

## Global Journalist: The Future of Space Exploration: United States, Russia, and China

**Abstract:** On this February 12, 2004 program science journalists discuss the ambitions of space programs between the United States, Russia, China, and how they all occupy in the same realm of space exploration.

### Guests:

- [Christopher Bodeen](#)
- [Michael Cabbage](#)
- [Oliver Morton](#)
- [Simon Saradzhyan](#)

**Producers:** [Renata Johnson](#), Pareetha George (PN?), Unta Kon (PN?)

**Directors:** [Pat Akers](#)

**Mentioned:** Space, Space Exploration, International Space Station, NASA, European Space Agency, International Space Station, Mir, Beagle Two, United States, Russia, Communist Party, Soviet, China, Hubble Telescope, Probes, Craft, Mars, Moon, President Bush, Vice President Gore, Clinton Administration, Rovers

**Runtime:** 28:33

Stuart Loory 0:13

Welcome to Global Journalists on KBIA. I'm Stuart Loory of the Missouri School of Journalism coming to you again from Moscow where I'm teaching this semester. Are we headed for a new international space race? One as competitive is that between the United States and the Soviet Union during the Cold War? Space exploration is once again in the news emphasized by the renewed exploration of Mars by the United States and the European Space Agency by President Bush's commitment to renewed manned exploration of the moon in the next 20 years, and the launching of a manned mission to Mars by the year 2035, and also by China's launching of a man into space last year and the continuing build up of its program. Although Russia has not been active in international competition, it continues to play a key role in space exploration. Right now, with the American shuttle grounded, Russia is launching all of the missions needed to resupply astronauts and cosmonauts living aboard the International SpaceX. . . I'm sorry, let me repeat that. Right now. with American space shuttles grounded, Russia is launching all of the missions needed to resupply astronauts and cosmonauts living aboard the International Space Station under construction, and also the materials needed to continue that construction. It is training Chinese spaceman near Moscow for their next adventure in space, and it launched the European Space Agency's Mars Probe that circled the Red Planet last year and tried to put a lander on it. Does the United States really want to spend all the money and effort necessary to put people on Mars? Is President Bush getting us into a new international competition with Europe and China? Those are the key questions for the future given the spectacular pictures we have had from Mars. But we also want to hear something about

what more we can expect to learn from the unmanned exploration of Mars now underway. Our guests today are in Shanghai, Chris Bodeen of the Associated Press in Orlando, Florida Michael Cabbage Space Correspondent for the Orlando Sentinel in Moscow, Simon Saradzhyan, News Editor of the Moscow Times and in London Oliver Morton, a freelance science correspondent and author of the book Mapping Mars. Last summer many of us spent time looking at Mars as it was at its closest point to Earth in several decades. We did it with our own eyes, but let's take a new look now through the eyes of some journalists, Oliver Morton, tell us what we have learned from the new exploration of Mars now going on so far, and what we can hope to learn in the future.

Oliver Morton 3:15

Well, what we've learned so far is that we or at least, NASA, can land fairly sophisticated robot geologists on Mars, which are capable of having a good stab at working out what the rocks and landscapes in front of them, tell them about how Mars used to be, and to some extent about what potential it may have for the future. We haven't yet discovered, there haven't yet been a ground shaking discovery from the from the new set set of missions. But I think that we're now at this wonderful stage where that's not quite how Mars works anymore. I'm sure there will be ground-shaking discoveries, but the really exciting thing is that Mars is a continual presence now within the scientific and the popular world there are new images of it every day from satellites at the moment from the rovers, and it's slowly becoming, becoming real to us. So albeit in an electronic form.

Stuart Loory 4:11

Michael Cabbage, what do you have to say about that?

Michael Cabbage 4:15

Well, I think that's exactly right. I think that time is going to tell exactly what sort of discoveries that come out of the the current rover missions that NASA has on Mars. They're looking for traces of past water, which of course is one of the prerequisites for life as we know it here on Earth, whether they're successful in that or not as going to impact the way that future missions look. But as you mentioned in your lead in all of this is sort of part of a grand plan that is designed to to pave the way for future exploration to Mars that is unmanned and then at some point in the future, possible manned missions 30 years or so on down the road.

