The analysis of the observations of the protons in the near-lunar plasma wake by the SWIM sensor of the SARA experiment on Chandrayaan-1 mission had revealed the following:

1) Dawn-dusk asymmetry in the differential flux of protons in the wake, with the dusk flux 30% lower than the dawn flux. The asymmetry possibly linked to the plasma expansion process (parallel to IMF) with the IMF oriented dominantly along the Parker spiral. The asymmetry is more pronounced near the wake edges.

2) Comparison of the density of the protons computed as a function of distance along the direction of IMF with the 1-D plasma expansion model supports the observation of protons up to distances of 500 km from wake edge where as in the deeper wake, processes other than plasma expansion dominates.

3) The velocity distribution of the protons in the wake also supports the above inference.
Since the protons originated by different entry mechanisms differ in their energies, the existence of protons of different population in the near lunar wake alters the wake plasma environment.