



International military cooperation in space

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Disclaimer



This is a personal presentation and doesn't engage nor the French Air and Space Force Academy, nor the French Air and Space Force, nor the French military.



Contents

- Space for the military
- International military cooperation in space
- “Advertisement”





Space for the military

- Space support to operations
- Space Domain Awareness (SDA) → “Space mastery”
- Actions in space





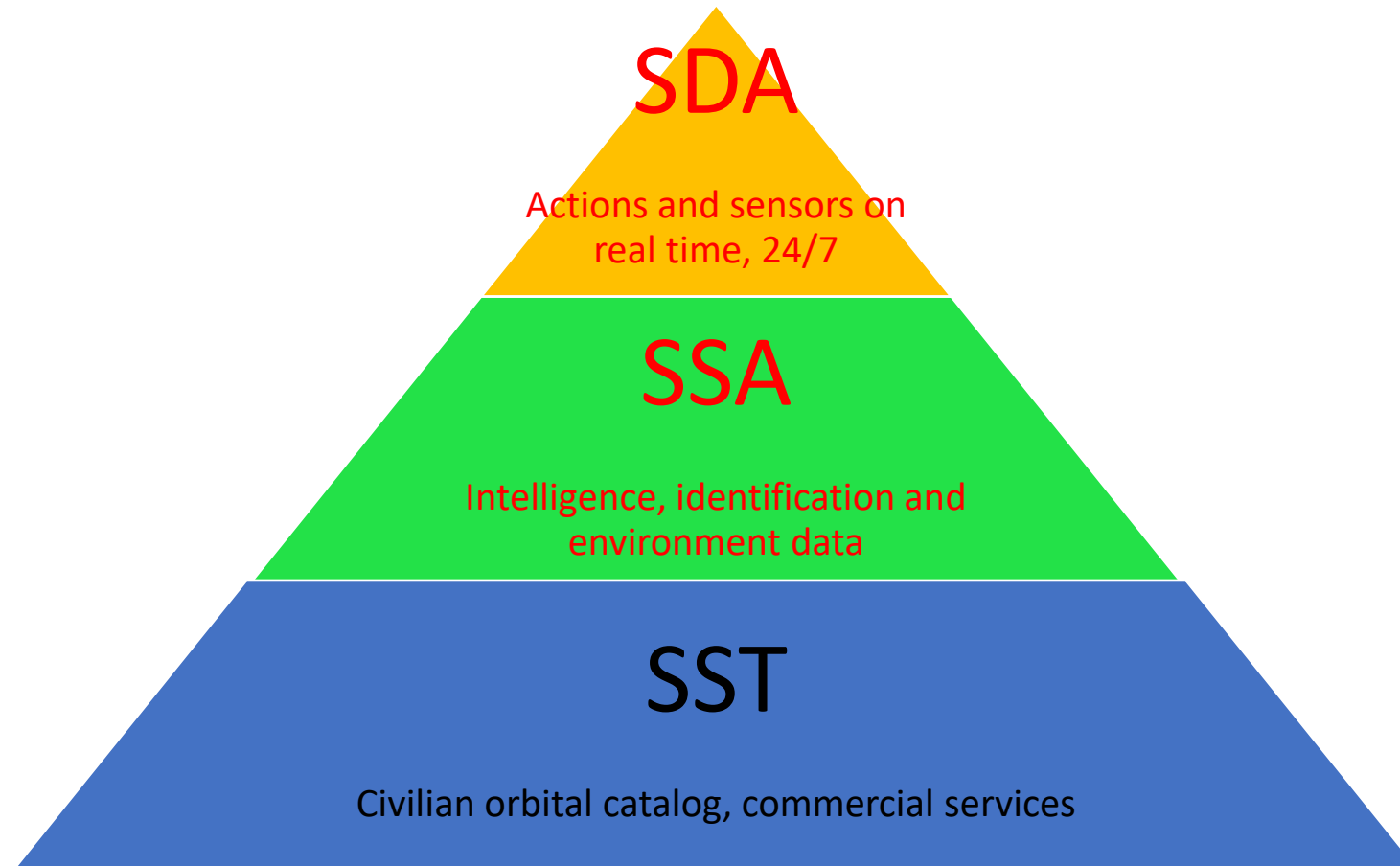
Space support to operations

- Intelligence
- Map
- Targeting
- Planning
- Weapons choice
- Communication
- Navigation
- BDA
- ...