Stuart Loory 4:59

The European Space Agency is now has a spacecraft circling Mars, and haven't they announced that they have taken pictures that that show that there is water on Mars at the present time?

Oliver Morton 5:16

Yes, they this is Oliver Morton again in London. Yes. The announcement is some, is something that one needs to take slightly with a with a pinch of salt, there's been no real doubt that there has been water, that there is water ice on the surface of Mars, frozen water. There's been no real doubt of that since the

1970s when there was very clear evidence for water in the north pole of Mars from the American Viking missions. What the Europeans have found is that they've shown quite conclusively what previously been argued from other data that there's water ice in the south pole of Mars. It's not quite as dramatic as saying we found water on Mars and what they haven't found any evidence of liquid water on Mars. What Michael was saying there was quite right that water is absolutely fundamental to life as we understand on earth but that liquid water nothing on earth can live in solid ice, only liquid water. So liquid water is still the big the big question on Mars, where do you look for the liquid water? And the the European mission may have part of the answer to that in a few months when they'll be deploying a large aerial from the satellite so that they can look for water under, liquid water underneath the surface using a radar system.

Stuart Loory 6:31

The Europeans also had a lander on board I think they called it... what? Beagle Two Beagle Two and that apparently did not deploy properly. Have the Europeans given up on trying to get that working?

Oliver Morton 6:50

Pretty much yes, there's a very cursory effort to listen out for it, but I don't think anyone has any serious belief that if it were there, it would still be working. Almost two months after it separated from its mothership without any supervision. So it's unfortunately it has it has been lost in the very sad thing is that in order to make the mission cheap, it was done without any way for the spacecraft to communicate with the earth, between leaving its mothership and landing on the surface of Mars. So, some time, at some point in those six days something went wrong, but it's quite possible we will never for sure know what that was.

Stuart Loory 7:32

Yeah. Michael Cabbage, is there a feeling of competition between the people who are managing the the American rover experiments and the rest of the world?

Michael Cabbage 7:47

You know, I think it's actually quite the opposite. I think it's a more of a feeling of cooperation. I was at the Jet Propulsion Laboratory in Pasadena for the first rover landing, and this was shortly after Beagle Two's arrival at Mars, and in the early days, when people were still wondering, you know exactly what had happened, and there was a very genuine sense of loss and sadness there among many of the scientists at JPL about the possible fate of the the European craft, as they were, you know, celebrating and rejoicing in the success that they had with with the first rover landing. I think, there there is competition in other arenas where space is concerned, but as far as interplanetary exploration is concerned, I think that's one of the areas where worldwide, there's still a tremendous amount of cooperation between scientists, especially between Americans and Europeans.

Oliver Morton 8:48

Yeah, I mean, there is a hint of competition in the space science world, it's a very nice sort of competition where the point is not that the other person should do badly, but just that you should do absolutely brilliantly, and everyone wants to do particularly well. And so there is a slight spur, but it's not the sort of thing that means that they want the other guy to lose just that they want to want to do particularly well themselves.

Stuart Loory 9:12

And let's bring, if we may Chris Bodeen into this discussion, Chris, how competitive are the Chinese in their space efforts now? Is this something that they see as enhancing their prestige? Or are they in this, because they want to be good scientists and technologists and explorers?

Chris Bodeen 9:37

Well, it's very much a national prestige issue. I mean, China's about 30 years behind in terms of putting a man into space and where they're going looking toward the moon. But for the government and the people of China it permits an issue of proving that there was good as anybody else, and technologically, it's important as well, they're trying to use this to sort of slingshot their way past a lot of the technologies that other countries took about 30 years to build up, and arrive somewhere in coming years in the front ranks of nations who are now exploring space. But overall, overall, it's a it's a national prestige issue for the Communist Party, and they seem to be making very good use of it.

