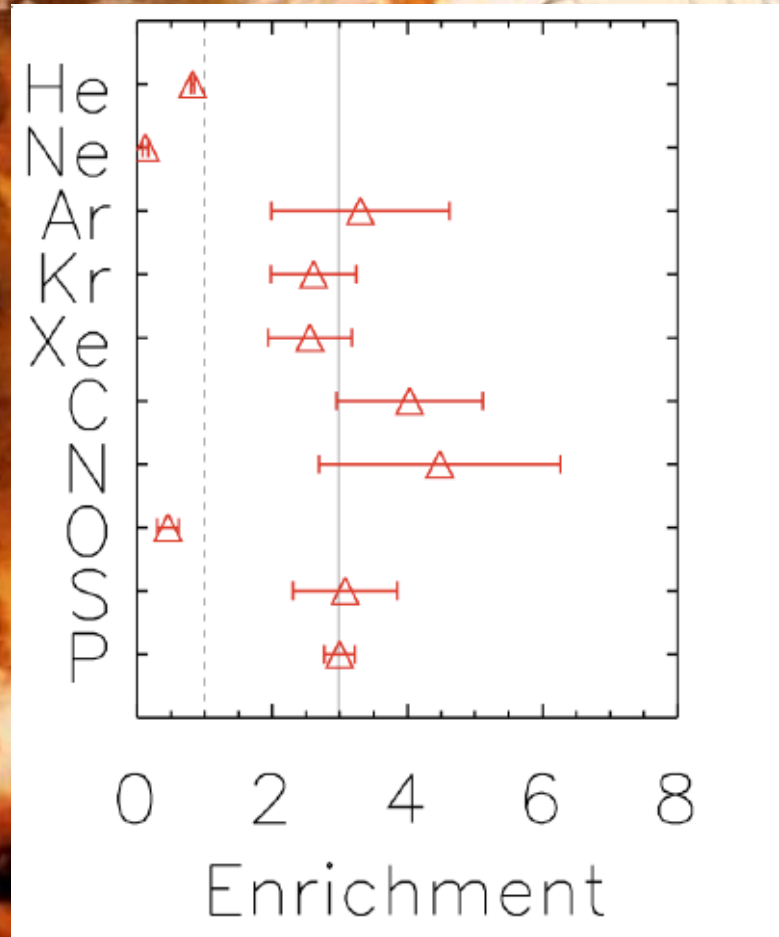


# Noble Gases and Oxygen in Gas Giants

Nikhil Monga<sup>1</sup> John Shumway<sup>1,2</sup> Steven Desch<sup>1</sup>

<sup>1</sup>School Of Earth and Space Exploration, Arizona State University.

<sup>2</sup>Department of Physics, Arizona State University.



Galileo probe measurements of Jupiter's atmosphere

Background: An artist's take on the Galileo probe entering Jupiter. (NASA Public domain image)

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The composition of Jupiter: sign of a (relatively) late formation in a chemically evolved protosolar disc

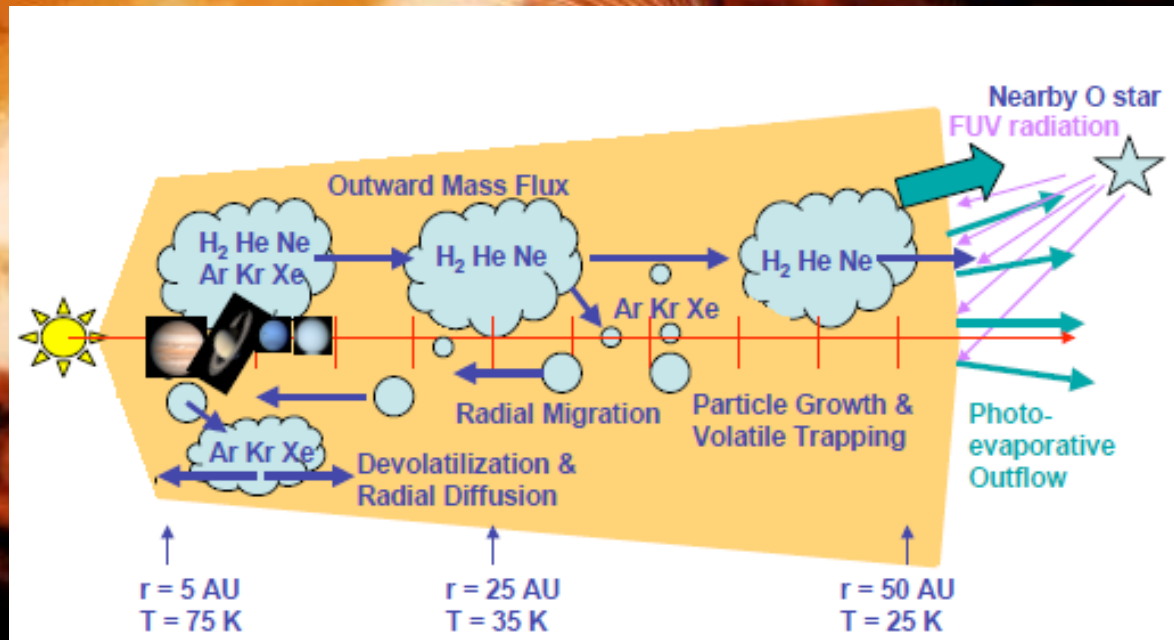
Tristan Guillot<sup>1\*</sup> and Ricardo Hueso<sup>2\*</sup>

