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#### NATIONAL RECONNAISSANCE OFFICE

14675 Lee Road Chantilly, VA 20151-1715

28 March 2019

Mr. John Greenewald 27305 W Live Oak Rd Suite 1203 Castaic, CA 91384

REF: FOIA Cases F-2019-00040

Request ID 38956; Confirmation ID 38431

Dear Mr. Greenewald:

This is in response to your request dated 14 December 2018 and received by the National Reconnaissance Office (NRO) on 17 December 2018. Pursuant to the Freedom of Information Act (FOIA), you requested, "records, electronic or otherwise, of the following: the most recent copy of the NRO PRIMER. This is referenced in NRO's RECON Magazine, in the February 2003 issue, page 1".

We have processed your request in accordance with the FOIA, 5 U.S.C. § 552, as amended. A thorough search of our files and databases located one document responsive to your request. This document is being released to you in part.

Material redacted is denied pursuant to FOIA exemption (b)(1) as properly classified information under Executive Order 13526, Section 1.4(c), (g) and pursuant to FOIA exemption (b)(3), which is the basis for withholding information exempt from disclosure by statute. The relevant withholding statute is 10 U.S.C. § 424, which provides (except as required by the President or for information provided to Congress), that no provision of law shall be construed to require the disclosure of the organization or any function of the NRO; the number of persons employed by or assigned or detailed to the NRO; or the name or official title, occupational series, grade, or salary of any such person.

You have the right to appeal this determination to the NRO Appellate Authority, 14675 Lee Road, Chantilly, VA 20151-1715, within 90 days of the above date. You may also submit an appeal electronically through the National FOIA Portal at <a href="www.foia.gov">www.foia.gov</a> or via email to <a href="FOIA@nro.mil">FOIA@nro.mil</a>. Please include an explanation of the reason(s) for your appeal as part of your submission. The FOIA also provides that you may seek dispute resolution for any adverse determination through the NRO FOIA Public Liaison and/or through the Office of Government Information Services (OGIS). Please refer to the OGIS public web page at <a href="www.ogis.archive.gov">www.ogis.archive.gov</a> for additional information.

If you have any questions, please call the Requester Service Center at (703) 227-9326 and reference case number F-2019-00040.

Sincerely,

Cynthia Allman

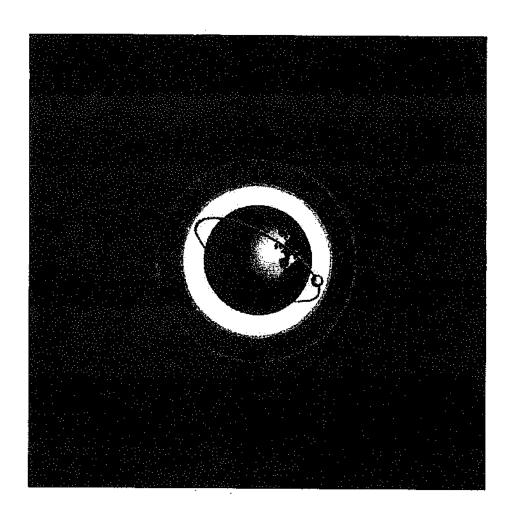
FOIA Public Liaison

## Enclosure:

1.) C05117788, NRO PRIMER



# (U) National Reconnaissance Office Primer



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NRO CG 6.0 DRV FROM: 21 May 05

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Overall classification of this briefing is:

# TOP SECRET//COMINT/ TALENT KEYHOLE// RSEN,IMCON,NOFORN/MR



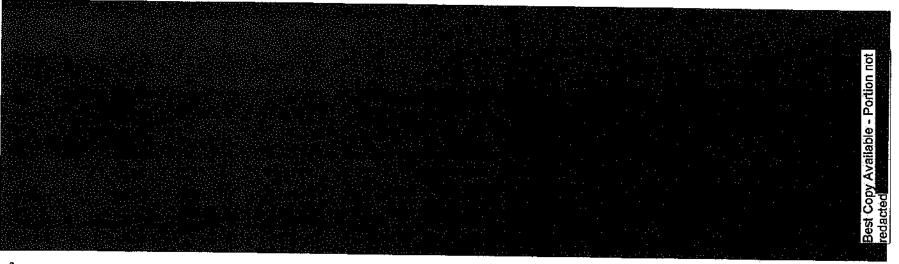
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As of 22 Aug 05



