

## → FOREWORD

The past year was in some respects an unusual one for the Agency. We had no launches of exclusively ESA satellites. But we did have many celebrations, starting with the 50th anniversary of the dawn of the space age with the launch of the world's first artificial satellite Sputnik, and the 40th anniversary of the UN Outer Space Treaty.

We also celebrated the 20th anniversary of Austria's membership of ESA in Vienna on 24 October in the presence of its President Heinz Fischer, who in his capacity as minister responsible for space had signed his country's accession agreement back in 1985. ESOC in Darmstadt celebrated its 40th birthday on 17 December.

After a long period of uncertainty, the European Union reached agreement on the funding and procurement arrangements for the Galileo project. ESA has been entrusted with the role of procurement authority. This is a major breakthrough that, along with the expected launch of GIOVE-B in 2008, will bring the project closer to reality.

There was also some added waiting in 2007. Due to technical problems with the

Space Shuttle, we have had to wait until 2008 for the launch of the Columbus laboratory and the ATV *Jules Verne*. On 23 October, Node-2 (Harmony) was launched on STS-120 with ESA astronaut Paolo Nespoli on board. This was a very important mission, since it prepared the way for the arrival of Columbus.

Ariane-5 continued on its successful path with five launches, placing ten satellites in their required orbits. This achievement further demonstrates the launcher's reliability, which enabled Arianespace to maintain a very strong position on the world's commercial launcher market.

Another key event took place in Brussels where, on 25 May at the Fourth Space Council, 29 governments approved a European Space Policy document that sets out fresh ambitions for Europe in space. I must also mention the adoption by the European Council of the Reform Treaty, signed by the Heads of State or Government of the 27 EU Member States on 13 December. The Lisbon Treaty grants new competences to the EU for space matters and specifically mentions ESA as one of its partners in fulfilling its space objectives.

Internally, I would stress the Agency's and the delegations' full commitment to the financial management reform. This process, together with the reforms envisaged for decision-making and procurement policy, will bring very profound changes to life at ESA.

Looking ahead, 2008 will be an exceptionally rich year in terms of ESA missions that will keep everybody in the space sector very busy. A record number of major missions and satellite launches are scheduled. The first three – Columbus, ATV and GIOVE-B – will have been launched by the time this Report is published.

Another highly important event in 2008 for ESA, and indeed for all European stakeholders, will be the Council meeting at Ministerial Level to be hosted in The Hague on 25/26 November. Although preparations are already ongoing, the preparatory phase will officially start in March with the setting-up of a dedicated Working Group. This Ministerial will be crucial in terms of expected decisions on future programmes and the evolution of the Agency.

On behalf of the Member States, I should like to thank all of you who work at ESA for

your very dedicated service. Lastly, I should like to thank my predecessor, Professor Wittig, for his dedication and commitment to the work of Council.

#### Per Tegner

Chair of Council



## → YEAR IN REVIEW

2007 has been a year full of symbols and anniversaries. In 2007 we celebrated 50 years of space, because in October 1957 the first satellite (Sputnik) was launched. There were a lot of events around the world to celebrate this, and ESA has been very visible in these events. Even though ESA did not exist 50 years ago, ESA has now a place that is valued by all space powers in the world.

We also celebrated 50 years of Europe, because in 1957 the Treaty of Rome was creating the European Community. ESA is at the crossroads of space and Europe, and I think that this was a formative period for European space activities.

We also celebrated 100 years of the German space agency (DLR) and 20 years of Austria being a member of ESA. In February we inaugurated the launch pad of Soyuz in French Guiana, another very important symbol for ESA, and December saw ESOC's 40th anniversary.

Although in 2007 we had relatively few missions (normally we have many more), we still had a very busy year and involvement in important launches. Paolo Nespoli flew in space for the first time on

the Space Shuttle, and the crew and in particular Paolo, did a fantastic job, paving the way for the launch of Columbus. Node-2 was an Italian delivery to the ISS, but it was developed under ESA responsibility, so two reasons to be very close to our hearts.

There were several non-ESA missions where we made valuable contribution, for example the Japanese Kayuga (Selene) lunar mission, where ESA's SMART-1 team had helped the JAXA team test its ground segment. For the Chinese Chang'E 1 lunar mission, ESOC provided spacecraft and ground operations support services to CNSA.

Moreover, there were many other exciting events and important decisions being made. First, funding for Phase 2 of Segment 1 of GMES was agreed by ESA Member States participating in the programme. This has been an important decision as GMES is a breakthrough in ESA history, because to have a significant cooperation between ESA and the European Commission for providing services to the European citizens represents a key way we shall work in the future.

Then we had the historical decision on Galileo by the European Union Council under a proposal by the European Commission: to fund the Galileo Full Operational Capability programme and to entrust its management to ESA. This decision paves the way for a robust implementation of this strategic and commercial satellite navigation programme.

Next was the signature of the Alphasat contract. This is the first significant public private partnership put in place by ESA with a private satellite operator. This is a one billion Euro programme where ESA Member States, space industry and the operator Inmarsat, selected under full competition, are joining forces to develop a new, highly competitive European system in the commercial sector of telecommunication satellites.

A fourth breakthrough was Cosmic Vision. We issued the call for proposals in March after the Science Programme Review. The success of Cosmic Vision is outstanding; we received more than 70 proposals, 50% more than the call for proposals issued ten years ago. These proposals came from not only European scientists but also from scientists all over the world.

