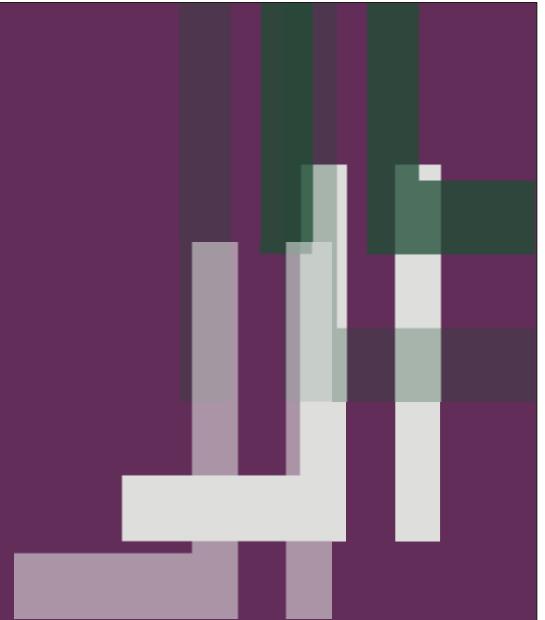




POLISH-AMERICAN  
CONFERENCE ON  
SCIENCE AND TECHNOLOGY

„TRANSFER OF TECHNOLOGY AND KNOWLEDGE”



# Marek Banaszkiewicz

## Space Research in Poland

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# History: milestones

- First rocket experiment (X-ray spectrometer) -1970
- Remote Sensing Center – since 1975
- First Space Experiment (Interkosmos Kopernik 500) - 1975
- Space Research Centre PAS – since 1977
- Polish astronaut Gen. Hermaśzewski - 1978
- First sensor on ESA mission (Cassini/Huygens) - 1991
- COSPAR in Warsaw – 2000
- PECS Agreement with ESA - 2008

# Status

- > 60 instruments sent to space and working => TRL 9 reached => **the quality is there**
- 300-500 individuals working on space in Poland => far too few (2000-3000 would be in proportion to the EU level) => **the quantity is missing**
- Funding: 15 M\$ yearly, 200 times less than in France, 35 times less than in Spain => **another civilization gap is generated**
- Space research sector is well advanced to reach the goals set by the Ministry of Science (**competitive edge, young professionals, good salaries, only 45% of financing from statutory funds, joint ventures with private enterprises, international cooperation**) => **it deserves the support**

# Polish Space Strategy

- ESA membership soon (2012?), 15 MEuro is the yearly mandatory fee
- National space program in addition => total funding (ESA optional + national) => 50 Meuro yearly is to be spend
- Space industry based on aeronautic and defense sector + SMS should be developed soon => pro space governmental policy is needed (space projects can last 10-20 years)
- Priority areas:
  - upstream sector** => small satellites, satellite subsystems, small launchers. technologies
  - downstream sector** => applications of satellite navigation, Earth observations, telecommunication – integrated applications
  - science** => participation in astronomy , astrophysics & planetary missions
  - exploratory missions** (e.g. space robotics)

# Challanges

- Changing of the perception of space activities by Polish citizens is needed
- The form of governance of space activity in Poland should be decided and implemented very soon („space agency”)
- Consolidation of Polish space research sector, then links to industry
- Establishing our role in the EU space area