

'Jurisdiction and Control' over Space Products in the Age of Moon and Mars Settlement

An Analysis from a Private Law Perspective

Fumiko Masuda*

Abstract

This paper attempts to analyse how the law applicable to property rights over various things in outer space should be determined considering the framework of 'jurisdiction and control' provided by international law in the age of settling on the Moon and Mars. This thought experiment reveals current uncertainty and the need to embrace private interests in space law.

1. Introduction

Celestial bodies, including the Moon and Mars, are unique in that their appropriation is legally prohibited (Article II, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies [OST]). This paper is a thought experiment on whether and how this legal peculiarity would affect commercial space activities from a private law perspective, inspired by the Building Blocks for the Development of an International Framework on Space Resource Activities adopted by the Hague International Space Resources Governance Working Group on 12 November 2019 (hereinafter, the BBs).¹

First, positions regarding the BBs and relevant national legislation on the issues are examined to show the purpose of the analysis (2).² Then, the

* Fumiko Masuda, Okayama University.

1 The Building Blocks are available at <https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-of-air-space-law/the-hague-space-resources-governance-working-group> accessed 11 January 2021.

2 This part is purely based on the text of the BBs and its Commentary, Olavo de O Bittencourt Neto and others, *Building Blocks for the Development of an*

rationale for the *lex situs* rule for private property rights on earth is briefly described (3). Based on the observations, what law should be applied to property right issues in the course of settlement on celestial bodies and possible approaches to the issues will be examined (4).

The analysis of this paper assumes, for the sake of simplicity, that (i) the extraction of resources from celestial bodies will be allowed despite the non-appropriation principle; (ii) private entities will be able to have good title to the extracted resources and the products made from them; and (iii) current international space law does not thoroughly address the issues of private international law. Assumptions (i) and (ii) do not intend to take a particular position in the debates over whether and to what extent the utilisation of space resources is restricted or prohibited by international space law.³ Assumption (iii) seems less controversial though not clear-cut. There appears to be no firm consensus on whether and to what extent the civil jurisdiction of national courts is affected by Article VIII OST which is the sole provision in the OST addressing ‘jurisdiction’. Some literature seems to take the position that civil jurisdiction is restricted by Article VIII OST and that the application of private laws should be discussed within the restriction.⁴ Others appear to suggest that Article VIII should not be construed as covering (at least all) the aspects of civil jurisdiction.⁵ This paper assumes that conflict-of-

International Framework for the Governance of Space Resource Activities (Eleven International Publishing 2020). The Artemis Accords, signed on 13 October 2020 (<https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf>, accessed 11 January 2021), are not addressed here because they do not contain specific regulations.

- 3 See, for example, Stephan Hobe and Philip de Man, ‘National Appropriation of Outer Space and State Jurisdiction to Regulate the Exploitation, Exploration and Utilization of Space Resources’ (2017) 66 ZLW 460, for an account of the current law.
- 4 Stephen Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law*, vol 1 (Carl Heymanns Verlag, 2009), Article VIII, para 81 [Schmidt-Tedd and Mick] state that ‘the State of registry determines the status and transferability of ownership through its public and civil laws’. See also Stephen Hobe and others (eds), *Cologne Commentary on Space Law*, vol 2 (Carl Heymanns 2013), Article II REG, para 35 [Bernhard Schmidt-Tedd and others] on the intended effects of registration to also facilitate the exercise of proprietary rights over space objects. Nikolay Natov, ‘Private International Law Aspects of the Draft International Code of Conduct for Outer Space Activities’ (2017) 66 ZLW 290, seems to presuppose this position.
- 5 See Dietrich Weber-Steinhaus and Dirdre Ní Chearbhaill, ‘Security Right over Satellites: An Overview of the Proposed Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets’ in Lesley Jane Simith and Ingo Baumann (eds), *Contracting for Space* (Routledge 2011) 221ff, 222. P J Blount, ‘Jurisdiction in Outer Space: Challenges of Private Individuals in Space’ (2007) 33 J Space L 299, 319-322, argues that ‘the only truly accepted limit to civil jurisdiction under customary international law is that of effectiveness’. Regarding the Cape Town Convention, Mark J Sundahl, *The Cape Town Convention: Its*

laws rules on property rights in outer space are worth discussing because international space law does not expressly resolve this issue⁶ and seems to accept the possibility of the conflict of jurisdictions at any rate,⁷ and that this issue can also be relevant in dispute resolution outside courts. As there is no supranational universal private international law, the analysis in this paper is based on what appears to be widely accepted in national private international laws to the best of the author's understanding.

