Asia in Space: A History

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Background

- Asia occupies a little space in the history of space
  - Japan and China launched the first satellite in 1970
- The rivalry was not the driving force for Asian countries
  - There is widely shared understanding that space is global and US and USSR were in the lead
- None of Asian countries were global powers
  - Neither Japan, China nor India has long-range projection capability
  - Military space was not driving force for many years
Phase 1: Catching Up - Japan

- Technological catching up
  - Pacifist Constitution – no military driving force
  - National pride as the first non-Western industrialized country
  - Economic growth 1950s-1980s – space was affordable
  - Introducing US technology – strong motivation for engineers to develop their own technology
  - Japan-US Accord on commercial satellite procurement in 1990
Phase 1: Catching Up - China

- **Strategic catching up**
  - Spin-off from strategic missiles to launch capability
  - Inspired by Sputnik launch – symbol of the success of Communism
  - Great Leap and Cultural Revolution – Back step
  - Revitalization of space – “Four Modernization”
  - Fueled by SDI – “863 Plan” including manned space
  - Economic growth and search for international reputation
  - Manned Space is the symbol of Great Power
  - United States is always the target of the catching up
Phase 1: Catching Up - India

- Societal catching up
  - Space is for social infrastructure
    - Telecommunication for education, medicine and broadcasting
    - Earth observation for agriculture and land use
  - Space is not the evidence or proof of technological power
    - Widely divided social strata
    - High technology sector and low productivity sector co-exist
  - Avoidance of ambitious programs
  - Clear cut share of work between civilian agency and military
Phase 2: Competing for Leadership

- APRSAF vs. AP-MCSTA (APSCO)
  - APRSAF – Asia Pacific Regional Space Agency Forum
    - First meeting: 1993
    - Japan’s leadership to contribute regional space capability development through providing services
    - Forum (talk shop) of space agencies
  - AP-MCSTA – Asia Pacific Multilateral Cooperation in Space Technology and Application
  - APSCO – Asia Pacific Space Cooperation Organization
    - First meeting: 1994
    - Chinese leadership to transfer technology to less developed countries
  - APRSAF’s change – Sentinel Asia in 2005, SAFE (environmental program) in 2008, STAR in 2009 (small satellite program)
Phase 3: Beyond Catching Up

- Japan – From technology to strategy
  - Information Gathering Satellite – first strategic reconnaissance satellite
  - Basic Space Law in 2008 – opening up for Self-Defense Force to develop, own and operate satellites

- China – From catching up to global leadership
  - Manned exploration – space station and Moon exploration
  - Modernization of military capability

- India – From society to technology
  - Moon exploration
  - Commercialization
Military Space in Asia

- **Japan** – Lack of strong motivation
  - Constitutional constraints – hard to justify long projection capability
  - Telecom for territorial defense and missile defense (early warning)
  - Veto by MoD – Budgetary constraints

- **China** – Concerns about US space dominance
  - 2007 ASAT test – Denial strategy, response to NSP 2006
  - Question of transparency

- **India** – Concerns about emergence of China
  - Potential threat for future Indian security
  - Modernization of military force + civilian space technology
  - Relationship between civil and military space is not strong

- **Contestable issues**
  - Japanese missile defense – Chinese concerns
  - Chinese ASAT capability – Indian missile defense
  - Chinese emergence of modern military power – Japanese territorial defense
Different Perspectives

- Historical, institutional, social and political differences
  - Japan, China and India shared the concept of catching up
  - But their perspectives on space are quite different
  - There is no common ground for competition except regional leadership

- Future of space in Asia
  - Each country pursue its own objectives
  - Space race only happens when both sides play the same game – India is keen on competing with China, but it is not true *vice versa*
  - Japan may concern Chinese development, but it does not have enough resources to compete