Possibly the most significant breakthrough of 2007, though, was the European Space Policy. For the first time in history, we had 29 Member States supporting a policy document of the ESA Director General and the European Commission. In this document, there are new ambitions and new chapters at the service of citizens, for a competitive industry, for security and defence, for a knowledge-based society and for international cooperation. The role of ESA for implementing such a European Space Policy is recognised not only by the ESA Member States, but also by the EU Member States.

Internally, we were working on the evolution of ESA, in particular the reform of our financial management, industrial procurement and decision-making processes. The evolution of ESA is important for efficient operations, in particular when ESA could grow to between 22 and 25 Member States within a few years and when our working relations with the European Commission will be intensified.

In 2007, I visited all the centres, establishments and offices of ESA. Everywhere I could feel the motivation and the dedication of our people. We are making

progress on programmes and activities. We are making progress on the visibility of ESA in the world. ESA and the European space sector represent an unrivalled model of cooperation and success, thanks to the continuous support of our Member States and thanks to our people. We must continue building on this fact.

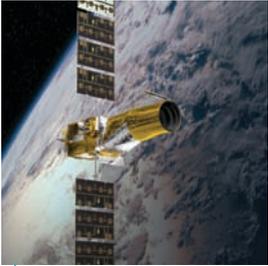
So, although we may have had only a few missions in 2007, we had many fantastic breakthroughs and opportunities, and I think that 2007 will soon be seen as a turning point in the history of ESA.

#### Jean-Jacques Dordain

Director General



# → HIGHLIGHTS OF 2007



## January

On 17 January, the protective cover of the telescope on the **COROT** planet-hunter satellite is opened, and for the first time **COROT** sees light coming from stars. ESA is a partner in this French-led mission. On 23 January, ESA's HQ hosts the 'ISS Heads of Agency meeting' for heads of space agencies involved in the **International Space Station**.



## February

ESA astronauts Léopold Eyharts and Hans Schlegel are officially named to fly the Space Shuttle carrying **Columbus** to the ISS. On 25 February, **Rosetta** makes a swing-by of Mars at a distance of only 250 km. On 26 February, the Soyuz launch pad construction site in Sinnamary is officially inaugurated.



## March

The first 'Call for Mission Proposals' marks the beginning of the implementation of the new **Cosmic Vision** 2015–25. On 29 March, ESA and New Zealand sign an arrangement on the installation of a transportable telemetry station to track the **Ariane-5** launcher carrying **ATV**.



## April

On 17 April, the European Union hosts a high-level conference in Munich to define a roadmap for the future of **GMES**, Europe's Global Monitoring for Environment and Security initiative. On 23 April, the largest ESA scientific symposium of the year, **Envisat** Symposium 2007, opens in Montreux. On 27 April, Poland becomes the fourth ESA European Cooperating State.



## May

On 22 May, ministers of the European Union, ESA and their Member States adopt a Resolution on the **European Space Policy**.



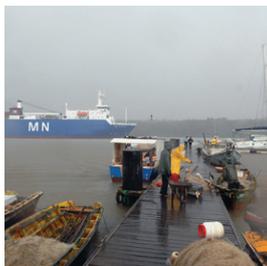
## June

In June, ESA Telecommunications launch the new **Iris** programme to develop satellite communications for air traffic management. On 18 June, ESA and Thales Alenia Space sign the contract for the design and development of **Sentinel-1**, the first Earth observation satellite to be built for **GMES**.



## July

On 13 July, *ATV Jules Verne* leaves ESTEC for the transatlantic trip to Europe's Spaceport at Kourou, French Guiana.



## August

On 1 August nearly two weeks after leaving Rotterdam harbour, the French cargo ship *MN Toucan*, carrying *ATV Jules Verne*, sails into Pariacabo harbour in French Guiana. NASA request that ESA's *Mars Express* spacecraft relays communications with their Phoenix Mars lander during its Entry Descent and Landing phase.



## September

On 14 September, the Foton-M3 spacecraft is launched with more than 600 kg of scientific payload, aboard a Soyuz-U launcher, from Baikonur Cosmodrome, Kazakhstan. The 58th International Astronautical Congress takes place in Hyderabad, India, 24–29 September.



## October

On 23 October, Space Shuttle *Discovery*, STS-120/10A, transports Italian-built Node-2, Harmony, along with ESA astronaut **Paolo Nespoli**, to the ISS.



## November

On 14 November, an *Ariane-5 ECA* sets a new record for total payload mass of 9527 kg. The contract for *Alphasat*, the first satellite to use *Alphabus*, is signed by ESA and Inmarsat. For the first time, ESA tracking stations transmit telecommands to a Chinese satellite, Chang'E-1.



## December

On 4 December, a prototype of the P80 rocket motor, which will power the first stage of ESA's *Vega* launcher, was tested at Europe's Spaceport in Kourou, French Guiana. On 15 December, *ATV Jules Verne* is mated with its launcher in the final launch configuration at Kourou.



# → MANAGEMENT STRUCTURE



Jean-Jacques Dordain  
**Director General**



David Southwood  
**Director of Science**



Volker Liebig  
**Director of Earth Observation**



Giuseppe Viriglio  
**Director of Telecommunication and Navigation**



Daniel Sacotte  
**Director of Human Spaceflight, Microgravity and Exploration**



Antonio Fabrizi  
**Director of Launchers**



Michel Courtois  
**Director of Technical and Quality Management**



Gaelle Winters  
**Director of Operations and Infrastructure**



René Oosterlinck  
**Director of Legal Affairs and External Relations**



Ludwig Kronthaler  
**Director of Resources Management**