**ESA Ministerial Earth Observation - VT**

**A ROLL FINAL**

Ministers from the 22 ESA member states and Canada will gather in Lucerne, Switzerland, on 1-2 December to discuss future spending priorities for the ESA space programme.

Before the meeting, each ESA directorate has drawn up a list of priorities to be considered by ministers. In this report, we hear from ESA’s Earth Observation directorate.

**A-ROLL**

10:00:14:16

[ANIMATION OF EARTH OBSERVATION MISSION SCANNING ICE AT NORTH POLE AND GLACIER ICE LOSS WITH GVS OF FISH AND SEA]

Earth Observation is informing our society at a time when we face environmental challenges - be it changes in ice at the poles, atmospheric pollution, food security or rising sea levels.

10:00:28:00

[ANIMATION EARTH EXPLORER SPACECRAFT AND DIGITAL MODEL OF THE EARTH’S GRAVITY FIELD OR GEOID FROM GOCE SATELLITE MEASUREMENTS]

ESA’s science and research Earth Explorers missions study our evolving planet and deliver data to scientists around the world. The GOCE satellite, for instance, improved measurements of the Earth’s gravity field…

[ANIMATION OF CRYOSTAT ICE SHEET & SEA LEVEL CHANGES]

and CryoSat keeps delivering the first maps of changes in ice thickness at the North pole or changes in sea level.

[ANIMATION SHOWING EARTH’S FOREST COVER FROM SPACE; GVS FOREST]

A future mission, called Biomass, will examine the state of our forests and determine the amount of biomass and carbon stored there.

[GVS SENTINEL-1 SATELLITE IN CLEAN ROOM]

A family of satellites known as the Sentinels, is already monitoring our planet as part of the European Commission’s Earth Observation programme Copernicus.

[ANIMATION SENTINEL SPACECRAFT SCANNING EARTH]

ESA will make sure that new satellites will continue to deliver what is needed to understand the future of Earth.

10:01:17:10

[INSET CLIP: Josef Aschbacher

Director of Earth Observation, ESA]

*“We are addressing a number of issues that relate to the development of new science but also operational missions. For example, Earth explorer missions, the scientific missions, but also we are preparing the next generation of Sentinel missions for Copernicus.”*

*10:01:32:06*

[ANIMATION OF SOIL MOISTURE AND OCEAN SALINITY (SMOS) SPACECRAFT AND ITS MEASUREMENTS]

The science from ESA’s missions is making an invaluable contribution to a planetary health check. This data is not only useful for scientists. It will also provide a future economic benefit through helping to develop business in Europe.

[SENTINEL-1 CLEANROOM TIME LAPSE SHOTS]

But ESA’s main objective is to take space technology to the next level - while making sure that data from its satellites is available for everyone.

10:01:57:00

[INSET CLIP: Josef Aschbacher

Director of Earth Observation, ESA]

*“The impact will be everywhere in society. For example, we have done a study recently where it was proven that 1 Euro invested in Copernicus, in Earth Observation, brings up to 10 Euros back to the society. So really science is converted to business and these business ideas are really good for job growth, for employment, for economic growth which is absolutely required and space is at the service of the people by supporting this.”*

10:02:25:00

[ANIMATION OF EARTH AND DIFFERENT ENVIRONMENTAL READINGS]

The directorate’s proposals will cover everything from satellite development to providing long term data on climate change. Data exploitation projects and public private partnerships can also develop the commercial Earth Observation sector.

10:02:40:00

[INSET CLIP: Josef Aschbacher

Director of Earth Observation, ESA]

*“In the next 5-10 years in Earth Observation we will face a number of challenges, some of them coming from outside - big data, constellations, commercial companies entering our domain and I think there we really have to see, as ESA, as European Space Agency, a public institution, how we can best react to these external challenges and position ourselves with our programmes to really address these challenges from our perspective.”*

*10:03:06:00*

[ANIMATION OF ADM-AEOLUS MISSION]

Challenges in Earth observation will be to deliver new observation techniques required in the future in order to further improve Earth Observation for the scientific, business and environmental needs of Europe and beyond.

10:03:22:00

[ENDS]

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**B ROLL**

**10:03:22:19**

**[TITLE] ESA MINISTERIAL - EARTH OBSERVATION - B-ROLL**

Interview Josef Aschbacher

Director of Earth Observation, ESA (English)

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*“The impact will be everywhere in society. For example, we have done a study recently where it was proven that 1 Euro invested in Copernicus, in Earth Observation, brings up to 10 Euros back to the society. So really science is converted to business and these business ideas are really good for job growth, for employment, for economic growth which is absolutely required and space is at the service of the people by supporting this.”*

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*10:04:42:23*

**[TITLE] SENTINEL CLEAN ROOM TIMELAPSE**

Speeded motion timelapse of Sentinel-1A spacecraft radar deployment in Thales Alenia Space clean room, Cannes, France (January 2014).

10:05:34:05

**[TITLE] ESA’S WATER MISSION**

Launch shots of ESA’s ‘water mission’ - the Soil Moisture and Ocean Salinity spacecraft or SMOS mission (2nd November 2009). Animation of SMOS and its scientific aims, with text.

10:06:53:23

**[TITLE] THE MANY FACES OF EARTH**

Animation showing spinning Earth and how Earth Observation satellites view the Earth, from around 800kms high, using different sensors.

10:07:39:19

**[TITLE] CryoSat - Ice Mission**

**10:08:25:15**

**[TITLE] Profiling the Earth Winds**