

Temporal variation of the solar wind bulk velocity by STEREO PLASTIC at solar minimum

Andrea Opitz^{1,2}, R. Karrer², P. Wurz²

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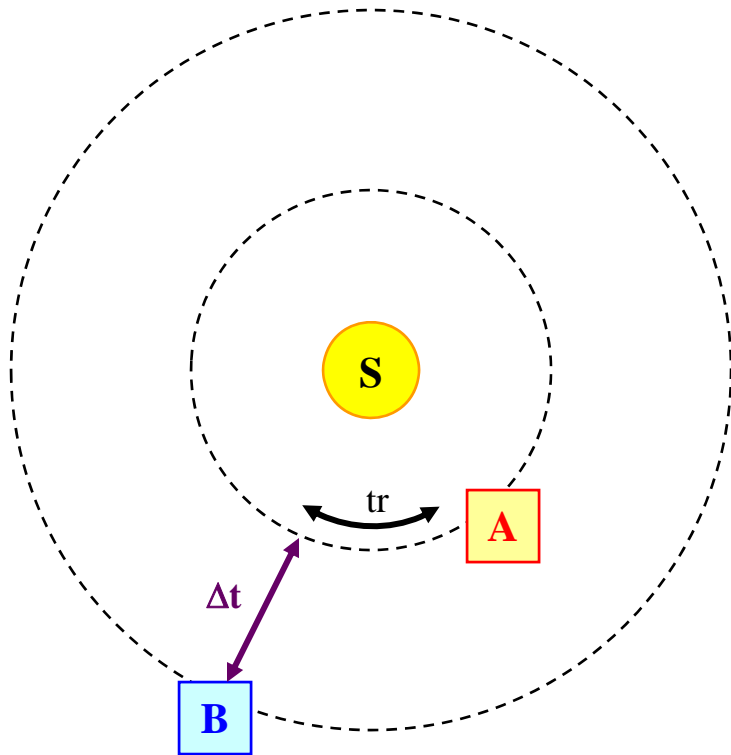
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Motivation