Stuart Loory 10:29

And Simon Saradzhyan in Moscow, if I can bring you into. Russia seems to be making a lot of money on space exploration by others: in providing services to them. But it has opted out of the competition itself, or at least that's the feeling that one gets. Do you think Russia will be coming back?

Simon Saradzhyan 10:56

Well, I think yes, at one point Russia would be able to stop sustaining in the competition, the only the basic problem is money. Russia is not actually making that much money. They used to, Russian companies used to earn around \$800 million a year, but that was when MIR was still around. Now, it's much less than with the market for geostationary launches depressed. It's making pennies compared to what it used to, and we have to take into account that Russia's entire space budget is even less than that of India's which has been launching only a few rockets every year. So the basic question is whether and when the Russian economy would grow to level and the government and the companies will to be able to spend more on actual problems rather than on research and development, which is basically the only thing that they can do at the moment.

Stuart Loory 12:12

And what kind of programs would Russian space scientists like to get into?

Simon Saradzhyan 12:17

Well, much as long as we know, Russia's attempt to launch its own craft, Mars 1996, failed when one rocket failed and Russian still have the technology. Russians still have the knowhow, but they just don't have the money to do it and contribute, perhaps, or compete in exploration of the planet. Also, even though Russia space cooperative has been pretty skeptical about President Bush's grand space vision, but if the United States does launch such a program to return to the moon, and then fly to Mars, Russia would definitely want to participate in that, given the amount of research that the Russian space companies such as InnerGear(PN?) or Inpoloralychnov(PN?), and a few other in the few research institutes have been doing.

Stuart Loory 13:16

Okay, I want to continue with this discussion, but first, I have to say this is Global Journalist on KBIA, and I'm Stuart Loory. You may listen to this program again, ask questions or make comments by going to [www.GlobalJournalists.org](http://www.GlobalJournalists.org) or in mid-Missouri by calling 573-829-641. Simon, I'd like to come back to you, if I may. The Russians appear to be pretty well confined to putting astronauts into the International Space Station, astronauts and I should say cosmonauts for Russians. Is there any desire by the Russian space scientists and others to put Russians on the moon or on Mars?

Simon Saradzhyan 14:19

Well, of course there is, but as I said, Russia's entire space budget is less than half a billion dollars. And the problem that it's being spent and it's a formidable part that's being spent on the International Space Station allows Russia only to maintain a steady supply of progress cargo and progress cargo ships and say use crew capsules for the stations. Russia's budget should be increased dramatically, so it could participate in problems like that, Innergear(PN?) has already done a lot of research on possibilities of flying to Mars, and all Russian engineers involved in that research agree that it's technically feasible and possible and all Russia needs is billions and billions of dollars so that it could launch such a program. But as we understand Russia won't be able to afford such a program, and that's why Russians would like to participate in the journey to the moon and to Mars if the United States ever gets to implementing this plan, as we've known before, US presidents have outlined similar visions, but they are yet to materialize. Think Bush, Bush Senior also proposed a flight to Mars.

Stuart Loory 15:49

Yeah, Bush was President Bush was pretty vague in his State Of The Union message about the program, but he did, he give us some dates and they were dates that, that are certainly feasible. As a matter of fact, you can go pretty slowly, I think and, and still meet those states. But Michael Cabbage, President Bush did not mentioned in his State Of The Union message, I don't think the International Space Program with which it's cooperating with, with Russia in building was there any implication in that that he may be losing interest in this program?

Michael Cabbage 16:30

Well, I think if you listen carefully to President Bush's sort of grand vision here and in mid-January, and actually one very slight correction, he made this announcement at NASA headquarters in mid-January, and the State of the Union address actually I, if I remember correctly, did not contain one reference.

Oliver Morton 16:49

That is my memory as well. Yeah.

Michael Cabbage 16:51

This new space vision so that.

Stuart Loory 16:53

Excuse me.

