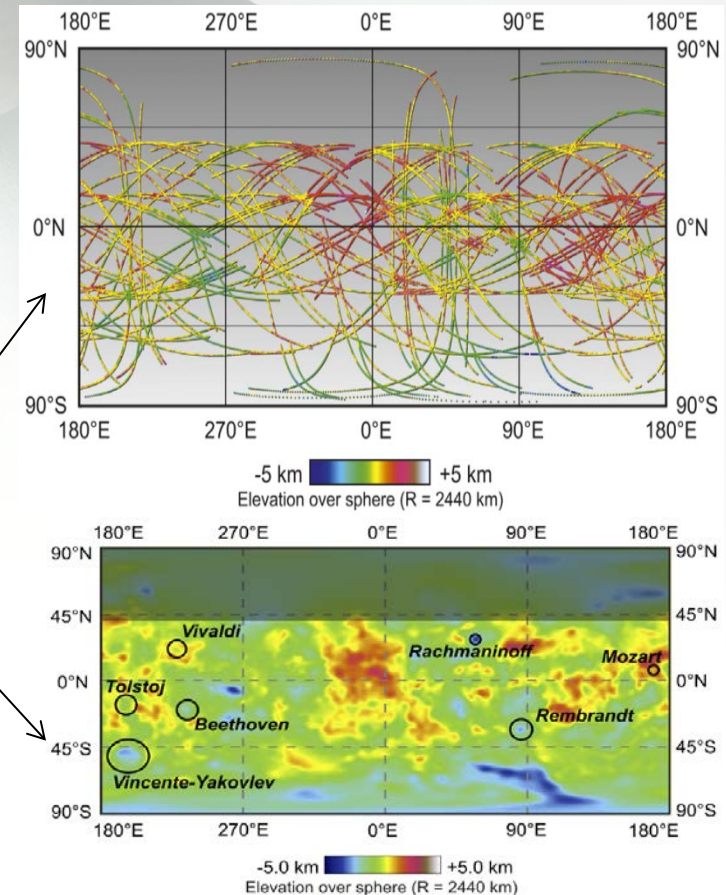


# MESSENGER Confirms the Equatorial Ellipticity and Polar Oblateness for Mercury

- MESSENGER measurements confirm that Mercury possesses an equatorial ellipticity and a polar oblateness.
- Crossover heights of 225 individual limb profiles were adjusted by least-squares techniques to establish a rigid global topographic network as shown by the Equidistant cylindrical projections of adjusted limb profile network (top) and spherical harmonic representation of limb height measurements to degree and order 80 (bottom).
- Limb profiles and local digital terrain models derived from stereo-photogrammetry showed good agreement.
- Comparisons with absolute height data from laser altimetry indicate that the limb model overestimates planetary radius by ~900 m on average.



S. Elgner et al. (2014), Mercury's global shape and topography from limb images, *Planetary and Space Science*, 103, 299–308, doi:10.1016/j.pss.2014.07.019.