



National
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Assessment
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OFFICE OF WEAPONS INTELLIGENCE
Weapons Intelligence Daily Review

25 JANUARY 1978

RORSAT ENTERS IN CANADA

[redacted] on 24 January Cosmos 954, the Soviet radar ocean reconnaissance satellite (RORSAT) reentered the earth's atmosphere over western Canada.

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[redacted]

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[redacted] visual sightings were reported by residents of the Pine Point community just south of Great Slave Lake which, although sketchy, correlate with the reentry of Cosmos 954. Although we are unable at this time to determine if any fragments survived reentry [redacted]

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Of primary concern is the extent to which the nuclear reactor broke up during reentry and what fragments, if any, impacted on earth. We believe the reactor is of the Romashka type (see figure 2). This system uses 49 kg of U-235.

We believe there is a high probability that the reactor broke up during reentry. However, the graphite fuel disks (see figure 3) could have survived. The high altitude dispersion of the fuel would pose a minimum health hazard; fine radioactive particles reaching the ground would also pose a minimal health hazard. Multiple fragments reaching the earth's surface increase the hazard potential to a severe level. Should the Romashka fuel disks impact intact, the debris would be lethal within a ten foot radius.

[redacted]

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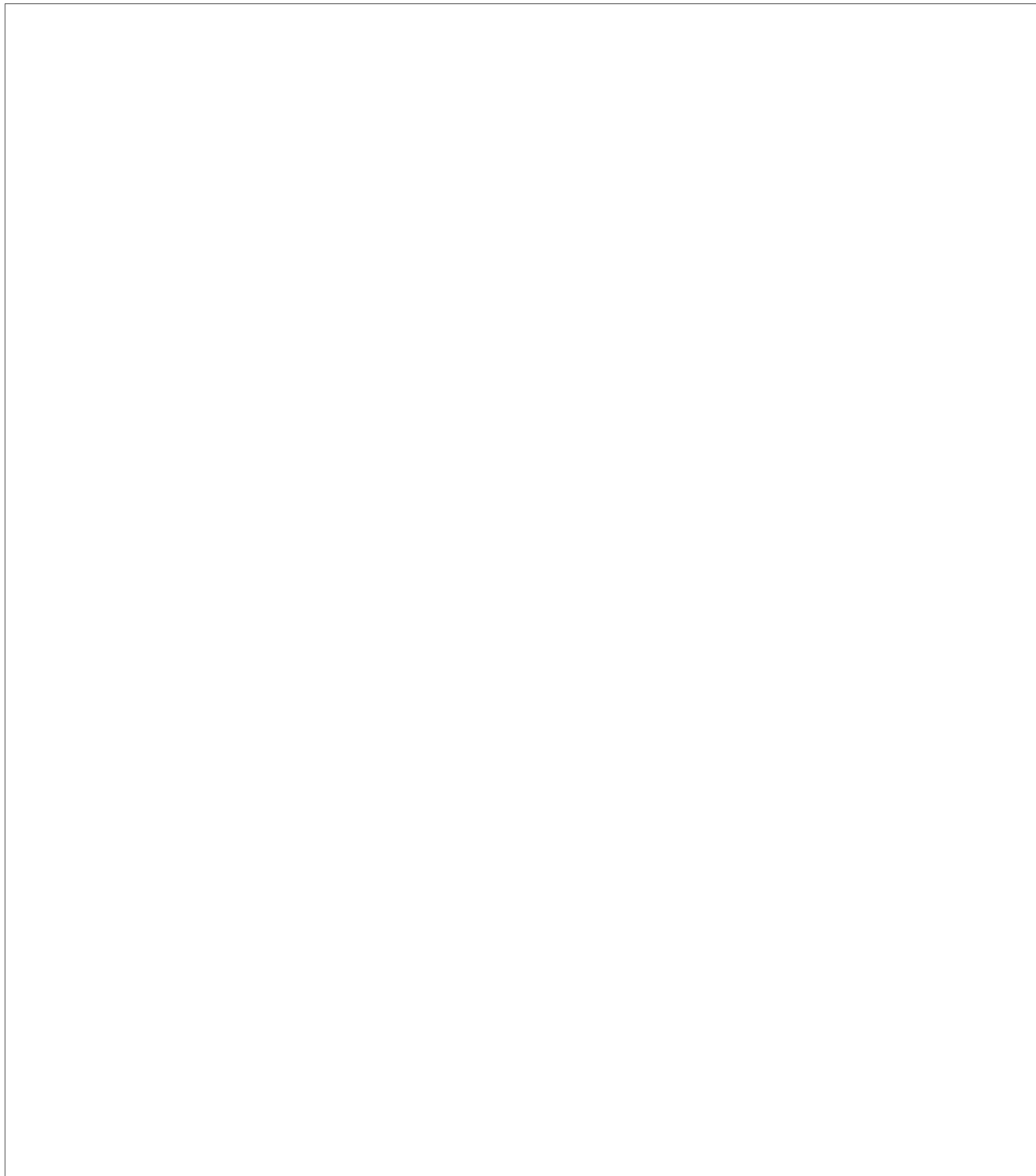
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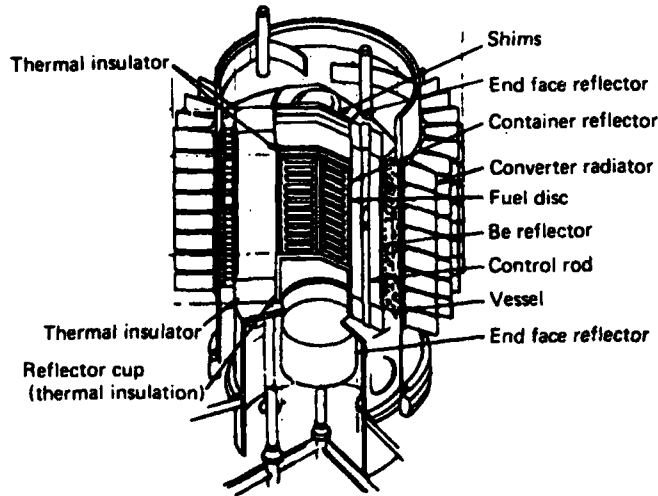
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Figure 2

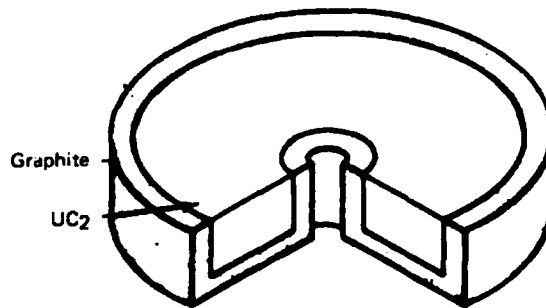
Cutaway View of the ROMASHKA Reactor-Converter Assembly



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Figure 3

Cutaway View of the ROMASHKA Fuel Disc



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