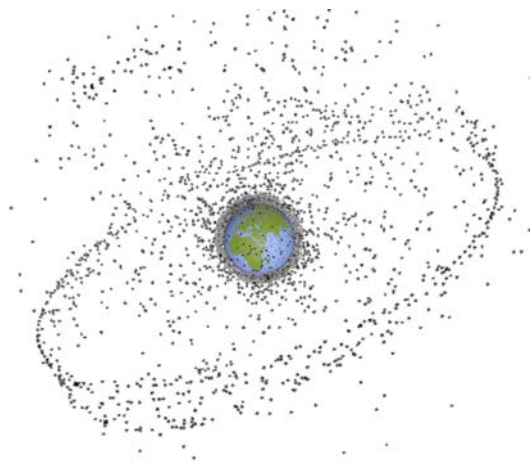


## First Announcement

# **FIFTH EUROPEAN CONFERENCE ON SPACE DEBRIS**

ESA/ESOC  
Darmstadt, Germany

30 March – 02 April 2009



## **Abstract Submission**

Authors are invited to submit their abstracts according to the following procedure. The abstract (approximately 500 words) should clearly outline the paper's major elements of interest and its originality. Papers will be selected on the basis of:

- general interest of the subject and relevance to the conference topics
- quality of the content
- originality of the ideas presented

Papers must be submitted in English, according to the "instructions to authors". English will also be the working language at the conference.

**Abstracts should be submitted by  
14 Dec 2008**

Please follow the instructions for the abstract style and abstract submission procedure at:

<http://www.congrex.nl/09A03>

## **Exhibition**

A limited number of exhibition opportunities for products and services are available during the conference (see the website for details).

## **Important Dates**

14 Dec. 2008	Deadline for abstracts
31 Jan. 2009	Notification of Authors
13 Feb. 2009	Final Program
29 Mar. 2009	Deadline for papers
29 Mar. – 02 Apr. 2009	Fifth European Conference on Space Debris
Jun. 2009	Publication of proceedings (distribution on CD ROM)

## **Conference Venue**

European Space Operations Centre  
ESA/ESOC, Robert-Bosch-Strasse 5  
64293 Darmstadt, Germany

## **Registration Fees**

Early registration: €250 (students €125)  
After 31 Jan. 2009: €300 (students €150)  
Fees include proceedings on CD-ROM,  
reception, lunches and coffee breaks.

## **Point of Contact**

Conference website (as of 15-Oct-2008):  
[www.congrex.nl/09A03](http://www.congrex.nl/09A03)

ESA Conference Bureau  
ESA/ESTEC  
P.O. Box 299  
2200 AG Noordwijk  
The Netherlands  
Tel: +31 71 565 5005  
Fax: +31 71 565 5658  
e-mail: [esa.conference.bureau@esa.int](mailto:esa.conference.bureau@esa.int)

## **Space Debris**

Since 1957, more than 4,800 space launches have led to an on-orbit population today of approximately 13,200 trackable objects, with sizes larger than 10 cm. Less than 800 of these are operational spacecraft. The remaining 94% are space debris, i.e. objects which no longer serve any useful purpose. About 50% of the routinely tracked objects are fragments from explosions and breakups of satellites or rocket bodies. In addition, there is evidence of a much larger population of debris that cannot be tracked operationally. Almost 600,000 objects larger than 1 cm are expected to reside in terrestrial space.

Due to relative orbital velocities of up 56,000 km/h, centimeter-sized debris can seriously damage or disable an operational spacecraft, and collisions with objects larger than 10 cm will lead to catastrophic fragmentations, releasing hazardous debris clouds. Spacecraft designers and mission operators should implement debris mitigation measures to avoid the release of debris, and to conserve the environment in the already densely populated low Earth and geostationary orbit regions.

## **Conference Scope**

European Conferences on Space Debris are the largest dedicated gatherings on the subject. Internationally renowned scientists, engineers, operators and policy makers meet here to discuss different aspects of space debris research, including measurement techniques, model theories, risk analyses, mitigation concepts, and policy issues.

During four days, in two parallel sessions, the Fifth European Conference on Space Debris will provide a forum for presenting and discussing results, and for defining future directions of research. Special sessions will be dedicated to space surveillance and related pre-cursor activities within Europe.

The conference will provide a unique forum for information exchange, technical discussions and networking between debris researchers, engineers and policy makers of industry, space operators, space agencies, institutional organizations (e.g. EU, UNCOUOS, IAA, COSPAR), academia, and the defense sector.

## **Main Topics**

The conference will adopt, as a special theme, the topic of space surveillance, focusing on:

- space surveillance techniques
- space object catalogs
- system studies for a European space surveillance system

The conference program will also highlight all classical disciplines of space debris research:

- radar, optical & in-situ measurements
- debris environment modeling
- on-orbit & re-entry risk assessments
- orbit prediction & determination
- debris mitigation principles
- hypervelocity impacts & shielding
- standardisation & policies

## **Organised by**



## **Co-Sponsors**

