

THE DISCUSSION IN THE BRAZILIAN NATIONAL CONGRESS OF THE BRAZIL-USA AGREEMENT ON TECHNOLOGY SAFEGUARDS RELATING TO THE USE OF ALCANTARA SPACEPORT

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1. Introduction

This is a paper about a space-related political and legal controversy in the Brazilian Congress.

The "Agreement between the Government of the Federative Republic of Brazil and the Government of the United States of America on Technology Safeguards associated with the US participation in launches from the Alcantara Spaceport" (hereinafter called "the Agreement"), signed in Brasilia, on April 18, 2000, has been examined since last August by the Chamber of Representatives of the Brazilian National Congress. It is expected to be voted on before the end of the year.

The President of the Republic of Brazil submitted the Agreement to the National Congress, by means of Message nº 296, of 2001, with an Exposition of Motives prepared by the Ministers of Science and Technology, External Relations and Defense. Its Preamble states that: "The Agreement represents an important step towards the commercialization of launching services from the Launching Center in Alcântara (CLA). The equatorial position of CLA permits launchings with less fuel and therefore its costs would be less than other launching centers in higher latitudes. Furthermore, the possibilities of launching over the sea make it easy to place the satellites in different orbits, from polar to equatorial. The document stresses that the Agreement consolidates two issues: one that CLA could be a

center for foreign satellites launchings and that it could also protect dual use technologies of industries involved in the launchings. In view of the later goal the Agreement establishes mechanisms to address the concerns of the two countries regarding the exports of dual uses technologies, that are technologies that have commercial as well as military uses.

Moreover, the Brazilian Government considers the Congressional approval of the Agreement not only a constitutional legal requirement, but indispensable to win political support in its efforts to make possible the participation of the Alcantara Spaceport in the international commercial launch market, where the US private enterprises represent the great majority of the potential clients.

An analysis of this Agreement, as well as the political and juridical debates it raises, can provide useful insights for any study to shape a legal framework for the worldwide launch industry, reflecting the interests of all countries. In this sense the present paper is a kind of natural continuation of another paper, presented in the forty-third Colloquium on The Law of Outer Space, last year in Rio de Janeiro. (1)

The idea of sovereignty has been continuously in the center of the debates on this matter in the National Congress and in the media. The opposition forces criticize the Agreement as damaging Brazilian sovereign rights and interests. On the other side, the Ministry of External Relations, the Ministry of Science and Technology and the Brazilian Space Agency try to show the legality, as well as the need for an Agreement to expand the Brazilian commercial interests.

During the debates, the Brazilian Government thought it was useful to issue a clarifying note about the Agreement. It said: "It is imperative to recognize that the language and the structure of

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this document are very complex and that the expressions and generic terms are used as specific terms.”

Let’s examine each one of the main arguments raised by the Parliament Opposition and the answer offered by the Government and the Parliament Situation. We take as central source of the Parliament Opposition their arguments and views expressed in their Report (hereinafter called “the Opposition Report”) on the Agreement, presented on August 17th 2001 by the lawmaker Waldir Pires to the Commission of External Relations and National Defense of the Chamber of Representatives. This Report has recommended the rejection of the Agreement.

In the following paragraphs we are going to analyze the main issues of the debate.

2. Juridical Equality of States

Opposition to the proposed Agreement rests on defending the principle of juridical equality of States and “the non-hierarchyization of the international society.” The Opposition Report asserts that the Agreement “creates obligations exclusively or almost exclusively” upon Brazil, rather than reciprocal obligations on both parties.

The Report adds: “The obligations of the USA Government are basically the issuing of export licenses and the control of its licensed industries, but the obligations of the Brazilian party are very wide, going beyond the stated goal of the agreement to safeguard the USA advanced technology. Thus, we ask the reasons that justify this imbalance in the parties’ obligations.”

