

European perspectives on Space Security

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For a few years, « Space for Security » makes sense in the context of the European process

Idea of a political maturity: Europe must assume its political identity

Based on the traditional engine of the European construction, i.e. R&D (CERN, Euratom tradition)

Space as a provider of soft power in a context where a common ESDP remains a “work in progress”

National and European space programs with security potential exist

- Franco Italian Pléiades-Cosmo
- TerraSar X –TaNDEM
- Spot Satellites
- Topsat
- Surrey DMC
- ...

+ others (satcoms)

Galileo, GMES

Existing assets +
projects

European “Space for Security” getting organized through:

concepts : - security of the European citizen

- security of the critical infrastructures and activities

collective efforts: - ESRP starting with some “Security and Space” related money in the 2007-13 period (FP 7)

- Institutional activity at the ESA and EC levels (esp. GMES related activity)

In Europe “Space security” fits into the global “Space for Security” picture

At MS level : Several Member States are now considering the issue of Space security due to the level and the nature of their investments in space

At EU level: Space security also supported from a European Union point of view with more involved, willing, European institutions:

- Ref. “European Space Policy”, 22 May 2007, European Commission, implementation plan (Nov. 2007)
- Efforts from the ESA in the field of space security

Enhanced interest in European Member States for Space security



(...) The aim of space surveillance is basically dual. Insofar as it participates in revealing and identifying possible attacks, it could be considered as a multilateral or « good conduct code-like instrument » aimed at limiting the militarization of space (...)



(...) Access to timely and useful space-derived information must also be secured, based around effective space surveillance, adequate coverage and control capabilities (...)

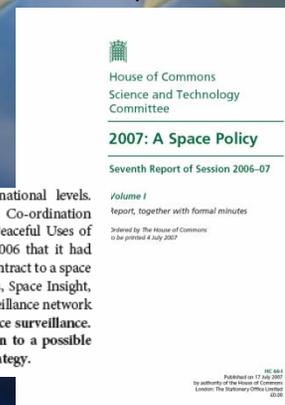


German national study (German Air Force-led) conducted on SSA (september 2006-March 2007)

House of Commons Report July 2007



Converging interest for Improved space surveillance/SSA capabilities



174. The BNSC is working on this problem at international and national levels. Internationally, the UK participates in the Inter-Agency Space Debris Co-ordination Committee and United Nations bodies such as the Committee on the Peaceful Uses of Outer Space. At a national level, the BNSC announced in November 2006 that it had awarded a £75,000 contract to a space surveillance project and a £33,000 contract to a space debris re-entry prediction project. The company that won these contracts, Space Insight, foresaw that ESA and the EU may bring forward proposals for a space surveillance network at the ESA Ministerial in 2008. We welcome the BNSC's funding for space surveillance. We recommend that future plans for this area, particularly in relation to a possible European project for space surveillance, be outlined in the new space strategy.

Existing national programmes

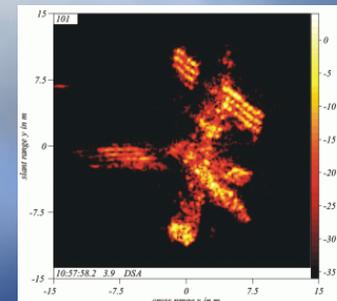
France : Bi-Static radar GRAVES
2200 objects observed a day
120 000 measurements/day
Operated by French Air Force since
december 2005



United Kingdom : Chibolton radar (RAL)
Starbrosk telescope (Cyprus)
Contracted by BNSC to private sector



Germany : Reconnaissance radar FGAN-TIRA
2 cm at 1000 km (L band tracking)
200 cm at 40 000 km (L band tracking)
+ Ku Band imaging (range res. 6,3 cm)
Operated by Research Establishment for Applied Science
+ Defense research for German MoD



+ other assets



European convergences on space security

- National programs with recognized European cooperation potential as it deals with the safety/security of space activities

Resembles very much the two « flagship programs », Galileo and GMES :

- Space Surveillance/ SSA, like GMES and Galileo, is about securing some level of European autonomy in a critical field
- This allows approaching collectively every issue possibly affecting regional/international security (non intentional/intentional threats/events)
- It will require well-defined and secured governance (and data policy)

Current areas of progress

- In line with major EU member states, ESA is about to make SSA an area of choice for sustained effort:
 - Capitalizing on ESA debris surveillance activities (Disco data base, etc)
 - Can quickly materialize an increased cooperative effort through a reinforced federation of existing national technical efforts
 - Possibly a first phase about better coordinating existing assets (for sufficient survey/tracking, Imaging, space weather)
 - A second phase developing new systems for improving the SSA (corresponding to the full requirements stated by the User Expert Group of ESA SSA Study)
 - Importance of defining fully operational governance/data policy rules

To be confirmed at the next ESA ministerial Council (11/08)

Policy issues ahead for Europe

- **Next issue: political endorsement of a dedicated European SSA**
 - Corresponds to the general approach adopted for any of the European strategic programs
 - Fits with member states policies aiming to promote the Europeanization of most of the security-related/dual-use programs
 - Provides Europe with an increased international status and prepares for a more efficient international cooperation with other existing foreign systems
- **Possible challenges**
 - Will have to mix different actors and space policies
 - Will have to prove secure in relation to national and international security interest