## Contents

- NRO Mission, Organization and Relationships
- **Orbit Fundamentals**
- Architecture
- **GEOINT Sensor Types and products**
- SIGINT Sensor Types and products
- Communications



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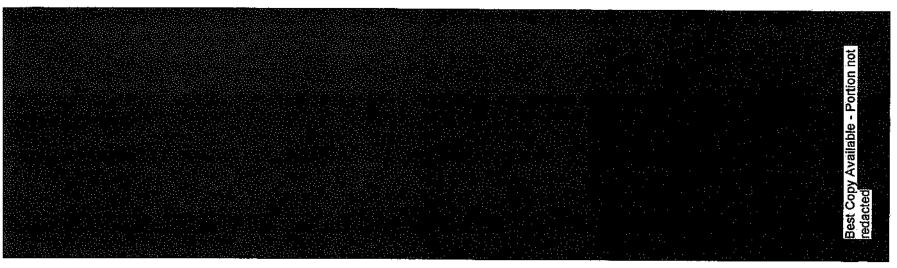




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## **Objectives**

- Know the fundamental characteristics of various orbit types used for space-based operations
- Know the primary types of intelligence supported by spacebased ISR and the basic types of sensors used
- 3. Know the various types of primary intelligence products made available by space based collection architecture
- 4. Know the advantages/disadvantages of certain orbits for ISR, sensor types and why specific orbit types are selected.



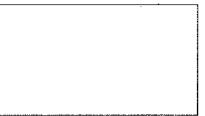
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## **Objectives Restated**



- 1. An orbit is an orbit right "round and round it goes"— what's the difference?
- 2. What are the main types of intel/info | get from space and what do | use to get it?
- 3. What does that intel / info look like what does it do for me
- 4. Why do we use all these different orbits anyway?

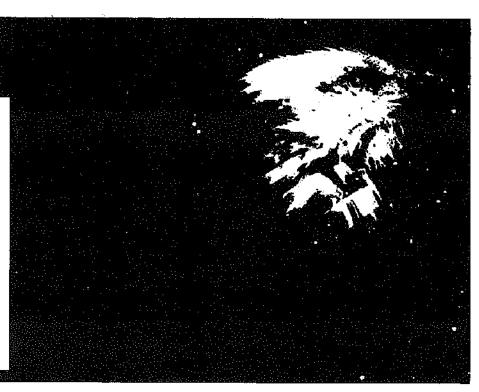


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# **NRO** Mission

The NRO develops and operates unique and innovative space reconnaissance systems and conducts intelligence-related activities essential for US national security.



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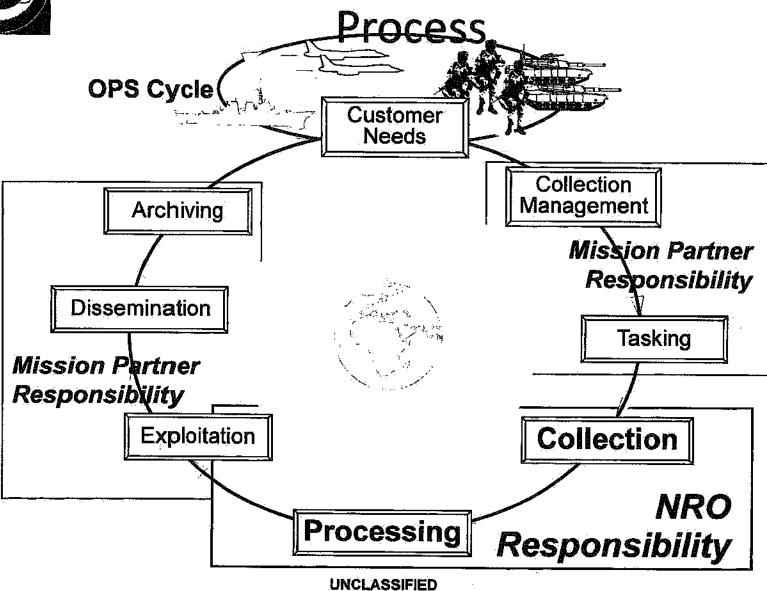


