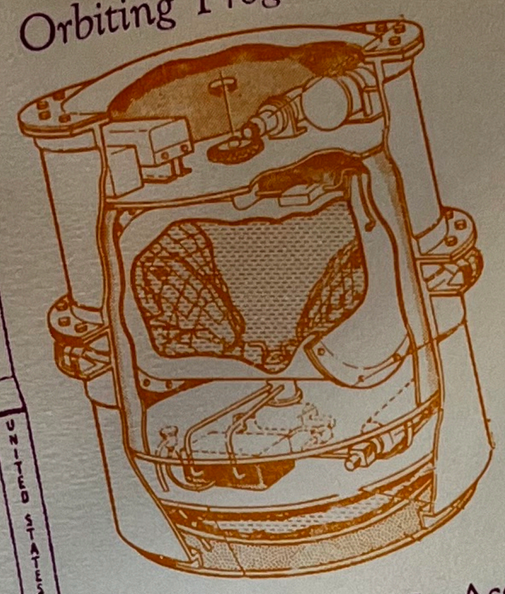
Largest Commercial
Comsat Ever Launched
3,058 lbs., 17 ft. high

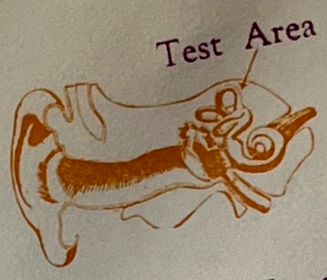
. Can carry
9,000 telephone circuits
or 12 color TV channels

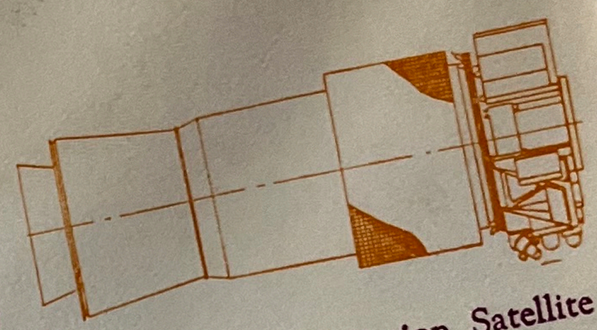
Intelsat IV

LEITZ 4781

Orbiting Frog Otolith

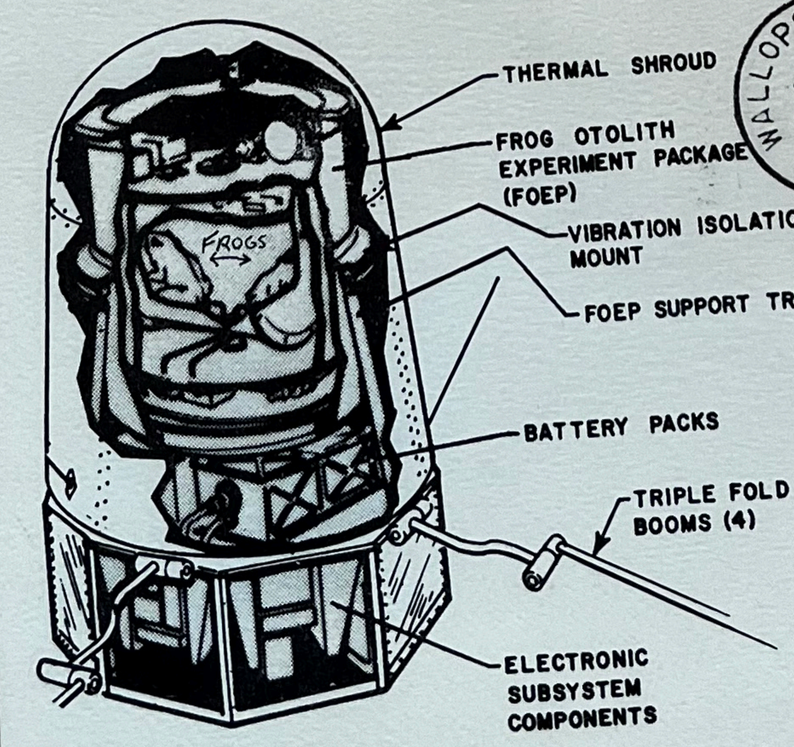






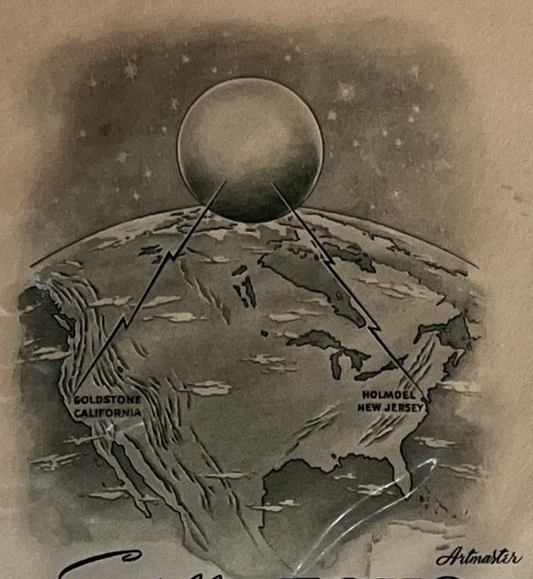
Weightlessness & Acceleration Test Of Inner Ear Otolith Sensors Of Orbiting Spinning Frogs.
A Vision & Balance Test For Astronaut Flights.
Radiation Meteroid Satellite Orbited For Improved Instrumentation Test.

Radiation Satellite



ORBITING FROG OTOLITH (OFO) SPACECRAFT WITH TWO MALE BULLFROGS. Sent into space to test electrical response of Otolith sensors of inner ear during hours of weightlessness.

C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050



Artmaster

Satellite ECHO

PROGRESS IN SPACE

First Day of Issue

FIRST DAY OF ISSUE

WORLD-WIDE

SPACE

OTTO EDENHARTER
WASSERBURG-INN-STADT
GERMANY - ALLEMAGNE

J.F. KENNEDY COOPERATION
WITH RUSSIA SPACE EFFORT
A REALITY.

VANDENBERG A.F.B. CALIF
JAN 25
6-AM
1964

World's Biggest Satellite

The orbiting of Echo 2 is the beginning of joint Soviet and American space experiments. the Balloon Satellite to be used for radio, telephone-telegraph communications between Soviet and American scientists. Echo 2 launched at Vandenberg Air Force Base in California and inflated over Russia.

