

GLOBAL SPACE DEVELOPMENT SUMMIT

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CSIS – AIAA

First Panel : Global Cooperation in a New Space Era

Pierre Bégin address

Annexe – Message de Jacques Blamont

Good morning, Bonjour, Zao an...

Don't be afraid I will do my best to continue in American languages.

Ladies and Gentlemen

I am happy to see CSIS and AIAA partnering for the organisation of this Space Summit.

As a Senior Adviser of CSIS, as Honorary Fellow of AIAA, and lucky to be a close friend of both John Hamre and David Thompson, I personally believe that this meeting is a strong sign for a new way of handling Space Exploration, on long term bases, with friendly open mind and large global cooperation.

But let me give you Professeur Jacques Blamont' best salute. He feels well but his doctor is prudent. May be too much. So I asked him few key words to be delivered to you.

I have a great respect for Jacques Blamont. 50 years ago, in Sahara, I started my space life, being in his team for the launch of the French rocket Véronique. That was my first experience, before Diamant and of course Ariane 1 to 5. Professeur Blamont was my very first space mentor.

So Space Exploration, to say like everyone... I really prefer: Space Exploration and Exploitation, something like "Space Double Ex", in order to be clear at the early beginning.

It is not only a question of curiosity, not only a technical challenge, a sport performance, a political demonstration. It must be useful and it will be useful, probably much more than we expect. It needs to be for the future generations as well as for our planet.

The question is less to know which rocket is the best than to determine where to go first, why, with whom. The question is less to know when, than to prepare a durable way of life over there, in order to be safe and mobile, to discover and work hard and of course to take new pleasure. I dream of Olympic Games on the Moon... with medals but without any flag. The TVs will beat their best audience record.

So why the Moon? And why International Cooperation ?

To be realistic and not to miss a big chance. At two days distance, can we neglect to explore in detail this so different continent? Can we neglect to demonstrate that the Moon is ours. that we feel at home on it, that we will be able to take advantage of it and to take care of it ? No, we cannot miss it even if she is no more virgin... We lost decades to do so... or may be, you American, wisely, you wait for us in order to do it together...

"Can the permanent occupation of the Moon by Human be organized as a joint international venture in the next half century?" Jacques Blamont asks.

Then he says: "the budget would be affordable with about 50 billion dollars investment and 10 billions a year operation. And if it is clear that the US would provide a very important part of the resources, the European Union could dispose of a sizeable budget after 2012."

And Professor Blamont to conclude: "Nobody can justify such a level of expenses if a new political motivation is not founded. Pure national pride is outmoded. The only driver which stands criticism is "Going to the Moon together"...

Three weeks ago we went, David Thompson and myself, to Bordeaux and Toulouse, not only for the Wine and the Cassoulet but for Aerospace. We met young kids at the Cité de l'Espace, students in the University, and of course Aerospace players.

Most of them are fond of Space Exploration. It's a bliss to see their eyes shining. Most of them would like a space global venture. It is good listening to their motivation.

But as Jacques Blamont says "this only way to go, requires a major change in the doctrine and practice of the space agencies. Risks and responsibilities will have to be shared. Information will have to be distributed without restrictions". And to mention the NRC report issued this year "America's Future in Space" which says "the government should pursue international cooperation in space to advance US strategic leadership... and meet national and international goals". Of course we are ready to recognize the US as the big space team captain. But a captain for the success of the whole team and not only for his own leadership...

Is it possible to change the mentalities?

I am not naïve. For several decades I worked on strategic missiles for dissuasion. We are pleased not to get a new world war. And we are pleased to see our East Europe friends to be free. But we need to go ahead, and as well as we developed Ariane in Europe, CFM 56 engines in transatlantic partnership, we need to cooperate with confidence, respect and friendship. We must do it for the future generations overpassing our old historical reminiscences.

Why not to be inspired by what is on the way to be done for Nuclear Fusion Development. Every country we envision for space exploration is dealing in an international team call ITER. Of course, the French are pleased to see the big experimental plant to be built in Cadarache but more important is to see them altogether preparing one century main goal: to get a clean nuclear energy. So, is it not possible to organise an "International Lunar Double Ex" ?

Innovation is so much better, faster and productive when technologists are involved in a global venture. Please don't stay at home behind your wall.