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# NRO and the Intelligence



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## **Orbital Basics**

- Given sufficient velocity, objects orbit the Earth rather than fall back to it
- Above the atmosphere, in the vacuum of space, the object does not slow down

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# (U) Primary Types of Orbits

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# (U) Low Earth Orbit (LEO) POP QUIZ!!

Answer: Stop abusing us - we haven't learned that yet!!

Nifty looking toys, aren't they!

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# (U) Highly Elliptical Orbit (HEO)

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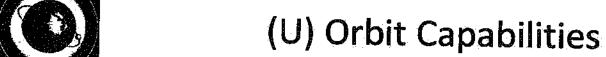


# (U) Geosynchronous Orbit (GEO)

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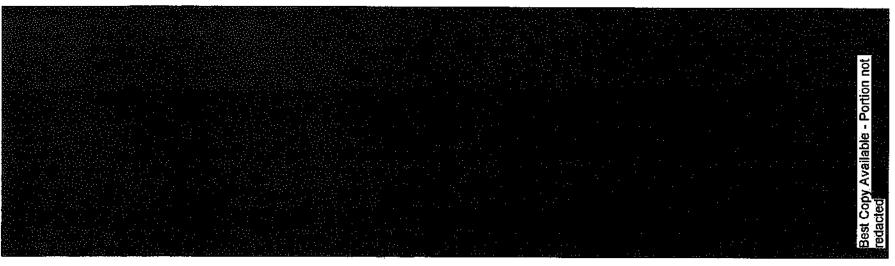
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## (U) Intelligence Terms

- (S) GEOINT:
  - GEOspatial imagery INTelligence
- (U) SIGINT:
  - SIGnals INTelligence comprised either individually or in combination of, all COMmunications INTelligence (COMINT), Electronics INTelligence (ELINT), and Foreign Instrumentation Signals INTelligence (FISINT)

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- (U) MASINT:
  - Measurements And Signatures INTelligence derived from analysis of data from multiple sources

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# (U) On-Orbit Satellites – Today

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# (U) On-Orbit Satellites - Today

