

### **3.9 Particle Acceleration: Physics Research or Particle Beam Weapon?**

Space physics particle accelerators could be confused with technology development of neutral particle beam weapons or of antimatter beam weapons. There is little difference between the acceleration equipment for these three devices. An orbital physics particle accelerator could be confused with operational weapons based on the observables of a long, slender structure, a large power source, and possibly of radioactive emissions.

### **3.10 Microsatellite Constellations: Nonweapons or Brilliant Pebbles?**

Microsatellites deployed in large constellations could be mistaken for a constellation of weapons. In the case of Brilliant Pebbles, a constellation of Pebbles could be effective against an attempted massive ICBM first strike by an enemy.

Microsatellites could also be mistaken as technology development for smart rocks or Brilliant Pebbles. Launchers for microspacecraft, such as laser launcher systems or mass drivers, could be interpreted as being a launch system for Brilliant Pebbles, microsatellite-based space mines, or a sabotage satellite.

### **3.11 Orbital Laser: Communications Device or Beam Weapon?**

A large orbiting communications laser (say, for communicating with the Thousand Astronomical Unit mission proposed by the Jet Propulsion Laboratory) could be mistaken either for an operational laser battle station or as development of technology in support of a laser space weapon. A laser-based orbital debris sweeper could be similarly mistaken for a weapon, although such a debris sweeper might not need the focusing ability of a weapon; however, it might still be mistaken for technology development towards space laser weapons.

### **3.12 Telerobotic Satellites: Satellite Repair or Sabotage?**

Telerobotic orbital transfer vehicles could be mistaken for sabotage satellites. Indeed, the same spacecraft could be used either for purely peaceful purposes or for sabotage/weapons purposes.

### **3.13 Satellite Constellation: Debris Sweepers or Space Mines?**

A constellation of debris-collecting satellites (e.g., orbital debris sweepers) could be mistaken for a constellation of space weapons, (e.g., space mines). The observable they have in common is the constellation.