“Space mastery”



Military : autonomous appreciation, decision and action

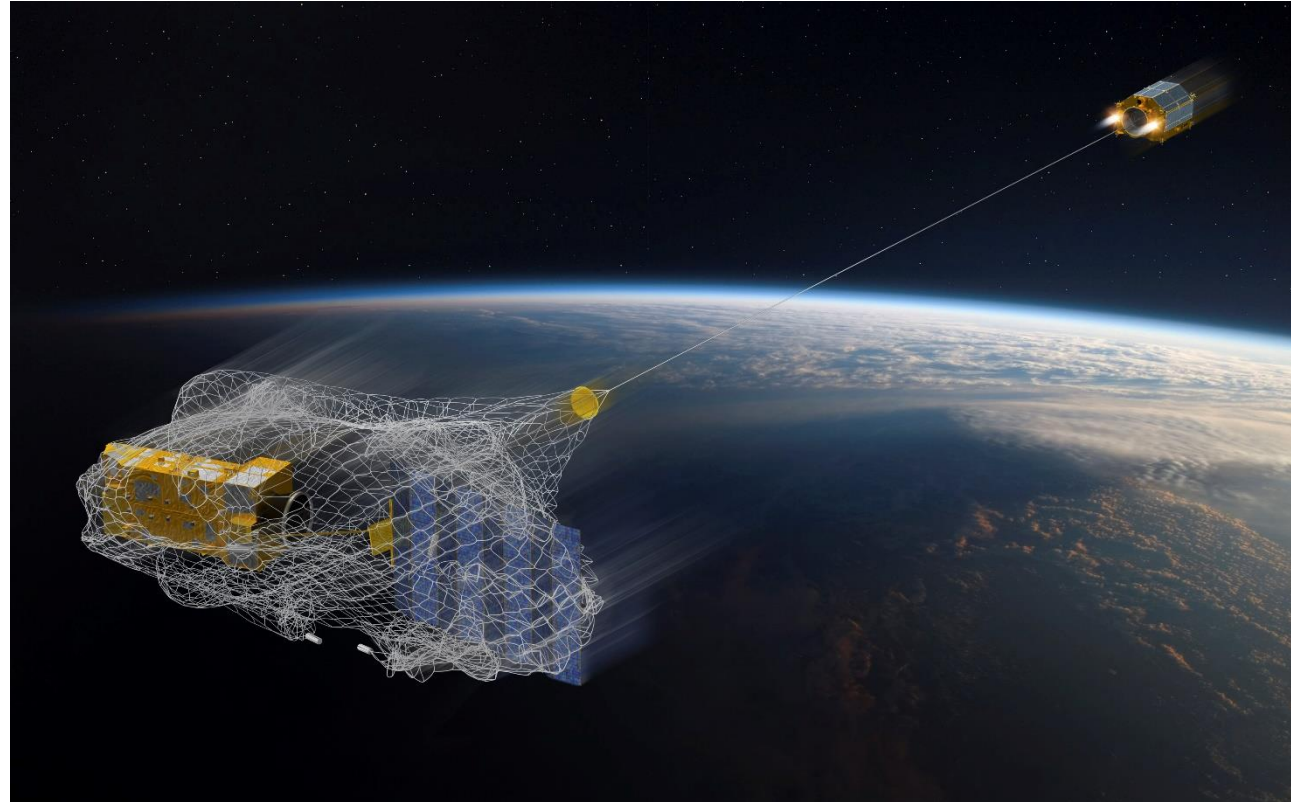
Military : characterize, understand and react

Dual : see, track and avoid



Actions in space

- New conflictual domain
- Jamming, spying, ...

