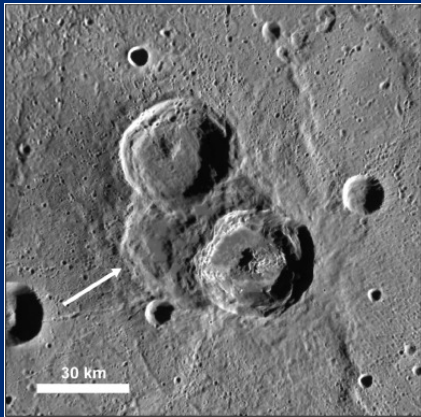
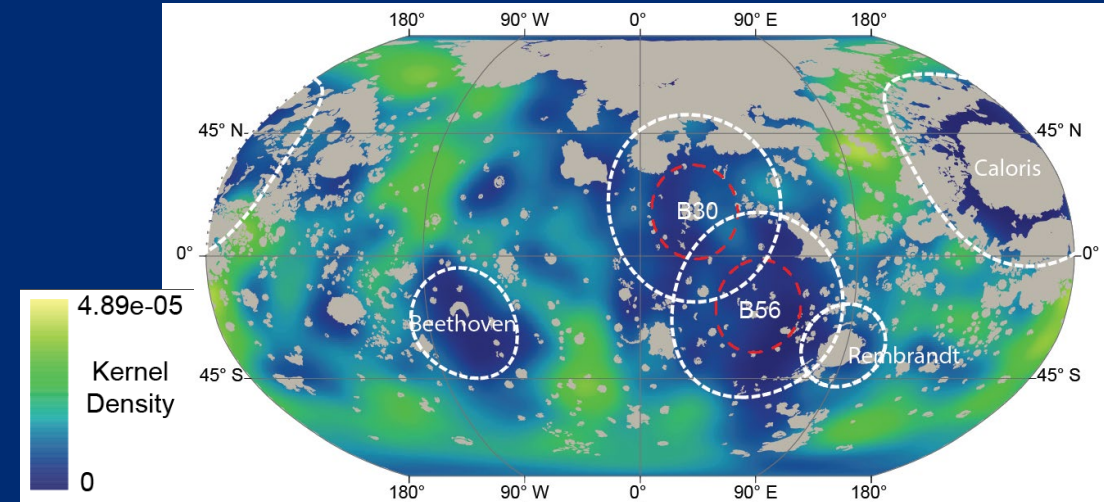
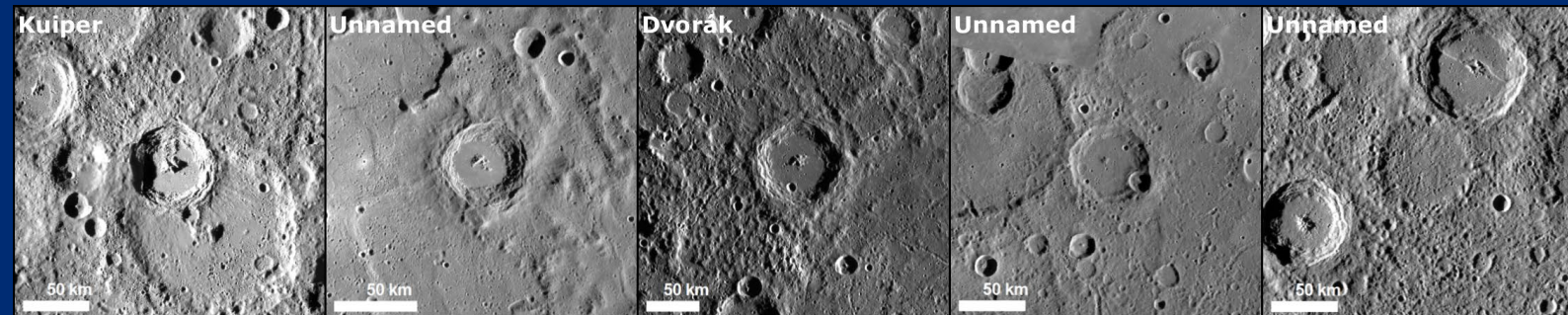


# A morphological evaluation of crater degradation on Mercury: Revisiting crater classification with MESSENGER data

- Impact crater morphology can be used to gain insight into the geological history and evolution of a planet's surface
- Both initial crater morphology and the characteristics of craters as they degrade over time are important factors when assessing crater age
- Mercury has a deficit of the most degraded craters near two large putative impact basins, suggesting that the formation of these basins likely obliterated many preexisting craters



Proximity weathering can cause craters to appear older than they actually are, due to modification by ejected material from a younger crater nearby



Above is an example of how mature-complex impact craters change shape as they age.

**The distribution of degraded craters on Mercury supports the theory for the Late Heavy Bombardment.**