Michael Cabbage 16:54

That speaks volumes right there. But you know, there are a lot of people that really think this whole project is sort of put together with smoke and mirrors. One thing that I would point out is that between the time that President Kennedy announced that we were going to the moon in 1961, and the first Apollo mission, one of the the, one of the ones that didn't actually land was a period of about seven years. During that seven year period, there was one presidential election and three or four different congresses, if if we do proceed on to Mars, or even go back to the moon, as Bush had suggested by 2020, then you're talking about this, this policy having to survive three or four different presidential elections and considerably more congresses and to maintain some sort of national support at a level that hasn't been seen since radically different conditions, Cold War conditions existed in the 1960s. And there there are simply many people who just don't think that's a possibility. Getting back to your question on what is this whole thing sort of pretend for the International Space Station, one of the the announcements that was made in conjunction with outlining this new vision was that the Space Shuttle Program was going to last only long enough to complete the International Space Station, which under their new timetable, depending on when the shuttle returns to fly, it is likely going to be sometime in the 2010 to 2012 timeframe. And after that, the United States and NASA are going to begin to sort of back away from the International Space Station Program and decrease their involvement until they're they essentially have no connection with it. Now exactly how that's going to be done over what time period and by what date remains to be seen, but if anything, it looks almost like if you look at the bush plan that it could in some respects mean less international involvement in human spaceflight, at least than it does right now.

Oliver Morton 18:52

It's also intriguing. I thought that the Bush plan is much firmer on the programs that it shuts down than the ones that it that it opens up. And to some extent, you can understand that they they haven't yet done the work to work out what the replacement levels will be. But it seems fairly firm as a way of saying that we retire the shuttle after the last parts of the space station are launched. And we stop using the space station in some way surprisingly soon after that, I mean, if you think the space station is a thing worth

doing, it's slightly surprising to hear that it's only worth actually operating once it's finished for about six years.

Michael Cabbage 19:28

And there are many people that absolutely agree with you on that point, and would would interpret that vagueness on these future goals. Some people might say it's, it shows that this this plan is more political in nature than it is scientific or exploration guided in nature. And I think it's going to be really interesting to see how this thing unfolds in the coming years. But it's it's a long way from becoming a reality. I think that's one thing pretty much everyone agrees on.

Oliver Morton 19:58

I think I mean, I think thing another point that is interesting, interested to hear what Chris thinks about this is, it seems to me that the time you pointed out how loose the timetabling is. One of the things that seems to me to govern the timetabling is that at any given point, America should be closer to the capability of putting people back on the moon than anyone elses.

Stuart Loory 20:20

Yeah and Chris Bodine(PN?), I think the the Chinese have also talked about putting their men on the moon is that correct?

Chris Bodine(PN?) 20:29

Yeah, the, the short term plan is a some kind of lunar orbiter in 2007, followed by an unmanned landing in 2010. And beyond that, it gets a little hazy. They do talk about a manned mission. They talk about a a space station and they talk about a Mars mission. But that's so far out there, and, and and so much more mind boggling in terms of funding that were not prepared give them a whole lot of credence just yet.

Stuart Loory 21:05

Tell us a little bit about why the Russians for years now have been concentrating on space stations, and why they think more can be gotten out of operation of space station's then in space exploration of satellites like the moon and, and other planets.

Simon Saradzhyan 21:30

Well I won't say all Russian space officials and engineers agree that Russia should be concentrating on maintaining space stations. MIR is a legacy that Russia is a Soviet legacy for Russia was a solid legacy for Russia. So it's sort of there was this issue of inertia and it was out there and Russia had to maintain it. Even when MIR was still in orbit, a lot of people and a lot of experts questions whether whether it's the best use of the limited funds Russia had for space exploration. But, you know, it was a political issue as well. That was one of the few remaining symbols of the, you know, superpower sauce that Russians had. So politicians felt very sensitive, and were really cautious when deciding when and how to deal with the station. And as another political issue was cooperation with the United States. And at that time, the

Clinton administration, particularly Vice President Gore, thought it would be one way to anchor Russia is to develop and launch and invite Russia to join the International Space Station project. And since Russia had this opportunity to invest less than, say United States financially, but continue to enjoy the benefits of space a man space exploration is just made that choice. Realizing then even if it hadn't decided to join the project, it would still not have sufficient funds to say, you know, to say explore the moon or on Mars at, you know, sufficient volumes and that's why it chose to continue that project which which in many ways is no different from MIR and it doesn't give Russia anything. You know, particularly new in technology. . .

