



Development of ProSEDS Conductive Tether

C3



Objective

To develop a conductive coating which can be applied to wires so that they have a desired conductive property as well as the necessary thermal control properties.

Why Needed

A bare wire electrodynamic tether has been proposed as a more efficient means to collect electrons from the ionospheric plasma. However, a bare metal wire doesn't have the proper thermal control characteristics to keep it from softening and melting. A conductive coating was developed for the ProSEDS mission whose emittance and solar absorptivity will maintain the needed temperature. The coating is very conductive, durable, can be applied to wires to be woven, is resistant to the space environment.

Point of Contact

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Sponsor

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