

## CANADA

### WORKING PAPER

#### **On the Merits of Certain Draft Transparency and Confidence-Building Measures and Treaty Proposals for Space Security**

1. Transparency and confidence-building measures (TCBMs) in the non-proliferation, arms control and disarmament field are instruments that are often used to make progress when the international community is unable to attain consensus that would be necessary for the negotiation of relevant treaties. Sometimes they serve as a precursor to what will hopefully follow. The best known example of that is the *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, adopted on 13 December 1963 (resolution 1962 (XVIII)). Reading that document again, one is struck by how closely it predicted the text of the Outer Space Treaty of 1967.<sup>1</sup> Looking back, one must conclude that the authors of these legal principles had in mind the end result of the Outer Space Treaty when they first set pen to paper. A relevant question for us today is should we do the same again for space security and start with a Code of Conduct to address the issues that were left unresolved in the Outer Space Treaty, or, should we launch directly into the negotiation of a new relevant treaty?

2. The Outer Space Treaty represents the best that could have been accomplished for space security during that era of the Cold War. It successfully banned the placement of weapons of mass destruction in outer space. It also banned the military use of the Moon and other celestial bodies, but permitted the military use of outer space for peaceful purposes. Space objects were granted freedom from harmful interference for peaceful purposes - a phrase that came to be interpreted as "non-aggressive." To deal with the potential for the aggressive behaviour of space objects, the Outer Space Treaty referenced the United Nations Charter to ensure that a state's legitimate right to self-defence would also apply in relation to its activities in outer space. We must remember that the Outer Space Treaty was drafted at a time when nuclear weapons were the only way to successfully attack satellites, following the Limited Test Ban Treaty of 1963,<sup>2</sup>

---

<sup>1</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, 601 U.N.T.S. 206 (1967).

<sup>2</sup> Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, 480 U.N.T.S. 43 (1963).

which prohibited the carrying out of nuclear weapon test explosions or any other nuclear explosion in outer space.

3. In January 2007, we witnessed a return to anti-satellite weapon testing based on physical effects kill-mechanisms generated by the continuous advance of conventional weapons technology. The amount of space debris produced by this most recent test again demonstrated why in 1985 the then Soviet and American governments both unilaterally ceased the testing of such class of weapons. The international community's continued safe and sustainable use of outer space cannot endure the production of space debris through further anti-satellite testing, let alone recover from the wide scale, debilitating effects of fighting humanity's first war in outer space with such destructive and indiscriminate weapons. Indeed, even collisions among existing space objects could begin to limit our safe and sustainable use of outer space for peaceful purposes. Causing or leaving derelicts in outer space could also risk the further production of space debris when active or inactive satellites subsequently collide. The most recent Iridium and Cosmos satellite incident is a stark reminder of this possibility.

4. The continuous march of science and technology has also set several states on a course to develop ballistic missile defence interceptors to engage the re-entry vehicles and rocket bodies of ballistic missiles using conventional hit-to-kill mechanisms. In many ways, the international community's struggle to prevent nuclear weapons proliferation and their means of delivery, and the continued possession of nuclear weapons by a number of states, is now spilling over into the space security issue.

5. Canada's goals for space security can be found in the juxtaposition of the right of safe passage of space objects for peaceful purposes with the right of self-defence in the Outer Space Treaty and the UN Charter, informed by the technological prowess that now permits conventional weapons to successfully engage objects in outer space. Herein lies the unfinished work of the Outer Space Treaty. These new rules of behaviour must address space activities in peace as well as when the use of force consistent with the United Nations Charter occurs. We can argue that security guarantees should presage safe passage guarantees for space objects. Don't believe it? Ask yourself a simple question, "Should the world's first space-based weapon<sup>3</sup> be granted safe passage or freedom from harmful interference in outer space?"

6. Consider, for example, Article II's undertaking in Russia-China's draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects (PPWT),<sup>4</sup> "not to resort to the threat or use of force against outer space objects." Notice how this undertaking follows one that would ban the placement of weapons in

---

<sup>3</sup> For example, a space-based ballistic missile defence interceptor, a space-based anti-satellite weapon or an orbital bombardment system.

<sup>4</sup> Letter dated 12 February 2008 from the Permanent Representative of the Russian Federation and the Permanent Representative of China to the Conference on Disarmament addressed to the Secretary General of the Conference transmitting the Russian and Chinese texts of the draft "Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT)" introduced by the Russian Federation and China, CD/1839, 29 February 2008.

outer space. Some have argued that the no force provision in this draft treaty would not have prohibited the anti-satellite weapon test of 2007 on China's own satellite.

7. The European Union (EU) has since proposed a draft Code of Conduct for Outer Space Activities<sup>5</sup> outside of this forum but circulated to all CD members on 12 February, defining what it considers to be acceptable rules of behaviour to enhance the safety, security and predictability of outer space activities for all. It undertook these efforts within the context of the prior US Administration's reluctance to enter into any legally-binding instrument that would constrain America's freedom of action in outer space. Article 4.2 of the EU's draft Code of Conduct calls for Subscribing States to:

refrain from any intentional action which will or might bring about, directly or indirectly, the damage or destruction of outer space objects unless such action is conducted to minimise outer space debris and/or justified by imperative safety considerations;

This draft Code of Conduct was made public many months after the United States successfully modified a ballistic missile defence interceptor to engage a decaying satellite at a low altitude for the minimization of the production of space debris, an engagement that was undertaken for the protection of public safety.

