

Secure World Foundation receives Observer Status at the United Nations Committee on the Peaceful Uses of Outer Space

By Phil Smith

The Secure World Foundation was granted permanent observer status by the United Nations [Committee on the Peaceful Uses of Outer Space](#) (COPUOS). Such a status enables the Foundation to contribute to the international dialogue on space policy alongside Member States.

In this capacity, the Foundation will provide input on matters related to the peaceful use of space, cooperative Earth observation, mitigation of orbital debris, tracking and deflection of near Earth objects, space traffic management and other space security matters.

COPUOS, a secretariat of the United Nations General Assembly (UNGA) and currently under the direction of Dr. Ciro A. Arévalo Yepes of Colombia, is responsible for:

- ◆ reviewing the scope of international cooperation in peaceful uses of outer space;
- ◆ devising programs in this field to be undertaken by the United Nations;
- ◆ encouraging continued research and sharing information on outer space matters;
- ◆ studying legal problems arising from the exploration of outer space;
- ◆ maintaining close contact with governmental and non-governmental organizations concerned with outer space matters;
- ◆ providing for the exchange of such information relating to outer space activities as Governments may supply on a voluntary basis;
- ◆ supplementing, but not duplicating, existing technical and scientific exchanges;
- ◆ assisting in the study of measures for the promotion of international cooperation in outer space activities; and
- ◆ implementing recommendations from UNISPACE III (held in 1999).

What's Up with Orbital Debris?

By Leonard David, SWF Research Associate

The intentional destruction by China of their Fengyun-1C weather satellite back on January 11, 2007 marked the single largest breakup event in the entire history of space exploration.

The total number of tracked pieces today stands at some 2,378 bits of space clutter, according to space debris analyst, T.S. Kelso of CelesTrak in Colorado Springs, Colorado. "Only 35 of these pieces have decayed, so far...about 1.5 percent of the total population," he explained to *Secure World* newsletter.

Those objects are being tracked by the U.S. Space Surveillance Network. Effective sizes of debris attributed to the anti-satellite (ASAT) test that can be monitored are roughly 10 centimeters or greater.



The United Nations Office in Vienna, Austria, site of the 51st Session of the UN Committee on the Peaceful Uses of Outer Space. Photo: Wikipedia.

News Bits

Rachel Yates, lawyer and partner of [Holland & Hart](#), presented at the July Space Security Lunch Series sponsored by SWF. The talk was entitled "Space Tourism: Have Fun at Your Own Risk." Rachel, whose expertise includes space law, is also a member of the SWF Advisory Committee. Details of the talk will be provided in the next issue of the newsletter.

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One new [fact sheet](#) has been published by the Secure World Foundation. It answers questions about the [United Nations Committee on the Peaceful Uses of Outer Space](#).

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SWF Executive Director Dr. [Ray Williamson](#) and contractor [Agnieszka Lukaszczyk](#) attended the [37th COSPAR Conference](#) in Montreal, Canada. They presented a paper entitled: [The Role of Space-related Non-Governmental Organizations \(NGOs\) in Capacity Building](#).

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[Rusty Schweickart](#), Chairman of the Board of the [B612 Foundation](#), also presented at COSPAR on the subject of near Earth objects. His talk was entitled: [The Asteroid Impact Threat: Decisions Upcoming](#).

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SWF contractors [Brian Weeden](#) and [Ben Baseley-Walker](#) attended a meeting at [NASA Ames](#) in which the [University of](#)

In other space clutter news, the intercept of USA 193—a classified [National Reconnaissance Office](#) (NRO) spacecraft—back on February 21, 2008 also introduced into Earth orbit fragments of space debris.

At the time, the Pentagon noted that, due to the relatively low altitude of the satellite at the time of the engagement, debris would begin to re-enter the Earth's atmosphere immediately. Furthermore, it was explained that nearly all of the debris will burn up on reentry within 24 to 48 hours with the remainder re-entering within 40 days.

