

# Coronal holes and solar wind parameters



Europska Unija  
Ulaganje u budućnost  
Projekt je sufinancirala Europska Unija iz  
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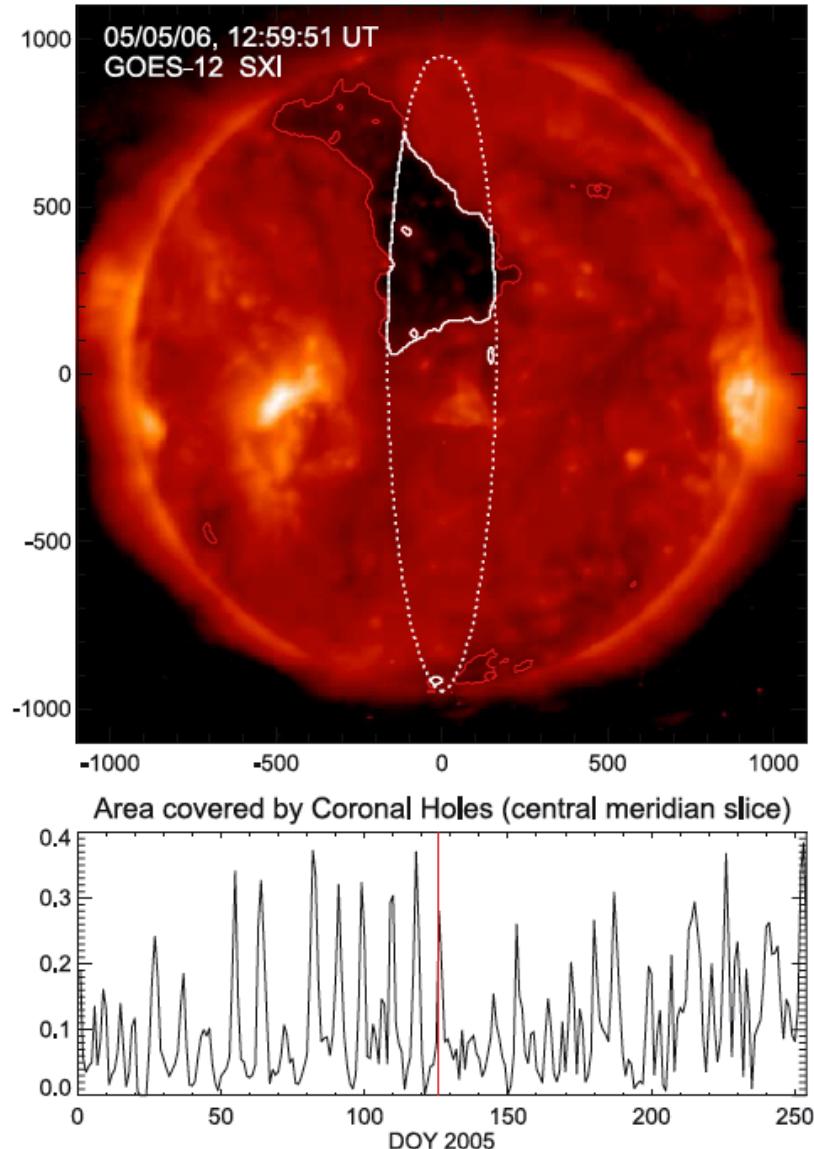
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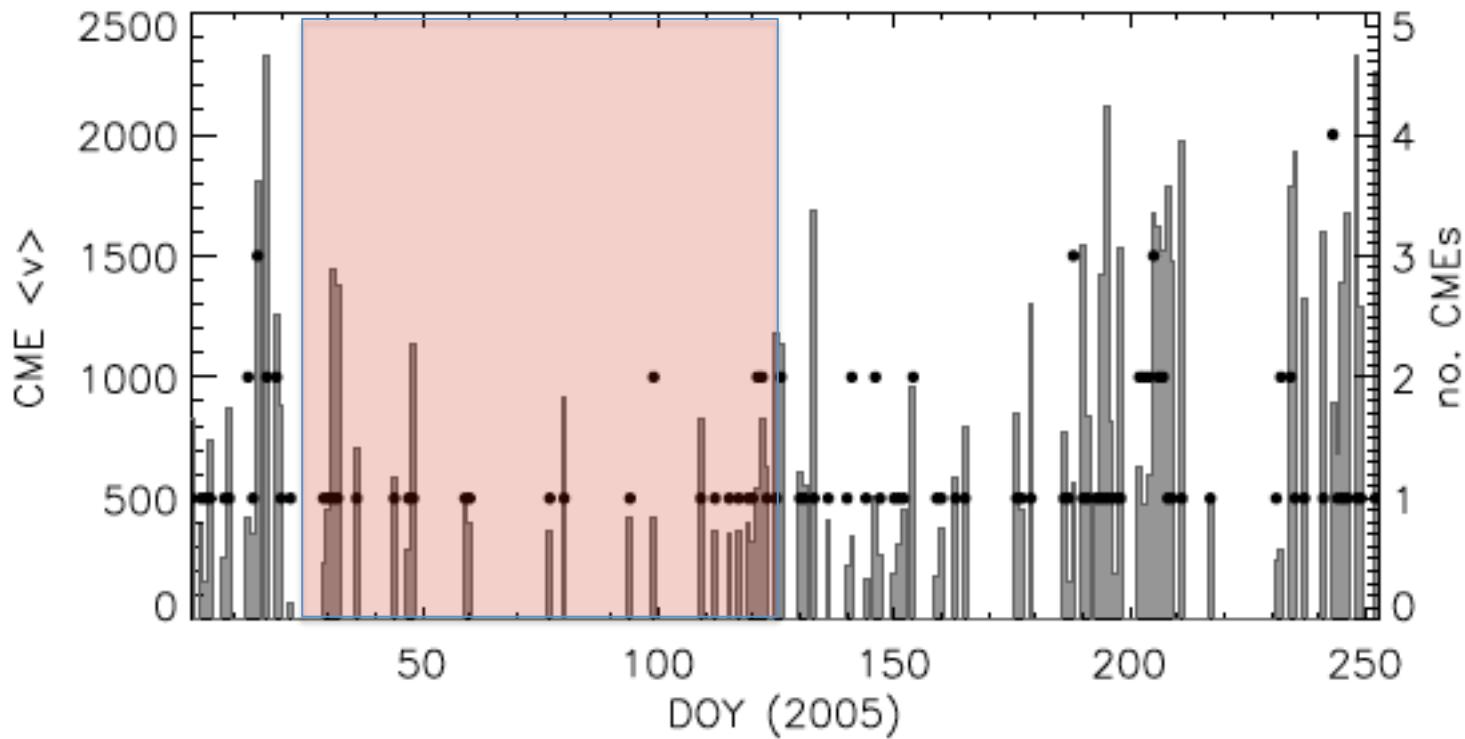
Temmer et al. 2007