According to the Report, Brazil has demonstrated in the national as in the international level, its firm compromise with the disarmament cause and the non-proliferation of dual use technologies. Brazil has stopped its incipient nuclear program, and the following measures were taken: 1) the Federal Constitution (Article XXIII, Article 21) prohibits nuclear activities not for peaceful purposes; 2) Brazil has moved its space program from the military arena to civilian jurisdiction under the Brazilian Space Agency (APB) reporting to the Ministry of Science and Technology; and, 3) Brazil has ratified agreements and treaties for disarmament (such as the Agreement signed with Argentina, and the International Agency of Atomic Energy, the Tlateloco Treaty, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Convention on the Prohibition of Chemical

Weapons and the Ottawa Convention on Territorial Mines). The Report also points out that Brazil joined, without reservation, the Missile Technology Control Regime (MTCR), in 27 October 1995, after long negotiations with the USA Government, which led Brazil to adopt the Law 9.112/95, establishing internal controls on dual use technologies, particularly missiles and parts of missiles.

In this context, the Opposition Report concludes that the Agreement would be “entirely dispensable”, since “Brazil has already signed previous agreements which prohibited the transfer, and illegal ownership of sensitive or dual technologies.” Thus, the Report concludes, the Agreement “is only justifiable from the premise that Brazil will not honor its obligations under national and international law, and will, when the opportunity arises, build and export such technology to other countries. This lack of trust is unjustified and lacks in respect”, the Report says.

The Government’s explanation, by contrast, rests upon arguments that the Agreement is based on symmetry consistent with equality among the signatories, and that it is in the economic interests of Brazil. The Minister of External Relations, Celso Lafer, former professor of International Public Law at the University of São Paulo (USP), wrote that “it’s not correct” the interpretation that the obligations included in the Agreement “represent a lack of symmetry which is against the principle of equality of States”.

To Lafer, “the Agreement – as the similar agreements signed between USA and China, Russia, Ukraine and Kasaquistan – includes clauses which translate the requirements of the side that owns the technologies to be protected; in this case such technologies belong to the USA and, therefore, the clauses that define the obligations of the Brazilian side are more extensive”.

Concerning this point, Lafer explained that “in International Public Law, safeguard is a term that means protection against a threat” and that, in this case, “the threat is the unauthorized transfer of sensitive technologies; they are safeguards of performance, which comply with the dual role to protect this type of technology and make viable the commercial use of the Alcantara Spaceport”. (2)

In turn, the Brazilian Minister of Science and Technology, Ronaldo Sardenberg, stressed that “the asymmetry is not in the Agreement, but in the international reality.” He notes: “Some nations have some knowledge of advanced space

technology, but the majority do not have it; very few countries can sell advanced technologies products or services, and therefore, the majority are condemned to be eternal buyers. For almost 40 years Brazil was in this situation, but our society and our predecessors had vision and common sense, so that today we have conditions to work to transform this relationship of dependency in the space arena.” (3)

The Minister also wrote: “Countries as diverse as Russia, China and Ukraine, which have to deal with very complex situations with the USA, have entered into agreements with the USA very similar to the Agreement with Brazil. None of these countries thought about considering this Agreement a threat against their sovereignty. Like it or not, everybody understands the world and its realities; none has renounced its participation in the international satellite launching market.”

“It is necessary (...) to know and put emphasis in the safeguards in favor of Brazil included in the Agreement. It is a very explicit fact, resulting from the efforts of our negotiating team, that in each launching that includes USA technology; Brazil will have the sovereign rights to exercise its legal authority. The symmetry in an agreement of this kind, looking for the protection of the unauthorized appropriation of foreign technology, is - in our view - secured by the safeguards of Brazilian interests together with the obligations of the USA to authorize the export licenses of goods and technologies needed for the Alcantara Spaceport launchings. This compromise will allow, for the first time, to have a commercial equation favorable to Alcantara Spaceport, since the North American companies have the main control of the international launching market.” (4)

3. Segregated areas

The Opposition Report also discusses the implications of segregated or restricted areas, which, in this context, mean areas, which were separated or isolated, for a specific purpose. In this respect, the Report concludes that according to Article IV § 3 of the Agreement, “the USA Government will control directly areas of the CLA, which will be inaccessible to Brazilian technicians working there”. Article IV § 3 says:

“For any Launch Activities, the Parties shall take all necessary measures to ensure that US Participants retain control of launch vehicles, spacecraft, related equipment and technical data, unless otherwise authorized by the Government of

USA. To this end, the Government of the Federative Republic of Brazil shall make available at the Alcantara Spaceport segregated areas for processing, assembly, mating and launch of launch vehicles and spacecraft by US licensees and permit persons authorized by the Government of USA to control access to such areas. The boundaries of such areas shall be clearly designated.”