8.50

20,-

ROCKET FIRED

NAME Echo 2

DATE January 29, 1964

PLACE California - N.Y. - England

ORBIT Successful

WEIGHT

MISSION First round the world transmission via satellite

VALLEY STREAM, 7-PM JAN 29 1964 N.Y.

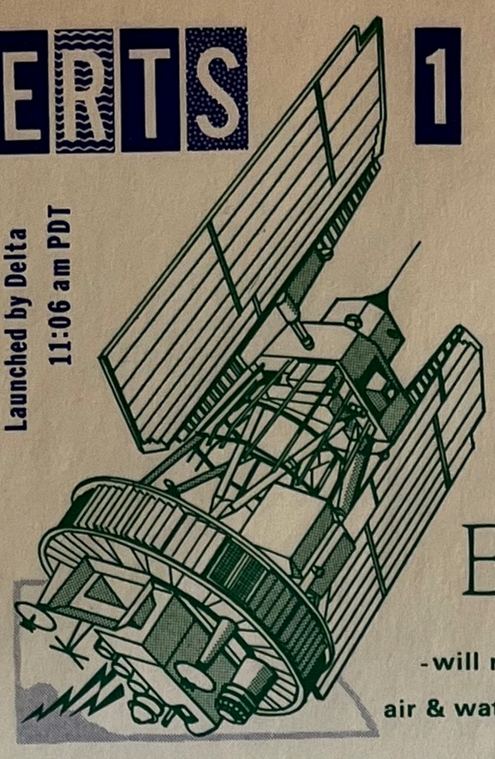
Major A. R. Sheldon

JOHN ZASO
43 FRANK STREET
VALLEY STREAM, L.I. N.Y.

15-

ERTS 1

Launched by Delta
11:06 am PDT



VANDENBERG AFB, CA
AM
JUL 23
1972

8c

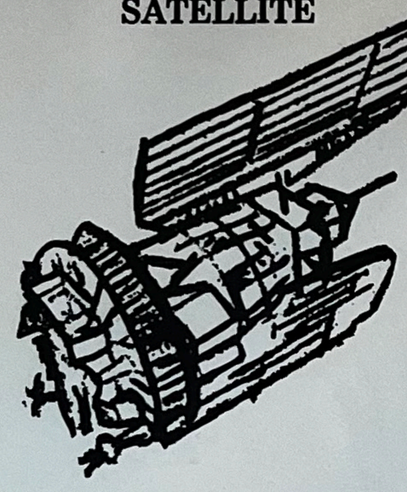
NASA EARTH RESOURCES TECHNOLOGY SATELLITE

-300,000 photos every week,
mapping 100 million square miles

Ecology Surveillance

-will return data pertinent to land management,
air & water pollution, snow cover, and precipitation

ERTS EARTH RESOURCES SATELLITE



VANDENBERG AFB, CA
AM
JUL 23
1972
93437

8c

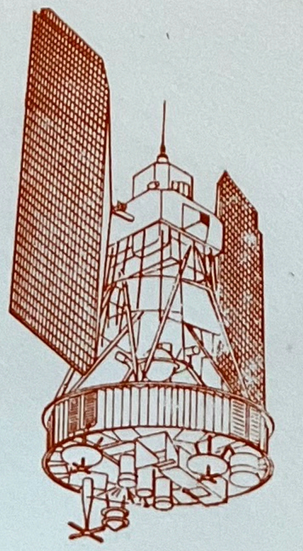
**ERTS-1 to provide
a comprehensive information base
about earths resources, and its
surface environment**

**NASA'S ERTS Launched today
from Western Test Range California**

C. SARZIN
PORT WASHINGTON
L.I., NEW YORK 11050

LEITZ 4781

ERTS-1



VANDENBERG AFB, CA
AM
JUL 23
1972
93437

NASA EARTH RESOURCES TECHNOLOGY SATELLITE

8c US ANTARCTIC TREATY 1961 1971

**To Assess & Understand Changes In The Environment
For Data On Agriculture, Forestry, Geology, Hydrology,
Pollution, Oceanography, Meteorology, & Ecology
ERTS Projects Joined By Canada, Brazil & Mexico**

BIOSAT 1 USA 1966

Aufgaben: Mit den Ergebnissen von BIOSAT 1 wollte die NASA feststellen, welche Veränderungen im Wachstum und im Erbgut bei Insekten, Pflanzen, Schimmelpilzen und Bakterien unter dem Einfluß von Schwerelosigkeit u. Kosmischen Strahlen eintreten.

Ausrüstung: Sender und Empfänger, Funkbake, Batterien, Programmsteuerungsanlage, Kapsel mit ca. 10 Millionen Kleinlebewesen, Aufenthalts- und Landekapsel für Affen.

Form u. Maße: Abgestumpfter Konus, Basisdurchmesser ca 1,0 m.

Massen : 200 bis 258 kg.

BIOSAT 1 konnte nicht wie vorgesehen über dem Pazifik von einem Flugzeug mit einer Auffangschlinge geborgen werden.

dokumentenechtes-umweltfreundlich
TUKAN 803

BIOSAT 3 USA 1969

Mit einer 2-stufigen DELTA-Rakete wurde am 28.6.1969 ein 3-jähriges, 6 Kg schweres Makaken-Äffchen aus den Dschungeln von Thailand auf eine für 30 Tage geplante Reise in den Weltraum geschossen.

Die Wissenschaft versprach sich von dem Verhalten des Schweinsaffen-Männchen mehr medizinische Erkenntnisse über die Einflüsse der Weltraumbedingungen auf Primaten als alle vorherigen Unternehmen bemannter Raumschiffe zusammen erbracht haben.

Jedesmal wenn eine Aufgabe richtig erfüllt wurde, Leuchtete eine grüne Lampe u. wurde ein Hebel freigegeben, nach dessen Betätigung ein Futterkügelchen als Belohnung genommen werden konnte.

Bereits nach 6 Tagen zeigte BONNY wachsende Teilnahmslosigkeit. Als er am 8. Tag kein Wasser mehr zu sich nahm, beschloß die NASA das Tier zurückzuholen.
Auch die Landung stand unter einem Unglücksstern. Die Suchflugzeuge verloren die 135 kg schwere Kapsel aus den Augen. Sie wurde dann durch Hubschrauber ca 25. Meilen nördlich der Insel KUAi geborgen u. nach HONOLULU gebracht.
Nach 12 Stdn. war der „Weltraum-Affe" nicht mehr zu retten. Er hatte nach den ersten Tagen stark abgebaut. An den Experimenten, die ihm seine Futterpillen einbrachten war er nicht mehr interessiert. Herzschlag und Atmung verschlechterten sich. Es wurde auch vermutet, dass die Enge der Kapsel für das Nachlassen der Körperfunktionen verantwortlich gewesen sein könnte.

