Rule Based Outer Space Security Governance
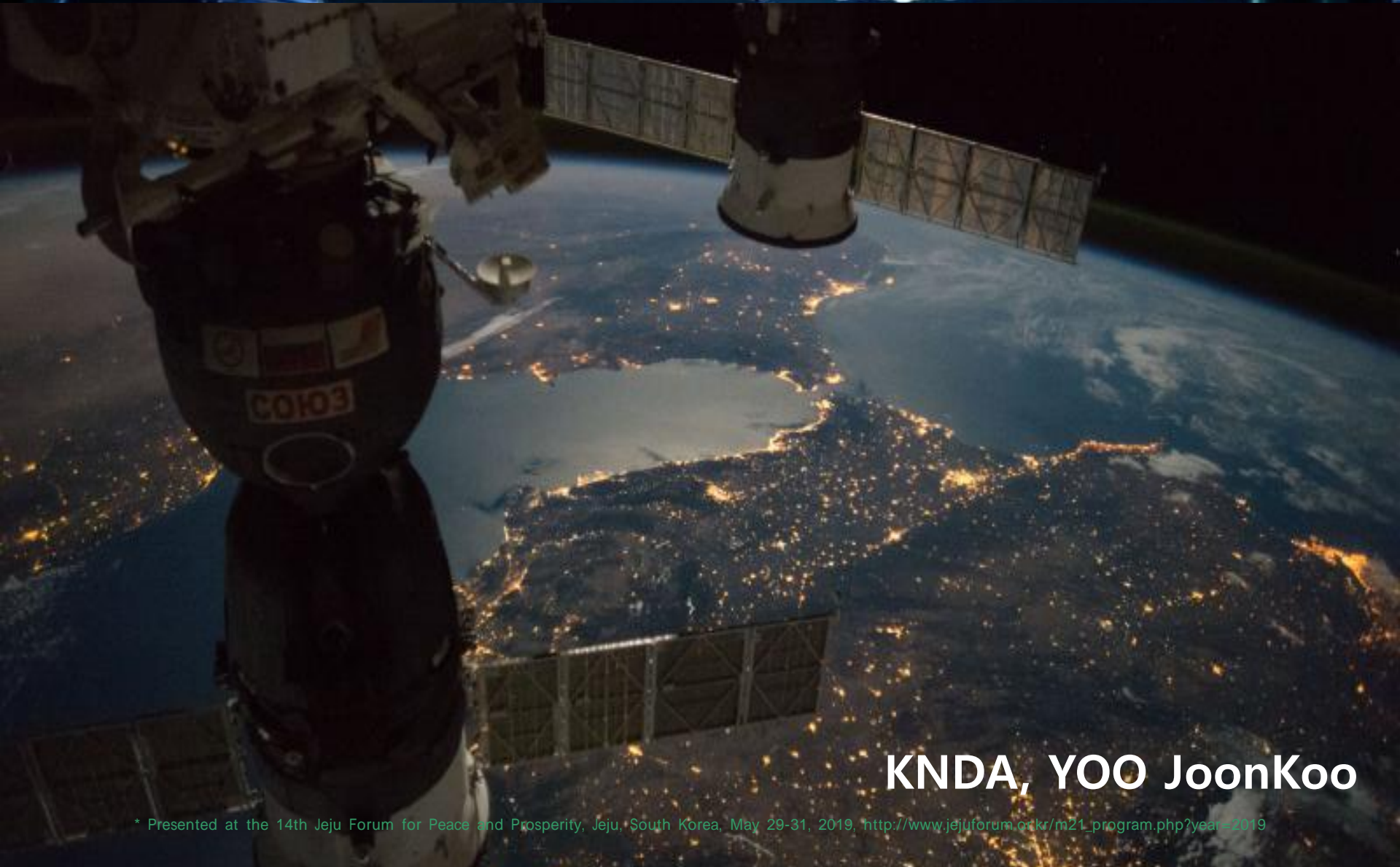
KNDA, YOO JoonKoo

Basic Questions

- How to manage interplay of P, E, and S?

- What are the differences from other domains?