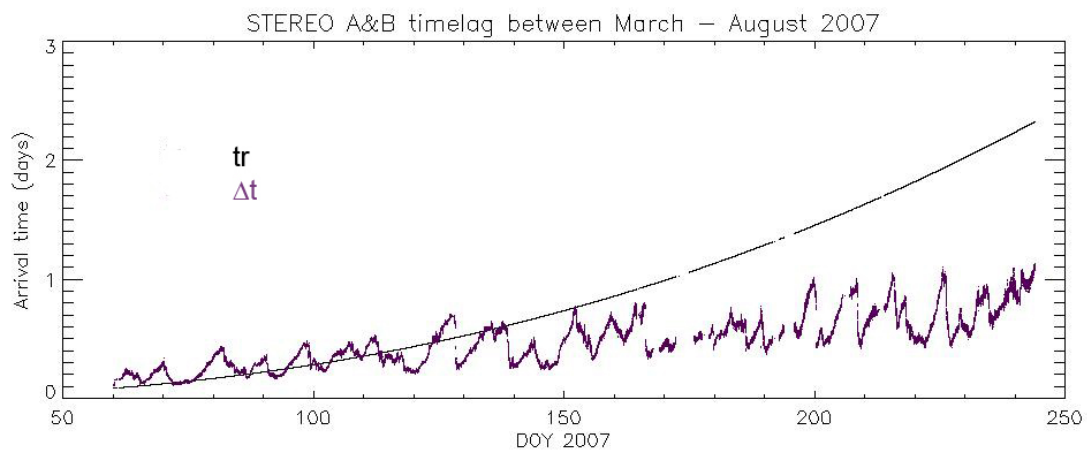
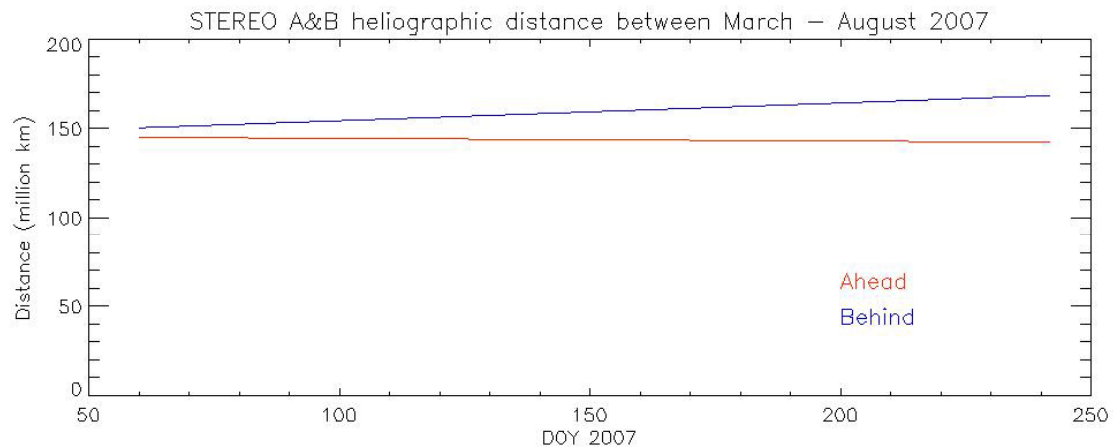
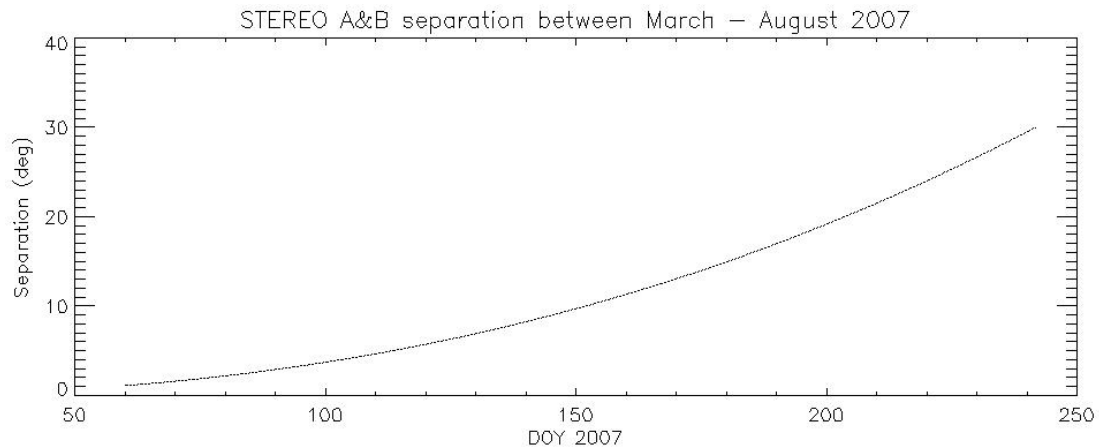
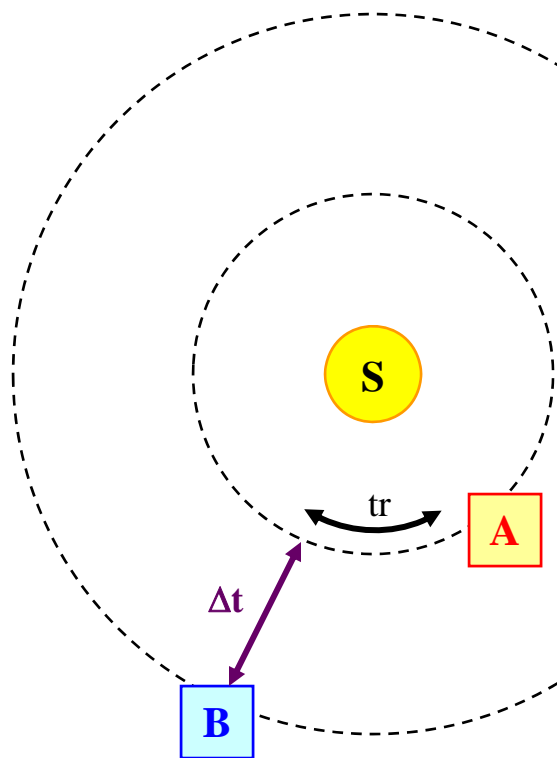


