

Hurdles for Outer Space Verification

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Necessary to have a Arms Control Agreement?



- ◆ Space have been widely used for military uses.
- ◆ Military theory /doctrine about space warfare has been developing since early 1980s.
- ◆ Institutionalized military force started to put in place at late 1990s or early 2000s.
- ◆ Outer space deterring doctrine and capability are quickly developing now.
- ◆ Vision 2020.....

Is Verification the Must Element?



- ◆ Good but not necessarily
 - Verification provides transparency and increase predictability
 - Verification could provide confidence for universal compliance
 - Verification provides cooperation mechanism
 - Bring political, technical and financial implication

Verification the Must Element?



- ◆ No verification regime does not mean no way to find non-compliance
- ◆ No non-compliance disposal provision does not equal no cost for noncompliance
- ◆ 1967 Outer Space Treaty, 1979 Moon Agreement, CCW, ENMOD Convention, BTWC etc don't have verification, still well observed
- ◆ Appropriate, feasible and effective verification is optional for outer space arms control treaty

Complexity of Outer Space Verification



- ◆ Verification touches upon sensitive military information
- ◆ Verification might cause the issue of protection of advanced technology concern
- ◆ Intrusive measures may cause the disputes of sovereignty issue
- ◆ Unequal technical capability increases the difficulty for agreed verification measures. Unsymmetrical capability may prevent the weak side from accepting verification.
- ◆ Worry of abuse of verification regimes

Complexity of Space Verification



- ◆ Outer space has been accepted as the fourth frontier after land, sea and air. The strategic nature increased the difficulty for major power to cooperate in outer space including cooperation on verification .
- ◆ Current development of defensive and offensive capability in outer space indicates mistrust among major powers are deepening. The more advanced space weapon capability developed, the more difficult to verify.

Recommendations

- ◆ New treaty to prevent arms race/or weaponization in outer space is necessary. Verification is optional and should not be the excuse for not negotiating of such treaty.
- ◆ Accept cooperative security instead of absolute security is the basis for cooperation in outer space including verification cooperation.



Recommendations



- ◆ Lab-to-lab cooperation on future possible verification measures research may help to build trust among states
- ◆ Civil society and NGO should advocate more public campaign for outer space peaceful cooperation



Thank you!