Analysis period:  
25 January 2005 - 11 September  
2005

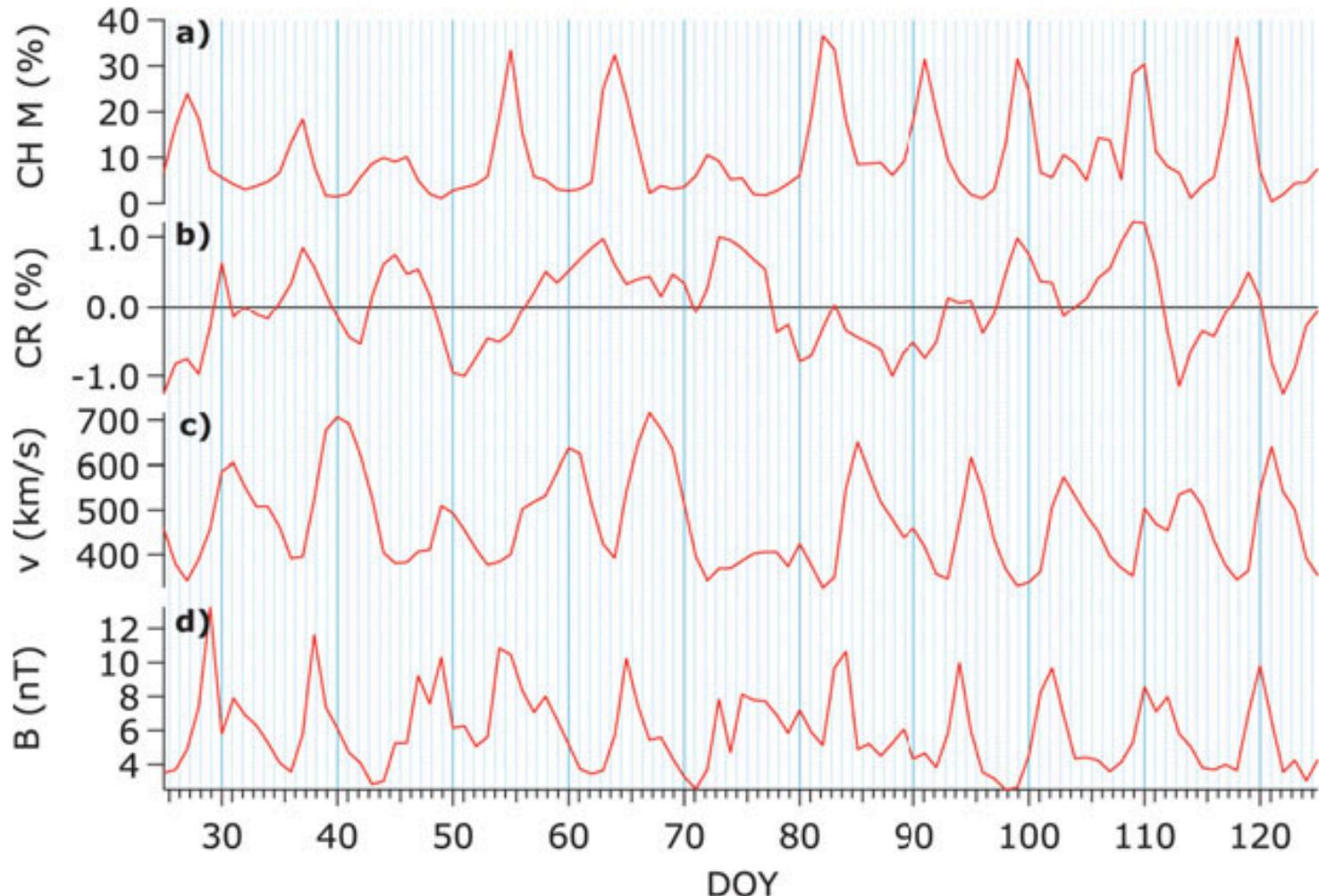
Found 9 day period with spectral  
analysis (Morlet wavelet)