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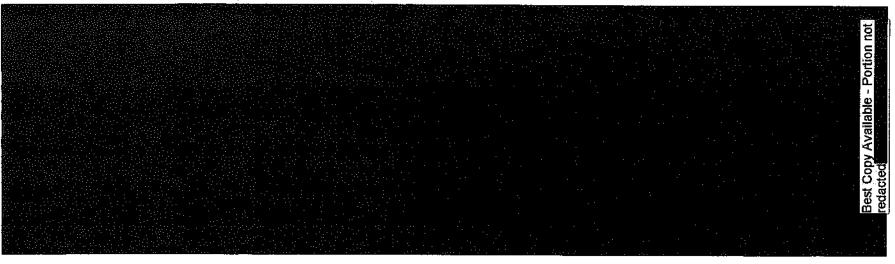
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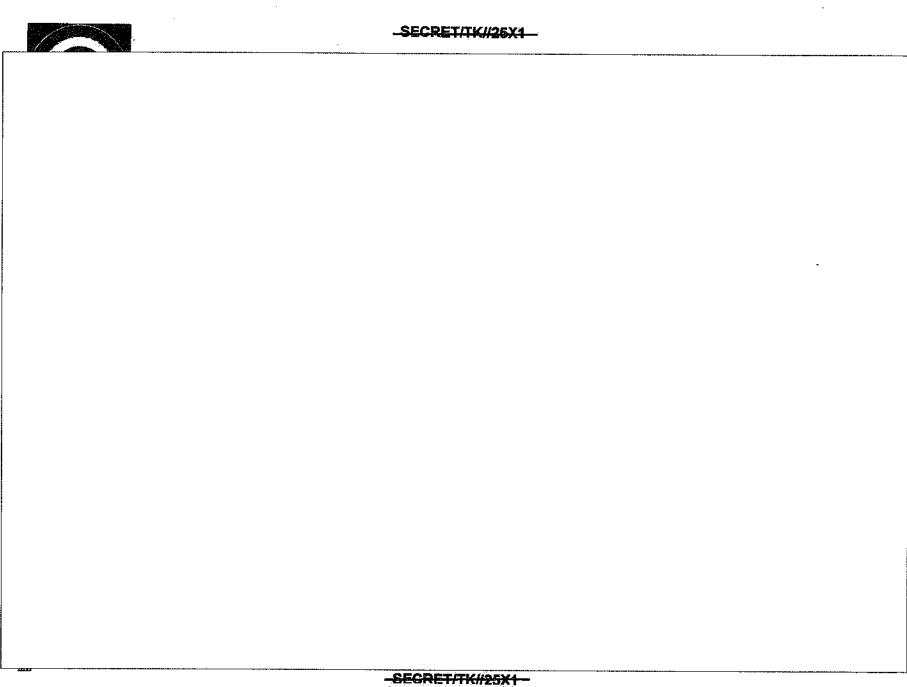
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(U) What Do We Collect?



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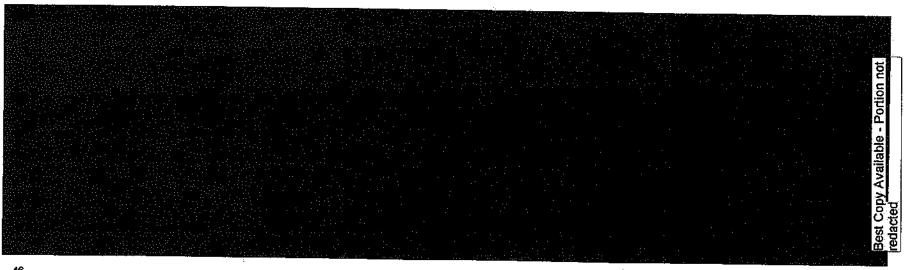
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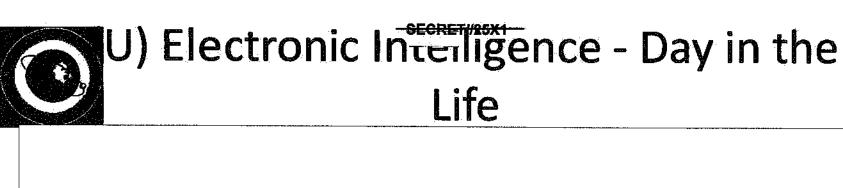
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# (U) Cueing – Intelligence Integration

