

Stellar Rotation Effects on the Stellar Wind

We discuss the role of the azimuthal stellar wind flow in the stellar-rotation braking mechanism (Shivamoggi [1]). The stellar rotation is shown to cause the slow magnetosonic critical point to occur lower in the corona and hence lead to enhanced stellar wind acceleration. For strong rotators, this process is shown to occur in a narrow shell adjacent to the star. The stellar rotation is shown to cause the physical throat section of the effective “de Laval” nozzle associated with the stellar wind flow to become narrower and the nozzle to also have a large flare, indicative again of an enhanced flow acceleration.

[1] B. K. Shivamoggi: *Phys. Plasmas* **27**, 012902, (2020), Editor’s Pick paper.