The Report also quotes Article VI § 2, which establishes: “The Parties shall ensure that only persons authorized by the Government of the USA, shall, on a 24-hour basis, control access to Launch Vehicles, Spacecraft, Related Equipment, Technical Data and the segregated areas referred to in Article IV, paragraph 3, throughout Equipment Component transportation, construction installation, mating/demanding, test and checkout, launch preparations, Launch Vehicle/Spacecraft and return of Related Equipment and Technical Data to the USA or other location approved by the Government of USA.”

Article VI § 3 says that “officials of the Government of the USA could inspect and check without prior notice to the Brazilian Government the segregated areas as well as other areas designated for launching of spacecrafts. To this end, the USA Government shall have the right to install electronic monitoring devices.

Article VI § 5 establishes that identification badges will be issued only by the USA Government to permit the access to the segregated areas, as well as other areas designated for launching of spacecraft.

The Government counters these assertions with the following:

“The segregated areas will be defined in a case by case basis, for a limited time, for specific launchings. For example, in the case of a sensor to be placed in a satellite, the segregated area would be a certain space in a room; if it is a satellite, then it would be a clean room; and if it were a rocket, it would be a shed. The US team would have access and control only to the agreed restricted areas and not to the Alcantara Spaceport as a whole. The access of representatives of the entities involved in the launchings in the Alcantara Spaceport, will be controlled by the Brazilian authorities.” (5)

“The utilization by USA of the segregated areas in Alcantara Spaceport, with the express consent of the Brazilian authorities will be exclusively for the processing, building and connecting and

launching of space vehicles and artifacts. For each launching, the Brazilian authorities will have at least ten opportunities to prevent activities, which are not in agreement with our interests. Any unauthorized use of these areas will be object of protests by Brazil, and the USA may be liable for these activities. The Agreement, foresees mutual consultations to prevent any misunderstanding and to provide clarifications” (6)

“Brazil will supervise the access of persons and vehicles to the Alcântara Spaceport by means of identification cards issued by the Brazilian Government. The Government will allow foreign civil technicians the control of access to restricted areas where the rockets or satellites or any parts thereof brought to Brazil by the foreign companies are located. Also, the foreign companies will control the access to areas where the foreign equipment is being built. They will propose a plan to control their technologies, which should be approved by the Brazilian Government, indicating areas, in which the access will be restricted, temporarily, when the assembly of sensitive technology is taking place. The Brazilian Government has the exclusive right to authorize the satellite launching and to license each launching.” (7)

“Each step of the launching undertaken by industries, not by governments, will depend on prior authorization of the Brazilian Government. The power of the Brazilian Government remains for decisions regarding the dimensions, the needs, the security procedures, and location of the technology assembly. These restricted areas are for limited time and for each preparation for launching.” (8)

4. Sealed containers

“Sealed containers” in the context of the Agreement means receptacles, which are closed with specific marks (seals) or emblems so as to prove authenticity or ownership. In this regard, the Opposition Report states that “the Brazilian customs will be prohibited to inspect any incoming delivery from the USA to the Brazilian territory”.

The Opposition Report quotes Article VII § 1.B, which says: “Any Launch Vehicles, Spacecraft, Related Equipment and/or Technical Data transported to or from the Territory of the Federative Republic of Brazil and packed in appropriated sealed containers shall not be opened for inspection while in the territory of the Federative Republic of Brazil.”

The Report states that this clause contains “great danger”, because with it the Brazilian Government will not have control over the material that the US Party will use to launch satellites from Alcântara Spaceport” and “the USA Government may, if it wishes, launch military spy satellites against countries with which Brazil has good diplomatic relations.

