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U. S. NAVAL RESEARCH LABORATORY

Payload Number 120 (2101)

This payload is designed with the following characteristics:

Diameter - 24 inches

Weight - 100 pounds

Height of equatorial band - 2½ inches

Overall height - 28 inches (with antennas folded)

Experiment:

4 D. L. inputs

D. L. Inputs:

6 elements with dual coverage located between solar cell patches, 3 above and 3 below equator.

2 elements with single coverage on spin axis.

4 elements with single coverage on equator spaced 45 degrees from telemetry antennas.

Antenna System:

4 element turnstile located on equator.

Telemetry System:

16 channel commutator reading voltages, currents, and relay positions. Clock rate maximum for SCO's.

2 SCO's connected for redundancy.

100 mw transmitter at 136 mc to be amplitude modulated with a composite of 2 SCO outputs.

Payload will contain antenna release mechanism with 16 second delay operated by separation microswitch. Overall height to be a minimum. Fold antennas for clean separation.

No spin systems required.

Battery pack to be F size cells.

This payload is being designed for launch with WS 622A in November 1962.

HANDLE VIA BYEMAN-TALENT-KEYHOLE-COMINT CONTROL SYSTEMS JOINTLY

Handle Via BYEMAN Control System only

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July 61?

U. S. NAVAL RESEARCH LABORATORY

Payload Number 121 = 710

This payload is designed with the following characteristics:

Diameter - 20 inches

Weight - 60 pounds

Height of equatorial band - 2½ inches

Overall height - 24 inches

Experiment

4 D. L. Inputs

6 elements with dual coverage located between solar cell panels, 3 below and 3 above equator.

2 elements with single coverage on spin axis.

4 elements with single coverage on equator spaced 45 degrees from telemetry antennas

Telemetry

Antenna System

4 element turnstile located on equator

Input channels - one

Number of segments in commutator - 16

Number of SCO's - two (for redundancy)

Clock rate >> 1 segment/second

Transmitter Power - 100 mw

Modulation type - AM

Payload will contain antenna release mechanism with 16 second delay operated by separation microswitch.

Battery pack - 18 cells size F

This payload is being designed for launch with WS 622A in November 1962.

Handle Via [redacted] control system only

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A. Payload 110

Band A-

Two antenna elements mounted at the Poles and measuring approximately 14".
Four Filters, Tubular ½" dia. x 6" long.
Two Detector Mounts, Tubular 5/8" dia. x 3½" long.
One Video amplifier with built-in bias-box facility.

Band B-

Four antenna elements mounted on the equator (equally spaced between the elements of the turnstile) each measuring 7" in length.
Six Filters, Tubular ½" dia. x 6" long.
Six Detector Mounts, tubular 5/8" dia. x 3½" long.
One Video amplifier with built-in bias-box facility.

Band C- and Band D.

Six antenna elements oriented on the 36° latitude and length-5½".

Band C-

Six Filters, Tubular ½" dia. x 6" long.
Six Detector Mounts, Tubular 5/8" dia. x 3½" long.
One Video Amplifier with internal bias box facility.

Band D-

Six Filters, Detector Mounts, rectangular 1" x ½" x 3" long.
One Video amplifier with internal bias box facility.

B. PAYLOAD # 130....

Band A-

Two polar mounted antennas measuring 14" in length.
Four Filters, Tubular ½" dia. x 6" long.
Two mounts, 5/8" dia. x 3½" long.
One video amplifier with internal bias box facility.

Band B-and C Symmetrical system of 6 antennas mounted at 36°Latitude 6" long.

Band B- Six filters, tubular ½" dia x 6 " long.
Six mounts, tubular 5/8" x 3½" long.
One Video amplfiere with internal bias box facility.

Band c- Six Filte rs, Tubular, ½" dia. x 6" long.
Six Detector mounts, tubular 5/8" dia. x 3½" long.
One video amplifier with internal bias box facility.

Band D..Symmetrical system of 6 antennas loacated at 36°Latitude, each 1 1/8"long.
Six Filter-Detector Mounts rectangular 1" wide ½" thick and 3½" long.
One video amplifier withinternal bias box facility.

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CONTROL SYSTEMS JOINTLY

Handle via BYEMAN [redacted] control system only.

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C. PAYLOAD # 112....

Band A. Two polar mounted antenna measuring 35" in length.
Four Filters, tubular ½" dia. x 7" long.
Two Detector Mounts, tubular 5/8" Dia. x 3½" long.
One video amplifier with internal bias box.

Band B. Four equally spaced antennas on the equator, each 17" long.
Ten Filters, tubular ½" dia. x 7" long.
Six Detector mounts, tubular 5/8" dia. x 3½" long.
One Video Amplifier with internal bias box facility.

Band C- symmetrical system of 6 antennas mounted at 36° lat. each 2½" long.
Six Filters, Tubular, ½" dia x 6" long.
Six Detector Mounts, tubular, 1½" dia.x 3½" long.
One video amplfier with internal bias box facility.

Band D...Symmetrical system of 6 antennas mounted at 36° lat. each 1 &1/8" long.
Six combined Filter-Mounts,rectangular 1½" x ½" x 4" long.
Six video Amplifiers and Trigger Amplifiers.

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CONTROL SYSTEMS JOINTLY

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