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Jupiter's envelope is not homogeneous

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The amount and distribution of heavy elements in Jupiter's interior is crucial to understand how the planet was formed and evolved. The results provided by the Juno mission in the last years have fundamentally changed our view of the interior of Jupiter. The remarkably accurate gravity data, including odd gravity harmonics, have allowed us to put constraints on the zonal flows, the extent of differential rotation and lead us to find that Jupiter has most likely a dilute core. In this study we do interior structure calculations using a Bayesian statistical approach and fitting all observational constraints, to show that a non-homogeneous envelope is also a constraint set up by the Juno measurements, which is helping us to get closer to unveiling Jupiter's deep secrets.