- STEREO geometry
- timelag correction
- cross correlation
- SW persistence

$$tr = \alpha / \omega$$

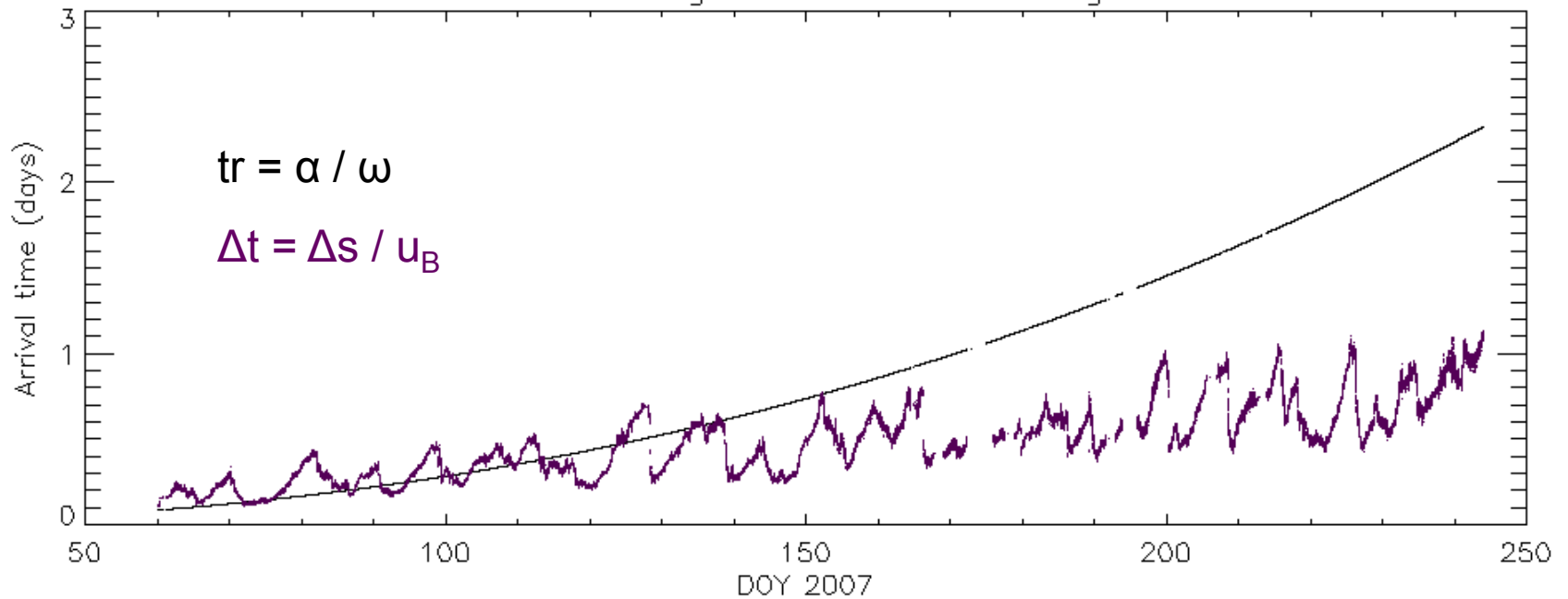
$$\Delta t = \Delta s / u_B$$

Geometry, timelag

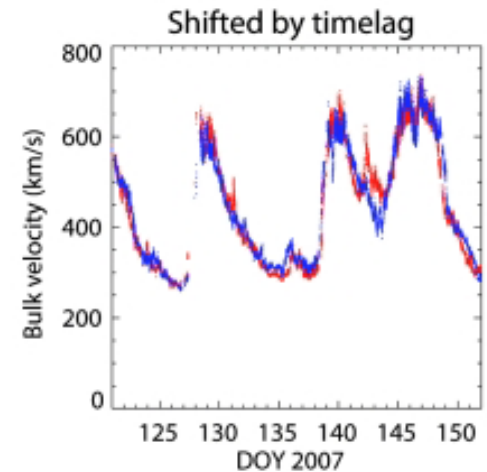
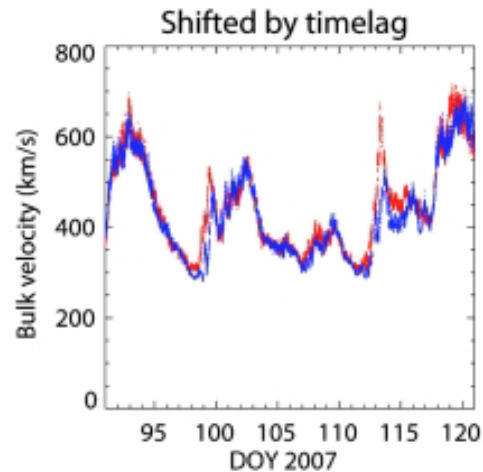
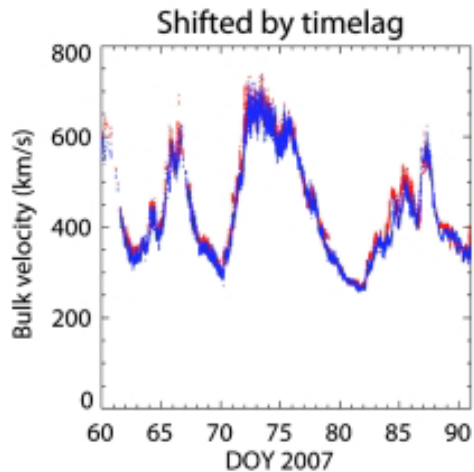
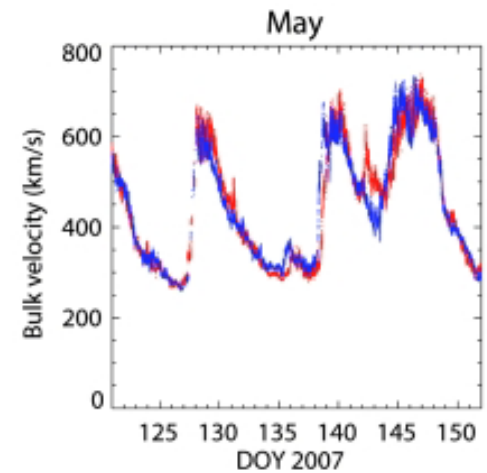
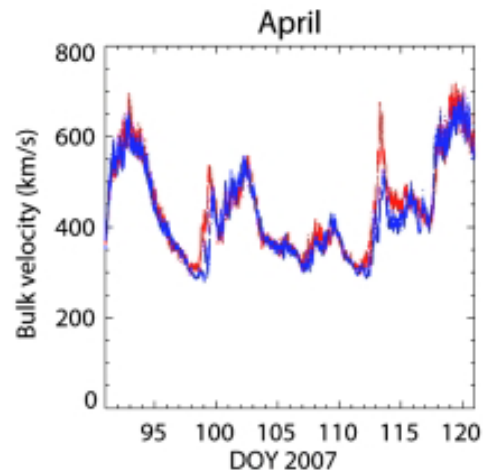
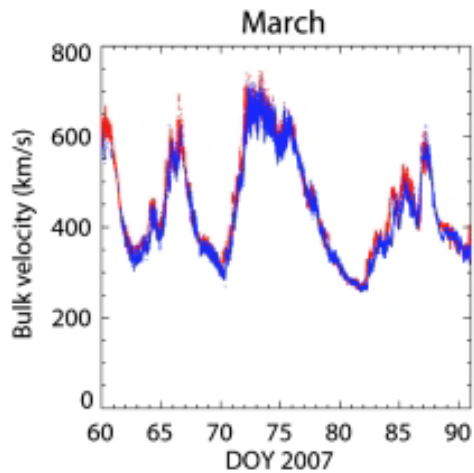