2. The BBs and Relevant National Legislation

2.1. Relevant Suggestions in the BBs

The BBs suggest establishing an international framework to attribute 'priority rights' to search for and/or recover space resources in a specified area for a limited time upon registration and to have these rights to be internationally recognised (BB 7) and recommend that the framework should provide States with jurisdiction and control over any space-made products used in the space resource activities for which they are responsible (BB 6). The BBs further specify that the framework 'should ensure that resource rights over raw mineral and volatile materials extracted from space resources, as well as products derived therefrom, can lawfully be acquired through domestic legislation, bilateral agreements and/or multilateral agreements' (BB 8.1) and 'should enable the mutual recognition between States of such resource rights' (BB 8.2).

The BBs cover 'space-made products' used in space resource activities and 'resource rights' to extracted resources and space-made products on the premise that 'priority rights' should be allocated to an operator under the international framework. A 'space-made product' is defined as a product made in outer space wholly or partially from space resources (BB 2.5). The BBs also provide a definition for 'space object' in line with Article VIII OST (BB 2.4). The BBs seem to carefully avoid terms that directly connote 'property rights' or rights in rem over celestial bodies or extracted resources, while the system of the mutual recognition of resource rights is suggestive of proprietary nature. At the same time, probably to provide a basis for investments, they seek to enable operators to have a preferential access right to an area allocated under the

Application to Space Assets and Relation to the Law of Outer Space (Martinus Nijhoff 2013), 169–173 suggests that 'jurisdiction' in Article VIII OST can be narrowly interpreted as only granting prescriptive jurisdiction.

6 See, for example, Ioanna Thoma, 'Transfer of Satellites in Orbit' in Mahulena Hofmann and Andreas Loukakis (eds), *Ownership of Satellites* (Nomos 2017) 97-110, 102-103.

7 Regarding possible conflicts of jurisdictions, see Article II (2), Convention on Registration of Objects Launched into Outer Space (REG), and for a general account of the relation between international law and civil jurisdiction, Donald Earl Childress III, 'Jurisdiction, Limits Under International Law' in Jürgen Basedow and others (eds), *Encyclopedia of Private International Law* (Edward Elgar 2017) 1051.

international framework and to allow them to acquire certain property rights, leaving the precise character of these rights, rights in rem or something closer to rights in personam to national laws or international agreements. In this sense, it appears that the BBs carefully attempt to strike a balance between the economic interests of operators and various arguments raised on the legality and limits of space resource activities.

Whatever the precise character of these rights, it can be observed that in terms of space-made products, BB 6 follows the principle for space objects, namely, Article VIII OST, and assumes that States will have jurisdiction and control over any space-made products. This position may be a natural consequence of the framework of international space law, where State Parties bear international responsibility for national activities in outer space in accordance with Article VI OST, and the appropriation of celestial bodies is prohibited by Article II OST with the result that any exercise of jurisdiction over space resource activities and things used for this purpose will have an extraterritorial nature. On the other hand, the implication this solution would entail in relation to private proprietary rights over space-made products and extracted resources is not clear. The BBs are silent on how the acquisition of resource rights should be secured under national laws or international agreements while the Commentary on the BB admits the possibility of positive or negative conflicts of jurisdictions, which are supposed to be resolved by private international law.⁸

2.2. Relevant Provisions in Major National Legislation on Space Resource Activities⁹

As is well known, the US Commercial Space Launch Competitiveness Act (PL 114-90. [CSLSA]) states that any ‘United States citizen engaged in commercial recovery of an asteroid resource or a space resource under this chapter shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use, and sell the asteroid resource or space’.¹⁰ Luxembourg’s ‘Law of 2017 on the Exploration and Use of Space Resources’ states that ‘space resources are capable of being owned’ (Article 1).¹¹

8 Bittencourt Neto and others (n 2) 42.

9 On 10 November 2020, it was reported that the ruling party of Japan prepared for the submission of the draft legislation to allow private entities to have ownership over extracted space resources, but the draft has not yet been published. See <https://www.nikkei.com/article/DGXMZO66042220Q0A111C2PP8000> accessed 11 January 2021.

