

## **EISC: 26 October 2009: DG's keynote speech**

I would like to start by making one remark in response to the Chairman's opening comments concerning astronauts: I have done my best not to have a British astronaut in ESA but Tim Peake was such a good candidate that I could not do this! Having selected him, I now realise the importance for UK to have an astronaut, which is an added benefit of his appointment.

The EISC is an important item in my calendar. I thank you for the invitation to address you and I am glad to be with you again this year. One year ago, we were in Prague for this conference, three months after the Czech accession to the ESA Convention. The Czech Republic was first of the new EU members to join ESA.

This year we are in UK, which is one of the founding members of ESA but this is a UK with renewed ambitions: there is UK astronaut, we have the opening of ESA at Harwell and an Innovation and Growth Team has been established to identify a 20-year strategy for establishing leadership for the UK in space. Moreover, this conference takes place three days after an important European Prague conference on exploration.

The last year has been important. At the ESA Ministerial Council in The Hague, the mandatory science programme was increased, the International Space Station exploitation (ISS) was the biggest optional programme approved, opening doors to science, including now Earth science. There were also a number of applications programmes approved, with significant investments, for example in meteorology (MTG), and environment (GMES) operational services. Many of these applications concern services to citizens – navigation, integrated applications etc. These programmes were complemented by decisions on technology development and a data relay satellite.

Ministers have opened new avenues for manned exploration with studies of the Cargo Return Vehicle and a Lunar Lander, in addition to decisions on ExoMars and ISS. These set the ground for Europe to become a significant partner in exploration.

These key decisions provide a firm foundation for European industry to consolidate its competitiveness, for European scientists to be at the forefront of progress of knowledge and for European citizens to receive more services.

However, decisions are not important unless they can be turned into successful achievements. In the past year we have launched GOCE. This will be followed in a few days by SMOS and three months later Cryosat. Within a year ESA will have launched three satellites for Earth science and environmental research, key towards the understanding and management of climate change.

We have also launched two masterpieces of European engineering technology in Herschel and Planck. Our research is complementary to CERN's programme in studying the origins of the Universe. We continue to exploit the ISS and secure much more than the 8% of experimenting time we are entitled to, because the ideas of the European scientific community are so outstanding.

Before the end of the year I wish to secure three further achievements: to consolidate Exomars, to consolidate BepiColombo and to sign the first three contracts on Galileo FOC (Full Operational Capability).

Our citizens can no longer live without space, even if they are not aware of this. There is still a lot of ignorance among citizens about the benefits that come from space. Space is so user-friendly that citizens that do not recognise they are using it. In Paris, the taxi drivers always use GPS but 80% of them do not know that the signal comes from space. They do not even care, as long as it works. The same is true in the weather forecast. Citizens do not realise that the five day forecast comes from the use of satellites. Citizens are looking for services not for satellites.

Our goal is to serve the needs of citizens for the short-term, the medium-term and the long-term.

In the short-term, space is a significant contributor to the economy, through applications programmes. The five day weather forecast provides huge economic benefits to agriculture and to many other sectors. Telecommunication is the most profitable application and now gives rise to real Public Private Partnerships (PPPs) in ESA development programmes: Hylas with Avanti, Alphasat with Inmarsat and the Small GEO Satellite with Hispasat. The operators are sharing the funding and sharing the risks. These are real PPPs, where the operators are sharing the risk with ESA. If the private partner does not share the risk, it is financial engineering not PPP. These represent a change of culture in ESA. We are studying future economic uses, such as the role of space in the management of the power grids across Europe.

In the medium term, we are addressing climate change, which is a real, urgent, complex problem. To understand climate change we need a chain of actions in which each link is important: collection of data, understanding the science, modelling and prediction and then action – adaptation and mitigation – the effects of which, in turn, require monitoring. By itself, space will not provide the whole solution to understanding climate change but is at both ends of this chain – providing data and monitoring the impact of actions. For once, Europe is at the frontier of action. Earth explorer satellites averaging a rate of one per year is something no one else in the world is doing.

But it goes wider. Understanding greenhouse effect on Venus or climate change on Mars contributes to understanding climate change on Earth. We are the first partner on the ISS to issue a call for proposals on how scientists can use the ISS for the study of climate change. There is still a lot to do. We miss a political forum for space and climate change. We must make progress on data policy. But I am proud to say we in Europe and at ESA are at the leading edge of the actions that are being taken on this fundamental issue.

Looking to the long-term, last Friday, as I have mentioned, we had the first exploration conference organised by the Czech minister and European Commission. Exploration is about science but it is about much more than science. It may be the only global endeavour that we can undertake without first waiting for a crisis to which to respond. Europe is already a significant player in exploration: we are a significant partner in the ISS and success in exploration can only be based on success of ISS, meaning successful exploitation of the facility.

There is no global political forum which can provide governance over space activities. This can present us with a challenge. Europe could take initiative and propose a model of global governance relying upon a well experienced intra-European governance.

Exploration will require additional money. This is true also in the US, where the Augustine report has proposed an increase of NASA budget by 3 bn \$, i.e. an increase approximately equal to ESA's total annual budget. We need to commit more money in Europe but there will be no EU new money before 2014 and we may not be able to afford to wait until then.

We will take the next year to build Europe's global vision and I hope the Belgian EU Presidency will provide a lead within the EU in the process. The Belgian Minister has certainly indicated an intention to do this.

Space is more and more connected to the lives of citizens across the world. We cannot just wait and follow initiative taken by others. We in Europe have a unique experience in international cooperation and unique capabilities which provide credibility to European initiatives. The space sector can support parliamentarians but we cannot replace you. Political leadership is your responsibility to exercise.

I wish you a fruitful conference made from good exchanges and friendship.