Timelag

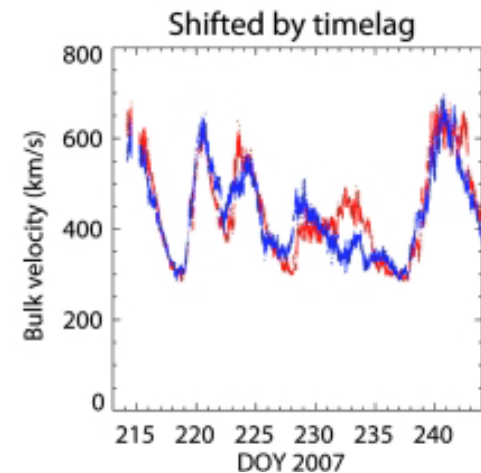
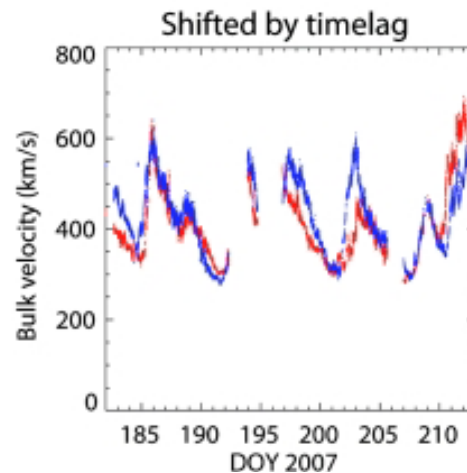
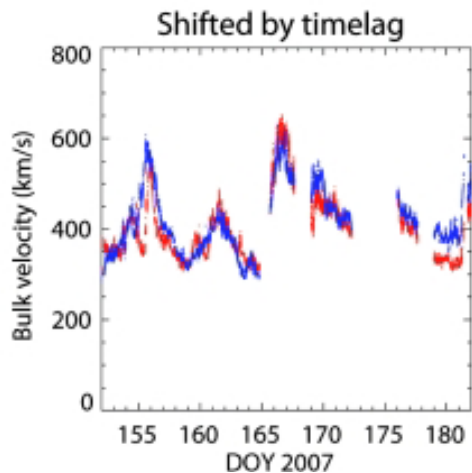
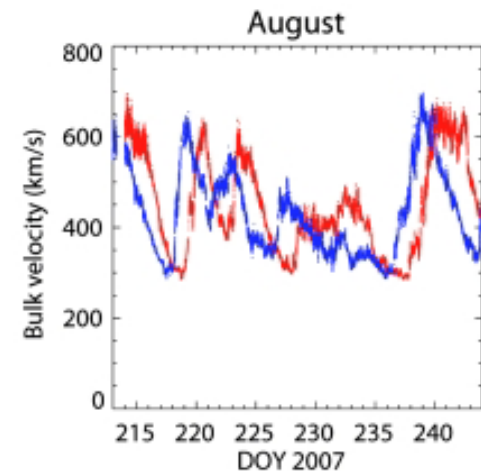
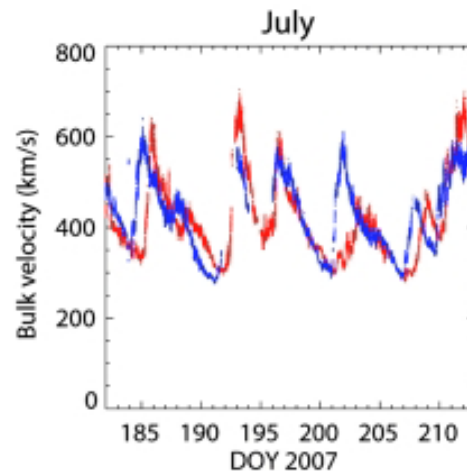
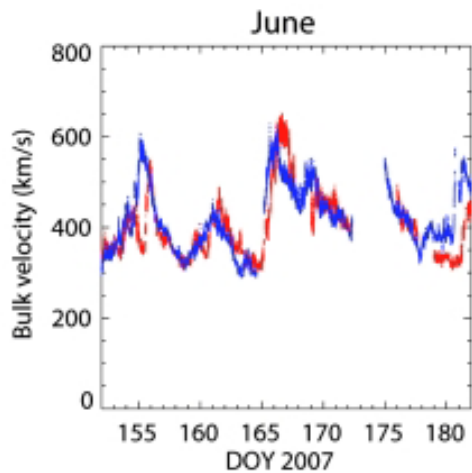
STEREO A&B timelag between March – August 2007

