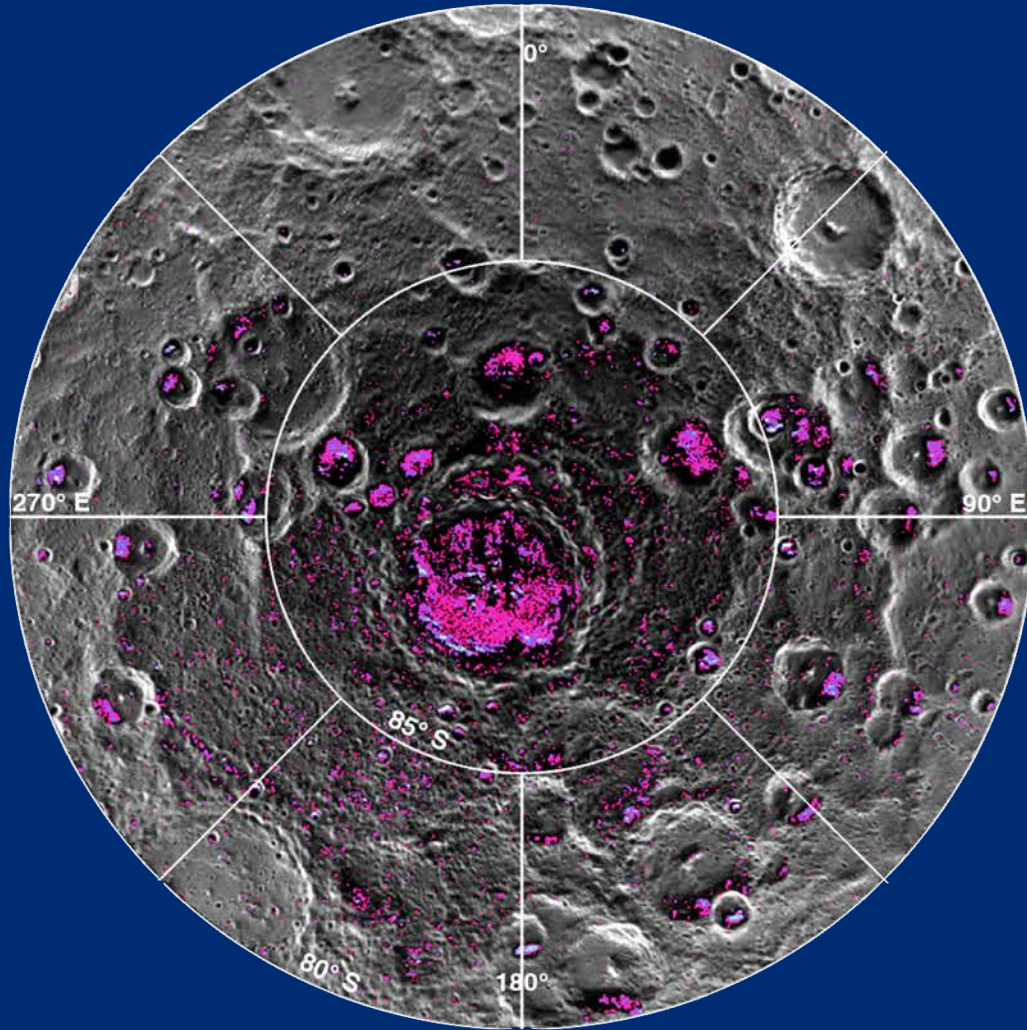
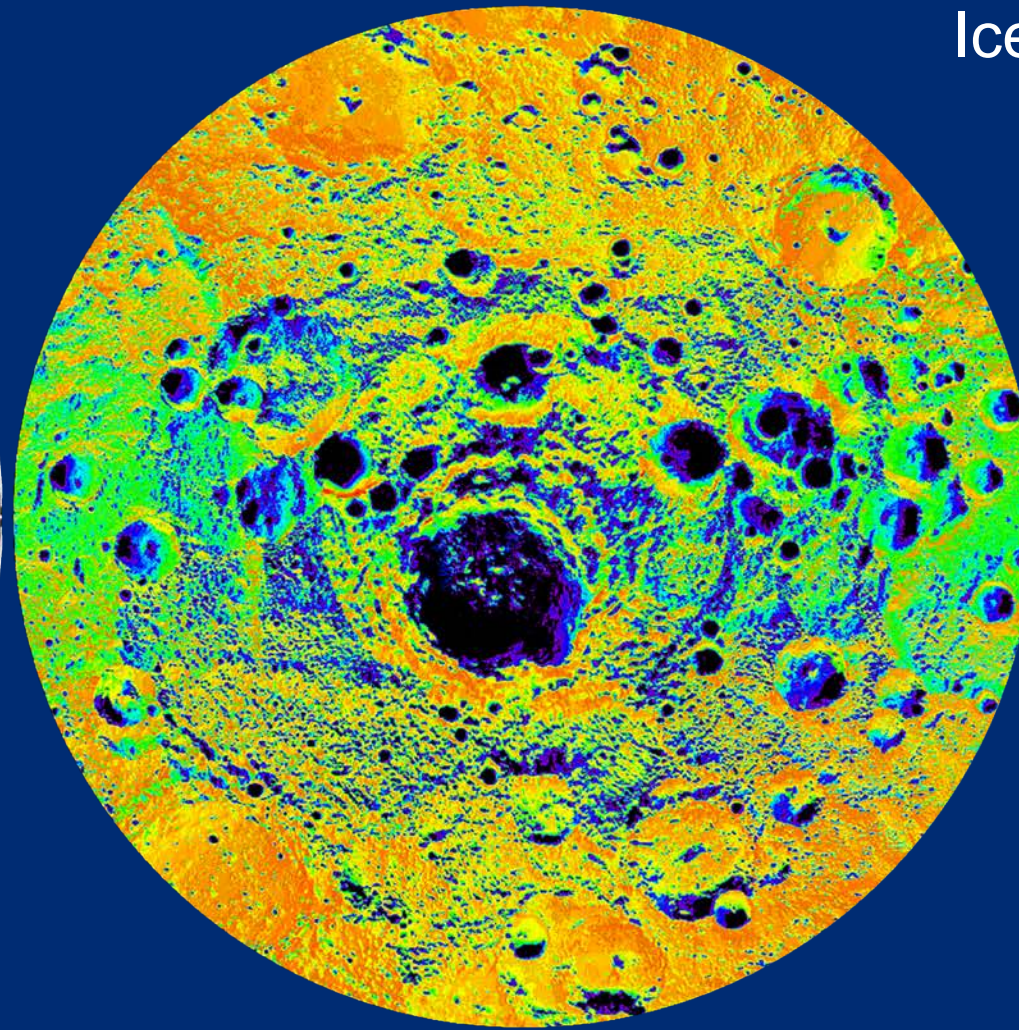


# Mapping Ice at Mercury's South Pole



Arecibo radar image in pink indicates locations of water ice at Mercury's south pole.



Illumination map from MESSENGER images, colored by percent sunlit during a Mercury solar day. Permanently shadowed regions are in black.

Ice is located in permanently shadowed regions near Mercury's south pole.

**But not every permanently shadowed location has signs of ice!**

Arecibo radar and MESSENGER data show that ~50% of permanently shadowed regions lack evidence of ice at both of Mercury's poles.

**The uneven distribution of Mercury's ice supports an impact origin**