Think-tanks like CSIS, associations like AIAA might be very helpful. We have to say must be very helpful. Their role is becoming more and more important. They are open minded, they are international oriented, they have a high level réseau of personalities, they are in relations with the key deciders and generally speaking there job is to anticipate and bring people working together. Why not to focus on Lunar Double Ex?

Professor Blamont says about this: "A deep analysis on the principles of such cooperation should be initiated by CSIS to various scenarios with at least these 4 questions:

- "What type of governing body for the program?
- What type of managing rules?
- What degree of classification for technical information?
- What rules of relationships between engineers?

Answers to these questions are needed before any negotiation devoted to the start of an international lunar program".

Having the experience of so many cooperation I may add: we need to consider several type of relations inside such a huge program.

- Partnership between companies, for example to build a joint engine (like GE-Snecma)
- Prime to supplier contracts, like it is the case for the Boeing or the Airbus supply chain organisation.
- Agencies and Industries multilateral cooperation, with a strong leader, like it is done for Ariane in Europe.
- Coordination program between agencies like for ISS.

Just a concrete example:

The US, Europe and let say Russia or China or India have their own launcher to go to the appropriate Earth orbit .Why not to organise this orbit as an international spaceport where each of us or between us we can fill the tanks, dispatch people and robots, assembly and repair what is needed.

Then, from this orbit to fly to the Moon, separately or together with a joint engine. And of course on the Moon why not to live, not in the same room, even not in the same hotel, but in the same villages? An international village at the South Pole, another close to the launch pad, one in a very sunny place, one near a very cold crater? One in a space station around the Moon. Why not? Is it a dream?

To conclude I suggest 3 simple addresses:

Address to governments:

- Space cooperation is needed for middle term efficiency
- Space cooperation is good for long term peaceful relations
- Nobody wants a war because a Moon conflict of interest

Address to public opinions:

- Because Space, yes we can do much better for you
- For you, your descendants and our planet
- Yes we can, if we all work together

Address to the young and to future generations:

- We still are at the beginning of Space Exploration
- The best is to come, exciting and useful
- Wide open to talents from a lot of disciplines

So please, decide it, support it, and do it...

Merci, Xié xié, Thank you.

Pierre Bétin

International Cooperation for Lunar Exploration

The Augustine Committee has concluded that the Lunar program pursued by NASA under the Bush 2004 initiative is short of funds by three billions dollars a year for at least ten years. Let us suppose that the Obama administration will not abandon the field. Since it is unlikely that the American taxpayer will be requested to entirely??? The bill, a good part and maybe all the three billions will have to come from some sort of international cooperation.

Such a contribution is not completely out of question, since other nations (today China and tomorrow India, Japan,...) have announced that sending a man to the moon is considered as a possible national ambition. The European Union, although lukewarm towards manned spaceflight, could dispose of a sizeable budget for space ventures after 2012.

Can the permanent occupation of the moon by humans be organized as a joint international venture in the next half-century?

The budget would be affordable, which figures around 50 billions dollars for the investment and 7 to 10 billions a year for operations. But it is clear that the United States would provide a very important part of resources.

Nobody but the space industry lobbies, believe that science, technology or the thirst for exploration can justify this level of expenses. A political motivation has to be found, but pure national pride is outmoded. The Apollo of the 21st century will have to differ from the Apollo of the 20th century, and the only driver which will stand criticism is "going to the moon together".

Sustaining a joint venture among equal partners, which is the only way to go, requires a major change in the doctrine and practice of the Space Agencies of the world. Risks and responsibilities will have to be shared ; technical information will have to be distributed without restrictions. Those two points have to be negotiated and agreed upon at the very beginning.

The NRC report issued in 2009 "America's Future in Space" shows how far attitudes will have to change since its recommendation Nr5 (only reference to international cooperation) states "the government should pursue international cooperation in space practically as a means to advance US strategic leadership and meet national and mutual international goals". It is certainly not the purpose of Chinese, Indian, Japanese, Russian and even European taxpayers to advance US strategic leadership.

As in depth analysis on the principles of space cooperation in the 21st century should be initiated by CSID applied to various scenarios of lunar exploration with at least the following questions asked :

1. What type of "governing body" for the program ?
2. What type of managing rules ?
3. What degree of classification for (exchanges of) technical informations ?
4. What rules for relationships between engineers ?

Answers to these questions are needed before any negotiation devoted to the start of an international lunar program.

J. Blamont