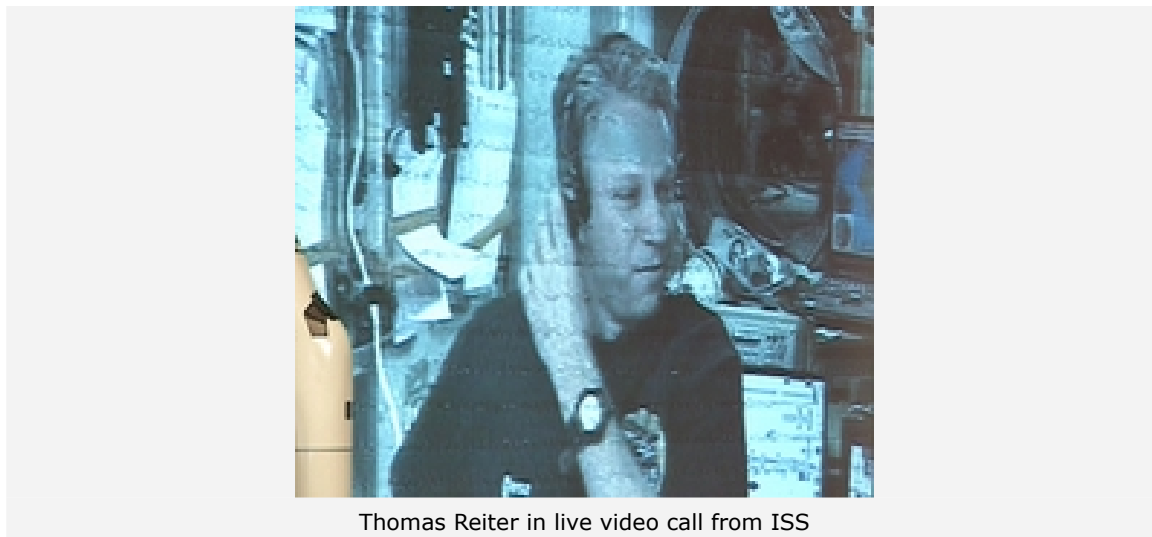

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Europe paves the way to the International Space Station

10 October 2006

On 22 September 2006, the European Astronaut Centre (EAC) based at DLR's Cologne-Porz establishment, hosted a presentation for German, European and international media entitled "Europe Paves the Way to the ISS."

Amongst the highlights of the presentation was a live video link with German-born European Space Agency (ESA) astronaut Thomas Reiter, currently on board the International Space Station (ISS) who answered journalists' questions.



Thomas Reiter in live video call from ISS

Prof. Sigmar Wittig, DLR CEO, welcomed media

"I am happy and proud to see the harvest of the many tasks we have been working on for many years" said Dr Wittig. He said that Germany provides 41 percent of Europe's contribution to the ISS. "We are beginning to see real progress in building the ISS. Ariane and other support programmes are a continuing success. Next year the Automatic Transfer Vehicle (ATV) which has been built in Bremen will be launched," continued Dr Wittig.

"2007 will also see the launch of the Columbus Laboratory. Germany is extremely strong in microgravity research along with the development of medical and biological systems. Thomas Reiter, on the ISS, has been doing fine preparatory work for this. Another German ESA astronaut, Hans Schlegel, will accompany the mission which takes Columbus to the ISS. It is very important for both ESA and Germany that the International Space Station is completed by the end of this decade. Once fully operational, we can use the station to its full extent. Science and industry have been waiting for this moment. Soon we will be bringing that harvest in," he concluded.

Michel Tognini, ESA astronaut and head of the European Astronaut Centre, was joined at the presentation by ESA astronaut Reinhold Ewald and their astronaut colleague Paolo Nespoli, who will fly next year.

"With the successful landing of the Space Shuttle yesterday," said Dr Tognini, "and after a certain amount of worry about debris seen around the area of the ISS the day before, Europe can now plough

ahead with confidence. During the next few days, further mission dates would be confirmed. It was important to note," he said, "that the launch of the Columbus laboratory next year would proceed on schedule."

"Very happy" with Reiter's mission

Reinhold Ewald said that, three months into Thomas Reiter's Astrolab mission on the ISS, "we are very happy with the continuing human space flight effort." Ewald is currently the Astrolab Mission Operations Manager based at DLR's Columbus Control Centre.



Reiter had a very successful space walk in August - known formally as an extra vehicular activity (EVA). The EVA had six hours and 30 minutes assigned to it, but it had been completed in 6 hours and 6 minutes. According to Ewald, Reiter claims that he is now owed 24 minutes by somebody!

Construction of ISS continues; crew exchange this week

The ISS is permanently crewed by three people now. Thomas Reiter was the 'new boy' in July. With the arrival of the next crew, he is now the most experienced member of the space station. He is familiar with all the routine maintenance tasks (for which six hands is much easier) and is fully-trained for the science programmes, supported by the Columbus Control Centre in Oberpfaffenhofen, near Munich.

The newly-operational Columbus Control Centre, designed to be mission control for the new European Columbus Laboratory to be transported to space next year, is already closely co-ordinating the ISS science experiments.

Mission STS-116, scheduled to last eleven days, will be launched on 14 December 2006 and on board will be ESA Astronaut Christer Fuglesang from Sweden. He will take part in two EVAs and there will be a third EVA involving other members of the crew.

The tasks of the mission include the delivery and installation of the P5 part of the 120 metre long 'Truss' for the ISS. The crew will work on the power system of the space station. During the mission, a solar array will be retracted in orbit - this is the first time this has ever occurred.



Video feed from DLR's Columbus Control Centre

The mission will be also notable that, at the end of it, Thomas Reiter will be flown back to Earth in time to spend Christmas with his family.

Paolo Nespoli, an aerospace engineer from Italy described his own future mission, STS-120 which will be launched in 2007. The ISS is being put together by placing 'nodes' in central positions to which further sections are joined. STS-120 will deliver Node 2 which will be attached during three EVAs.

Node 2: NASA component built in Italy with European technical input

Node 2 is not simply a connector. It has equipment, a power supply, gas, water and coolant which makes assembly challenging. Node 2 will also include eight racks in the aft section - these are personal 'dorms' for the crew - the first time ISS astronauts will have their own living space. This will allow better use of the rest of the ISS.

With Node 2 in place, the ISS will be ready to receive the Columbus Laboratory on the following flight.

The following mission, STS-122, will be an important one. Scheduled for launch on 17 October 2007, it will see the return of German-born ESA astronaut Hans Schlegel to the ISS. STS-122 will deliver the Columbus Module to the ISS and install it on Node 2's starboard port. Once installed, the Columbus Module will be activated for crew operations.

The European payloads, SOLAR and EuTEF, will be installed and activated on Columbus by this particular mission.

Columbus was built in Germany, its shell built in Italy and the entire laboratory assembled in Bremen. It is the major European contribution to the ISS. It allows science experiments such as material science and life science to be conducted in space.

16 ISS missions will be flown by the year 2010

These ISS expansion missions depend on the Space Shuttle's continuing operation. During these missions, with the ISS orbiting at seven kilometres a second above Earth, a lot of complicated reconfiguration, moving, disconnecting and reconnecting will take place.

By 2010 though, the ISS will be in its final configuration. With, by then, ten power arrays installed, it will have plenty of power to support its missions. Alongside the Columbus Laboratory, a Japanese laboratory will also be up and running.

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