

**FINAL SCRIPT**  
**FOR**  
**SATURN I/IB QUARTERLY FILM REPORT**  
**NO. 24**  
**(COVERING APRIL, MAY, JUNE 1965)**

**July 26, 1965**

FILM

NARRATION

SCENE 1--

NASA Seal

SCENE 2--

"The George C. Marshall

Space Flight Center

Presents"

SCENE 3--

Artwork, then pop-on

words over artwork,

"Saturn I/IB"

Saturn I/IB Quarterly Film Report No. 24

covers progress during the period April,

May, June, 1965.

FILM

SCENE 4--

Sequence on delivery,  
inspection, checkout,  
and assembly of  
components for SA-8.  
(Include B.P. No. 26  
and Pegasus B)

NARRATION

Highlighting this quarter was the successful launch and flight of the ninth Saturn I, SA-8, and the equally successful orbiting of the second Meteoroid Technology Satellite, Pegasus B. By the beginning of the quarter, the launch vehicle had been erected at the Cape and was being tested. On April 10th, following preparations for shipment, the service module and its adapter for Apollo Boilerplate No. 26 was flown from Marshall to the Cape. Meanwhile, final checkout of Pegasus B was completed at Hagerstown, Maryland. Following checkout, the satellite was shipped to General Electric for vibration tests April 13th. Two days later, Pegasus B was shipped to the Cape. In mid-April, Pegasus B underwent system checks in Hangar D. Following testing, the satellite was mated to Boilerplate No. 26's service module and its adapter April 27th. On April 28th, the spacecraft was moved to the launch pad and erected atop SA-8. Erection of the Command Module followed immediately. Flight objectives of SA-8 were to: provide and evaluate meteoroid data in near-earth orbit; demonstrate launch vehicle iterative guidance mode, and evaluate system accuracy; and test a closed-loop guidance system for the fourth time.

## FILM

### SCENE 5--

Show SA-8 on pad.  
inspection, check  
Show blockhouse  
and front of  
scenes, then back to  
SA-8 on pad.  
(Include 5-7)

### SCENE 6--

SA-8 on pad prior  
to engine ignition,  
short countdown  
activity in  
blockhouse; then,  
back to SA-8 on  
pad.

### SCENE 7--

Engine ignition, vehicle  
release, liftoff, tracking  
sequence.

### SCENE 8--

Booster burnout, then  
follow-up with second  
stage ignition and flight.

## NARRATION

Highlighting the success  
Pre-launch checkout of SA-8 progressed  
launch and flight  
satisfactorily. Countdown demonstration  
SA-8, and the first  
testing was completed May 21st. Countdown  
the second stage  
began two days later.

Vehicle liftoff occurred on May 25th at 2:35 a.m.  
Eastern Standard Time.

SA-8, the first vehicle to use a Chrysler-  
built booster, was the ninth straight  
successful Saturn. The first stage burned  
for 148 seconds and separation was good.

The second stage burned about 474 seconds,  
obtaining programmed cutoff velocity. Stage  
performance was satisfactory.

## FILM

### SCENE 9--

Kinescope on

Pegasus B

sequence.

### SCENE 10--

Preparations for shipment

of S-I-10 at Michoud;

follow-up with booster

shipment to KSC

### SCENE 11--

Show S-IV-10 removal

from storage at SACTO,

shipment by Guppy, and

arrival at the Cape.

## NARRATION

The Apollo Command and Service Module

ejected mechanically, and the Pegasus'

swings successfully deployed. Pegasus B's

roll rate was 6.6 degrees per second as

compared to Pegasus A's roll rate of 9.8

degrees. Pegasus B, like its predecessor,

is successfully obtaining information

concerning quantity and penetrating ability

of meteoroids in the near earth orbit. The

remaining Pegasus satellite will be launched

by SA-10, which, throughout the quarter, has

been undergoing preparations for launch.

At Marshall's Michoud Operations, preparations

for shipment of S-I-10 continued during April

and May. On May 26th, the booster departed

via barge for Cape Kennedy and arrived at the

site May 31st. Two days later, it was erected

on the pad and pre-launch checkout was begun.

S-IV-10 was removed from storage at SACTO, then

loaded aboard the Guppy and flown to KSC,

arriving May 8th.

FILM

SCENE 12--

Checkout and painting  
of S-IV; then, erection  
atop S-I-10

SCENE 13--

Checkout and preparations  
for shipment of S-IU-10.  
Arrival of S-IU-10 at the  
Cape. Show complete  
vehicle on launch pad.

