SATELLITE CONFIGURATION

Configuration drivers:

- fit reference launch vehicle fairing envelope

- outside shape must be a cylinder, diameter = 1 m

- low area-to-mass ratio

- easy integration of PGB

- spin axis must be a principal axis of inertia
$$\beta = (J_{spin} - J_{trans})/J_{trans} \approx 0.2$$

Proposed solution:

- ad-hoc 'spinning top' structure supporting the PGB and equipment plus cylindrical solar panel in two pieces

- sensors and electric thrusters mounted to central belt, two S-band antennas aligned with spin axis, one deployable

- $\beta = 0.23$

- cross sectional area = 1.3 m²

- area-to-mass ratio = 0.005 m^2/kg