

INTERVIEW WITH DR. ATHENA COUSTENIS, ASTROPHYSICIST,
L'OBSERVATOIRE DE PARIS, BROADCAST JUNE 3, 2008

ROCKET LAUNCH

"3,2,1 and lift-off of the Cassini spacecraft on a billion mile trek to Saturn."

ATHENA COUSTENIS

"I think that within the 21st Century we're going to be able to start living on other planets and on other bodies and having a broader view of what's going on with our own solar system. It's going to be fantastic and I think we're now beginning to have the means to make that journey."

COMMENTARY

Astrophysicist Athena Coustenis has spent her career exploring other worlds.

Born in Greece, she now lives and works in France researching the atmospheres and surfaces of our solar system.

The author of more than 100 scientific articles and two books on Titan, she has described a near future in which humankind will live in space and roam freely in our solar system.

Euronews met Dr. Coustenis at the Paris Observatory where she analyses the data received from the Cassini-Huygens voyage to Saturn, a mission in which she remains closely involved.

INTERVIEWER

"How did you feel that night when the Huygens probe descended towards Titan's surface?"

ATHENA COUSTENIS

"The night came in and we were waiting for the first data to come in. There was a lot of excitement. I can tell you some of us hadn't eaten or slept for so much time and we were waiting and it took the longest time in the world I think. It probably got there just on time, but for me it was a long time. And then we saw on our screens the first images and all of a sudden all of us were flabbergasted. When we saw the channels you know and the shore-like shape of the images we were just so thrilled. We looked ...we couldn't believe what we were seeing. This was so much more than anything we had hoped for. It was just fantastic."

INTERVIEWER

"Titan turns out to have considerable resources."

ATHENA COUSTENIS

"Right, well on Earth what's precious these days very much is space - this is precious because humankind is growing in number and also fuel - you see what petrol costs these days. And on Titan you don't have oxygen, you have very little water and it's a little bit cold I'll admit that. But on the other hand you have hydrocarbons in the atmosphere and on the surface - you probably have lakes filled with hydrocarbons -so lots of fuel, lots of petrol there. So I think that Titan does have a lot of precious resources. It may also have a lot of minerals, we haven't yet discovered what's under the ground. But there are a lot of things that lead us to think that Titan is a very interesting place, that's why we started the exploration there."

INTERVIEWER

"How do we get there?"

ATHENA COUSTENIS

"We need a lot of energy because we're going all the way out to Saturn - ten astronomical units. But the energy today that we're thinking of mostly seems to be solar energy. We have solar panels and we have new photovoltaic iodes that can provide and capture at the same time all this energy and use it with space missions today, or with space cities in the future when we want to live in space, or we want to live on another planet or the Moon we can use solar energy."

INTERVIEWER

"What's going to be the driving force, what's going to make us go?"

ATHENA COUSTENIS

"What's going to make us go is our planet cannot handle first of all the way we're using it and second of all the way we're populating it, there are too many of us here and we're using up all the resources we have. So eventually we're going to have to find new places for these kind of resources that we need. Also humankind needs to colonise space... look how we colonised Earth. If we didn't have this spirit of adventure we wouldn't have gone to the Americas and we wouldn't have explored the whole planet. We're going to have to explore our own solar system and colonise it in the right sense of the term - not destroying it - and moving to other planets eventually."

INTERVIEWER

"Speculating, perhaps towards the end of the century, what would you suggest is going to happen?"

ATHENA COUSTENIS

"Given how fast we're working today with communications, for instance - I'm amazed at how communications with cellphones and how computers and emails are evolving - I think that communications will be such an easy thing in the future. And towards the end of the century I'm hoping that communication will also be feasible through space. Transportation,

communications, space missions - the exploration of our own solar system - heading towards exoplanets, those are planets that exist outside our own solar system - we're heading in all those directions. But for me the most important thing is to start heading out towards space - explore the solar system, have new space missions in the future."

INTERVIEWER

"Cities in Space, orbiting power stations - science fiction?"

ATHENA COUSTENIS

"I don't think so, not any more. I think we're moving within the next 20 or 40 years, somewhere in there we're going to have to move, leave the planet and move into Space. Space cities? I think it's coming, I think it's coming in the next 2 or 3 decades, we're going to move out there."

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