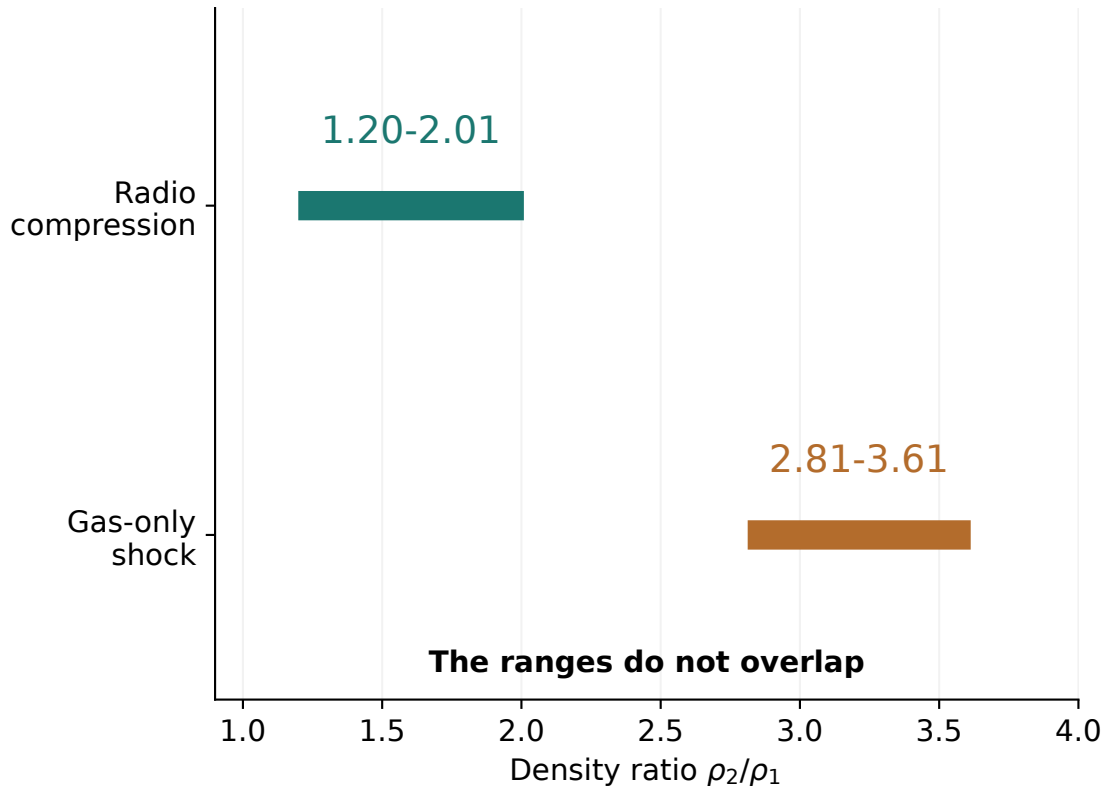


13 June 2010: why plasma motion matters

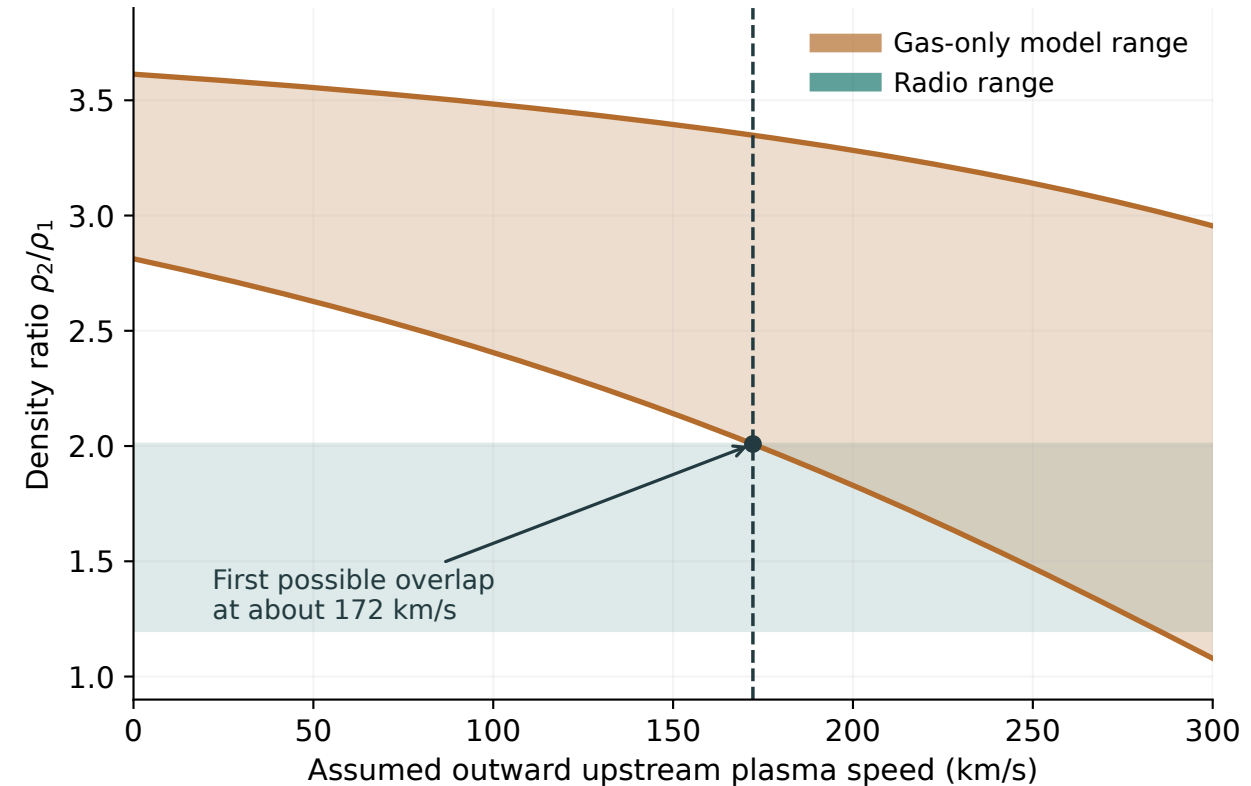
Published inputs: Ma et al. (2011) and Kozarev et al. (2011) | Conditional RMO calculation

Front speed at 05:40 UT: 496-667 km/s; adopted sound speed: 126-186 km/s

Upstream plasma at rest



Allow upstream plasma to move



Result: the stationary-plasma comparison supports a magnetic contribution; it depends on the plasma flow.

The 172 km/s threshold is a model condition, not an observed flow or a guarantee of a complete solar fit.

Quoted errors treated as bounds; normal front speed, common plasma and gamma = 5/3 assumed. No solar family is identified.