10 51 USCA § 51303.

11 The English translation is cited from https://space-agency.public.lu/en/agency/legal-framework/law_space_resources_english_translation.html accessed 11 January 2021. The newly enacted Luxembourg law of 2020 on space activities (N° 1086 du 28 décembre 2020) does not apply to the mission covered by the 2017 law, with the exception of some articles. The official French versions are available from

The CSLSA seems to focus on US citizens' entitlement to space resources, which is slightly reminiscent of the old conflict-of-laws rules that apply the personal law of the owner to the title to movables (*mobilia ossibus inhaerent*). The declaration in Article 1 of the Luxembourg law is not necessarily clear on the mechanism of its application, but it presupposes the authorisation and continuing supervision of the State.

2.3. The Purpose of the Analysis

The observations above show that the BBs try to regulate space resource activities with the extension of the current framework of international space law, and as a result, issues of private property rights are not clearly addressed despite the expected changes in the main location where space activities would be carried out. The BBs and the national legislations above might aim to cover these issues under the allocation of jurisdictions in general. However, the fact that this approach is not necessarily common on earth, where economic transactions hinging on proprietary rights take place on an everyday basis, casts some doubts on its appropriateness. It should also be noted that irrespective of the exact nature of resource rights, regarding the rights that are expected to arise over physical things on celestial bodies, the presence of these things could cause legal issues similar to those on earth. It is this perception that leads the author to think that it could be useful to conduct the analysis based on assumptions (i)-(iii) in section 1.

3. *Lex Situs* Rule for Property Rights

3.1. Methodologies of Private International Laws

Generally, two methodologies are used in the application of private laws: unilateralism and bilateralism (or multilateralism).¹² The unilateral approach focuses on conflicting substantive laws, examines the spatial scope of the application of relevant laws and determines which law should be applied to a case. On the other hand, private international laws based on the bilateral approach set certain categories of 'legal relationships', corresponding to major divisions of private law, such as contracts, torts or property rights, and determine the law applicable to a legal relationship through connecting the factors specified for each, including the contracting parties' intentions regarding a contract, the law where a wrong is committed for tortious liability or the law where the thing in question is located for property rights.¹³ As far

<http://legilux.public.lu/> accessed 11 January 2021.

12 For its history, see, for example, Kurt Siehr, 'Private International Law, History of' in Basedow and others (n 7) 1390, and from an American law perspective, Symeon C Symeonides, *The Oxford Commentaries on American Law: Choice of Law* (Oxford University Press 2016) 45 ff.

13 The bilateral approach, which seeks to identify the 'seat' of the legal relationship, is

as commercial transactions are concerned, the bilateral approach provides more certainty and predictability, therefore protecting the expectations of the relevant parties when performing transactions, while unilateralism gives weight to resolving disputes reasonably, considering the intent of legislatures and the governmental interests of relevant States. The unilateral approach is in harmony with the method of the application of public law, while the bilateral method presumes that States do not have strong interests in regulating legal relationships between private persons or entities.

The *lex situs* rule, applying the law of the country where the thing in question is located at any given time to determine the nature of the thing, the validity of its transfer, its effect on the proprietary rights of the relevant parties and so on, basically belongs to the bilateral methodology. It should be noted, however, that because of its focus on the location of the thing in question, and therefore the territory of the country where the thing is located, the *lex situs* rule has a certain affinity with the unilateral method.

3.2. Rationale for the Lex Situs Rule and Exceptions Regarding the Rule

Applying *lex situs* to property rights is justified because property rights are by nature closely connected with the legal or economic order of the law of the country where the property is located. Principally, a two prong explanation can be given: (i) Applying *lex situs* secures clarity and predictability, especially for third parties, and (ii) it is practical and convenient to apply *lex situs*, whereas applying other laws is often difficult.¹⁴ Applying *lex situs* provides clarity and predictability and ultimately facilitates transactions because the law usually has some systems to make the public aware of who is the owner of, or the holder of security interests over, a particular thing: a certain registry system or the rules on what effect is given to the possession of a tangible movable. It is practical to apply *lex situs* because the registry system will be managed by the competent authority of the territory, and, to enforce proprietary rights, their validity and effects need to be recognised by the law of the forum, often coinciding with the law of the situs for practical and jurisdictional reasons.

