



NATO'S DETERRENCE DILEMMA IN SPACE

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OVERVIEW

WHAT IS THIS REALIST MIND GAME?

RELEVANCE OF DETERRENCE IN SPACE

REQUIREMENTS OF CREDIBLE DETERRENCE

NATO'S ROLE IN SPACE

RESERACH QUESTION AND HYPOTHESES

ENABLERS OF DETERRENCE

ASSET-SPECIFIC DISTRIBUTION OF RESULTS

LIMITS OF SPACE DETERRENCE

SO WHAT NOW?

CONCLUSION

WHAT IS THIS REALIST MIND-GAME?

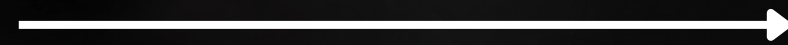


STATE A

BENEFITS
OUTWEIGHTING COSTS

COST-BENEFIT
CALCULUS OF THE
ADVERSARY

DETERRENCE



STATE B

COSTS OUTWEIGHTING
BENEFITS

RELEVANCE OF DETERRENCE IN SPACE

INCREASED
RELIANCE

MILITARIZATION

LACK OF
ALTERNATIVES

REQUIREMENTS OF CREDIBLE DETERRENCE

BALANCED
COMMUNICATION AND
SIGNALING

RELIABLE
ATTRIBUTION

RESOLVE
TO ACT

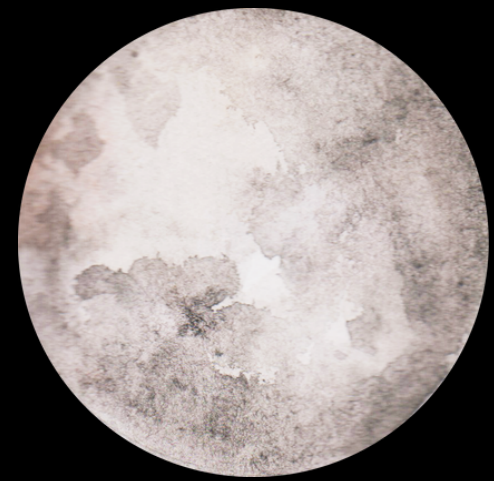
ESCALATION
DOMINANCE

TECHNOLOGICAL
SUPERIORITY /
RESILIENT
CAPABILITY

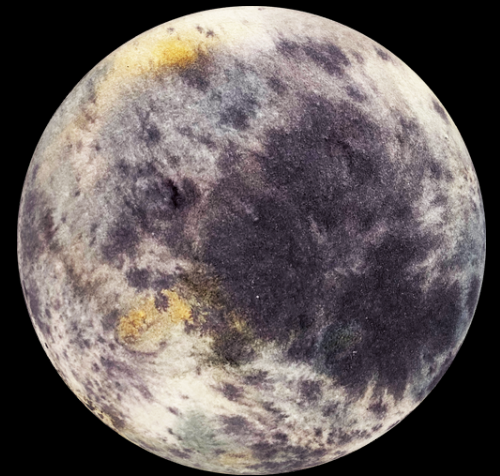


NATO'S ROLE IN SPACE

A MAJOR ACTOR WITH MINOR AGENCY



“THE ALLIANCE WILL CONSIDER A RANGE OF POTENTIAL OPTIONS, FOR COUNCIL APPROVAL, ACROSS THE CONFLICT SPECTRUM TO DETER AND DEFEND AGAINST THREATS TO OR ATTACKS ON ALLIES’ SPACE SYSTEMS”

