

A = 5090.41
P = 507.0 nmi
I = 82.071
Period = 94.84105

~~SECRET~~

SETTER 1 MISSION 7228 DESCRIPTION

NRP
SF-5110-94

OBJECTIVE: To test a new automatic, precision location finding system and provide rapid ROB on such priority radars as [redacted] 50X1 and [redacted] Future SETTERS will cover [redacted] and other high interest targets in "S" band.

SYSTEM: SETTER is integrally mounted with the prime payload (in this case Mission 7160) on a fully stabilized AGENA vehicle. It is a 6 channel -85 dbm sensitivity system using six circular horn antennas arranged in an interferometric array feeding six superheterodyne receivers each tuned in 256 steps 2679.5 - 2935.5 mc with 1.5 mc bandwidth. The dwell time on each step is 7.8 - 100 millisecond depending on signal density. During this time the 120 x 340 n mi field of view is scanned and the radio frequency, pulse width and repetition interval of received pulses are digitized and stored. After pulses arrive from any given 15 x 15 n mi space window, additional processing from that window is inhibited until the receivers have stepped to the next rf. This sorting according to location is a new concept in handling high density ROB data and is expected to greatly reduce the pulse interleaving problems of more conventional digital systems. The SETTER data is recorded and dumped on the same type of 10,000 bit/sec equipment as is the Mission 7160 data. Two 96 bit words are used for each intercept; 6550 intercepts can be stored and the total dump time is only 165 sec.

Location accuracy of SETTER is ± 7.5 n mi on a single intercept with even increased confidence and minimized system errors possible from multiple hits. Rf measurement accuracy is $\pm 0.03\%$, pulse width quantization levels are 1.43, 2.86, and 5.72 microsec, pulse repetition interval is measured ± 1.0 microsec for prfs 130 to 33,000 pps and pulse amplitude is measured ± 2.5 db over a 40 db dynamic range.

SETTER is an advanced all-solid state system using electronically tuned frequency synthesized stripline receivers and a magnetic core data handler.

EXPECTED LIFETIME: 20-40 days.

SCHEDULED LAUNCH DATE: Early 1966.

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

~~SECRET~~

50X1