Dokumentenecht · PVCFREI
Rexhit
Made in Germany

ECHO 1
1960-1980

NASA
AMES RESEARCH CENTER
20th ANNIVERSARY

000099

MIT LUFTPOST
PAR AVION

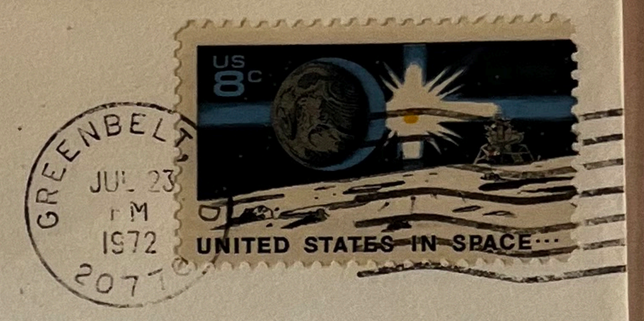
D-
Hans R a h n
8501 Feucht / Nbg.
Frühlingstr. 13

LEITZ 4781

NASA/GODDARD SPACE FLIGHT CENTER STAMP CLUB

Primary objective of the mission is to provide a reservoir of multi-spectral images for experiment and application to more effective management of the earth's resources.

WESTERN TEST RANGE
LOMPOC, CALIFORNIA



ERTS-A (EARTH RESOURCES TECHNOLOGY SATELLITE)

OFFICIAL COVER

LEITZ 4781

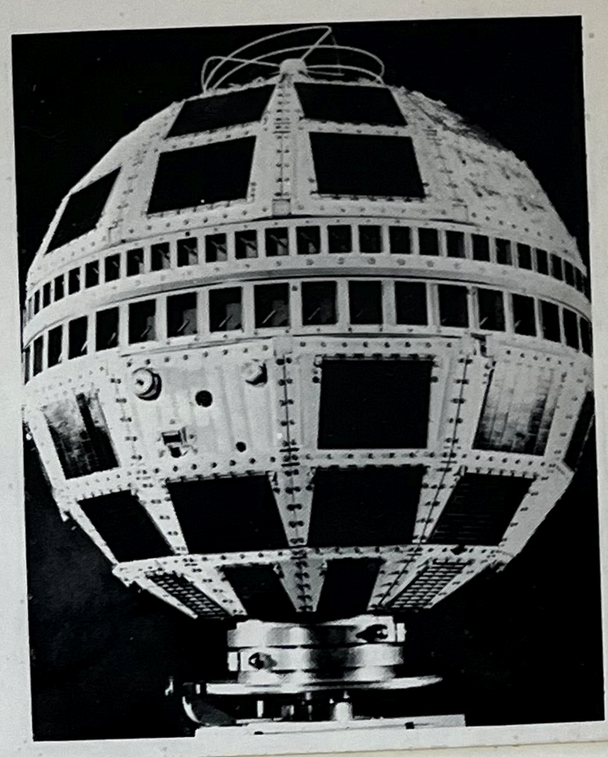
THE WORLD'S FIRST PRIVATE ENTERPRISE COMMUNICATIONS SATELLITE IS NOW BEING USED FOR DRAMATIC EXPERIMENTS IN RELAYING TELEPHONE CALLS AND TELEVISION INTERNATIONALLY.

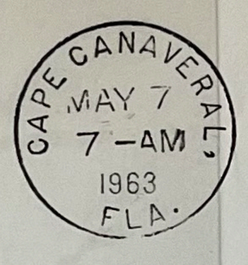
ITS NAME: TELSTAR. IT WAS LAUNCHED FROM CAPE CANAVERAL AT BELL SYSTEM EXPENSE BY THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

TELSTAR RECEIVES SIGNALS BEAMED TO IT FROM A GROUND STATION AMPLIFIES THEM AND TRANSMITS THEM TO ANOTHER STATION ON THE GROUND BELOW-PERHAPS AN OCEAN AWAY FROM THE FIRST ONE. THE NEW SATELLITE THUS ACTS AS A MICROWAVE RELAY STATION IN THE SKY, ENABLING VOICES, TV PICTURES AND DATA MESSAGES TO LEAP THOUSANDS OF MILES IN A NEW AND EXCITING WAY.

20/- 15/-

TELSTAR II





Ralph
Valley Stream NY

10/-

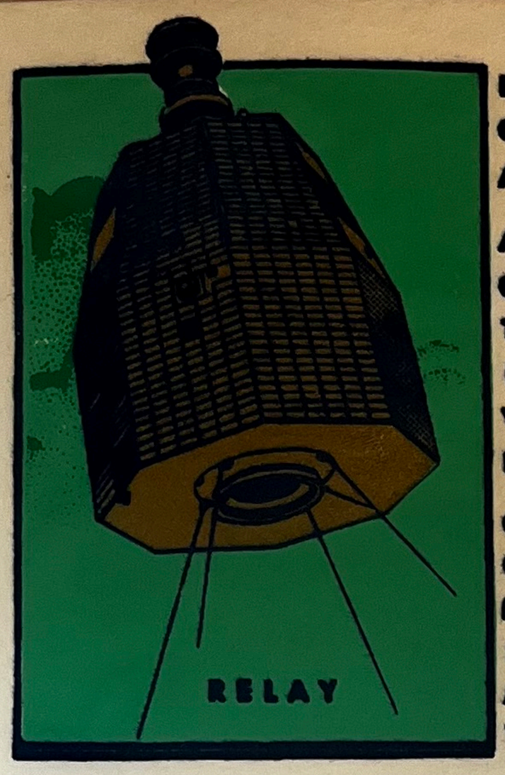
TELSTAR 3

American Telephone & Telegraph Company
AT&T-owned-and-operated domestic communications satellite

Launched July 28th, 1983, by Delta from Cape Canaveral, Florida

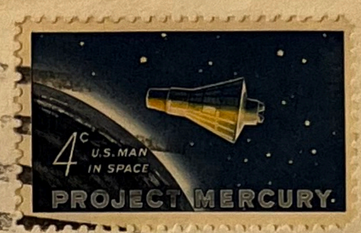
The Great Seal of the United States
1782-1982