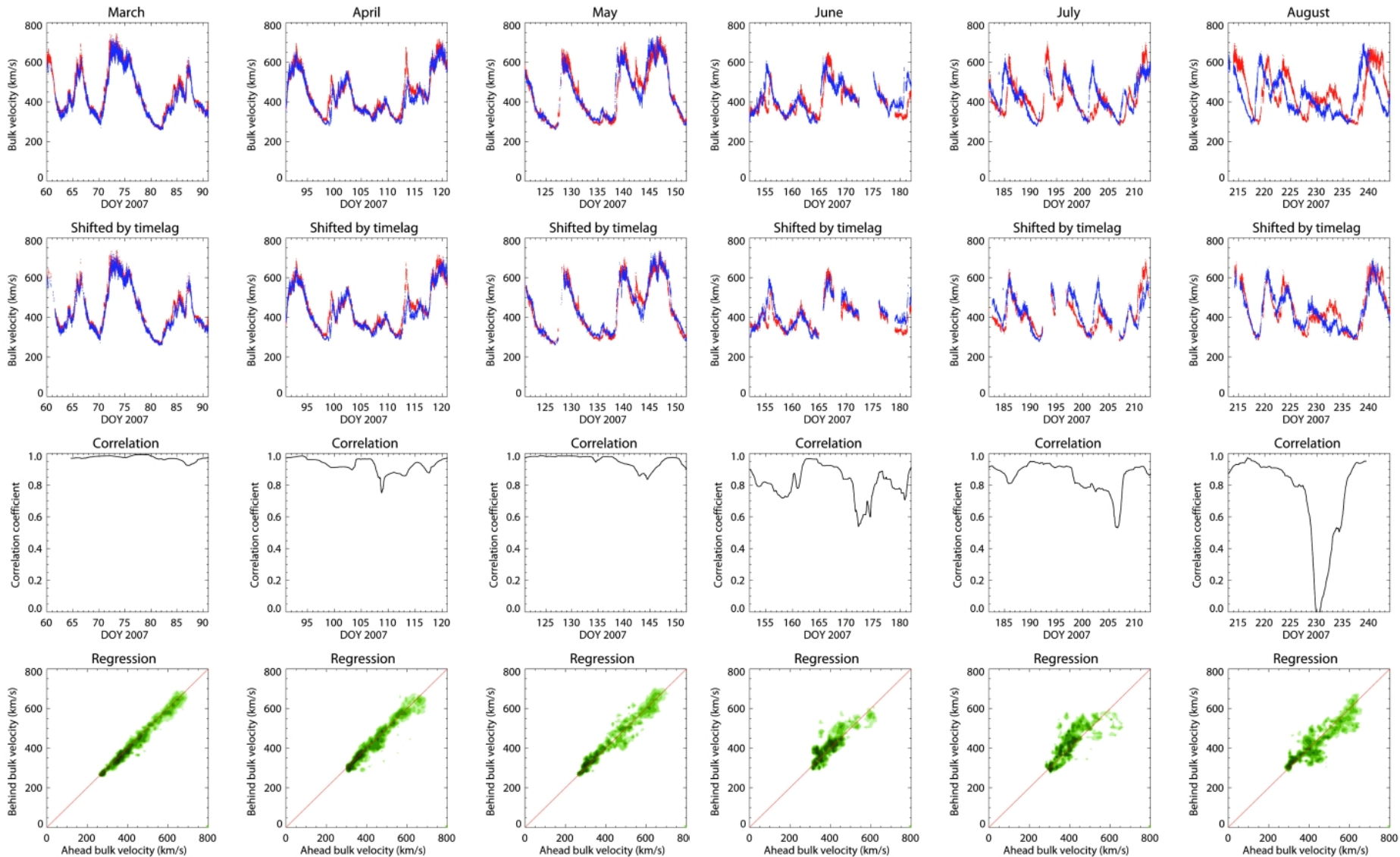


Timelag correction

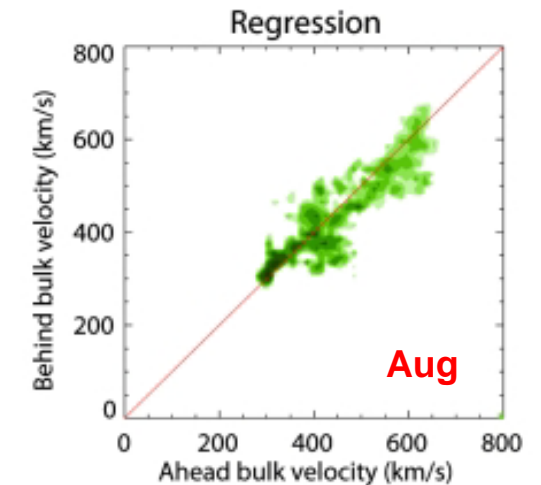
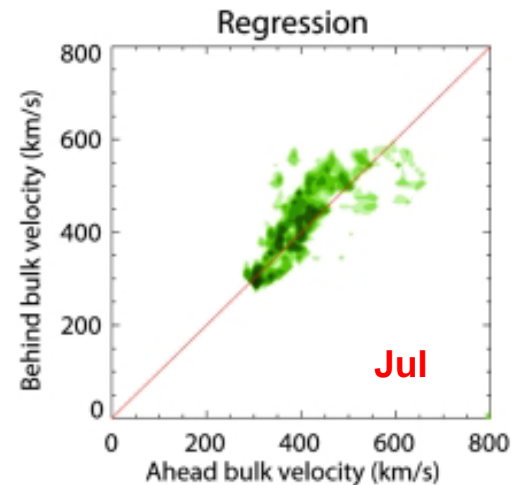