- Universal international laws & norms apply in any meaningful way? (legitimacy v legality)

- How to set up the governance of outer space?

- How to promote international cooperation based on national interests?

Space Security Environment Worldwide

- **Increase in Space Threats and its effect**
  - Rapid Development of Space Infrastructure -> Economic Benefits
  - Dependence on SI in Our Life -> Increase in Exposure to Space Threats

Public sector

Private sector

Military sector
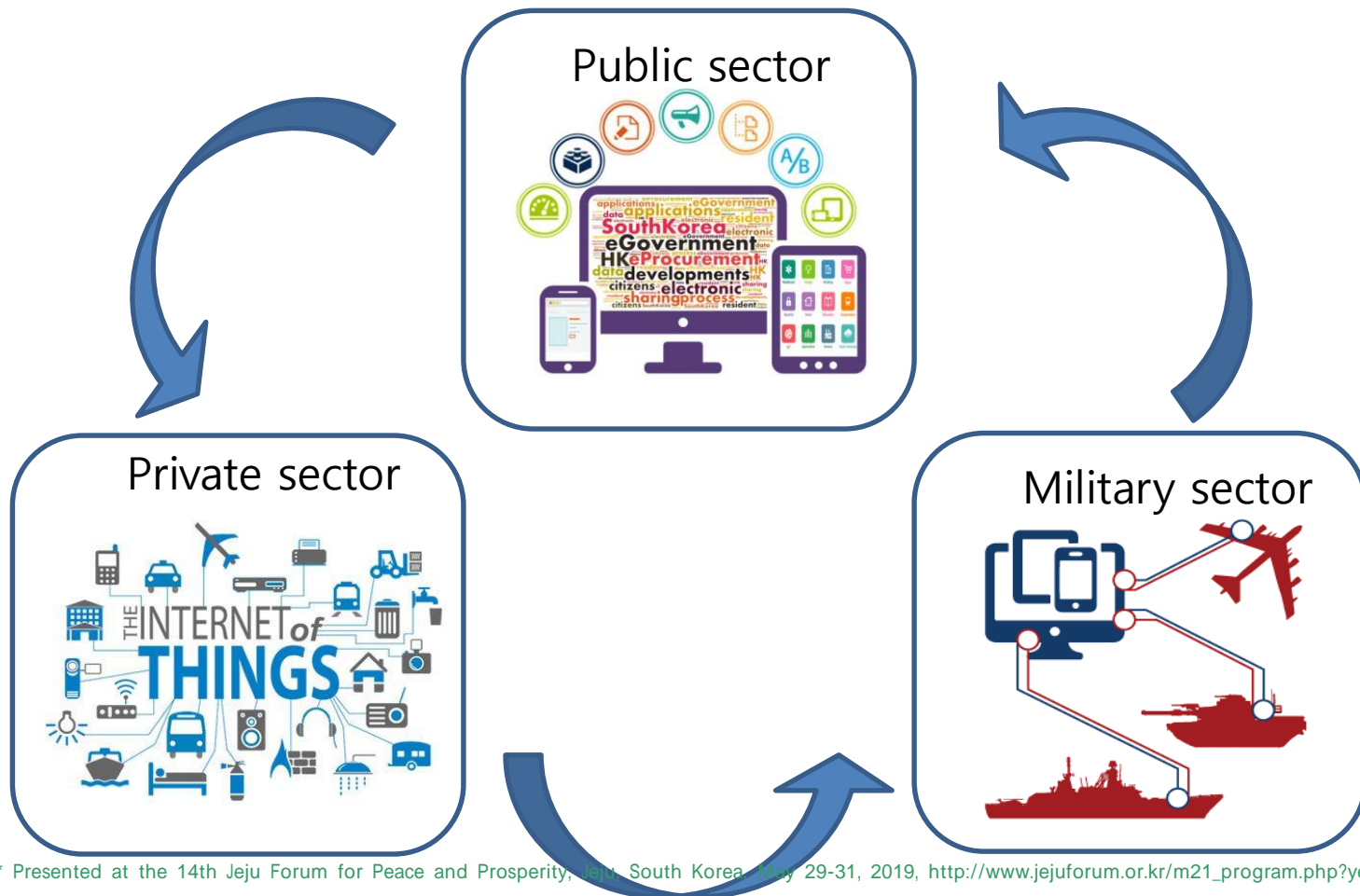
Pending Issues of Space Operation

● **Policy & Law : Interplay among politics, economy & Science & Technology**

- 2 approaches, 4 baskets too many venues

- Hybrid nature of outer space

- State v. non-state actor

- Wide range of space based operation

☞ sovereignty, jurisdiction, state responsibility, counter measures & self defense, export control

Global Commons?

