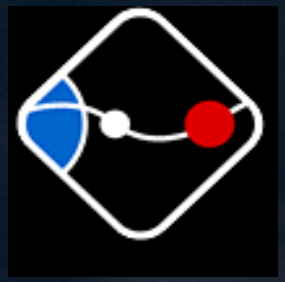


The President's Commission on Implementation of US Space Exploration Policy

Testimony By
Philippe Berterottière
Senior Vice President
Sales, Marketing & Customer Programs
Arianespace SA

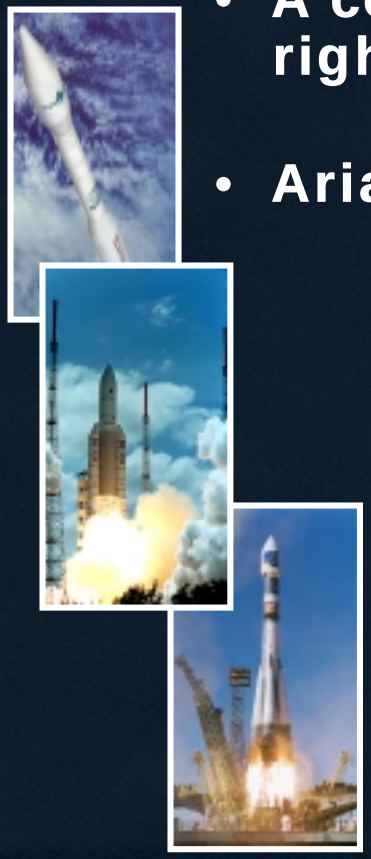
Arianespace - May 3, 2004

Who We Are

- Founded in 1980
- The world's 1st commercial launch services provider
- Signed over 250 contracts
- Launched majority of commercial satellites in orbit
- >50% of our business is with US manufacturers/operators
- Privately held European company with 44 Shareholders from 13 European nations
- Arianespace is the prime contractor to ESA for marketing, sales, integration and launch of Europe's family of vehicles

Family of Launch Vehicles

- Serves European launch policy to optimize resources and address all market segments
- A contract with ESA provides Arianespace with the rights to operate Europe's family of launch vehicles
- Arianespace operates 3 systems from French Guiana
  - The heavy-lift Ariane 5 (operational)
  - The medium-lift Soyuz ST (from 2006)
  - The light-lift Vega (from 2006)
- Arianespace is currently involved in Soyuz operations from Baikonur through our sister company Starsem



Ariane 5

Current Configurations & Capabilities

	LEO (mt)	GTO (mt)	Moon (mt)
Ariane 5 Generic		6.8	
Ariane 5 ECA		10	7.5
Ariane 5 ES/V	21		

ARIANE 5 Configuration Under Evaluation

Ariane 5 ECB	23	12	9

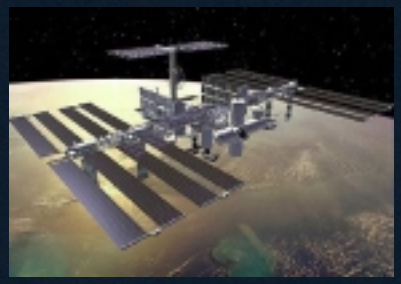
With the two solid propellant boosters and the central core of Ariane 5, there is a tool kit to build a super-heavy vehicle, should the need arise

Facilities

- We launch from the Centre Spatial Guyanais (CSG), a European launch site in Kourou, French Guiana
- A dedicated commercial spaceport in a NATO country
- Spacecraft are processed in the new S5 building using state-of-the-art clean rooms and preparation facilities
- Western safety standards and ISO 9000 certified
- Security is provided at the same level used to protect the French strategic nuclear forces

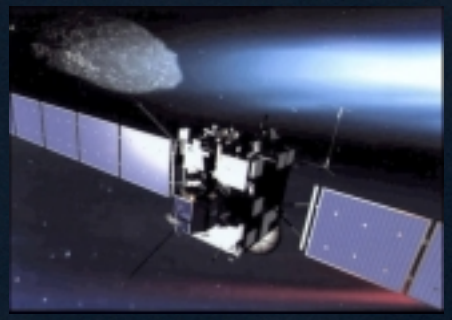
ISS & Exploration Capabilities

- Ariane 5 was developed as a man-rated launch system capable of carrying Europe's Hermes space plane
- Ariane 5 flight 503 successfully carried the Atmospheric Reentry Demonstrator (ARD)
- Ariane 5 will be used to launch Europe's Automated Transfer Vehicle (ATV) for ISS supply and re-boost
- In late 2006 the Soyuz ST will join the Arianespace family launching from new facilities in French Guiana
- Soyuz ST is an improved version of the venerable system that has launched over 1685 times



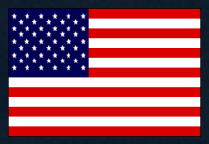

Unique Scientific Launches

- **Envisat**
  - Polar orbit mission launched in 2002
  - Europe's largest satellite at 8 tons
- **Smart-1**
  - Lunar mission launched in 2003
- **Rosetta**
  - Comet chasing mission launched in 2004
- **Herschel & Planck**
  - 2007 Launch to L2



International Cooperation

- Arianespace has launched 23 government missions for 5 NATO countries with 100% success
- Launched key government satellites for Australia, Japan, India and Turkey
- Launched satellites for intergovernmental organizations including: Intelsat, Inmarsat, Eutelsat and Eumetsat
- Under NASA/CNES program Arianespace launched the Topex/Poseidon ocean science probe
- Under contract with ESA to launch ATV missions to ISS for supply and reboost







Launch Services Alliance

- Formed in July 2003 between Arianespace, Boeing Launch Services and Mitsubishi Heavy Industries
- Provides mission assurance to commercial customers using three launch systems: Ariane 5, H-IIA & Zenit 3SL
- DIRECTV 7S launch tomorrow, May 4
- Cooperation could be expanded into civil space
- Arianespace is working with Mitsubishi to provide back-up for Japanese and European government missions
- Arianespace and Boeing are also exploring opportunities for cooperation on civil space programs

Launch Services Alliance
ARIANESPACE • BOEING • MITSUBISHI

DIRECTV

Conclusion

- Arianespace has a long history of being a reliable partner on commercial and government programs
- Arianespace has unique experience and capabilities
- European launch services can play a critical role in meeting the near-term and long-term requirements for space exploration
- The Commission should actively consider the capabilities of European companies and their ability to partner with US firms to achieve exploration goals