Table 1: Conditions for a 4m Geostationary sphere

Parameter	value
Environmental conditions at	
Geocentric distance r_o km	42,164
Solar m_V	-26.74
Earth m_V ($\beta = 90°$,quadrature)	-20.6
Earth m_V ($\beta = 20°$)	-16.0
Moon m_V	-12.74
Physical and observable properties	
Adopted sphere diameter d_s m	4
Angular diameter arcsec	0.0196
Adopted albedo a	0.9
q (phase law parameter)	1.5
m_V (opposition)	10.08
m_V (quadrature)	11.32

Notes: "Lambert's law" for scattered radiation is assumed, corresponding to a perfectly diffusing sphere. Magnitudes were computed assuming the distance to the sphere is $r_o - r_\oplus$. β is the angle between the geocenter-line and geocenter-Sun line.