Astronomy Looks into the Future - Transcript

A-ROLL

Dur.: 5:05

Out Q: …later in the year.

Guide Voice: With Europe apparently in crisis, it's not the ideal time for the European Commission's Directorate-General for Science and Research to be proposing to double the size of its budget. But the EU Commissioner responsible says it's now more vital than ever before that Europe works towards a knowledge-based economy.
0:22 CLIP: Janez Potocnik, EU Commissioner for Science and Research - *"It's not a question of will we do it? Should we do it? It is only a question of when we will do it. Because we don't have any other choice."*
Guide Voice: Janez Potocnik was speaking to scientists and journalists at a press briefing in Holland. He said the rejection of the EU Constitution by voters there, and in France, only serves to underline the importance of remaining competitive.
0:45 Janez Potocnik, EU Commissioner for Science and Research - *"The major reason why the people said No was because they're afraid that Europe is not giving them enough answers about their social and economic security. But surprisingly the same was the reason for voting Yes. Because they see Europe somehow as a protection against the possible threats from globalisation. We have to admit that the cost of the European product is somehow higher and we have to put in knowledge to make it better and to make our lives and influence on life better."*
Guide Voice: Mr Potocnik's comments were welcomed by Holland's Minister for Science.
1:23 Maria van der Hoeven, Dutch Science Minister - *"We have to continue investing in scientific research and devlopment. It provides us with answers, answers to questions, and those answers will lead to economic growth."*
Guide Voice: The Commissioner and his colleagues realise that persuading member states that the EU needs to spend an extra five billion euros a year on science won't be easy. But they're assuring the doubters that none of it would be wasted.
1:46 Elena Righi, European Commission - *"My experience is that European money is very well spent in science because not only are we bringing about integartion of science in Europe but we are also bringing science closer to the citizen. And also R&D has spin-off developments which eventually will go into industry."*
2:11 PIECE TO CAMERA: Robin Powell, reporting from Dwingeloo, Holland - *"A classic example of an area of research for which cross-border co-operation is essential is radio astronomy. By linking together*

antennae in different countries, even different continents, you effectively create a a single, giant telescope. And the larger the telescope you use, the more precise your image of the universe will be."

Guide Voice: The co-ordinated use of antennae hundreds or thousands of miles apart is called VLBI, or Very Long Baseline Infrerometry. And this is JIVE - the Joint Institute for VLBI in Europe. Here, at Dwingeloo in northern Holland, data is assessed from observatories all over the world. JIVE's Director says collaboration between member states is the only way of ensuring that Europe stays at the cutting edge of research into radio astronomy.

3:04 Dr Mike Garrett, Director of JIVE - *"There are many projects that are being done on nartional scales that are really just not competitive with the other competitors that we have in the world. Any single country in Europe, for example, can't really compete with the might of the United States or even China."*

Guide Voice: Research into astronomy has several practical and commercial applications. But Dr Garrett admits that his prime motivation is the thirst for knowledge, finding out about the very biggest issues, such as how the world began.

3:35 Dr Mike Garrett - *"This is the impact of the spacecraft on the comet Tempel which occurred earlier this week. We're looking for material which was deep in the centre of the comet. We're looking to see if we can measure the properties of that material. This is really a fundamental question because we think that within the centre of comets is basically pristine material which hasn't changed since the solar system formed about five million years ago."*

Guide Voice: One of the observatories collecting data on Tempel One is this one at Westerbork, 30 kilometres east of Dwingeloo.

4:10 Dr Willem Baan, Director of Westerbork Observatory - *"Results are coming in already. Some of the telescops have detected some lines, some water, some gas coming from the comet. All of this will hit the press as soon as people can get organised."*

Guide Voice: Professor Neil Spooner conducts research into astroparticle physics at the University of Sheffield. Privately he's sceptical about closer European integration but he admits that the EU's involvement has made his job easier.

4:43 CLIP: Professor Neil Spooner, University of Sheffield - *"I'm actually quite a euro-sceptic personally. I've been sucked into the European research initiatives in my area, and it's actually worked quite well. I've found it has integrated people and it has had a positive effect."*

Guide Voice: But the battle to convince Europe's politicians of the need to invest in science continues. The European Commission plans more press briefings like this later in the year.

SHORT B-ROLL

Dur.: 2:00

- **Press briefing in Dwingeloo, Holland**
- **Joint Institute for VLBI in Europe (JIVE)**
- **Westerbork Observatory**
- **European Southern Onservatory (ESO)**
- **ESO observations**

LONG B-ROLL

Dur.: 15:03

- **Extended interview with Janez Potocnik**
- **Press briefing in Dwingeloo, Holland**
- **Joint Institute for VLBI in Europe (JIVE)**
- **Westerbork Observatory**
- **European Southern Observatory (ESO)**
- **ESO observations**

END