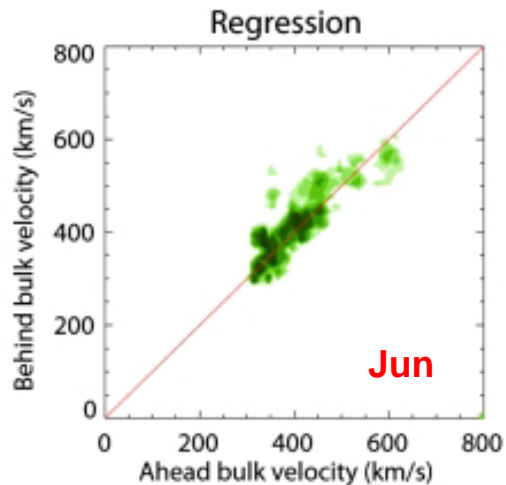
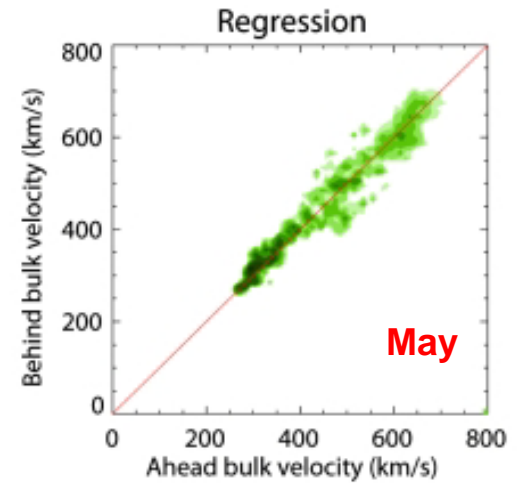
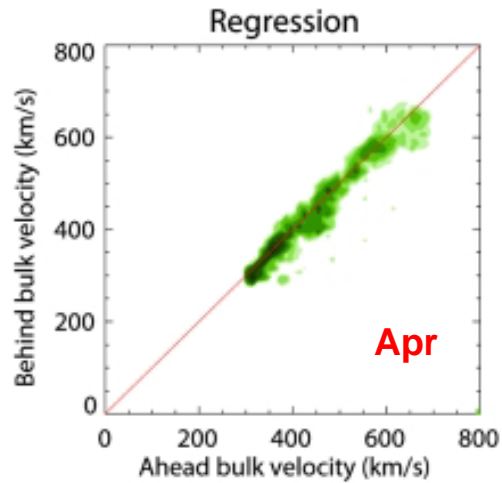
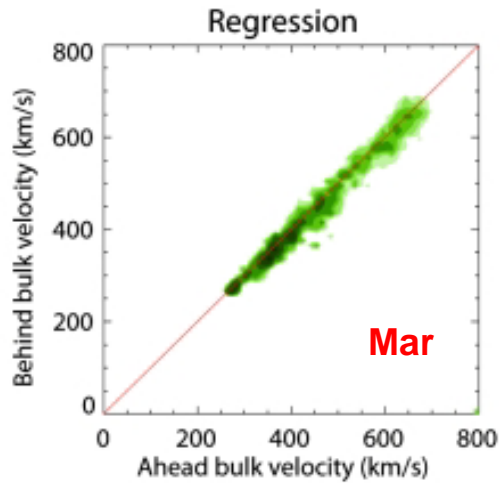


