

World Space Week 2017 Theme Inputs



Two Proposals from Vice President Michel Laffaiteur

1) "Observing climate change"

The December 2015 Conference in Paris has been one of the biggest international climate conferences ever. The stakes were high: all together we need to contain climate disruption that is threatening our societies and economies. The Conference has adopted an international agreement, setting the framework for a transition towards resilient, low-carbon societies and economies.

It has been showed that space applications, mainly Earth observation, can provide efficient tools for managing forests, studying clouds, oceans, north and south poles, atmosphere, intertropical belt, methane, carbonic gas, humidity, vegetation, hydrology and salinity.

In many countries, new missions have been launched or are going to be launched in the coming years, including some under international cooperation. The Conference has recognized the role that can be played by space in the implementation of the recommendations that have been adopted.

World Space Week Association should be proud to honor next year the results of this conference, first time that about 195 nations reached a global agreement.

2) "Go forward to Mars exploration"

The first mission of the ExoMars programme, scheduled to arrive at Mars in 2016, consists of a Trace Gas Orbiter plus an entry, descent and landing demonstrator module, known as Schiaparelli. The main objectives of this mission are to search for evidence of methane and other trace atmospheric gases that could be signatures of active biological or geological processes and to test key technologies in preparation for ESA's contribution to subsequent missions to Mars.

The Orbiter and Schiaparelli will be launched together in March 2016 on a Proton rocket and will fly to Mars in a composite configuration. By taking advantage of the positioning of Earth and Mars the cruise phase can be limited to about 7 months, with the pair arriving at Mars in October. Three days before reaching the atmosphere of Mars, Schiaparelli will be ejected from the Orbiter towards the Red Planet. Schiaparelli will then coast towards its destination, enter the Martian atmosphere at 21 000 km/h, decelerate using aerobraking and a parachute, and then brake with the aid of a thruster system before landing on the surface of the planet. From its coasting to Mars till its landing, Schiaparelli will communicate with the Orbiter. Once on the surface, the communications of Schiaparelli will be supported from a NASA Relay Orbiter. The ExoMars Orbiter will be inserted into an elliptical orbit around Mars and then sweep through the atmosphere to finally settle into a circular, approximately 400-km altitude orbit ready to conduct its scientific mission.

Ideas from Others:

3) Extraterrestrial Resources

Recently, Luxembourg announced an initiative in support of extraterrestrial resource utilization. ULA just announced its vision for using lunar ice as fuel. And the US just passed a law on this general subject

too. Space-based solar energy is a promising technology being pursued. There remain legal questions. But if we consider WSW a forum relevant to current issues, a theme on space resource exploration and utilization might be appropriate.

4) Astrobiology:

Astrobiology is the study of the origin, evolution, distribution, and future of life in the universe: extraterrestrial life and life on Earth. Astrobiology addresses the question of whether life exists beyond Earth, and how humans can detect it if it does. This could also involve the search for Earth-like planets in other solar systems.

For Reference

Theme considerations:

- Timely to encourage media and public attention
- Suggests a range of public events which could be planned around the theme
- Permits teaching a variety of subjects using the theme, such as science and math
- Range of organizations involved in the theme from which WSWA might get sponsorship

We have generally alternated between “looking up” (deep space) and “looking down” (Earth benefits). If we follow this pattern, 2017 is the year to look up.

2016 – Remote Sensing: Enabling Our Future	(DOWN)
2015 – Discovery	(UP)
2014 – Space: Guiding Your Way	(DOWN)
2013 – Exploring Mars – Discovering Earth	(UP)
2012 – Space for Human Safety and Security	(DOWN)
2011 – 50 Years of Human Spaceflight	
2010 – Mysteries of the Cosmos	(UP)
2009 – Space for Education	(DOWN)
2008 – Exploring the Universe	(UP)
2007 – 50 Years in Space	
2006 – Space for Saving Lives	(DOWN)
2005 – Discovery and Imagination	(UP)
2004 – Space for Sustainable Development	(DOWN)
2003 – Space: Horizon Beyond Earth	(UP)
2002 – Space and Daily Life	(DOWN)
2001 – Inspiration from Space	(UP)
2000 – Launching the Space Millennium	