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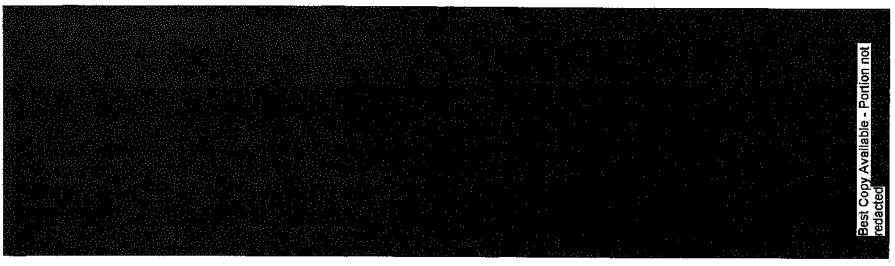
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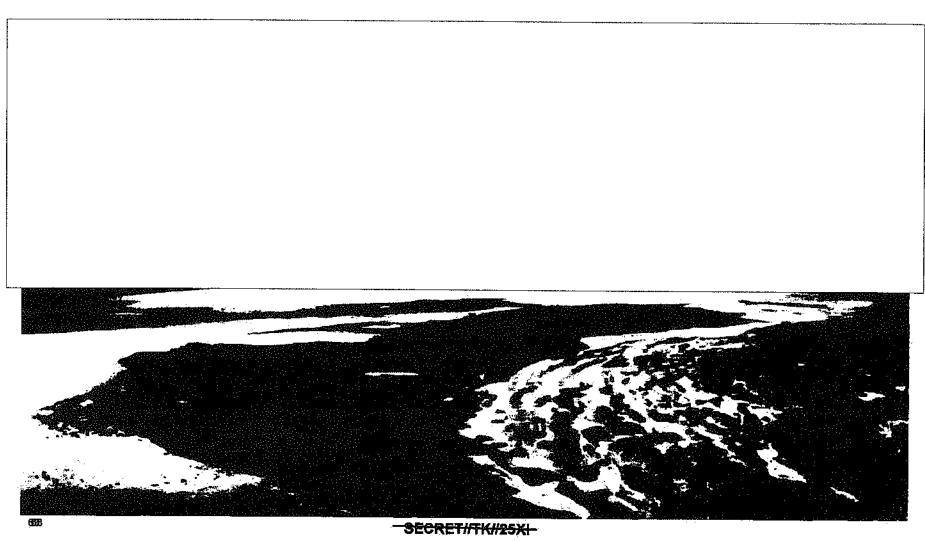


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# (U) Communications Satellites

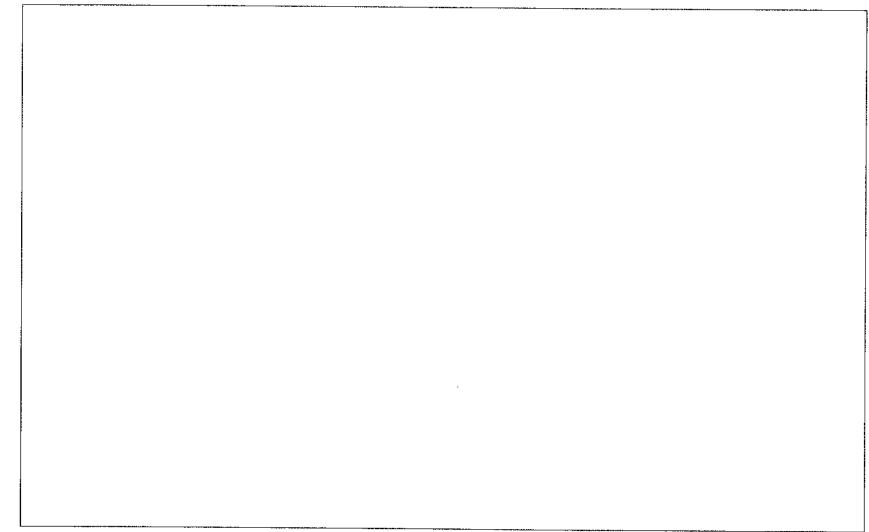


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# (U) Communications Systems



