Testing the cataclysm: What samples do you want?

- Ages of pre-Nectarian basins
- Samples of basin melt sheet
  - Identify by similar ages, chemistry
  - Likely to have rocks from more recent basins mixed in
- No single “Genesis rock”
  - Need to understand diversity of site
- Need to avoid large young craters
  - Most samples in and around small impact not reset
  - Small (5-20 km?) craters may expose pristine melt rocks
Finding the ages of pre-Nectarian basins: Where do you go?

- South Pole-Aitken
- Next oldest mostly Farside, near S. Pole
- Access to S. Pole, Farside highly desired

Pre-Nectarian basins (colored) on Nearside (left) and Farside (below), from Wilhelms (1987). The oldest are South Pole-Aitken and those in brown like Australe.