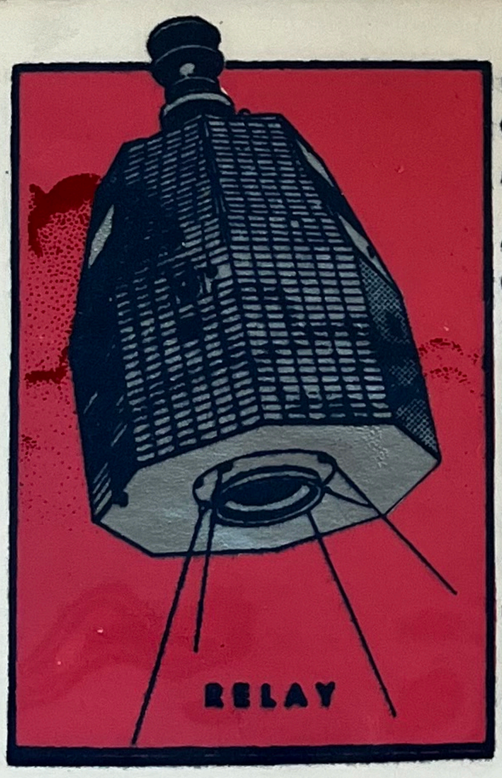
USA 20c



RCA ACTIVE COMSAT

SATELLITE BEACH
DEC
13
630 PM
1962
FLA.





RCA ACTIVE COMSAT

SATELLITE BEACH
DEC
13
630 PM
1962
FLA.

ROCKET FIRED

NAME Relay 2

DATE January 21, 1964

PLACE Florida, N.Y., Europe

ORBIT Successful

WEIGHT

MISSION First transmission between N.Y., Florida & Europe by Relay 2

1-22-64

NEW YORK, N.Y.
JAN 22
2 30PM
1964

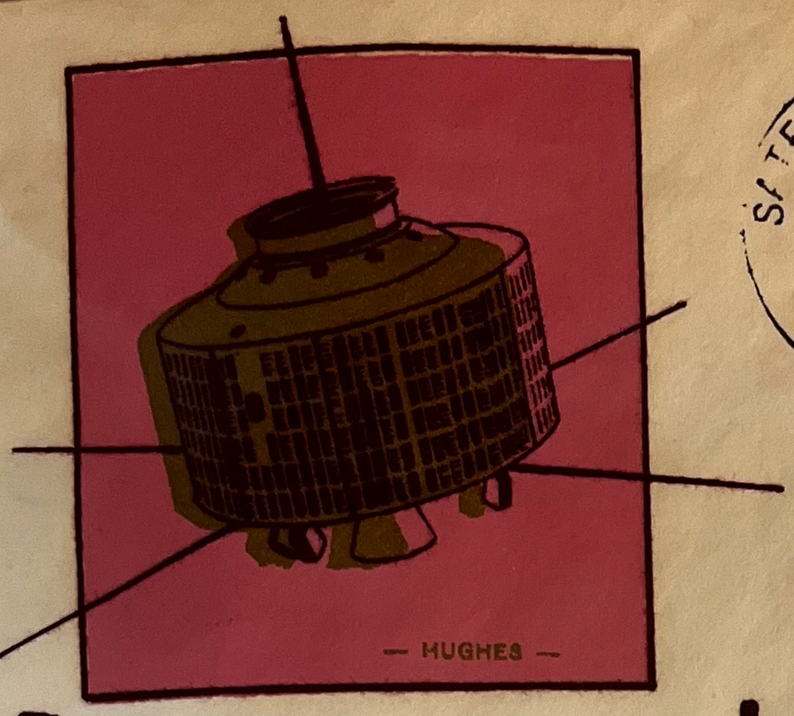
FIGHT
INFANTILE PA
JOIN MARCH

UNITED STATES POSTAGE
FIVE
5
CENTS

ROCKET FIRED
CAPE CANAVERAL

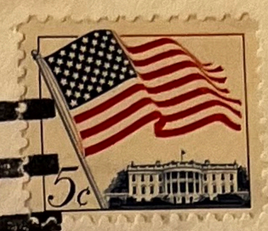
Major
A. R. Sheldon

John Zaso
43 Frank St.
Valley Stream
N.Y.
12/50

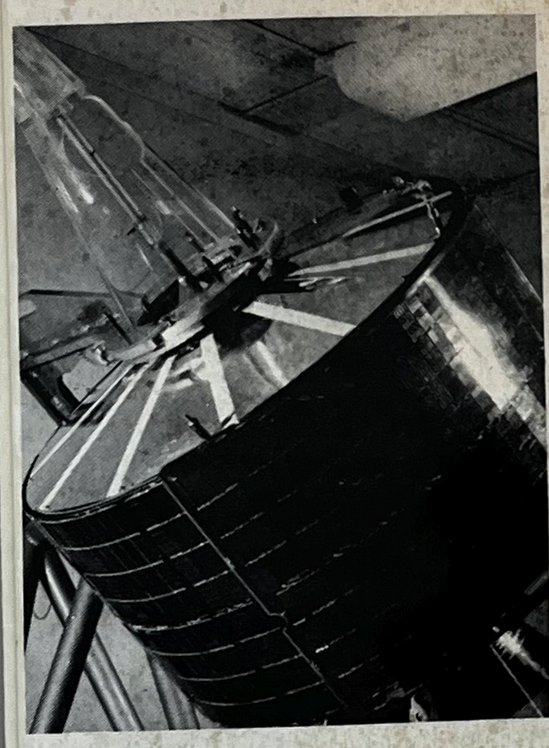


Syncom I

SATELLITE BEACH FEB 14 12:30PM 1963 FLA.



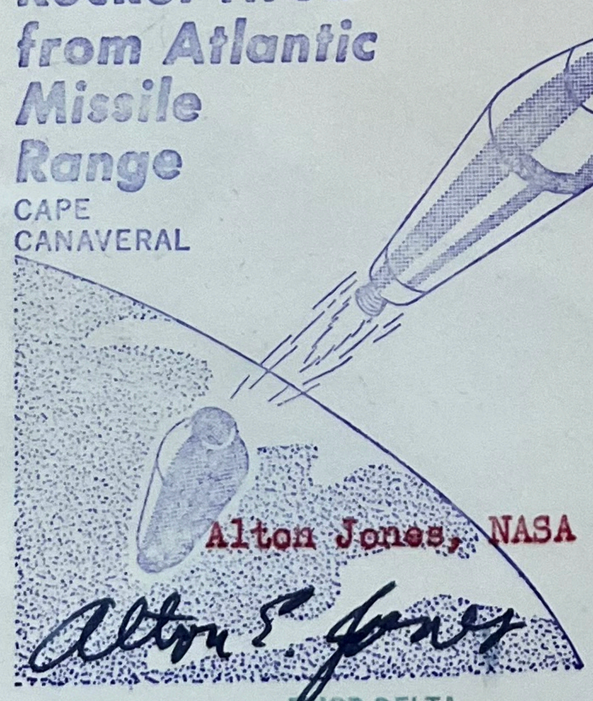
SYNCOM



CAPE CANAVERAL FEB 14 A.M. 1963 FLA.