The Government offers the following counter-arguments:

The inviolability of the containers at their arrival to Alcântara Spaceport does not imply any damage to Brazil. There is no payment of taxes because the equipment has a temporary nature in Brazil, originating from abroad and going to be used abroad. Also, Brazilian authorities will have access to the container to verify its contents, as established in its Article VII § 2A. The Federal Income Tax Department by means of Instruction 29, dated March 15, 2001, has regulated this situation, establishing procedures for its conference, which shall be done in appropriate conditions. Moreover, Brazilian technicians will have access and knowledge of the equipment to be launched, not only by operational needs, since the launches will be done by the Alcântara Spaceport team, but because of international liability of Brazil, as launching State, according to the Convention on International Liability for Damage caused by Space Objects (in force since September 1972). Furthermore, inspections will be done by Government representatives in the areas of Health and Nuclear Energy (from the explanation note distributed in the Brazilian National Congress by the Ministry of Science and Technology).

Upon arrival in Brazil by air or sea, the cargo with the satellites and related equipment is sealed, under the responsibility of the Federal Income Tax Secretary. For security reasons, the cargo control will be done exclusively within Alcântara Spaceport, which has the status of customs area. This area is located in the airport within Alcântara Spaceport, and there the verification of the contents of the containers will take place, in the presence of Authorities of the Brazilian Ministry of Defense, Brazilian Space Agency, Secretary of Federal Income Tax, and representatives of the industry importing the equipment. The group will verify the material based upon a declaration of contents, which lists the equipment. Once the cargo is checked it is liberated to stay in the Alcântara Spaceport for a limited period of time, which will correspond to the launching schedule. Once the

launching is done the equipment used for the flight will be returned, and legally will be considered re-exported. The equipment in ground should be removed from Brazil after the launching” (9)

It is worthwhile to remember that, accordingly to article VII §1B of the Agreement; “the appropriate Brazilian Authorities shall be provided by the Government of the USA with written statement of the contents of the aforementioned sealed containers.”

5. Debris

The term “debris” in general refers to scattered remains of something broken or destroyed. In the context of this Agreement it refers to debris from satellites or related equipment. Referring to this issue, the Opposition Report considers that Article VIII § 3.B “does not agree with the Principles of International Law applicable to this case, which are consolidated in the “Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space”, opened for signature in April 22, 1968.

Article VIII § 3.B says:

“The Government of the Federative Republic of Brazil shall ensure that a US Participants-controlled ‘debris recovery site’ for the storage of identified Launch Vehicle, Spacecraft, and/or Related Equipment components and/or debris is located at the Alcântara Spaceport and/or another location agreed to by the Parties. Access to this (these) location(s) shall be controlled as provided in Article VI of this Agreement, as appropriate. The Government of the Federative Republic of Brazil shall ensure the immediate return of all identified Launch Vehicle, Spacecraft and/or Related Equipment components and/or debris recovered by Brazilian Representatives to US Participants without such components or debris being studied or photographed in any way.”

The Report pointed out that the Rescue Agreement foresees the custody rights for the country in which territory the debris fell out and that right is not included in the Agreement, which determines the immediate return of the debris.

Government counter-arguments are as follows:

In the event that the launch is not successful the USA will have the right to access to the debris, because this would be an opportunity for the unauthorized access to the technologies. (10)

The 1968 Rescue Agreement does not require technological safeguards for the space objects

that have suffered accident. It only calls for the prompt return of the these objects to the “launching authorities”, it means, to the State whom the objects belong. The need for technological safeguards is raised rather later. Under the Rescue Agreement the “launching authorities” may assist in the search and recovery of the lost objects and their components parts. The Agreement (Brazil-USA) goes ahead of this, to preclude unauthorized technological transfer. It anticipates the Brazilian permission not only for search assistance of the USA Participant and for the access of the USA Government emergency search personnel to the accident site, but also for the setting up of a US participants-controlled “debris recovery site”. The Agreement can be interpreted as meaning that Brazil maintains the command of search and recovery operations developed in its national territory, although it agrees to adopt all the measures needed to avoid unauthorized technological transfer.

