target receivers, or through thermal overload. Both satellites share the observable of high-power sources, the critical capability of tracking, and the ability to focus a high-power beam of microwave energy.

3.5 Lunar Mass Driver: Materials Transporter or Bombardment Catapult?

A lunar mass driver for launching mined material into orbit for processing could be confused with a lunar bombardment catapult weapon. Both share the observables of a long, slender structure (the accelerator section), the supporting technology of mass drivers, and a large high-power energy delivery system. Indeed, a lunar mass driver could in principle be used as a bombardment weapon.

3.6 Large Aperture Optics: Astronomy Telescope or Space Laser?

Development of large astronomy telescopes in orbit could be confused with the optics of either a space-weapon laser or a weapon targeting system. They share the supporting technology of large aperture mirrors. Even if not confused with operational weapons, research into large reflectors for orbital astronomy could contribute to the development of the optical components of these systems. Historically, on the other hand, things have gone the other way; one hears that the most recent civilian space optics technology — the Hubble Space Telescope — drew on military optics for surveillance applications.

3.7 Earth Observation: Means of Verification or Weapons Tracking System?

Civilian Earth-observation satellites and nonweapon military surveillance satellites could be confused with the tracking component of a space weapon system. These spacecraft types share the observable characteristic of large aperture optics, the supporting technology of large mirrors, and the critical capability of performing extremely accurate tracking of targets.

3.8 Particle Beams: Ion Rocket or Neutral Particle Beam Weapon?

Satellites using ion rockets could be confused with research into neutral particle beams. Both share some technologies: a high-power energy source and an ion acceleration and neutralization device. An ion engine, however, is not likely to be confused with an operational neutral particle beam weapon, because the former should not have the pointing or focusing capabilities of the latter.