Timelag correction

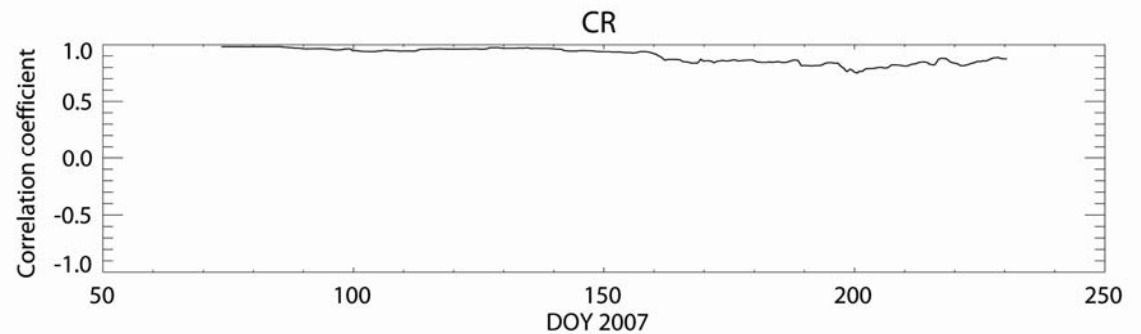
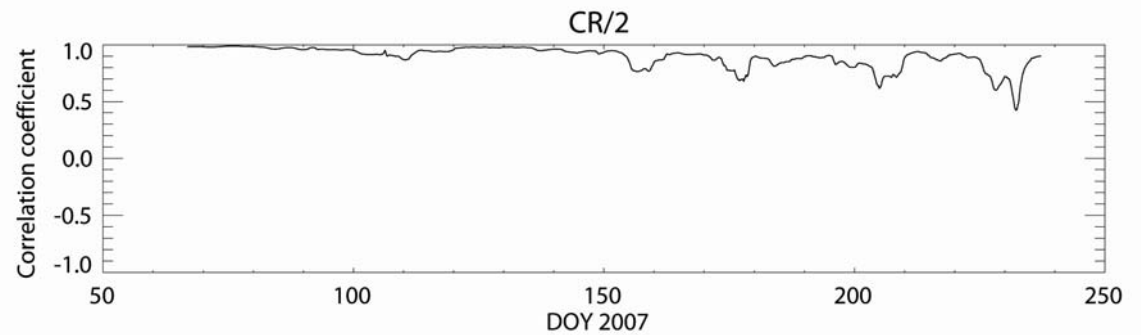
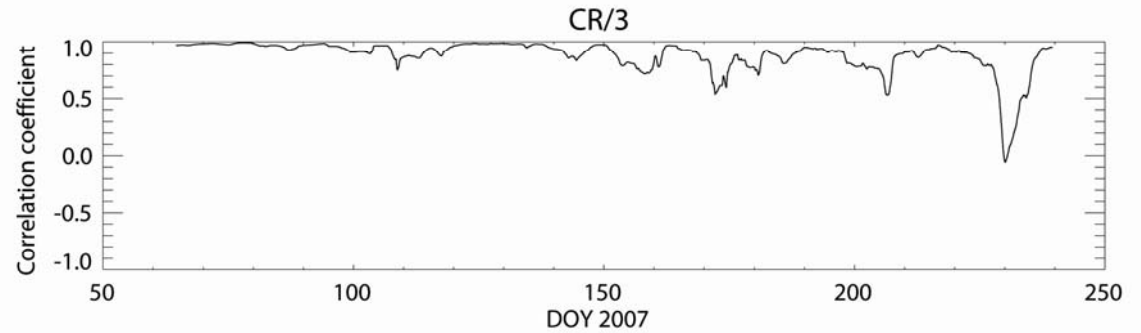
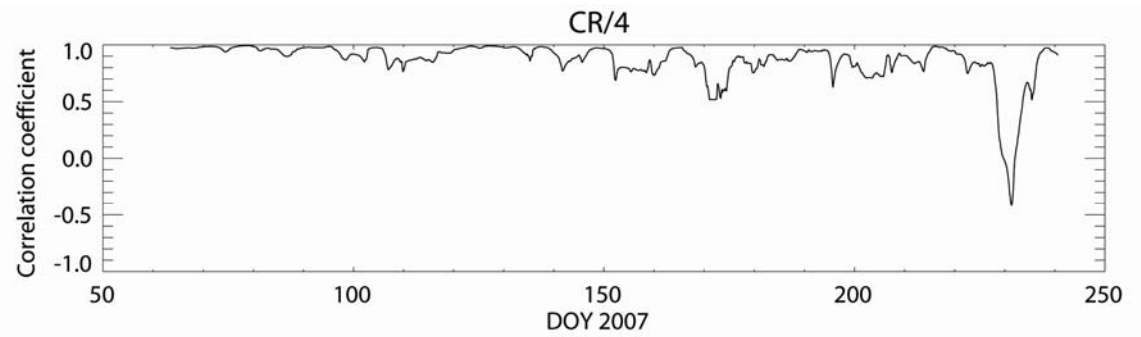




