MEMORANDUM TO: DNR (S)

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SUBJECT: Current SIGINT (Satellite ~~General Search~~ Intelligence Collection Requirements

A. General Search

1. The overall intelligence requirement for the SIGINT Satellite General Search Program is the need for information on the nature and extent of Soviet electronics equipment research, development and deployment which would constitute a Soviet technological breakthrough in this field.

2. In an attempt to satisfy the above intelligence requirement, a general search capability covering the frequency spectrum from 30 mc to 12,000 mc should be maintained in orbit at all times. This general search capability should be of sufficient reliability and sensitivity to produce valid positive and negative data. Complete coverage of the noted frequency spectrum should be made for at least fifteen twenty-four hour periods each quarter programmed in the following priority:

down 50 100 - 250 mc
3200 - 12,000 mc up 2500
550 - 1000 mc
1000 - 2650 mc
250 - 550 mc
2650 - 3200 mc
30 - 100 mc

7104 155-9500

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SECRET [redacted] information within the following tolerances:

a. Detection of signals with a signal to noise ratio of 15 db from emitters at the horizon (from what altitude) with a [redacted] at 3000 mc (S-Band) linearly decreasing to [redacted] at 10,000 mc (X-Band).

✓ b. Measurement and identification of main lobe signals [redacted]

✓ c. Measurement and identification of PFR up to 5000 and the recognition of PRF above 5000.

d. Measurement of signal frequency within 5%.

e. Measurement of [redacted] 20

✓ f. Measurement of [redacted]

✓ g. Measurement of scan rate within 10%.

✓ h. Determination of a time of signal intercept within ±1 second.

i. Determination of signal emitter location within [redacted]

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GENSTART SEARCH START

Radio Frequency Coverage from 30 to 15,500 Mcs, Listed in Order of Priority

Priority 1. ERL Priority 1A and 1C Related, in Priority Order:

a.	100 - 200 mcs	c.	550 - 915 mcs
b.	2600 - 3300 mcs	d.	1100 - 2400 mcs

Priority 2. ERL Priority 2C Related, in Priority Order:

a.	4900 - 5100 mcs	f.	4000 - 4900 mcs
b.	6500 - 6700 mcs	g.	5100 - 6500 mcs
c.	8000 - 9500 mcs	h.	6700 - 8000 mcs
d.	14000 - 15500 mcs	i.	9500 - 14000 mcs
e.	3300 - 3900 mcs		(at atmospheric windows)

Priority 3. ERL Priority 3A, 3D, and 3E Related, in Priority Order:

a.	200 - 550 mcs	d.	3900 - 4000 mcs
b.	915 - 1100 mcs	e.	30 - 100 mcs
c.	2400 - 2600 mcs		

12. Information Tolerances, Pulsed Emitters, ELINT

Priority 1. (Not in order of priority)

a. Detection of Signals - In order to intercept useful data suitable for processing into intelligence information, it is necessary to insure the detection of signals from emitters at the horizon with a [redacted] at 30 mcs to [redacted] at 3500 mcs linearly decreasing to [redacted] at 15,500 mcs for pulsed type emitters.

b. Measurement of PRF within ± 1% at rates up to 5000 pps and within ± 5% above 5000 pps.

c. Measurement of Signal Frequency within ± 5%.

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d. Measurement of [redacted]

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e. Measurement of Scan Rate w[illegible]in ± 1%.

f. Determination of Signal Intercept Time within ± one second.

g. Determination of Signal Emitter Location within

Priority 2.

a. Identification of Main Lobe Signals and Measurement of

b. Measurement of

13. Information Tolerances ELINT.

Capability to detect and determine presence

ELECTRONIC ORDER OF BATTLE

Periodicity of Coverage

23. Update at quarterly intervals.

Technical Parameters

24. Radio Frequency Coverage, in order of priority:

a.	150 - 175
b.	4930 - 5095
c.	2600 - 3250
d.	700 - 915
e.	550 - 680
f.	6550 -6700
g.	8000 -8100
h.	103 - 110

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3 Cont.)

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25. Information Tolerances:

a. Location:

b. Measurement of Emitter Frequency: ± 5%

c. Measurement of PRF: ± 3%

d. Measurement of

e. Measurement of Scan Rate: ± 10%

DIRECTED COVERAGE

Technical Parameters

32. Radio Frequency Coverage: 155 - 165 mcs

has not been intercepted since its initial appearance in August 1961 despite numerous attempts to do so. Therefore, it is deemed advisable not to include Directed Coverage target until additional infor-

33. Information Tolerances: (Priorities will vary on a case-by-case basis.)

a. Frequency: ± 1%
b. PRF: ± 1%
c.
d. Location:
e. Time of Intercept: ± 1 milsec
f. Scan Rate: ± 1%
g.
h.
i.
j.
k.

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Technical Parameters

37. Frequency Coverage: 60 - 80 mcs.

Signal Frequencies - 61, 66, 71, and 76 mcs.

38. Information Tolerances:

a. Recovery of data of sufficient quality to permit the production of telemetry analogs for conversion into useable intelligence data.

b. Measurement of emitter frequency of sufficient accuracy to identify the noted signal frequencies.

c. Location:

Technical Parameters

43. Frequency Coverage: 1500 - 1800 mcs.

44. Information Tolerances:

a. Location:
b. Frequency: ± 1%
c. Presence or absence of channel activity.

Technical Parameters

48. Frequency Coverage: 60 - 70 mcs.

49. Information Tolerances:

a. Presence or absence of channel activity.
b. Location:
c. Frequency Determination: within ± 100 kcs.

cted Coverage Cont.)

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Technical Parameters

53. Frequency Coverage: 100 - 200 mcs.

54. Information Tolerances:

a. Location:

b. Recovery of sufficient signal content to identify the users.

c. Frequency Determination: within ± 100 kcs.

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