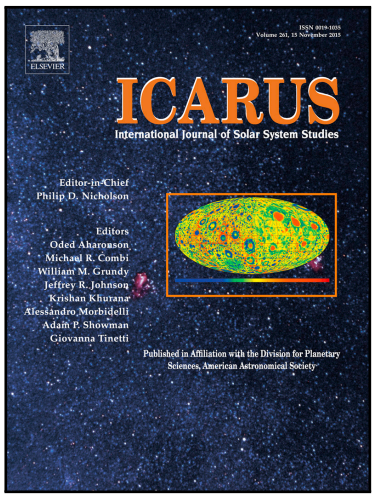

Hydrocode modeling of the spallation process during hypervelocity impacts: Implications for the ejection of Martian meteorites

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Highlights

- Impact spallation is modeled using both grid- and particle-based hydrocode.
- Impact-driven flow field within a 1.5× projectile radius is investigated.
- Resolution test using 100–2000 cells per projectile radius is performed.
- Ejecta is further accelerated above the ground by late-stage acceleration.
- Impact spallation is a plausible mechanism to launch Martian meteorites.