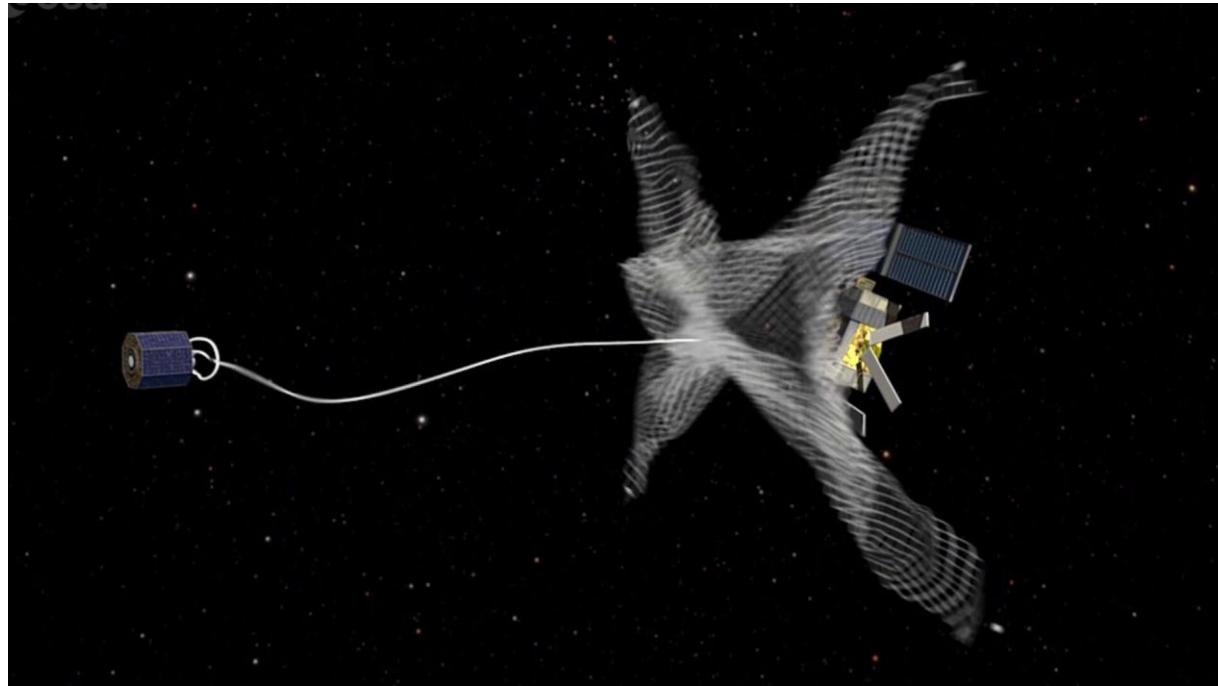


- Defensive policy (actions vs operations)



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- For actions in space : no military cooperation at the moment





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➤ SSA : EU SST + cooperation



But ...



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- Space support assets ? YES ! ... but !



Communication satellites example : Athena Fidus



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- Intelligence → optical, IR, RADAR sensors / ELINT sensors
- Map → optical or RADAR sensors / stereoscopy
- Targeting → optical, IR sensors
- Planning → SSA assets
- Weapons choice → SSA assets
- Communication → communication satellites
- Navigation → PNT satellites
- BDA → optical sensors
- ...



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➤ Intelligence assets :

Historical example : Helios 2

- France
- Belgium
- Spain
- Greece
- Italy
- Germany





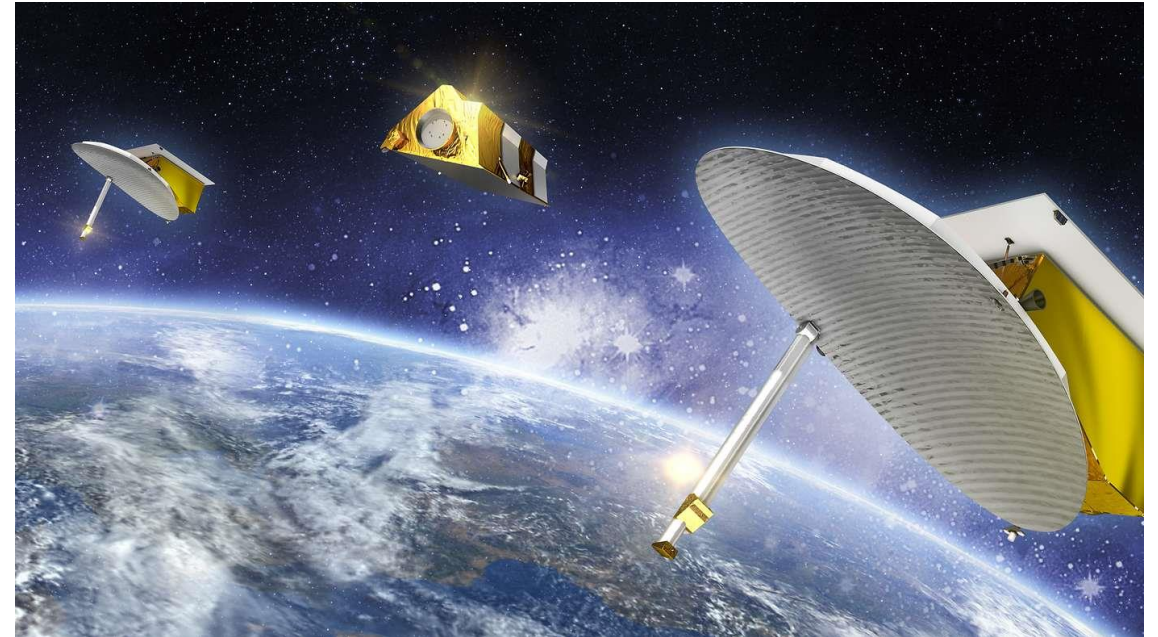
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➤ Intelligence assets :