8. Two issues arise from the EU's proposed safety guarantee. The first is that a national security prerogative is not an expressly authorised reason for the production of space debris. Some states might not accept this restriction on their national security when confronted with the possibility of a competitor's deployment of a constellation of a significant number of space-based weapons. The second issue with the proposal, is that it allows for a proliferation path for anti-satellite weapons that ought to be closed when judged against other possible or viable proposals for a more robust security guarantee.

9. Given that the means to ensure the safe burn-up of satellites during re-entry of the Earth's atmosphere can also be designed into the satellite beforehand, it can be argued that a better security guarantee than both the EU's draft Code of Conduct and the Chinese-Russian draft PPWT, would be for the international community to agree or accede to a ban or a pledge such as:

10. State [Parties]/[Signatories] to the [Treaty]/[Code of Conduct] [shall]/[should] not test or use a weapon against any satellite so as to damage or destroy it.

11. Note that such an undertaking would again need to be done in conjunction with a prohibition on the placement of weapons in outer space, lest we inadvertently provide a sanctuary for space-based weapons. Furthermore, a prohibition on the test or use of any satellite itself as a weapon capable of inflicting damage or destruction on any other object, would address the residual threat of a benign dual-use satellite serving as a weapon. Taken together, these three rules would prohibit armed conflict in outer space based on the application of physical force.

---

<sup>5</sup> Draft Code of Conduct for Outer Space Activities, as approved by the Council on 8-9 December 2008, Council of the European Union, Brussels, 17 December 2008, No. 17175/08, PESC 1697, CODUN 61.

12. Interestingly, these rules can be crafted without the need to define a weapon, a satellite or even outer space, since the effects of the weapon are included within the proposed prohibitions, a satellite is a object that orbits round the Earth or other celestial body, and the prohibition on the placement of any weapon in outer space can be modelled on the language of Article IV of the Outer Space Treaty. To aid in the verification of a treaty or the compliance monitoring of a code of conduct, the definition of test could also be modelled on the following: where “test” means “to flight or field test in a manner observable to the national or multinational technical means of [verification]/[compliance monitoring] available to a State [Party]/[Signatory].”

13. The above security proposal would also obtain a concomitant safety guarantee preventing the production of space debris or derelicts that could result in the production of space debris during subsequent collisions. This proposed security guarantee therefore helps ensure the sustainability of outer space for the future. The risk to the international community of settling for a weaker proposal is that we will endorse a proliferation path for the test of specially designed or modified devices, to serve as anti-satellite weapons capable of producing indiscriminate effects through the production of space debris, or we will close an avenue for needed self-defence measures against the future prospect of space-based weapons.

14. This intervention should demonstrate how great care must be exercised when we depart from the familiar foundations of the Outer Space Treaty. It also speaks to the need for any new rules concerning a state’s activities in outer space to be negotiated in an appropriate forum. Obtaining practical safety and sustainability measures for space activities should not inhibit the collective desire to achieve robust security guarantees for those activities in outer space currently accepted by the international community. And yet, most states recognize that going into the future, new rules of behaviour for outer space activities must be crafted in order to obtain its secure, safe and sustainable use in full consideration of the advances that have been made in conventional weapons technology. In this regard, Canada argues for security guarantees to be considered by the Conference on Disarmament (CD) and practical safety and sustainability measures for space activities to be considered in the Committee on the Peaceful Uses of Outer Space (COPUOS). To ensure that these forums do not work at odds with one another, increased co-ordination of the CD and COPUOS ought to be given favourable consideration by the Member States of both international bodies.

15. Most recently, the new US Administration has announced its intention to resume its leadership on space issues with a “worldwide ban on weapons that interfere with military and commercial satellites.”<sup>6</sup> We believe that this advance signal should bode well for our current discussions of space security within the Conference on Disarmament. We also welcome the new US Administration’s pronouncements on addressing nuclear non-proliferation and nuclear disarmament issues and hope that these too will help us make progress on the space security file. A new found policy approach by a significant space actor should also inform our attempts to collectively define additional acceptable behaviours for the conduct of activities in outer space within the Conference on Disarmament.

---

<sup>6</sup>Available on [www.whitehouse.gov](http://www.whitehouse.gov) under the heading of “Ensure Freedom of Space” as at 18 February 2009.

16. As we move forward on this important matter, let us recall the earlier collective experience with the *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space* and keep in our minds from the outset, the new legal protections we would all prefer to govern our activities in outer space. Drafting hard security guarantees first, as a soft declaration of legal principles, might just provide the international community with a third answer to the two questions posited at the beginning of this paper.

---

印  
發  
第  
五  
號