The *lex situs* rule applies strictly to immovables, but its application to tangible movables is more flexible or sometimes fictitious. For example, the consideration of *lex registrii* for ships or aircrafts is widely accepted, at least

widely accepted in Europe and other parts of the world, including Japan. It should be noted, however, that this approach is facing challenges as the clear demarcation between private and public has disappeared. See Horatia Muir Watt (ed), *Private International Law and Public Law*, vol 1 (Edward Elgar 2015) viii ff.

14 See for a succinct account, Lous d'Avout, 'Property and Proprietary Rights' in Basedow and others (n 7) 1428-1429. See also, for example, Jan Kropholler, *Internationales Privatrecht* (6. Aufl. Mohr Siebeck 2006) 555, and Dominique Bureau et Horatia Muir Watt, *Doirt international privé, Tome II* (4e ed., Presse Universitaire de France/Humensis 2017) no 666.

to some extent.¹⁵ Applying the law of destination or shipment, or the law applicable to the underlying transaction of the title of the goods in transit, seems to also be supported.¹⁶ In cases of the transfer of a tangible movable, some national laws even allow the law governing the underlying contract to transfer the movable, *e.g.* a sales contract, to be applied to determine the acquisition and loss of property rights between the parties,¹⁷ though most countries adhere to the mandatory *lex situs* rule.¹⁸ As is well known, the Uniform Commercial Code (UCC), Article 9, adopted by all fifty US states, gives weight not only to the law of the location of a collateral but also to that of the debtor.¹⁹ Some national laws even determine the law applicable to an intangible through searching for the *situs* of the intangible,²⁰ though others seem to make a clear distinction between property rights over tangibles, on the one hand, and claims or debts as transferrable assets or intangibles, such as intellectual property rights, on the other. The fictitious or flexible determination of *situs* sometimes serves as a particular policy as well.²¹ These exceptions or fictions suggest that despite the uniqueness of celestial bodies

-
- 15 For example, Article 44 (1) of the German Introductory Act to the Civil Code (EGBGB) expressly states that the law of nationality for aircrafts, the law of registry for ships and the law of licensing for rail vehicles shall apply. In contrast, the application of this fiction under English law is more limited. See Lord Collins of Mapesbury and Jonathan Harris, *Dicey, Morris & Collins on the Conflict of Laws*, vol 2 (15th edn, Sweet and Maxwell 2012) paras 22E-057-22-063.
- 16 See, for example, Article 104, Swiss Federal Act on Private International Law (IPRG). Japanese law also accepts the application of the law of destination through the interpretation of the *situs* under Article 13, the Act on General Rules for Application of Laws (Act No 78 of 2006, AGRAL). See the same view under German law, Kropholler (n 14) 565. English law appears to allow the applicable law of the transfer to govern the title to the goods in transit. See Collins and Harris (n 15) paras 24E 016-017.
- 17 See, for example, Article 104, IPRG.
- 18 For example, see on English law, Collins and Harris (n 15) para 24R-001 ff, and on German law, Article 43, EGBGB. Japanese law also takes this position. When Japanese private international law was revised in 2006, loosening in this context the *lex situs* rule, currently provided in Article 13, the AGRAL was discussed based on the comparative analysis of foreign laws, but enough support for the change was not gained.
- 19 See § 9-301, UCC. For a detailed explanation on space assets, see Sundahl (n 5) 15-19.
- 20 See, for example, on English law, Collins and Harris (n 15) paras 22R-023 ff.
- 21 For example, regarding cultural property, see the special proceedings and Article 13 of the Directive 2014/60/EU of the European Parliament and of the Council of 15 May 2014 on the return of cultural objects unlawfully removed from the territory of a Member State and amending Regulation (EU) No 1024/2012 (Recast). Applying the law of *situs* in the past will protect the original owner better than applying the law of *situs* at any given time.

and outer space, analysis starting from the rationale behind the *lex situs* rule can be performed, and this reasoning could be useful.