6. Countries sanctioned by UN Security Council and countries that support international terrorism

The UN Security Council has produced a list of countries that have supported international terrorism, that is, countries that would make political use of terror and intimidation. With reference to this issue, the Opposition Report considers “very worrying” the content of the Article III § 1. A, which establishes that Brazil “shall not permit the launch from the Alcântara Spaceport of Payloads or Space Launch Vehicles owned or controlled by countries which, at the time of the launch, are subject to UN Security Council sanctions or have governments determined by either of the Parties to have repeatedly provided support for acts of international terrorism.” The Report adds:

“This is obviously, a political safeguard which has no relationship with the technological safeguards object of the Agreement. Thus, the USA may prohibit Brazil from launching satellites (owned by Brazil or third countries) from its territory and its base, for countries that are not in friendly terms with the USA. One should consider that the USA State Department has flexible and arbitrary criteria to classify a Nation as “terrorist”. In accordance with its last report, the countries that support terrorism are: Iran, Iraq, Syria, Líbia, Cuba, North Korea and Sudan. Concerning Cuba, the report of the USA State Department justifies

its inclusion in the “black list” because that country would harbor North American fugitives and Latin American rebels. Regarding North Korea the justification is that the North Koreans may have harbor, in the 70’s, the kidnappers of a Japanese airplane. Libya is on the list because of the PanAm airplane that has crashed because of a bomb placed on board, even if Libya has delivered to the authorities the suspects to be tried in The Hague. Thus, this classification takes into consideration political and strategic interests of the USA. Even if by argument sake we say that Brazil is not going to be interested in dealing with a country in the US black list, the fact remains that this veto power of the US regarding Brazilian decisions is a very dangerous precedent. A foreign nation should not have a power decision regarding the use of Alcântara Space center, a national base built with great sacrifice. If this disposition is approved, Brazil will lose its autonomy to use its base in accordance with its wishes.”

The Government argues, in turn, that this concern is ill founded. Minister Sardenberg wrote: “The rejection of terrorism is included in the Brazilian Constitution. It is therefore a very settled point. The definition of which country is terrorist or not will depend of agreement between the parties. In case of disagreement, the Agreement itself has mechanisms for its solution.” (11)

7. Countries not members of the Missile Technology Control Regime (MTCR)

The objective of the Missile Technology Control Regime is to control the dual use space technologies such as the ones related to rockets and launching vehicles. Brazil has already established its own national legislation regarding this issue.

Article III § 1.B says that Brazil “shall not permit significant quantitative or qualitative inputs of equipment, technology, manpower, or funds into the Alcântara Spaceport from countries that are not members of the Missile Technology Control Regime (MTCR), except as otherwise agreed between the Parties.”

The Opposition Report considers that this disposition “prohibits Brazil to establish significant cooperative ties with countries that are not part of the MTCR”. As the MTCR has now only 32 members, the Report understands that it “excludes from the use of the Alcântara Spaceport most of the nations of the planet, with potential economic damages to Brazil”.

In the view of the Opposition Report, this rule gives to the USA “the capacity to limit the right of Brazil on how to use its launch center.” The Chinese-Brazilian Natural Resources Satellites, for instance, could not be launched from Alcântara, the Report adds, because China is not member of the MTCR.

Government arguments, by contrast, advance the following points:

Nothing prohibits Brazil from launching satellites or rockets owned by other nationalities. The restrictions being discussed refer, exclusively, to specific requests for export licenses for rockets or satellites from the US required for launches from the Alcântara Spaceport. (12)

“Since 1994, Brazil published its adherence to the MTCR (13); and as member of MTCR it certainly has interest in supporting this regime and its non-proliferation purpose. Exceptions to this rule can be negotiated in a case by case basis.

Concerning the case of China, with whom Brazil has a cooperation program for the construction of remote sensing satellites, it is known that this country has never shown any interest in launching from Alcântara.”

8. Funds obtained from Launch Activities in Alcântara

According to the Article III § 1.E, Brazil shall “not use funds obtained from Launch Activities object of the Agreement, for the acquisition, development, production, testing, deployment, or use of rocket or unmanned air vehicle systems (either in the Federative Republic of Brazil or other countries)”.