Optical + IR capabilities

vs

RADAR capabilities





International military cooperation in space

➤ Intelligence assets :

Optical + IR capabilities

vs

RADAR capabilities





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Exchange of capabilities

VS

exchange of pictures

because of classification of strategies and interests

TOP SECRET
CONFIDENTIAL
CLASSIFIED



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MUSIS = Multinational Space-based Imaging System

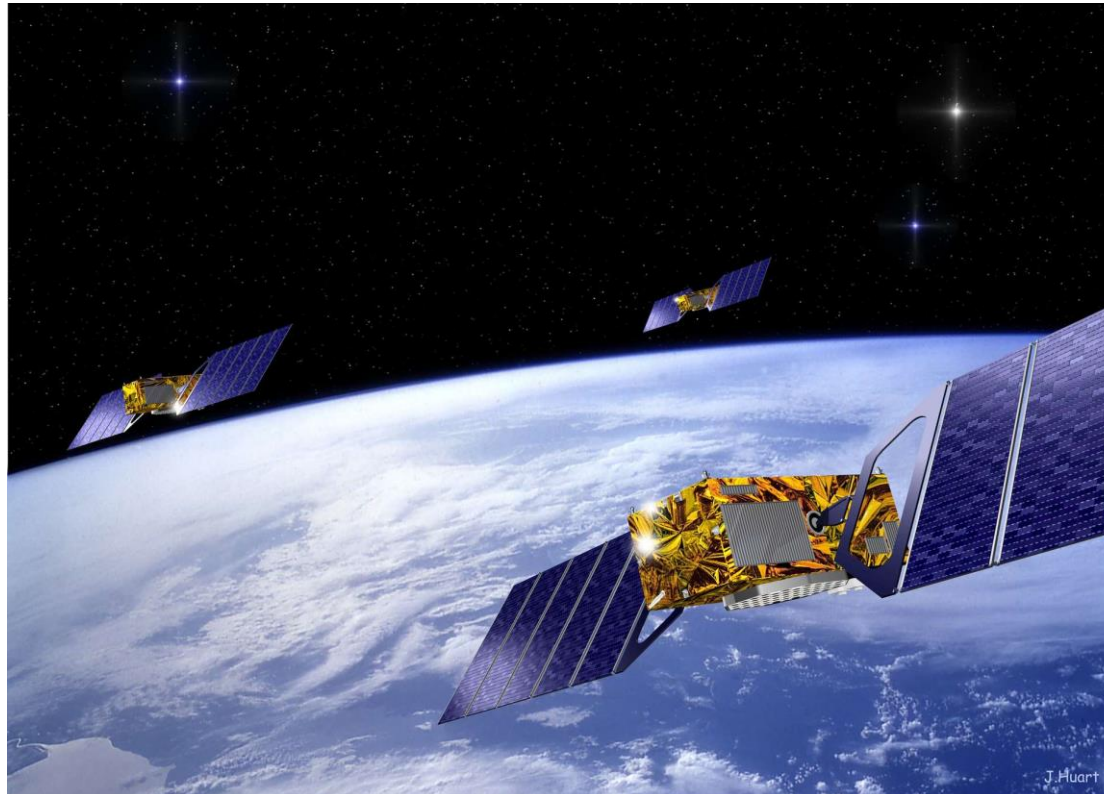
→ failed → CSO partners :

- Italy (CSG)
- Germany (SARah)
- Belgium
- Sweden (Antenna in Kiruna)



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PNT : GALILEO 😊 (but not that military, even if...)





« Advertisement »

Cooperation from the start : training together !



AsterX

2023



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**Thanks !
Any questions ?**

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