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The Martian Dust Devil Electron Avalanche: Laboratory Measurements of the E-field Fortifying Effects of Dust-Electron Absorption

W.M. Farrell , J.L. McLain , M.R. Collier , J.W. Keller

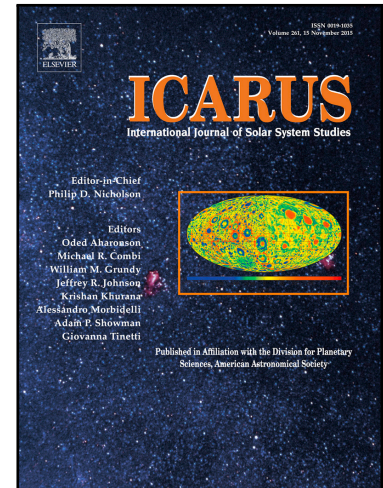
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### Highlights

- Triboelectric processes creates large E-fields and enhanced electrons flows in dust devils
- On Mars, the low atmospheric pressure under stress from the E-field gives rise to a Townsend discharge that limits tribocharging currents
- We show that the undercharged population of dust can absorb electrons in the Townsend discharge, thereby increasing E-fields compared to unobstructed electron flows.

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