4. Hypothetical Analysis

4.1. Context

Four types of things are relevant to future settlement on celestial bodies, including the Moon and Mars: (i) space objects launched into outer space from the earth; (ii) the belongings or objects of settlers or the persons involved in the space activities brought from the earth; (iii) resources extracted from celestial bodies; and (iv) space-made products. For the sake of convenience, for (i) and (iv), the definitions of BBs 2.4 and 2.5, respectively, are followed in this paper. Items (i) and (ii) are subject to the *lex situs* principle when they are still on the earth. The ownership of space objects (i) is ‘not affected by their presence in outer space or on a celestial body or by their return to the Earth’ in accordance with Article VIII OST. The volume of the transactions relating to things and the problems arising from the use or transfer of these things will differ depending on the various stages of settlement.

Table 1 below shows the context of the analysis. While nearly everything on earth is subject to the *lex situs* rule, the direct application of this rule to celestial bodies is impossible because States cannot claim sovereignty over them. Therefore, if the bilateral method (3.1 above) is used, it is necessary to look for the law of the country with which the rights over the things are most closely connected, considering the relevant interests surrounding the things in question. As things (i)-(iv) are all physical in their existence and are tangible movables, the rationale for the *lex situs* rule (3.2 above) could guide the exploration. If a unilateral approach in line with the application of public regulations on space activities is used, which every space-faring nation should implement to secure compliance with international obligations, the application of private laws will also follow the allocation of jurisdiction, the problems of overlapping jurisdictions or the lacunae regarding jurisdictions that are left to be resolved.

Table 1

	Immovables	Movables
On the earth	(a) <i>Lex situs</i> applies	(b) <i>Lex situs</i> applies in principle
Concerning celestial bodies	(c) No <i>lex situs</i> in the literal sense exists	(d) Law of the country with which the rights over the things are most closely connected (?)

4.2. Analysis

During the preparation for settlement stage, the operators authorised to conduct space activities on a certain celestial body by a State would carry out research or the relatively limited recovery of resources *in situ* with space objects launched from the earth. The volume of *in situ* activities would be small, and transactions of the things *in situ* would remain negligible. At this stage, property rights regarding the space objects (i) would be a central issue. If the construction of facilities for settlement started, the volume of *in situ* activities would grow and become usual. The operators would use space objects launched from the earth (i), but they would begin to use extracted resources (iii) and space-made products (iv) as well, and the presence of personnel on site might also be necessitated. Commercial transactions of extracted resources or space-made products among operators engaging in space activities could occur, though the volume would still be limited. Some transactions might be made beyond each area where an operator is granted a preferential access right, such as a 'priority right', under the BBs. In this context, rights over things (ii)-(iv), as well as (i), would become more relevant. In the settling down stage, people would start living on the celestial bodies, and exchanges between settlers and things beyond each area would occur. This would raise more serious problems regarding property rights over things on the celestial bodies. If settlement on celestial bodies was realised under an international framework, the conflict of laws regarding things (ii)-(iv) would occur at earlier stages.

4.2.1. Preparation Stage for Settlement: Current Situation

Regarding property rights over space objects (i), which have been discussed in respect of an on-orbit transfer of satellites,²² two different solutions can be inferred from Article VIII OST. The first solution is applying the law of where the space object was originally or last located on the earth.²³ It is true that the acquisition of and the content of property rights on earth should be governed by *lex situs* at any given time, but it is questionable whether and until when the same law should continue to govern the issues once the object is launched into outer space, since there can be more than one relevant original *situs* and the *situs* may not have or may lose its significant connection with the object. The second solution of applying the law of the State of registry²⁴ would provide more certainty and predictability as long as the space object is duly registered and the Secretary-General of the United Nations is notified (see Article IV REG). However, this solution would not

22 See (n 4) and (n 5).

23 Yuzbashyan, 'Potential Uniform International Legal Framework for Regulation of Private Space Activities' (2010) 53 Proc Int'l Inst Space L 39, 46, deduces the law of the place of origin from Article VIII OST.

