Abstract Submitted
for the DPP19 Meeting of
The American Physical Society

Stellar Rotation Effects on the Stellar Wind BHIMSEN SHIVAMOGGI, University of Central Florida — We discuss the role of the azimuthal stellar wind flow in the stellar-rotation breaking mechanism. We make use of Parker-Weber-Davis ([1], [2]) MHD stellar wind model. 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.

[1] E. N. Parker: Astrophys. J. 128, 664, (1958).

[2] E. J. Weber and L. Davis: Astrophys. J. 148, 217, (1967).

Ruth Teferi
APS

Date submitted: 01 Jul 2019 Electronic form version 1.4