Zaun
Valley Stream N.Y.
Syl 15.-

Rocket fired from Atlantic Missile Range
CAPE CANAVERAL



CAPE CANAVERAL JUL26 11-AM 1963 FLA.

IMPRIMÉ

Alton Jones, NASA SYNCOM Manager
Alton E. Jones

THOR-DELTA
SYNCOM 2

Alfred Syebel
3214 W. CRYSTAL ST.
CHICAGO 51, ILL.

Sy 2/10.-

Folle = 8,50-9,75 Maads Hollica 10,-

INTEL SAT PACIFIC 3

MISSILE

FIRED FROM..

CAPE
KENNEDY

R. DUBEAU

KENNEDY SPACE CENTER
FEB 5
PM
1969
FL

INTEL SAT 3

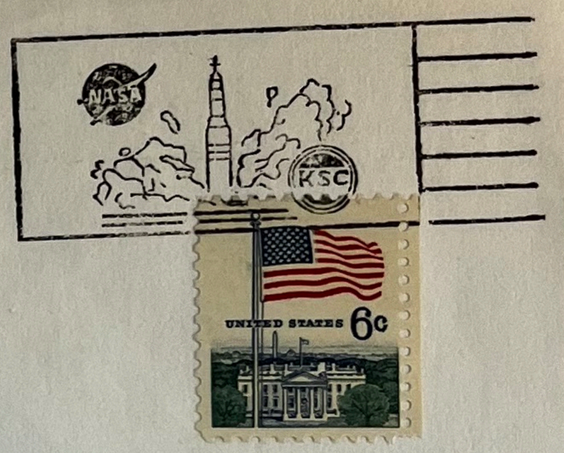
MISSILE

FIRED FROM..

CAPE
KENNEDY

R. DUBEAU

KENNEDY SPACE CENTER
MAY 21
PM
1969
FL



Dieter Körner
Auf der Bleiche 18
D 4795 Delbrück
West Germany

INTEL SAT 3 ATLANTIC

MISSILE

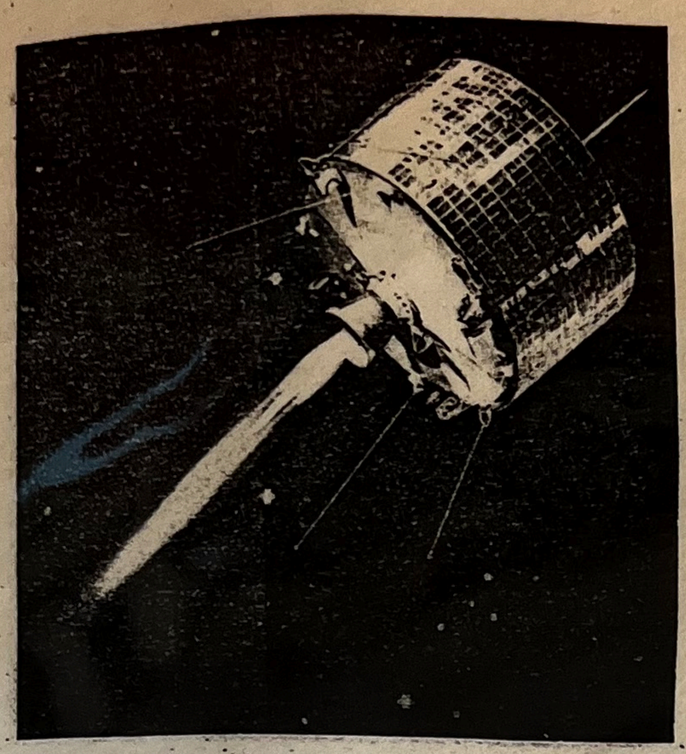
FIRED FROM..

CAPE
KENNEDY

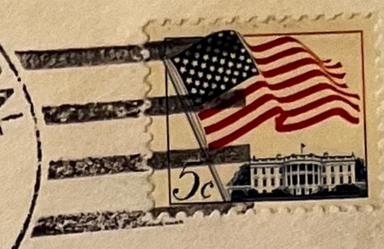
R. DUBEAU

KENNEDY SPACE CENTER
JUL 25
PM
1969
FL

Dieter Körner
Auf der Bleiche 18
D 4795 Delbrück
West Germany



CAPE CANAVERAL
AUG
19
A.M.
1964
FLA.



A SYNCOM 3, 83lb MOONLET BOOSTED into ORBIT by a DELTA Rocket plays back Star Spangled Banner

101

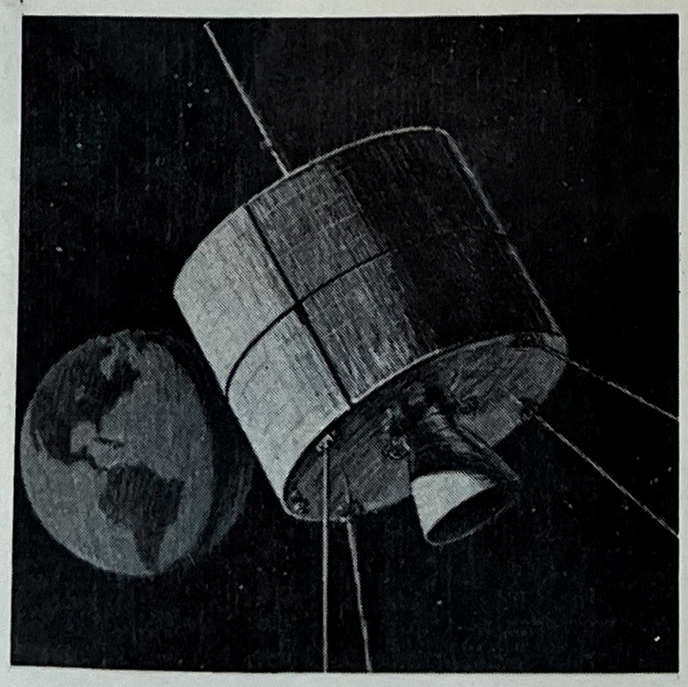
Syncom 3

SATELLITE BEACH
AUG
19
A.M.
1964
FLA.