In the view of the Opposition Report, this disposition “makes it clear that the real goal of the Agreement is to make it impossible to use the VLS (Brazilian Satellite Launch Vehicle) Program and to put the (Brazilian) National Policy of Space Activities Development (PND AE) in the orbit of USA strategic interests”.

An operational Satellite Launch Vehicle would permit Brazil to enter, independently in the profitable and technically relevant market of launchings, even more because we have a very optimal geographic location, the Report says.

Government arguments present a different interpretation. Article III § 1E was discussed at length with the US authorities. It is a consequence of the US policy to limit Latin American countries

launching capabilities, because this technology, in the view of the US, has dual (commercial and military) capabilities. The agreed text of the Agreement reveals the US position but it does not affect the Brazilian position. The financial resources for building national rockets are contemplated in the General Budget of the Government (14).

Minister Sardenberg said in an interview to magazine *Veja*: "According to our laws, the money received from the US enterprises resulting from the use of Alcantara Spaceport goes to our general budget. It is not, therefore, marked money. Thus, we could use it in the development of the VLS [Satellite Launch Vehicle, the Brazilian rocket]. But we are not going to do it because we do not want it and we do not need it. We will continue to finance our space program with the resources for the development of the VLS." (15)

"I am against the utilization of foreign resources to finance the development of the VLS, because its financing would come with direct or indirect conditionalities. That is the international reality. The VLS always was, is, and must be supported by funds from the Federal budget", the Minister said. (16)

9. Launching Agreements with other countries

The Agreement also rules on agreements with other governments having jurisdiction or control over entities substantially involved in Launch Activities. The substantive scope and provisions of such agreements shall be equivalent to those of this Agreement, except for the Article III § 1.F and as otherwise agreed between the Parties. In particular, such agreements shall obligate such other governments to require their Licensees to abide by arrangements substantively equivalent to the Technology Control Plans that the USA Government shall ensure that US Participants abide by pursuant to paragraph 4 of Article IV of this Agreement".

According to the Report, this paragraph forces the Brazilian Government to sign with other countries safeguard agreements with the same scope and the same contents as this one. Moreover, it states that such agreements should ask other governments to require from its licensees-industries which have space technology- the same requirements that the US requests to its licensees.

The Report considers this disposition a "real juridical aberration against the basic principles of international law". It says that Sovereign Nations

cannot be required to enter into international agreements based in a bilateral agreement, and to copy in future agreements the same provisions.

Government arguments contest this point, by asserting that Brazil assumes the obligation to sign similar safeguard agreements with any country involved in launchings of rockets or satellites from the US, in order to protect the US technologies.

Brazil plans to sign similar agreements with all friendly nations that have industries interested in participating in launching activities from Alcantara Spaceport. (17)

10. International Space Law considerations

The Opposition Report considered the provisions of International Space Law that may apply to launching activities and to bilateral agreements for launching services, and concluded that "the principles and rights adopted by the Space Treaty support technological transfer."

The Report also asserts that "the Agreement, as much it prohibits any technological transfer and imposes truly abusive clauses to Brazil, creates discriminatory conditions to our country, which directly violates the Article 1° of Space Treaty."

According to the Report, the protection of dual technology must be of equal responsibility of both countries, in accordance with previously assumed international obligations and "the Agreement should contemplate the transfer of space technologies for peaceful purposes."

Government arguments assert that from the principle of common benefit (Article 1° of The Space Treaty) does not follow the obligation of technological transfer.

The Agreement establishes the responsibility of both countries for the protection of dual technology, and the Brazilian responsibility in this case is to prevent non-authorized technological transfer.

This is not an Agreement on Technological Cooperation, but on Technological Safeguard. Its purpose is not to encourage or to permit technological transfer, but on the contrary to prevent by all means this transfer.

11. Some conclusions and comments

From a comparison of these respective positions, it seems clear that the Agreement on Technological Safeguards does not provide for cooperation and assistance for development, as

the Opposition would like to assert.