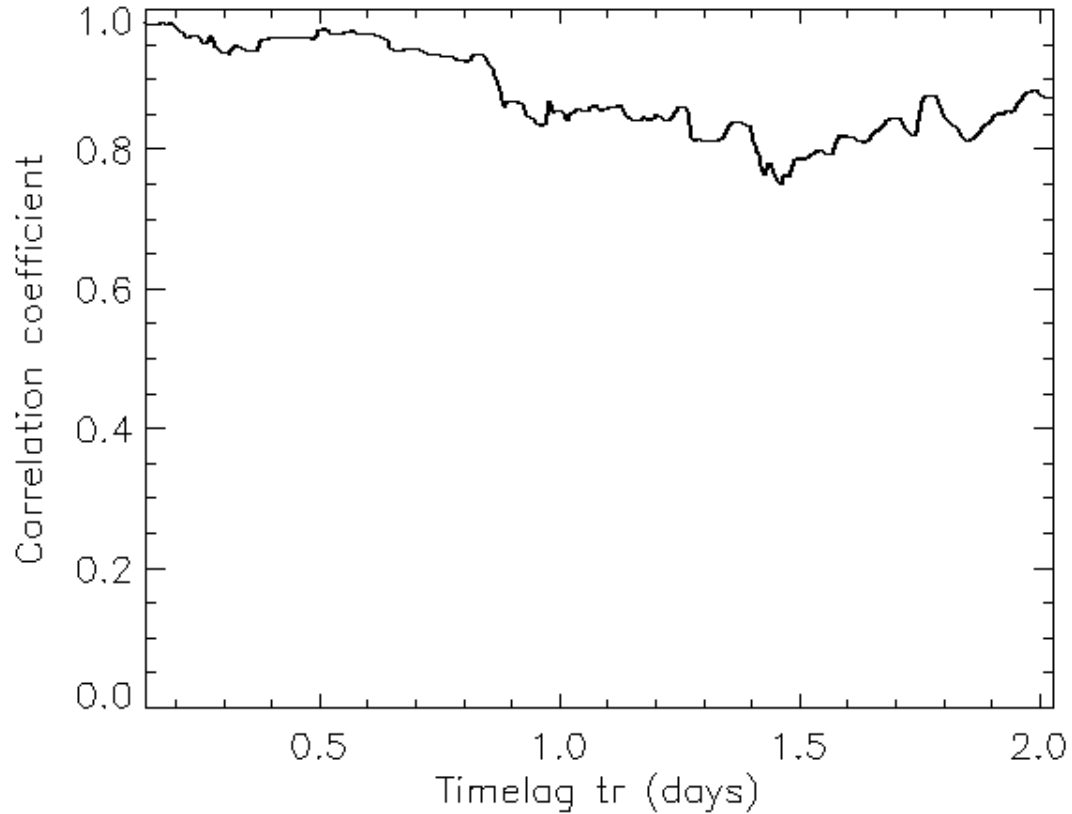
Regression



Cross correlation

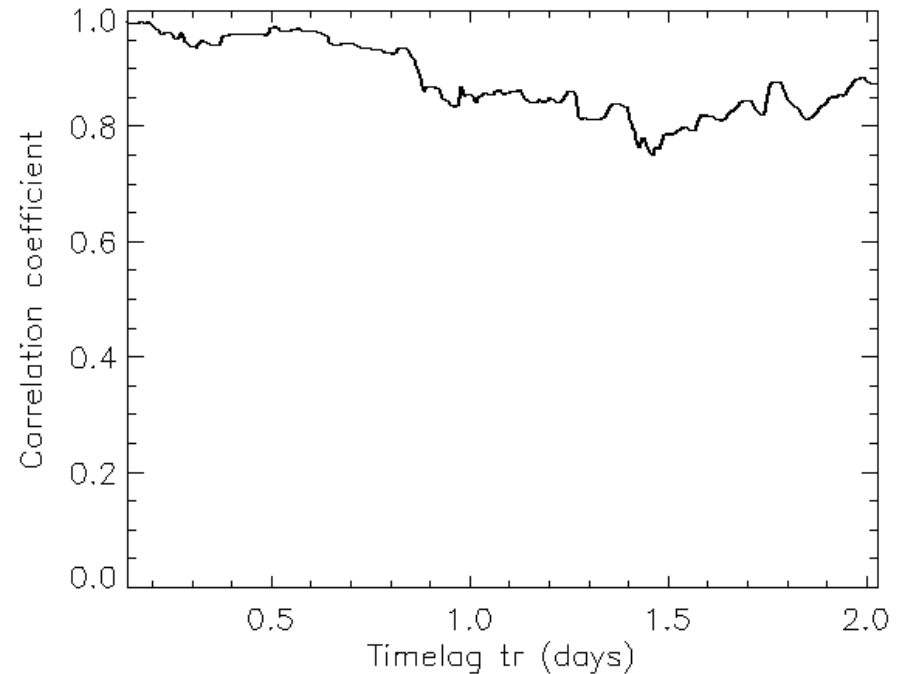


Cross correlation vs. timelag



Conclusions

- STEREO: in 4 years from 0° up to 180° separation
 - Timelag scan for any time
- $r = 0.85$ for 2-day timelag





SWG, Meudon, 21st April 2008

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Cross correlation over 1-day period