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<sup>2</sup>Física Aplicada I, ETS Ing., Universidad Pais Vasco, Alda. Urquijo s/n. 48013 Bilbao, Spain

Suggest, photoevaporative loss from top and bottom surfaces of disk.

We propose →



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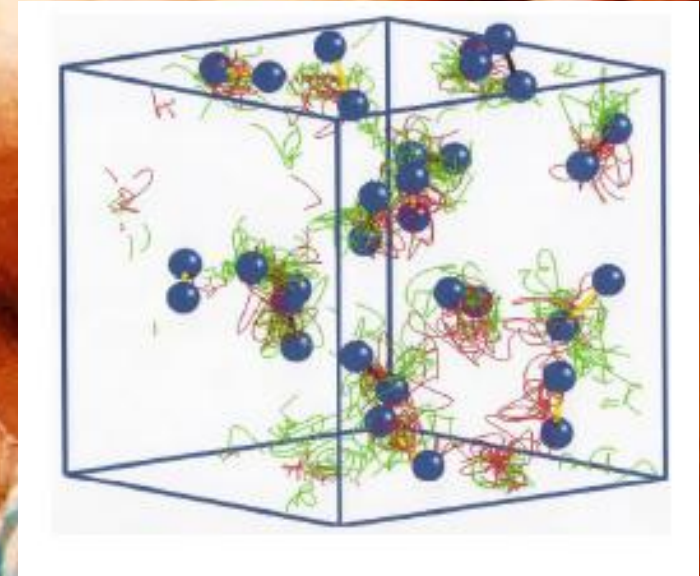
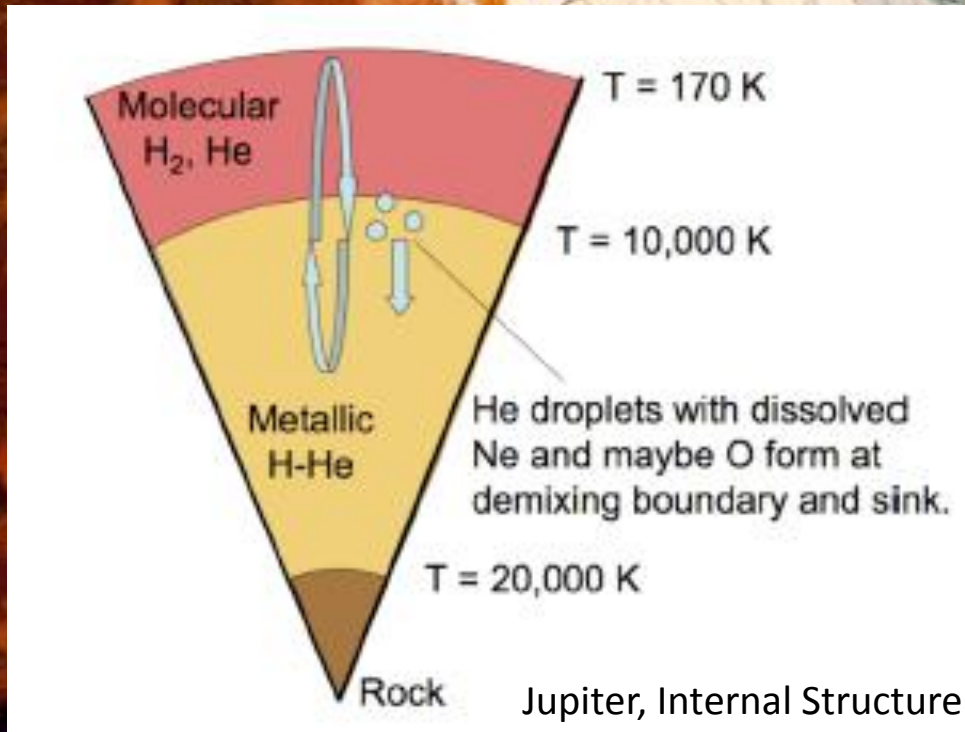
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He immiscibility → the helium rain !



Snapshot at 5000 K & 0.2 Mbar.

From John Shumway's Path Integral Quantum Monte Carlo code.

<http://phys-tools.github.io/pi-qmc/>

- Partitioning of noble gases?
- Is oxygen sequestered in helium?

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