Stuart Loory 23:47

When you say MIR you're talking about the Russian Space Station, which was really a space station in last year. But it talked a little bit about if you will, and Michael, if you want to come in to this, about what space stations manned space stations can do, that are going to benefit and benefit us on Earth.

Michael Cabbage 24:13

Well, you've, you've put your finger on a very interesting question that is been debated in many places over many, many years. And one of the things that is less than some of the enthusiasm for the International Space Station here in the United States is that there are a large number of people especially in the in the US, Congress who want to see tangible evidence that research being done on the International Space Station has some sort of benefit to average people here on earth and sort of their everyday lives. And frankly, it's it's just there, there really isn't a whole lot of evidence to support that. One of the things that NASA is talking about doing is shifting the focus of their research on the International Space Station to look at some of the life science issues in the human physiology issues that cover things like what it's like to spend long periods of time in weightlessness and how that would affect long duration spaceflight and that sort of thing. So from that aspect, you can help further this goal of sending people back to the moon or to Mars with some of the research that you do on the International Space Station. But as far as benefits for for people here on Earth, I, you know, NASA publishes each year a little book called "Spin Offs" in which they try to, to actually pinpoint some of the very specific things that people have gotten taxpayers here in the United States that how they benefited from from their support of this program. But frankly, a lot of that stuff is really a reach.

Stuart Loory 25:50

Okay, we've got about three minutes left, and there are two topics that I want to take up. One is the Hubble Telescope and the United States apparently abandoning something that has been a spectacular, spectacular use of space for unmanned space exploration. Michael, is that going to be scrapped? Or will something be done to save it?

Michael Cabbage 26:18

My my best guess at this point is that they probably are going to go through with their plans to, to scrap it. To use your word. I'm not sure I would quite characterize it that way. I think one thing that's



important to keep in mind is that when when Hubble was launched in 1990, I believe it had an expected lifetime of 15 years. And what essentially they're talking about doing here is decreasing its lifetime from 20 years to to 17. Now, as we near the end of this coming decade, as you know, there were recommendations made by the board that investigated the Columbia accident last year, the regarded some of the things that you need to be able to do. If you're gonna fly the shuttle again, as far as having a repair capability and an inspection capability to look for damage that was similar to what happened on Columbia. And to make a long story short, there's there's a lot of concern in NASA that they won't have that capability on missions that don't go to the International Space Station. That's why that they, that was the main reason they're giving for not wanting to do this.

Oliver Morton 27:23

And I think it's also worth pointing out that though the Hubble has been absolutely spectacular, if you account for the full cost of both the development of the Hubble and the space shuttle mission that launched and have serviced it, it is, I think, far and away the most expensive single of scientific instrument in history. And so it really ought to be producing spectacular results. And these days, people do produce very good results with disposable Speight with disposable space telescopes, of which there are there are a number which are much, much cheaper to run and create.

Stuart Loory 27:57

Okay, I also wanted to talk About the military implications of space, but unfortunately, we're out of time. Now our guests today have been in London Oliver Morton, in Moscow, Simon Saradzhyan in Orlando, Florida, Michael Cabbage, and in Shanghai, Christopher Bodeen. Our director is Pat Akers and our producers Renata Johnson and topcon and Pareetha George. Our webmaster is Ghuave Gos, for all I'm Stuart Loory Global Journalists will be back next week.

Transcribed by <https://otter.ai>