Ganymede PhiO Coordinate System

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The PhiO coordinate system is a fixed coordinate system which is defined by the corotation velocity vector at Ganymede (Phi, ϕ) and the Jovian spin axis (Omega, Ω) [1]. These vectors are perpendicular to one another. Phi is positive in the direction of corotation and Omega is positive northward.

Ganymede's ϕ is the X-coordinate whilst Ω is the Z-coordinate. The Y-coordinate completes the right-handed set and points towards Jupiter from Ganymede. Basis vectors of the system are fixed at the satellite's closest approach (i.e. epoch time).

References

[1] NASA. Galileo Orbiter at Jupiter Calibrated Mag High Res V1.0 (PDS). `"https://nssdc.gsfc.nasa.gov/nmc/dataset/display.action?id=PSFP-00283"`.