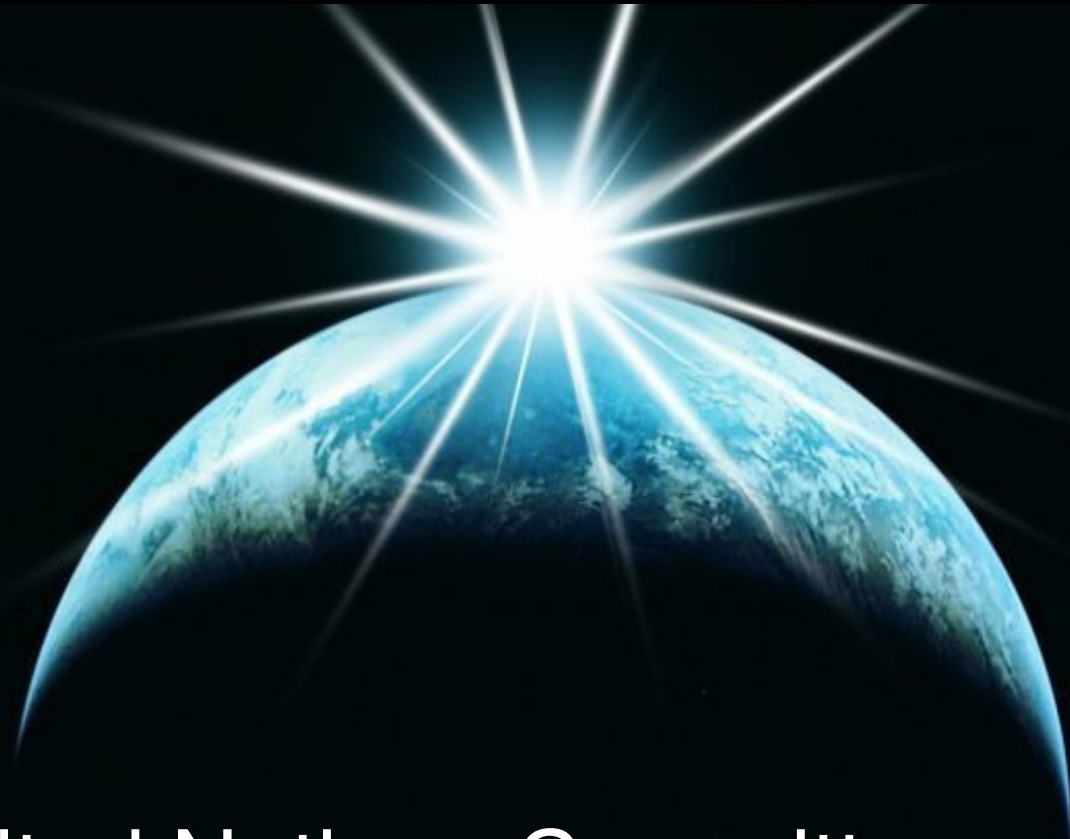


SPACE SECURITY INDEX



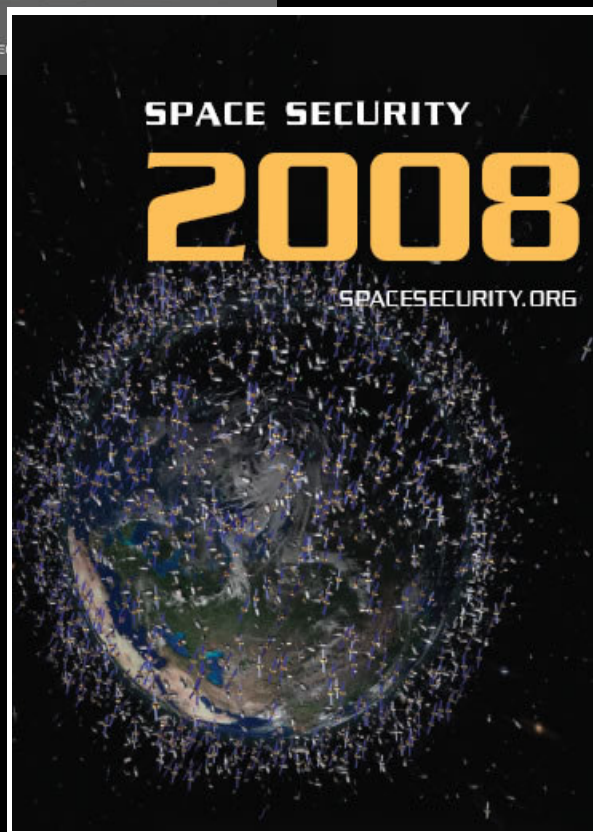
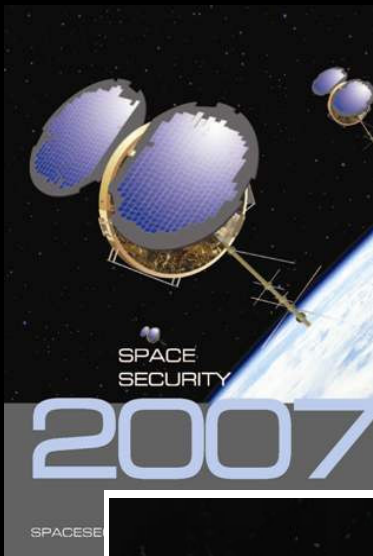
United Nations Committee on the
Peaceful Uses of Outer Space

17 February 2009

INTRODUCTION

Jessica West, Program Manager, Project Ploughshares

**Ray A. Williamson, Executive Director, Secure World
Foundation**



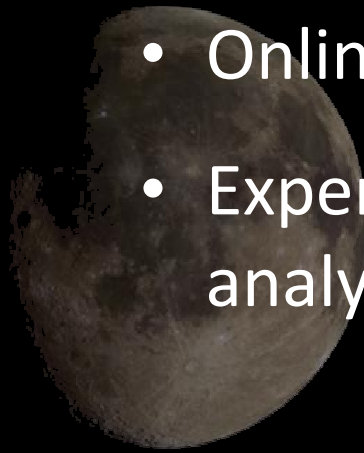
- **Annual assessment** of the status of space security, since 2004
- Provides objective and fact-based analysis to promote **transparency and confidence** in space activities
- Summarizes major trends in space security
- Supports the development of **policy** to ensure secure access to space for all States

Defining Space Security

- The secure and sustainable use of space
- Freedom from space-based threats

SSI Methodology

- Yearly research on trends and developments
- Online consultation
- Expert review of research and analysis





1. The Space Environment
2. Laws, Policies, and Doctrines
3. Civil Space Programs and Global Utilities
4. Commercial Space
5. Space Support for Terrestrial Military Operations
6. Space Systems Protection
7. Space Systems Negation
8. Space-Based Strike Systems

Critical challenges to space security:

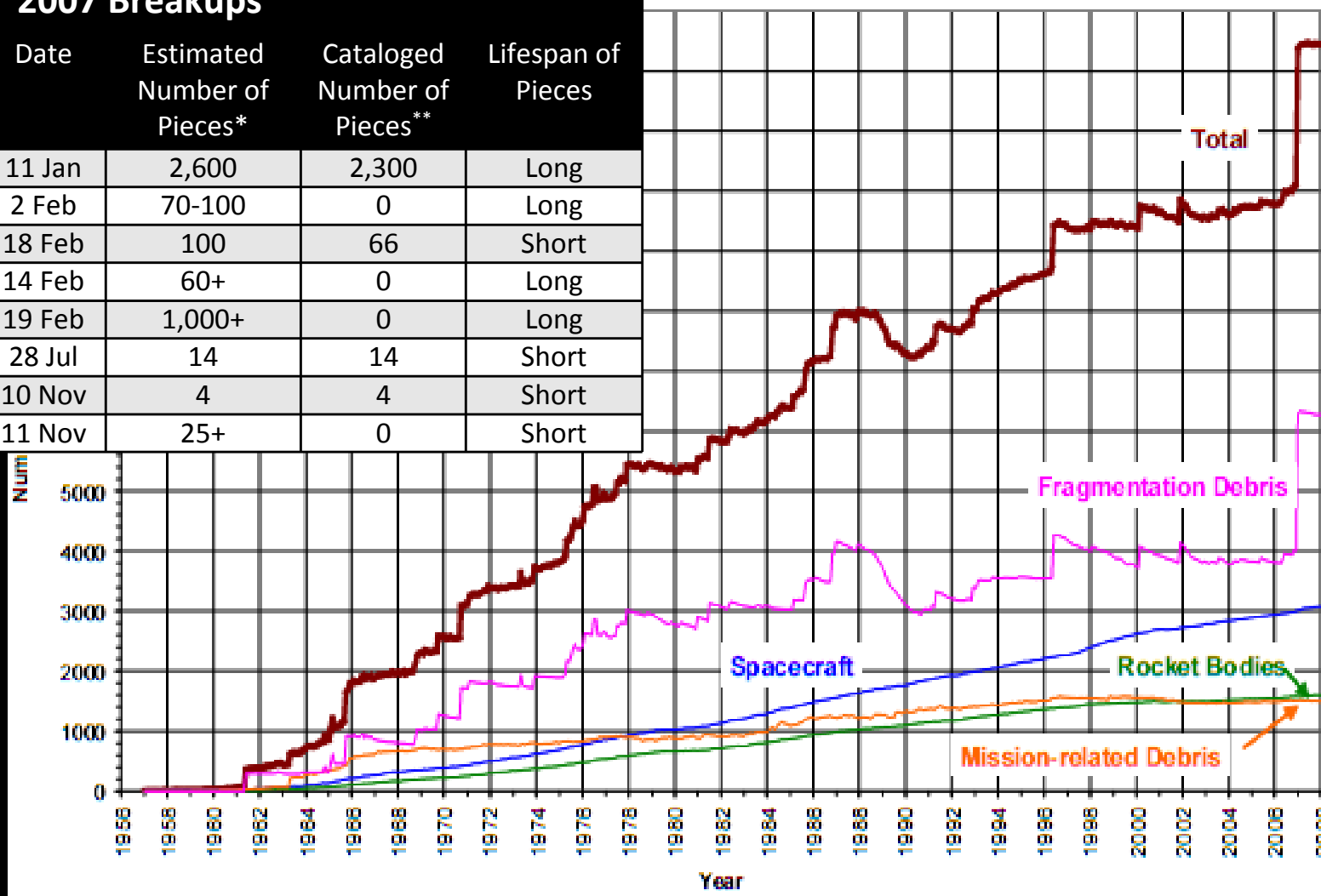
- ***Operating environment*** challenged by debris, crowding in key orbits and limited monitoring
- Proliferation of ***technologies*** that could threaten secure and sustainable access to space
- Growing number and diversity of ***actors*** in space