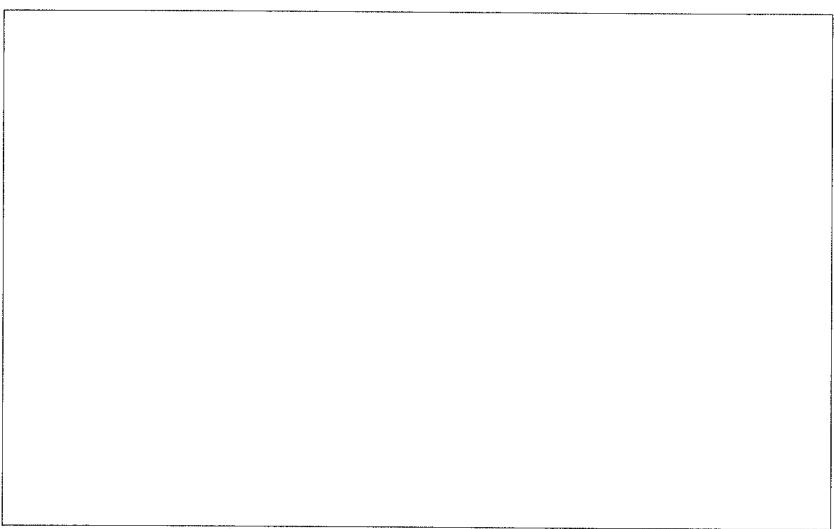
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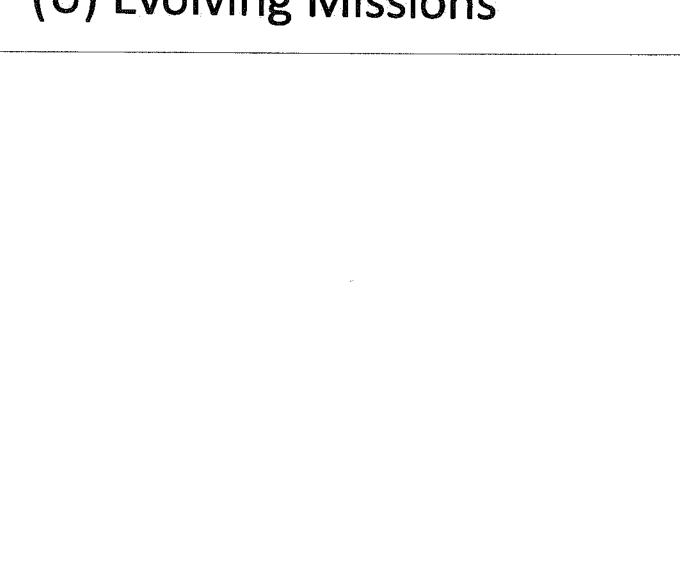
# (U) COMM Transition





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# (U) Evolving Missions



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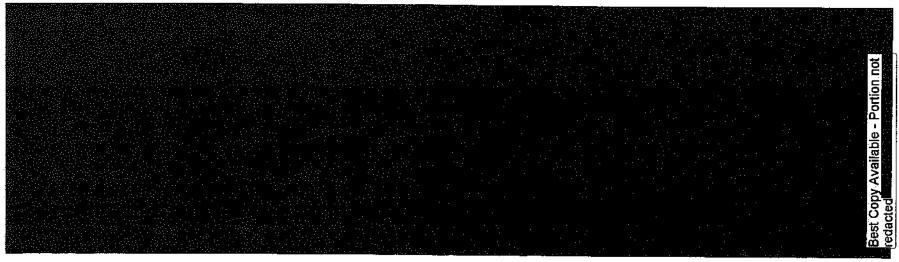
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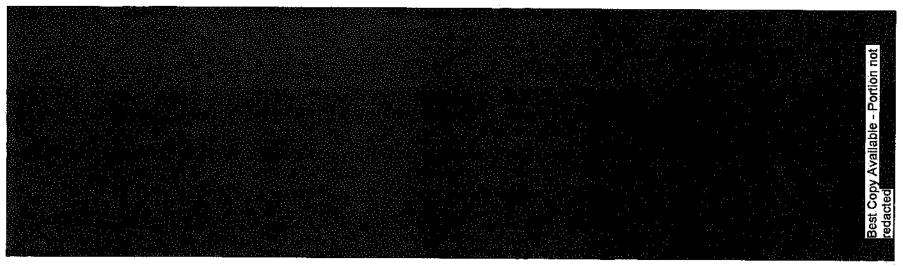
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Overall classification of this briefing is:

# TOP SECRET//COMINT/ TALENT KEYHOLE// RSEN,IMCON,NOFORN//MR



# QUESTIONS?

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