151-

7,50

SATELLITE "EARLY BIRD"



CAPE CANAVERAL, FL
APR
6
P.M.
1965
32920

World's first commercial space venture. Communication Satellite Corporation Comsat 23,300 mile high stationery orbit satellite will soon relay telephone conversations and all forms of communications between North American and Europe.

CLYDE J. SARZIN
PORT WASHINGTON, L.I.
NEW YORK, U.S.A.

Midas-Test 25.10.61
Fuchs-Katalog, Kat 148
Mi 5 60.–

MISSILE
FIRED FROM..
Cape
Canaveral

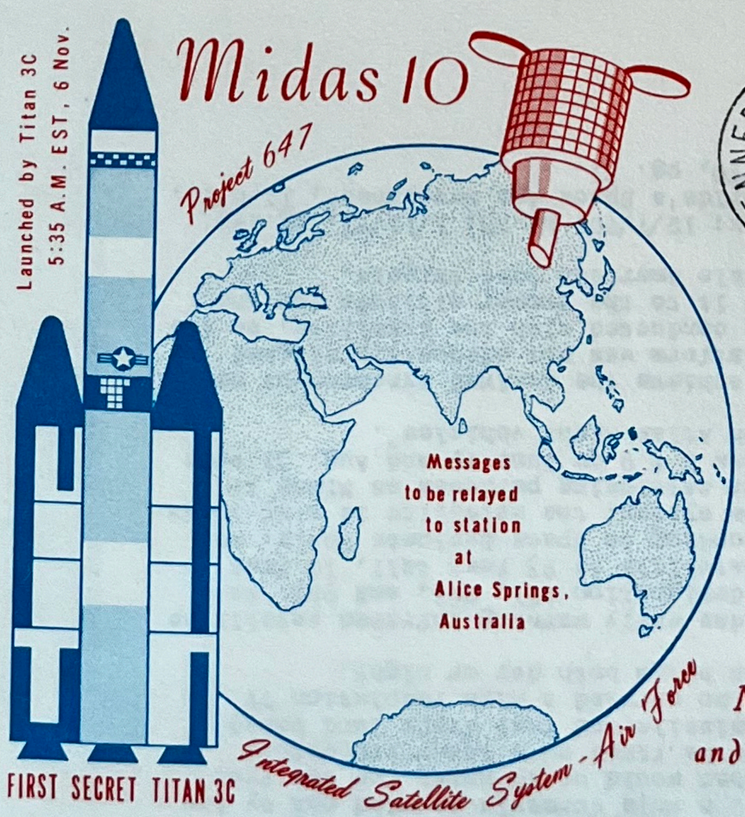
PATRICK AIR FORCE BASE
OCT 25
9 30 AM
1961
FLA.

USA
AIR MAIL

TITAN OCT 24 1961 6:30 P.M.

HARRY A. GORDON
795 GARDEN ST.
NEW YORK CITY. 60. N. Y.

LEITZ 4781



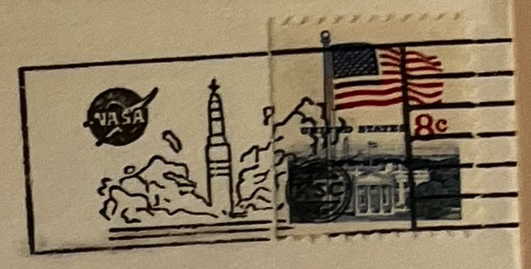
KENNEDY SPACE CENTER
NOV 6
AM
1970
FL

1800 lb.
satellite —
consolidating the
surveillance,
Midas detection,
and Vela Nuclear
satellites.

Launched by
Atlas-Agena
5:20 p.m., Dec. 20
"Synchronous
Orbit"

USAF

KENNEDY SPACE CENTER, FL
DEC 20
PM
1972



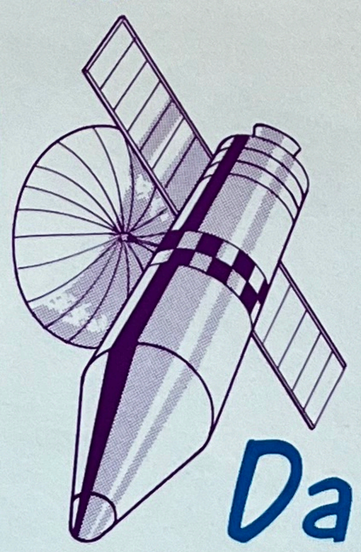
'PROGRAM 313'

'High Frequency Relay
Function for
MIDAS Super Spies'

R & D
Data Relay

LEITZ 4781

Launched by
Atlas-Agena
5:20 p.m., Dec. 20
"Synchronous
Orbit"



USAF

CAPE CANAVERAL, FL
DEC 21
A M
1972
32920

INTERSPACE
COVER

'PROGRAM 313'

'High Frequency Relay
Function for
MIDAS Super Spies'