Space debris is an indiscriminate threat to all space actors

Monthly Number of Objects in Earth Orbit by Object Type

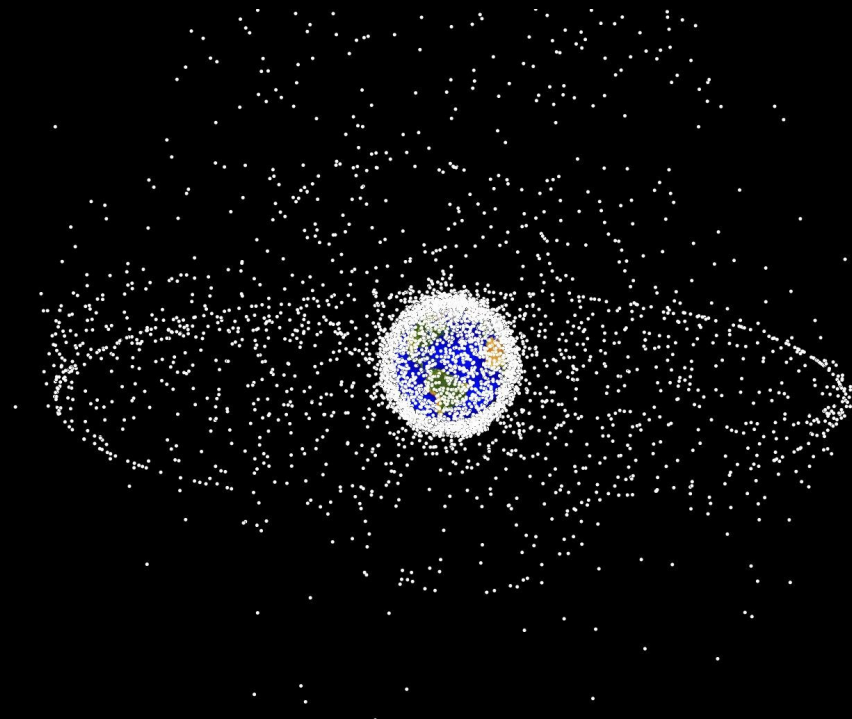
2007 Breakups

Parent Object	Country	Date	Estimated Number of Pieces*	Cataloged Number of Pieces**	Lifespan of Pieces
FY-1C	PRC	11 Jan	2,600	2,300	Long
Beidou	PRC	2 Feb	70-100	0	Long
CBERS-1	PRC/Brazil	18 Feb	100	66	Short
Aux Motor	CIS	14 Feb	60+	0	Long
Briz-M	CIS	19 Feb	1,000+	0	Long
H2-A	Japan	28 Jul	14	14	Short
UARS	USA	10 Nov	4	4	Short
Delta IV	USA	11 Nov	25+	0	Short



Limited ability to *monitor* the space environment

- Limited capabilities to see into space and follow objects
- Limited international cooperation on space situational awareness
- Limited transparency of space activities



Proliferation of space technologies

Proliferation of technologies that could threaten secure and sustainable access to and use of space:

- Ground-based technologies
- Space-based technologies
- Space-to-Earth enabling technologies



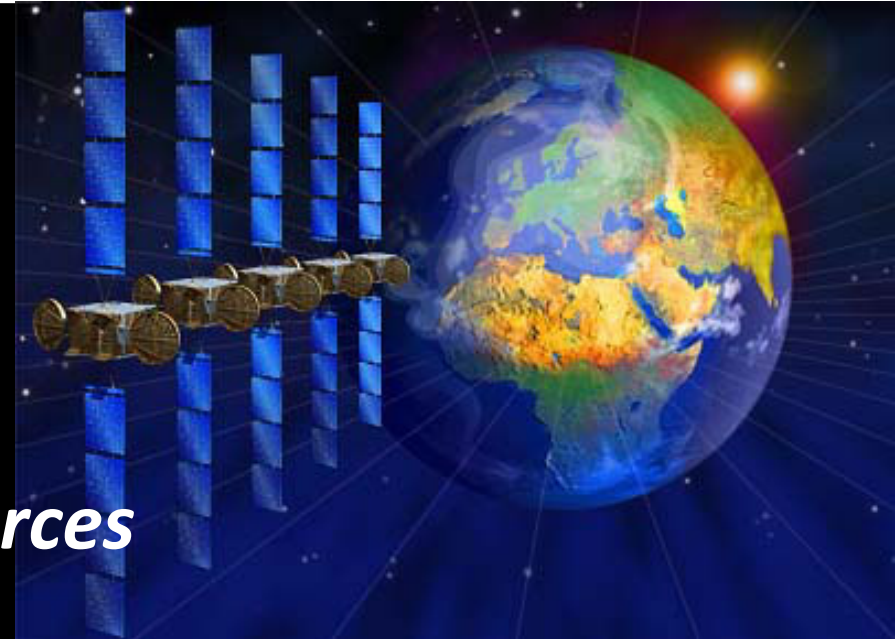
Access to outer space is growing

New space actors emerging

Greater demands on ***space resources***

More actors gaining a variety of independent ***space technologies***

But: new actors and increased awareness of the need present new opportunities for space governance



Project Ploughshares—*Jessica West, project director and editor*

- *McGill Institute of Air and Space Law, McGill University*
- *Secure World Foundation*
- *Simons Center for Disarmament and Non-Proliferation*
- *Space Generation Foundation*
- *Department of Foreign Affairs and International Trade, Canada*
- *Ploughshares Fund*

Download the report at—

<http://www.spacesecurity.org>