Analytical model of the heliopause shape

Peter Israelevich

Tel Aviv University, Department of Earth Sciences, Tel Aviv, Israel (peter@luna.tau.ac.il)

The point source of plasma expanding into the uniform plasma at rest is considered. Simple analytical description is found for the shape of the tangential discontinuity separating two different regions of plasma. Balance between dynamic pressure of the expanding plasma and static pressure of the uniform plasma at rest is used as a condition at the boundary. The obtained result describes the shapes of nebulae remaining after the star explosions. It is also applicable to the heliopause if the interstellar wind may be neglected.