R & D
Data Relay

First Decade...
Lunar Landing
1969-1979

LUNAR LIFTOFF

USA 15c

HOUSTON, TX ALBERT THOMAS BR
JUL 21 1979
USPO

8¢

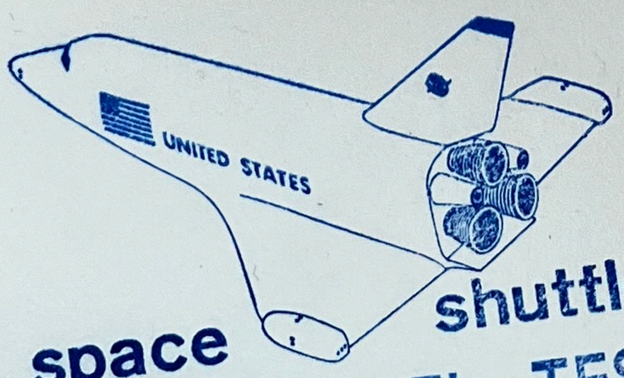
US 8c

UNITED STATES IN SPACE A DECADE OF ACHIEVEMENT

MOFFETT FIELD CA
MAR 23 P.M. 1976
94035

FRANK LLOYD WRIGHT

2c U.S.POSTAGE



space shuttle
WIND TUNNEL TEST

MR. FRANZ STARK
STEINHEIMERSTR. 24

D-7911 HOLZHEIM
ÜB. NEU ULM
WEST GERMANY

WIND TUNNEL TESTING

SSV

AMES RESEARCH CENTER

15-

Capt.n JAMES COOK
Hawaii 1778
13c USA

MOFFETT FIELD.
MAY 26
AM
1978
94035

38382

Copernicus
1473 - 1973
8¢US

KARL A! MAIER
GLEMSGAUSTR.3

D-7257 DITZINGEN 5
GERMANY

WIND TUNNEL TESTING

SSV

AMES RESEARCH CENTER

MOFFETT FIELD, C
JUL
12
A.M.
1978
94035

REGISTER
VOTE
5¢
POSTAGE

ENERGY CONSERVATION
USA 13c

ENERGY DEVELOPMENT
USA 13c

AIR MAIL

Martha Dathe
Im Vogelsang 1
7012 Fellbach
West - Germany

United States 13c
United States 13c
United States 13c
USE ZIP CODE 36138

35213

THOMAS JEFFERSON
UNITED STATES 1c

US 10c Skylab
US 10c Skylab

USE ZIP CODE

10c AIR MAIL
FIRST MAN ON THE MOON
UNITED STATES

UNITED STATES
space shuttle
WIND TUNNEL TEST

JOSEF BAIER
a/Wingert 19
6301 KROFDORF
Germany

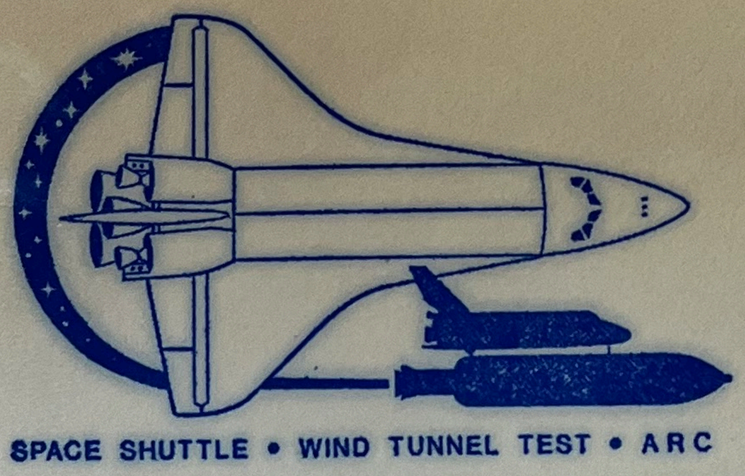
APOLLO SOYUZ SPACE TEST PROJECT
UNITED STATES · 1975
10c

USE ZIP CODE

USA 21¢
UNITED STATES AIR MAIL

UNITED STATES
space shuttle
WIND TUNNEL TEST

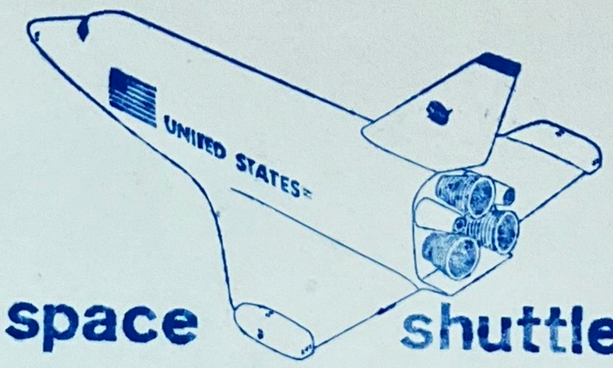
JOSEF BAIER
a/Wingert 19
6301 KROFDORF
Germany



AIR MAIL

MOFFETT FIELD
FEB 18
1977
$4036

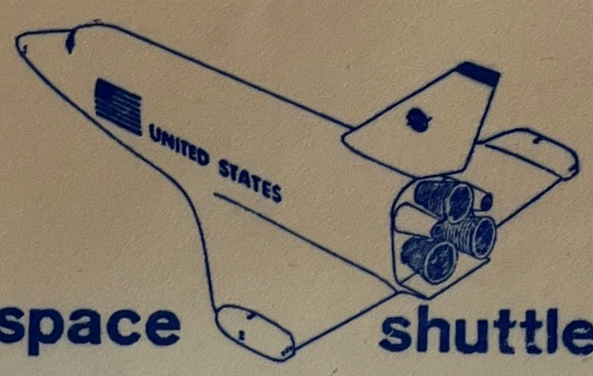
Gisela Nünke
Lortzingstr.3
7053 Rommelshausen
West - Germany.



space shuttle
WIND TUNNEL TEST

MUFFETT FIELD
APR
23
PM
1976
9403

Robert Keller
453 Ibbenbüren
Münsterstraße 113
West Germany

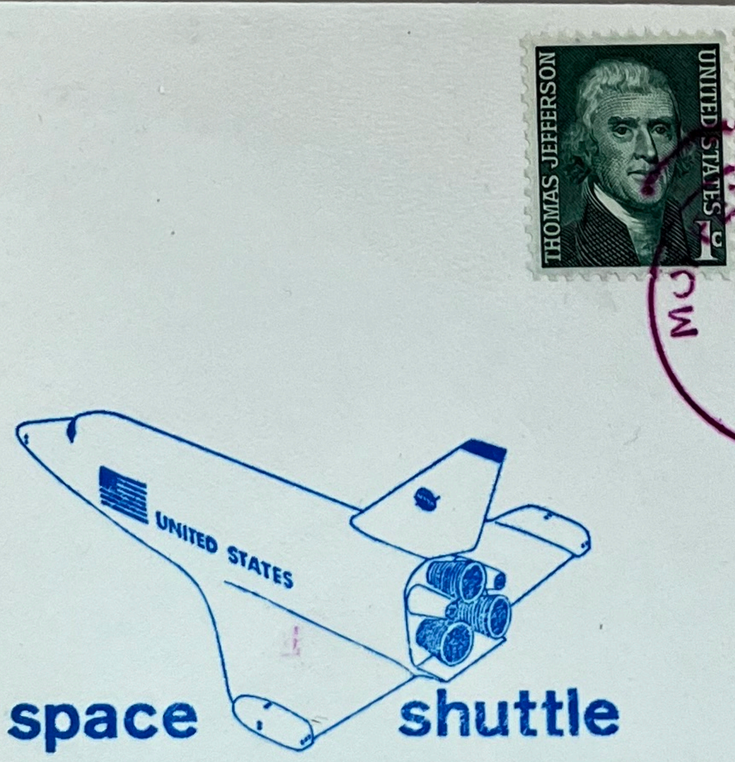


space shuttle
WIND TUNNEL TEST

MUFFETT FIELD CA
JUN 30 PM 1976
94035

10c ANDREW JACKSON UNITED STATES
10c ANDREW JACKSON UNITED STATES
U.S. 11c AIR MAIL
City of Refuge • Hawaii
National Parks Centennial