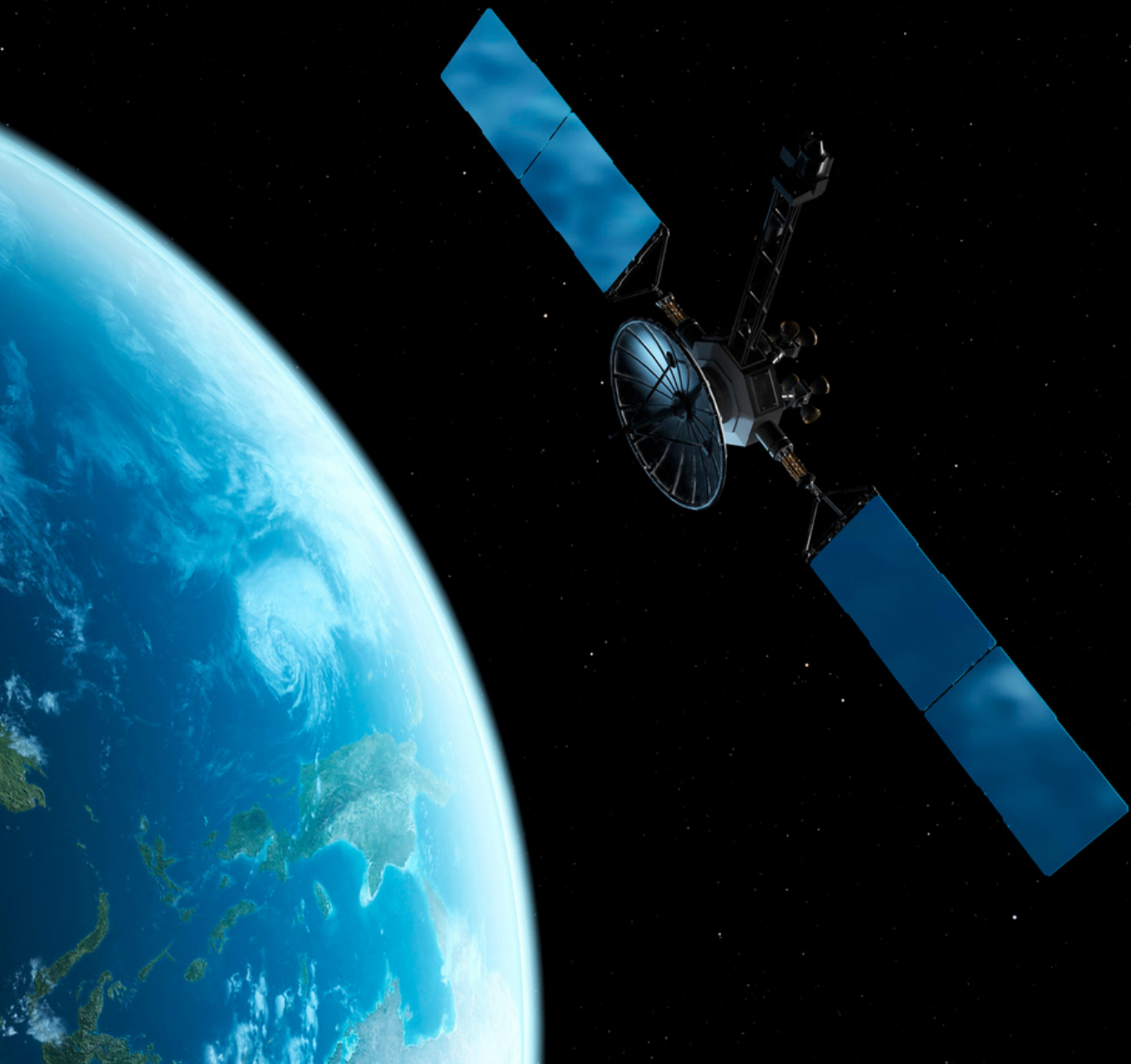


BUT IS IT FEASIBLE TO IMPLEMENT DETERRENCE IN THE SPACE DOMAIN (=SPACE DETERRENCE)?

RESEARCH QUESTION AND HYPOTHESES

CAN NATO IMPLEMENT SPACE DETERRENCE?

- A. DETERRENCE BY PUNISHMENT CAN BE CREDIBLY APPLIED IN THE OUTER SPACE UNDER CERTAIN CONDITIONS.
- B. DETERRENCE BY DENIAL CAN BE CREDIBLY APPLIED IN THE OUTER SPACE UNDER CERTAIN CONDITIONS.



ENABLERS OF DETERRENCE

VARIABLES FOR DETERRENCE BY PUNISHMENT

STRATEGIC VALUE
HIGH

REPLACEABILITY
LOW

RESILIENCE
HIGH/LOW

DENSITY
LOW

VARIABLES FOR DETERRENCE BY DENIAL

STRATEGIC VALUE
LOW

REPLACEABILITY
HIGH

RESILIENCE
HIGH

DENSITY
HIGH

ASSET-SPECIFIC DISTRIBUTION OF RESULTS

Category	Deterrence by punishment	Deterrence by denial
Terrestrial base	X	X
Weather & scientific satellite		X
SEWS	X	
PNT		
SATCOM		X
MILSATCOM	X	
ISR	X	
ASAT	X	

MOST SPACE ASSET TYPES ARE COVERED BY EITHER APPROACH OF DETERRENCE, HOWEVER.

LIMITS OF SPACE DETERRENCE



SPACE DETERRENCE IS
THEORETICALLY
FEASIBLE BUT

DIFFERENT ASSETS
REQUIRE DIFFERENT
APPROACH –
STRATEGIC
NIGHTMARE

TECHNOLOGICAL
ADVANCEMENTS WILL
ALTER THE TRAITS OF
ASSETS MAKING
DETERRENCE BY
PUNISHMENT LESS
IMPLEMENTABLE

SO WHAT NOW?

RELIANCE ON
DETERRENCE

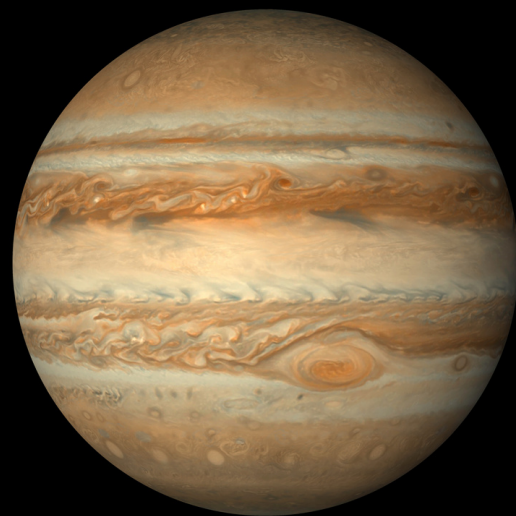
SPACE
DETERRENCE

X

CROSS DOMAIN
DETERRENCE



ALTERNATIVE WAYS
TO PROJECT NATO'S
PROTECTIVE
UMBRELLA



CONCLUSION

CAN NATO IMPLEMENT DETERRENCE IN SPACE?

YES, UNDER CERTAIN CONDITIONS.

BUT A HOLISTICALLY IMPLEMENTABLE DETERRENCE STRATEGY
WOULD YIELD MORE SECURITY FOR ASSETS.

POLICY LESSON: ATTENTION & RESOURCES ALLOCATED FOR SPACE
DETERRENT MEASURES CAN BE BEST USED FOR SUPPORTING CROSS-
DOMAIN DETERRENT EFFORTS.



THANK YOU FOR YOUR KIND ATTENTION!

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