SCENE 14--

Show B.P. No. 9 being  
prepared for shipment;  
then loaded on Guppy

NARRATION

Following checkout and necessary painting, the  
stage was erected atop S-I-10 the evening of  
June 8th.

Checkout of S-IU-10 was completed in early April,  
Preparations for shipment of the Instrument Unit  
were completed April 16th, when it was  
temporarily placed in storage. On June 1st,  
S-IU-10 was delivered to the Cape. On June  
9th, following checkout, alignment, and  
painting, the unit was erected atop the stages.  
Pre-launch checkout of stages and components is  
underway.

While pre-firing checkout of the launch vehicle  
was underway, modifications were completed on  
Apollo Boilerplate No. 9. The Service Module  
and Adapter were shipped from Marshall to the  
Cape June 20th. The Command Module and Launch  
Escape System were shipped on June 29th.  
Following mating with Pegasus, Boilerplate No.  
9 will be erected atop the launch vehicle early  
next quarter.

FILM

SCENE 15--

Input from Fairchild-Hiller  
on Pegasus C.

FADE OUT:

then

FADE IN:

sub-title

SATURN IB

SCENE 16--

Establishing shot of

complete vehicle in

Dynamic Test Stand.

Follow-up with Dynamic

Testing.

NARRATION

Pegasus C electronic cannister and thermal  
vacuum testing was completed at Bladensburg,  
Maryland, May 26th. The satellite was then  
shipped to Fairchild-Hiller's Hagerstown  
Facility for final assembly and functional  
checkout. Pegasus C was shipped to KSC  
June 22nd, where it will receive pre-launch  
checkout prior to mating with Boilerplate  
No. 9. The launch of Pegasus C and SA-10 is  
scheduled for early next quarter.

At Marshall, Saturn IB Dynamic testing of the  
complete vehicle configuration, started last  
quarter, was successfully completed May 27th.  
No major problems were encountered during  
testing.



## FILM

### SCENE 17--

Show work on upper stages to indicate changeover.

### SCENE 18--

Chrysler input on S-IB Structural Testing.

### SCENE 19--

S-IB-1 Static Firing at Marshall.

## NARRATION

At the present time, changeover is underway to the upper stage configuration, which will allow simulation of S-IVB flight conditions. Following completion of changeover, next quarter, dynamic testing will resume. S-IB-D has been shipped to the Michoud Assembly Facility for storage and such modifications as necessary for the Saturn IB/Centaur Launch Vehicle Dynamic Test Program.

In April, at Chrysler-Michoud, a failure during the S-IB Structural testing revealed a spider beam marginal design. MSFC and Chrysler investigated the failure, resolved the problem, and modified the beam. On June 19th, the modified spider beam was successfully tested to the required 140 percent load.

A major milestone in the Saturn IB Program was the static firing at Marshall of the first IB booster. On April 1st, the booster, built by Chrysler, was successfully fired for a duration of 35 seconds. On April 13th, an equally successful long-duration firing was accomplished.



## FILM

### SCENE 20--

S-IB-1 shipment from MSFC  
to Michoud. Follow-up  
with post-static checkout  
at Michoud.

### SCENE 21--

Chrysler input on S-IB-2.

### SCENE 22--

S-IB-2 preparation for  
shipment and arrival  
at MSFC docks.

### SCENE 23--

Chrysler input on  
S-IB-3 showing  
pre-static checkout.

## NARRATION

The stage was removed from the static test stand and transported to Marshall's loading docks. On April 20th, the stage departed MSFC and arrived at Michoud four days later. Following completion of post-static modification, post-static checkout began June 11th. The checkout will be completed in July. The stage is scheduled to arrive at KSC in mid-August for use in the checkout of Launch Complex 34 prior to beginning pre-flight check.

Also at Chrysler, Michoud, S-IB-202 pre-static checkout was completed April 22nd. On May 21st, installation of retrofitted engines was completed, along with the necessary electrical tests and engine alignment.

The stage was then prepared for shipment to Marshall, departing Michoud June 12th, arriving at MSFC June 19th. S-IB-202 is scheduled to be static-fired early next quarter.

At Michoud, Chrysler completed assembly of S-IB-203 June 16th. Following installation, pre-static checkout of the booster started June 17th and continued throughout June.