24 See Hobe, Schmidt-Tedd and Schrogl (n 4) Article VIII, para 81.

solve all the questions because of the following reasons: First, not all space objects are registered, and as a result, some space objects lack the law of registry. Second, the national registries that it is obligatory to maintain under Article VIII OST are designed to link a space object to its ‘launching State’ and thereby make it clear which State is internationally responsible for the space object (see Article II, REG), rather than giving notice of who owns the space object and what interests are attached to it. Where no registration is made, or in the case that the link between the State of registry and the space object becomes too weak, for example, because of the transfer of the object to outer space, an alternative solution should be sought. In light of the rationale for the *lex situs* rule (see 3.2), applying the law of the country where the owner or operator of the space object, who is likely to be the debtor in relation to the security interests, if any exist, seems reasonable.²⁵

The analysis above applies not only to satellites and spacecrafts but also to permanent structures made of space objects brought from the earth and set on celestial bodies (Article VIII OST).²⁶ Although Article VIII OST does not expressly mention (ii), it seems that the solutions under analysis should be at least premised since the State of registry retains jurisdiction and control not only over the space object but also over any personnel thereof. The framework of the ownership of equipment or material in or on the International Space Station (ISS) provided by Article 6 of the International Space Station Intergovernmental Agreement (IGA) and the arrangement on intellectual property rights (Article 21, IGA) seem to be examples of adjustments under or the extension of the principle in Article VIII OST.

4.2.2 Issues Arising from the Progress of Settlement

Current international space law is silent on property rights over extracted resources (iii) and space-made products (iv). The BBs appear to attempt to create a link of jurisdiction from the appropriate State obliged to authorise and supervise space activities to the resource rights and the space-made products in line with the framework under the IGA. Based on the understanding, an international registry for priority rights could play a pivotal role in giving sufficient notice to third parties in relation to the apparent entitlement to the things located in the registered areas. If the property right issues here are approached from a bilateral methodology perspective, searches for the law with which the rights over the things *in situ*

25 The connecting factor for the application of the Convention on International Interests in Mobile Equipment, 2001 (Cape Town Convention) is the location of the debtor (Article 3 (1), Cape Town Convention). See also the discussions in Souichirou Kozuka and Fumiko Masuda, ‘Private International Law (Conflict of Law Rules) for Human Presence of Long Term in Space’ (2014) Proc Int’l Space L 193.

26 See Henry R Hertzfeld and Frans G von der Dunk, ‘Bringing Space Law into the Commercial World: Property Rights without Sovereignty’ (2005) 6 Chicago J Int’l L 81, 82-83.

is most closely connected would lead to the application of the law of the country that authorises and supervises the space activities, which would be the same as the *lex registrii* of the priority rights if the scheme suggested by the BBs was in place. The law also seems to be suitable for governing property right issues in transactions regarding (iii) and (iv) among operators inside a registered area.

When *in situ* transactions of considerable volumes of (iii) or (iv) start to take place, transcending or independent of the boundary of each registered area, it appears that recourse to the general conflict-of-laws rules employed on earth will become more necessary, as solutions deducing from the allocation of jurisdictions under the international scheme will become more cumbersome. In this context, applying the law governing the underlying transaction, especially the law chosen by the parties, would provide a reasonable solution if the number of relevant third parties were still limited and full-fledged laws with *in situ* enforcement mechanisms did not exist.²⁷

More difficult questions arise when many things of different origins or persons, (i)-(iv), are present in the same place and become the subject matters of transactions. Reference to a (fictitious) *situs* in the past, such as the place of origin or original *lex registrii* of a space object, would favour the protection of an original owner's rights and might surprise third parties rather than facilitate transactions.²⁸ Moreover, different legal frameworks applicable to things (i)-(iv) would complicate transactions. The law of the country that authorises and supervises the space activities might be preferred considering the rationale for the *lex situs* rule, but in turn, it seems that this solution would reveal tensions between settlement or preliminary space resource activities and the non-appropriation principle.

5. Concluding Remarks

The analysis implies that there is uncertainty regarding laws applicable to property rights in outer space in current international space law (4.2.1), and its extension would work for a while but might not fit space activities in the age of settling on the Moon or Mars (4.2.2). Developments in the international regime that take private interests into account are hoped for.

27 Despite the limited acceptance of the position on the earth described in (n 18), this solution could be justified by the peculiar circumstances in outer space.

28 See (n 21).