The Opposition Report also does not take into consideration the present reality in the international launching market, in which about 80% of the international launchings is controlled by the US national laws reflecting its national security concerns, and its agreements with NATO countries to prevent the proliferation of dual uses technologies.

It is true, however, that USA did not take into due account all the international obligations assumed by Brazil in this matter, since the 1988 Constitution, as well as the measures adopted in national legislation by the Brazilian Government since 1994, when it has expressed its support for the MTCR guidelines. These concrete and relevant initiatives, as a matter of fact, should have been included in the preamble of the Agreement, as a background for the Brazilian party.

Nevertheless, the discussion in the Brazilian Parliament has shown that there are no fundamental reasons to reject the Agreement. There is no doubt that any country has the right to protect its technology against theft, fraud, and espionage as well as unauthorized transfer.

There is no basis to affirm that because of this Agreement Brazil may lose its sovereign rights over Alcântara Spaceport and the control of its operational space launchings. The Brazilian Government has all instruments and resources to enforce its rights and interests in the functioning of Alcântara Spaceport. At the same time, it has the opportunity to enter into the international launching market, its main goal. That is why the Agreement is of importance to Brazil.

But, even if this Agreement enters into force and Brazil conquers some space in the international launching market, this will be a particular case, due to a bilateral agreement. It does not diminish the importance of international cooperation in the area of space activities, specially launching activities.

The technological concentration and the national and regional security policies as well as the lack of trust in foreign partners restrict cooperation in space programs, which could benefit several countries and speed international development.

Laws and policies which qualify almost all satellites as 'arms' (subject to strict export controls) and mix the concepts of security and trade, discourage cooperation between launch companies in the field of safety, and will slow down the development of safe and affordable access to space. (18) Even the US recognizes that

its "US Export Administration Act represents a compromise between two conflicting goals, protecting national security and promoting US business interests abroad", as Senator Phil Gramm, (Republican, Texas) said during the review of the US Export Administration Act, last August. (19)

This is far from being the best scenario to promote global space projects to benefit all mankind. However, any measure to expand the international launching market with the participation of more countries, like Brazil, is certainly an improvement.

References

(1) Monserrat Filho, José, and Leister, Valnora, Brazil-USA Agreement on Alcântara Launch Center, Proceedings of the Forty-Third Colloquium on The Law of Outer Space, 2-6 October 2000, Rio de Janeiro, Brazil.

(2) Lafer, Celso, Alcântara e o programa espacial (Alcântara and the Space Program), *Jornal do Brasil*, August 29, 2001.

(3) Sardenberg, Ronaldo Mota, Política espacial, Alcântara e nacionalismo, *O Globo*, 11/9/2001.

(4) Sardenberg, Ronaldo Mota, O Acordo de Salvaguardas Tecnológicas e Alcântara, *O Estado de S. Paulo* (Brazilian newspaper), 8/9/2001.

(5) From the explanation note distributed in the Brazilian National Congress by the Ministry of Science and Technology

(6) Lafer, see note 2.

(7) Explanation on the Agreement between Government of Brazil and the Government of the USA on Technology Safeguards associated with the US participation in launches from the Alcântara Spaceport. Folder elaborated and edited by the Brazilian Ministry of Science and Technology, August 2001.

(8) See note 3.

(9) See note 7.

(10) See note 5.

(11) Sardenberg, see note 3.

(12) See note 5.

(13) See note 6.

(14) See note 5.

(15) Magazine *Veja*, 12/9/2001, p. 14.

(16) See note 4.

(17) See note 7.

(18) Project 2001: Recommendations of the Working Group on Launch and Associated Services, by Philip Markiol and Christian Kohlhase, Programme & Information, International Colloquium, Cologne, Germany, 29-31 May 2001.

(19) The revision of the 1979 Export Administration Act passed 85-14 in the Senate and now goes to the House. The bill removes controls on items that have mass-market status, but also gives the president new authority to block export of items that could pose serious threat to US national security. The measure also increases criminal and civil penalties for export-control violations. An individual could face criminal penalties of up to 1 million per violation and 10 years in prison.