ILM

SCENE 24--

Chrysler input on  
S-IB-4; tank clustering  
and assembly operations.

SCENE 25--

Chrysler input on S-IB-5  
showing second stage  
adapter assembly.

SCENE 26--

H-1 input from  
Rocketdyne.

NARRATION

On April 5th, S-IB-204 tank clustering began--  
with completion in early June. Assembly  
operations on the booster will continue into  
August.

Fabrication of S-IB-205 major structural  
components continued through the quarter. On  
May 12th, assembly of the second stage adapter  
was begun--with tank clustering scheduled for  
July 12th. Fabrication operations for S-IB-206  
are also underway. The lower thrust ring was  
completed on May 14th. On June 28th, the  
barrel assembly was completed. Stage  
fabrication will continue through next quarter.

At Rocketdyne's Santa Susana Facility, 200 K  
H-1 engine qualification testing, begun last  
quarter, was completed April 30th. The test  
program included functional and reliability  
tests of the LOX valve, turbo-pump, and thrust  
chamber. Eight 200 K H-1 engines will power  
the S-IB Stage.

FILM

SCENE 27--

Douglas input on

S-IVB Battleship

Stage. 0-1786

SCENE 28--

Douglas input on

S-IVB Facilities Checkout

Stage. 0-1731, 0-1764

NARRATION

Another Saturn IB major milestone was reached at SACTO, when the final IB-S-IVB Battleship tests were performed during May. On May 4th, a successful full-gimbal, full-duration firing was performed; on May 14th, successful environmental temperature conditioning tests were conducted. These concluded the Saturn IB Battleship Program. Conversion of the stage to Saturn V configuration began immediately.

Also at Sacramento, the S-IVB Facilities Checkout Stage underwent successful propellant loading tests at Douglas' Beta Test Stand No. 3 this quarter, qualifying both the stage and test stand. On May 1st, automatic loading tests were successfully completed. Following testing, the stage was removed from the stand and moved to an inspection site. No discrepancies were revealed during post-test inspections of the propellant tanks, LH2 tank insulation, and dye checks of all exposed welds. The stage was subsequently prepared for shipment at SACTO and departed via water transportation for KSC June 10th, arriving June 30th. The stage will be used in the checkout of Launch Complex 34.

## FILM

SCENE 29--

Douglas input on  
Vertical Checkout  
Laboratory at SACTO;

0-1764

SCENE 30--

Douglas input;

0-1786

SCENE 31--

Douglas input on

S-IVB/IB-1

## NARRATION

Construction of the Vertical Checkout Laboratory at SACTO is well underway. Erection of structural steel is complete, and installation of handling and test equipment is underway. Following acceptance, the facility will be used for post-static checkout of S-IVB stages after acceptance firing.

At Airesearch's Test Facility in Phoenix, Arizona, qualification testing of the fuel feed duct for S-IVB stages was conducted this quarter.

At Douglas' Huntington Beach Facility, the first S-IVB Flight Stage, S-IVB-201, underwent LH2 tank modifications, parts shortage installation, painting, and weighing. The stage was then shipped to SACTO April 30th, arriving May 6th. The next day, it was installed in Beta Test Stan No. 3 where out-of-position installations and modifications were begun. Pre-static checkout began May 29th, and continued through June. A major milestone will be reached early next quarter, with the acceptance firing of the first flight S-IVB stage.

## FILM

### SCENE 32--

Douglas input on  
S-IVB/202.

### SCENE 33--

Douglas input on  
S-IVB/203.

### SCENE 34--

Douglas input on  
S-IVB/204.

### SCENE 35--

Douglas input on  
S-IVB/205.

### SCENE 36--

Douglas input on  
S-IVB/206

## NARRATION

Major assembly on S-IVB/202 was completed April 30th. Checkout started the same day and continued through the quarter in parallel with installation of late parts.

S-IVB/203 clip bonding is now complete.

Installations in the LH2 tank and component installation in the forward and aft skirts and thrust structure continued.

Insulation of the LH2 tanks for S-IVB/204 was completed in May. Installation of helium spheres in the LH2 tank was completed in late May.

In early May at Santa Monica, S-IVB/205 fabrication and assembly of the LOX Tank was completed. The LOX Tank and LH2 segments were then shipped to Huntington Beach. Joining of the LH2 and LOX tanks occurred in mid-May. Joining of the forward dome was completed in early June. LH2 insulation is scheduled for next quarter.