“Of the 174 pieces associated with this event, three of them are still shown as on orbit,” Kelso noted. Now over 147 days past the event, these pieces have remained up well past the original 40-day estimate given at the time of the event,” he pointed out.

Significant fragmentation

Meanwhile, in the July issue of [Orbital Debris Quarterly News](#)—issued by the Orbital Debris Program Office at NASA's Johnson Space Center in Houston, Texas—yet another worrisome fragmentation of a spacecraft has been detailed.

Late in the first quarter of 2008, the U.S. Space Surveillance Network detected a “significant fragmentation” of Russia's Cosmos 2421, a representative of Russia's Electronic Intelligence Ocean Reconnaissance Satellite (EORSAT) system.

That breakup yielded approximately 300 detectable debris. Two more fragmentation events of the same spacecraft during April-June added another 200 or more large debris (greater than five centimeters) to the near-Earth space environment. Nearly half (22 out of 50) of the spacecraft have fragmented at least once, typically within a few months of the end of their primary missions.

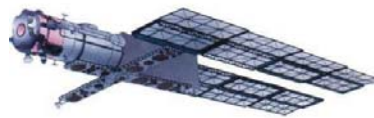
In the same NASA newsletter, orbital debris analysts, H.M. Rodriguez and J.-C. Liou, underscore a key fact: “With the first man-made satellite launched in 1957, no one expected the event would be the beginning of a growing environmental issue for the space community today.” They add that the combination of almost 5,000 launches and 200 on-orbit fragmentations of spacecraft and rocket bodies since 1957 have created an orbital debris issue.

Furthermore, roughly 17,000 objects are currently tracked in orbit by the U.S. Space Surveillance Network. The majority of these objects are 10 centimeter (softball size) and larger. There are even more objects smaller in size that cannot be detected by the surveillance network sensors, the two researchers report, yet these objects also present potential threats to operating satellites.

What's being done in the near term?

The [Inter-Agency Space Debris Coordination Committee \(IADC\)](#), founded in 1993, is an inter-governmental agency whose aim is to coordinate efforts on an international level to deal with mitigation of orbital debris and the limiting of future debris generation. The IADC membership includes 11 civil space agencies worldwide. In 2007, the IADC produced the Space Debris Mitigation Guidelines. The guidelines provide several mitigation measures, including limiting debris released during normal operations, minimizing the potential for on-orbit breakups, post-mission disposal and prevention of on-orbit collisions.

Meanwhile, the Secure World Foundation is investigating opportunities with partners to explore how the IADC's Space Debris Mitigation Guidelines can be taken a step further.



New breakup in Earth orbit: Russia's Cosmos 2421, an Electronic Intelligence Ocean Reconnaissance Satellite. Art depicts general configuration of this class of spacecraft. Photo: [Orbital Debris Quarterly News](#).

[California Santa Cruz](#) presented a proposal to NASA building on the space traffic management work conducted by the [International Space University](#) in 2007. Brian and Ben were asked to brief NASA Ames Director **Pete Worden** on the subject since both worked on the ISU STM report in question.

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[The U.S. Air Force's scary movie:](#) An Air Force TV commercial exaggerated the country's vulnerability to an anti-satellite attack, writes **Victoria Samson**, a Center for Defense Information (CDI) research analyst and consultant to the Secure World Foundation. She suggests a policy shift to start making things right. CDI is a key partner with the Secure World Foundation on matters of space security.

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In Cyprus, disaster management experts of the European Union tested a [satellite based system for monitoring disaster areas](#). On behalf of the European Commission, the German Aerospace Center (DLR) has developed a system that enables disaster relief workers to access up to date satellite images while being in the field and exchange data among themselves. The Secure World Foundation supports the establishment of international cooperative legal regimes governing the use of space-based assets and data to assist in humanitarian efforts and manage the health of our biosphere.