International Contributions for L3

- Must not be mission critical
  - Flight equivalent must exist in Europe
- Must bring real cost savings
  - Needs clean interfaces
  - Minimize shadow engineering required in ESA and Member States
  - Low friction losses required
- Ideally we want third arm back
  - Has implications both at ESA and Member States
- We need a creative mix of contributions

International Contributions

- What is noble work and what is not?
- Easily identifiable S/C building blocks:
  - Launcher
  - Propulsion modules
  - Thrusters
  - Pieces like: Solar array, power supplies, batteries, structures, mechanisms, star trackers, TTC, antennas
- Easily identifiable Payload items:
  - Telescopes
  - Lasers, Modulators, reference cavities
  - CCDs, Diodes, Pre-Amps
  - Proof masses
  - Actuators
  - Electronics, USO

International plans for space-based detectors

- USA
  - Scenario 1: Junior partner in eLISA
  - Scenario 2: NASA-led mission (SGO)
  - Technology: Telescope, Laser system, Interferometry , Optical Bench technology, GRS, Charge management, torsion pendulum test benches
- China
  - Scenario 1: Join eLISA with a 20% contribution
  - Scenario 2: Develop a similar Chinese mission
  - Technology: Telescopes, interferometry, GRS and torsion pendulum
- Japan: Decigo-Pathfinder was strong candidate for a small mission by Jaxa, not selected

Roadmap for eLISA as ESA L3

- eLISA Science Theme selected as L3 in 2013
- Technology Roadmap work 2013 – 2015
- Possibly continued Mission Concept Study 2014 – 2015
- Successful LISA Pathfinder flight in 2015
  - Assessment of technology status
  - Possibly additional work, e.g. breadboarding of Payload + (1 to 4) years
- Selection of Mission Concept in 2015 + (1 to 4)
- Possibly Start EQM of complete Payload 2015 + (2 to 5)
- Start of Industrial Definition Study 2015 + (2 to 5)
- Start of Industrial Implementation 2015 + (6 to 9)
- Launch in 2015 + (15 to 18)