

A Study on the Satellite Magnetic Momentum Assessment

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If the satellite has the magnetic material or magnetic moment, the satellite is affected by the earth magnetic field by the space environment. The aim of this paper is to assess the satellite magnetic momentum which is an input to ADCS(Altitude Determination Control Subsystem) analyses to assess spurious torques. The magnetic momentum at satellite level is due to magnetic momentum generated by each unit which is due to internal currents circulation or to the presence of magnetic components. Also the magnetic momentum at satellite level is due to circulation of the DC supply current from PSR to each unit. As introducing the intrinsic contribution of each unit and the magnetic moment based on the current return through the structure, this paper assess the satellite magnetic moment.