Marlene Baier-Wiemann
Simon-Meister-Str.6
5 Köln 60
Germany

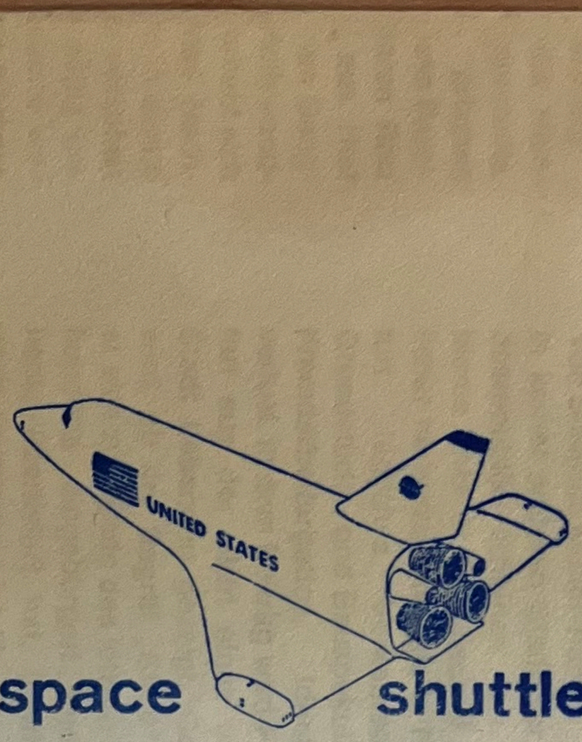


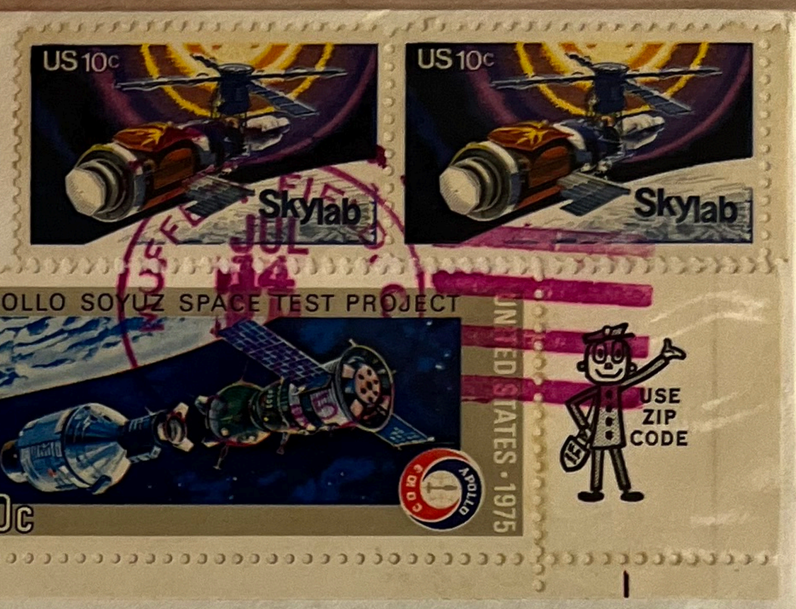
space shuttle
WIND TUNNEL TEST

MUFFETT FIELD CA
2 PM 1976
94035

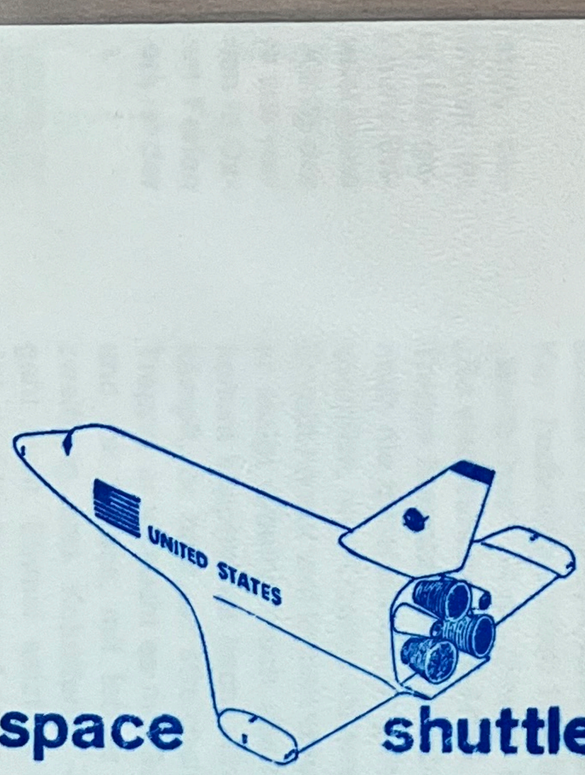
THOMAS JEFFERSON UNITED STATES 7c
US 10c Skylab
US 10c Skylab
USE ZIP CODE
10c AIR MAIL
FIRST MAN ON THE MOON
UNITED STATES

JOSEF BAIER
a/Wingert 19
6301 KROFDORF
Germany





JOSEF BAIER
a/ Wingert 19
6301 KROFDORF
Germany

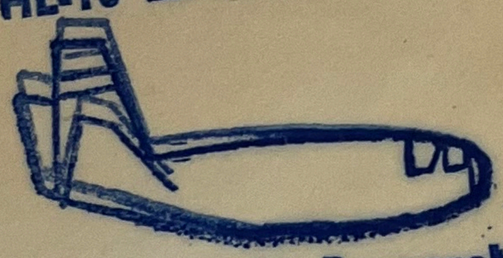


JOSEF BAIER
a/ Wingert 19
6301 KROFDORF
Germany

EDWARDS, CA
JUN 19
PM
1969
93523

TEN CENTS U.S. AIR MAIL

HL-10 LIFTING BODY



NASA Flight Research Center
Edwards, Calif.

JOHN MANKE

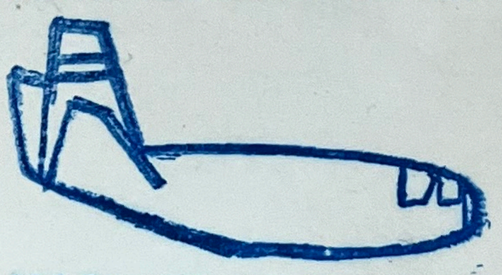
ROBERT BOUDWIN
1119 HARKER AVE.
WOODBURY, N. J. 08096

LEITZ 4781

EDWARDS, CA
JUN 6
PM
1969
93523

TEN CENTS U.S. AIR MAIL

HL-10 LIFTING BODY



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