Assembly of S-IVB/206 aft common bulkheads started May 4th. Work continued on the joining of aft and forward common bulkheads.

FILM

SCENE 37--

Vertical Stand 3-A

April J-2 input.

SCENE 38--

Rocketdyne J-2

Engine; 0-1789

SCENE 39--

J-2 Engine

Static Firing.

SCENE 40--

Continue above action

with varied application.

NARRATION

Development and manufacturing of the S-IVB's J-2 Engine continued throughout the quarter. At Santa Susana, modifications to Rocketdyne's Vertical Stand 3-A, for J-2 Engine static tests, started last quarter, were completed in early June. Initial static firing occurred in mid-April.

In order to improve manufacturing workload distribution, Rocketdyne transferred the J-2 Liquid Oxygen Turbopump fabrication from Canoga Park, California to its Neosho, Missouri, plant.

As part of the Flight Rating Test Program, which was successfully completed on June 30th, six satisfactory malfunction tests were performed at Santa Susana this quarter. During these tests, malfunctions are deliberately phased into an engine to determine effect on performance and to see if a safe shut-down can be accomplished.

The other Flight Rating Tests, including altitude testing series, safety limit series, and malfunction series, were successfully conducted with Engines 2002 and 2003.



## FILM

### SCENE 41--

Installation of a  
J-2 Engine in Marshall's  
J-2 Static Test Stand.

### SCENE 42--

Vibration testing  
of S-IU-200V,  
Wyle Laboratories.

### SCENE 43--

Assembly of the Facilities  
Checkout Instrument Unit.  
Follow-up with shipment  
and storing sequence;  
0-1807.

## NARRATION

At Marshall, the first J-2 Engine delivered by Rocketdyne was installed in the Static Test Stand in April. It is being used to familiarize MSFC personnel with the engine. A second engine, delivered to Marshall in June, will be used to activate the stand.

At Wyle Laboratories, Huntsville, Instrument Unit vibration testing, started last quarter, continued through April and May. Tests revealed deficiencies in the mounting of components to the IU structure; consequently, it was decided to bolt the mounting pads to the structure in addition to bonding. Additional vibration tests are underway to qualify the mechanically fastened mounting pads.

At Marshall, assembly was completed in mid-June on the Facilities Checkout Instrument Unit. The unit was shipped from MSFC to Michoud with S-IBD June 19th, arriving June 23rd. It will be temporarily stored, then shipped to the Cape with S-IB-201 for Launch Complex 34 checkout.



## FILM

### SCENE 44--

Series of shots showing  
S-IU-200/500S mounted  
in Structural Test Facility  
at Marshall; 0-1829

### SCENE 45--

Continue above action or  
IBM input, if available.

### SCENE 46--

Stock footage showing  
component assembly of  
an IU

### SCENE 47--

Series of scenes of  
IU Checkout station at  
Marshall or IBM  
footage (if available)  
plus MSFC footage.

## NARRATION

Instrument Unit structural testing began May 27th at Marshall. Testing revealed a necessity for minor changes in the IU access door--which have been made. Two series of tests have been completed, with the third and final series to be conducted early next quarter.

Assembly of structural segments for the second IU structural test unit began June 8th with completion scheduled in late July. Structural testing of this unit will verify the segments built by North American to be flown on SA-203 and subsequent vehicles.

Work continued on S-IU-201--with installation of inserts to allow bolting of all mounting pads to the structure. Component installation will be completed next quarter with checkout also scheduled for next quarter. Component installation is also well underway on S-IU-202.

Work is well underway at Marshall's System Development Facility--with installation of black boxes on IU simulator cold plates--and scheduled vehicle hardware checkout. The breadboard is expected to be fully operational by September.

SCENE 48--  
SCENE 48--  
Same as 47.

# NARRATION

Meanwhile, work continues toward activation of  
IBM's IU Checkout Station at Huntsville, At  
Michoud, the second of two S-I Checkout Stations,  
to be modified to the S-IB configuration, was  
completed in June.

SCENE 49--  
Summary

A summary of the Saturn I/IB Program from April  
through the end of June shows major  
accomplishments in all areas:

the ninth successful flight of a Saturn I...,  
...preparations for the flight of SA-10...,  
...acceleration of events within the J-2

Engine program...,

...and continued buildup of Ground Support  
Equipment.

During the next report period, additional major  
milestones will be reached-- strengthening the  
established and successful I and IB programs.

END