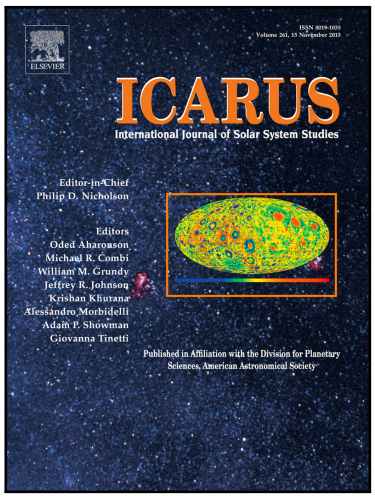

Rarefied Gas Dynamic Simulation of Transfer and Escape in the Pluto-Charon System

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Highlights:

- Pre- and post-encounter cases are simulated and well-resolved flowfields shown.
- Density fields exhibit a gas transfer structure arcing through L1 toward Charon's wake.
- A simulated escape rate of 7×10^{25} CH_4 s^{-1} for the NH encounter agrees with observation.
- Total flux to Charon is 2×10^{24} s^{-1} at ~98 % CH_4, with peak values (~2x) on the upstream face.
- Charon gravitationally focuses incident flow into a wakeward high-density region.
- Charon may retain a thin atmosphere sourced from Pluto's escape, but below observable levels.