● **Space : linkage of the other domains**

- Territorial sovereignty of space

- International regulation of the use and exploitation the space resources

- Coherent regulation of space control

- Mutual desire to keep military utilization out

☞ Lacking consensus leads to my way fashion

Complex Responses to Challenges

● **Multi-layer system: objects, persons and activities**

- Convergence and Complex of possibilities

- Non-governmental v. governmental

- National v. regional v. global

- Governmental v. multi-stake holder governance

- ☞ 2 approaches, 4 baskets, too many venues

Regulatory Framework of Policy and Law

● ⋯⋯ **New Technologies and Military & Security**

- Human Enhancement Technology

- Lethal Autonomous Weapons Systems(LAWS)

- Domain Weapons cf. Cyber & Space

- Multi-Domain Operation

☞ fragmented but mainstreaming

Where is relevant int'l legal instruments?

⬤·····**Two Blocks & Swing States**

Treaty Based System
- COPUOS: 6 treaties, 5 UNGA/R..
- ☞ shifting to bipolar to uni-multi polar, legitimate venue

GGE Approach
- DC: PAROS GGE(TCBMs), 2013(15), 2018-19(25), cf. PPWT
- ☞ mechanism of future format, open-ended working group?

Regional Initiative
- ICoC: TCBMs, Self Defense
- ☞ bridging b/w the US(like-minded) and Russia & China(BRICS)

New trends Manual
- Woomera Manuel on the International Law of Military S operation
- MILAMOS Projects: Manuel on International Law Applicable to Military Uses of U of OS
- ☞ state practices for hegemony *cf. UN Charter in its entirety*

Debates on Applicable International Laws

● **Perception, Policy and Laws**

- Outer space: global commons v. territory

- Space security: existing *jus in bello* & *jus ad bellum* v. new int'l law like disarmament

- Types of Regulation: comprehensive international law v. non-binding norms

- State control v. multi-stake holder governance

☞ Lacking consensus, "My Way" fashion

Space Warfare and Use of Force

● **Multi Domain of Warfare**

- Ambiguity: physical damage v. functional damage, cf. kinetic

- Effect of weapon v. Nature of weapon

- Right of self-defense: proportionality

- Space military strategy and market, cf. dual use

- ☞ Substance, Intention, Tool

"Armed Attack" under the *Jus ad Bellum*

● **The Gap b/w "armed attack" and use of force"**

- Nicaragua case: scale and effects

- Concept of "armed"

- "Physical consequences" standard

- Injury or damage test cf. intent v. conduct

☞ Lawful countermeasures and self defense cf. PSD of CSD

Basic Elements

- **Context, Purpose and Mean/Tool**

  - Context: space warfare act by the use of technological information systems with the purpose of strategic, operative and/or tactical advantage

  - Purpose: causing, even indirectly, physical damage to equipment or people or sabotaging...

  - Mean/Tool: an attack performed through the use of technological information systems of space critical infrastructure

Multi Domain Operation

- **Interplay with other Domains**

  - Outer Space enabled ground, ocean, air, and cyber operation

  - Other domains enabled outer space operation

  - PAROS GGE, Woomera & Milamos Manuel

  - ☞ Regulatory framework for new technologies on the multi domain operation

Conclusion & Policy Implication

● **Turbulence of Global Outer Space Security Governance**

- Creation of comprehensive International law: possible or optimistic?

- Segmented international fora for outer space: unilateral or blocs based initiative

- Bilateral & mini multilateral outer space cooperation, cf. comprehensive v. functional

☞ UN Ch. applies in its entirety?
  Political or legal instruments by UN?

Thank You!