

# **Double Star TC-2 observation of field aligned currents in the nightside Magnetosphere**

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Field-aligned currents play an important role in coupling the magnetosphere to the ionosphere by transferring momentum and energy from one region to the other. In this study, magnetic field measurements obtained by the Double Star TC-2 spacecraft are used to survey the Region 1 and Region 2 field-aligned current systems in the nightside magnetosphere. The effects of the interplanetary magnetic fields on the field aligned currents are investigated using cases when the interplanetary magnetic field is greatly enhanced in either strongly southward, northward, eastward or westward direction.