# Number of CMEs and their average velocity

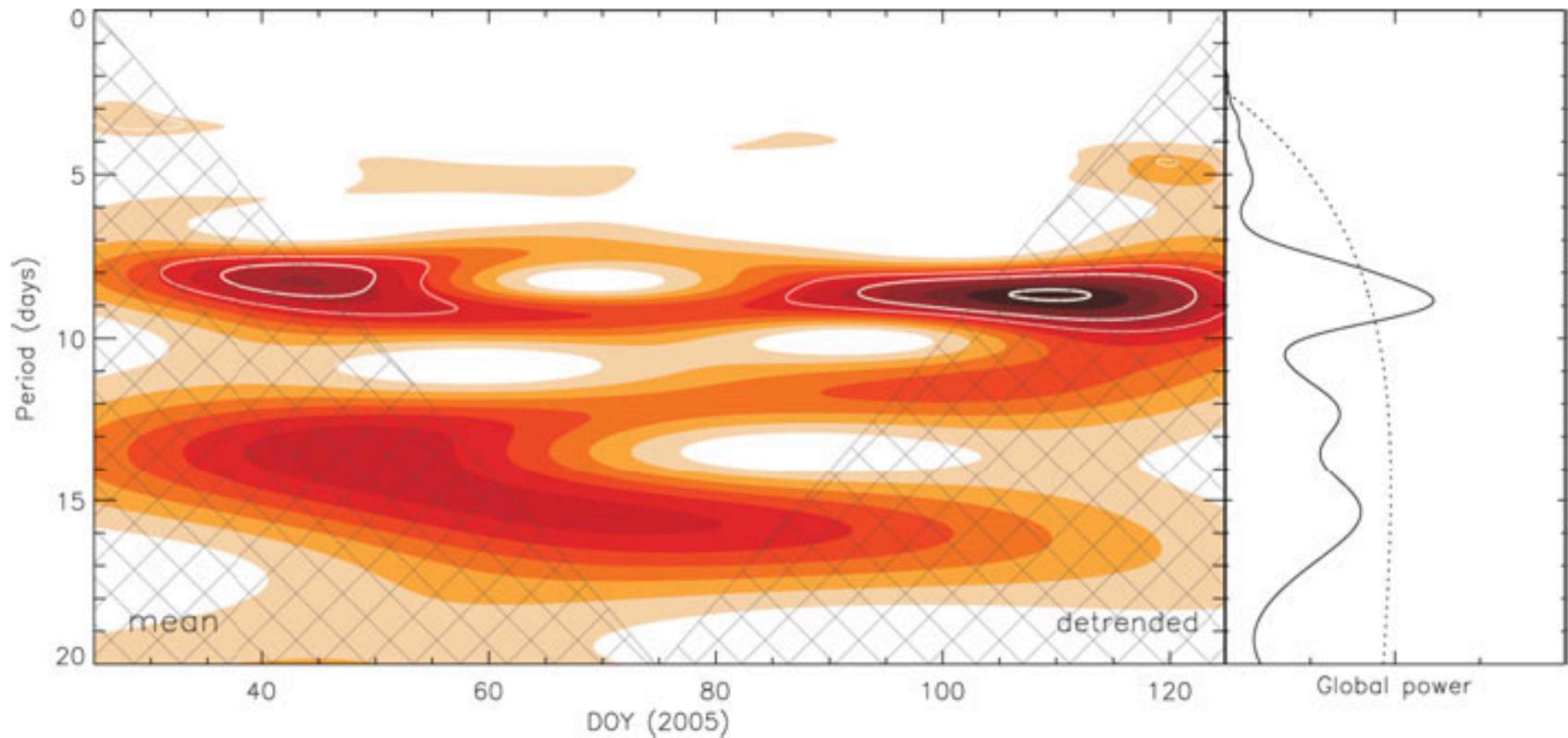


# CH fractional area & solar wind parameters (ACE)



Čalogović et. al. 2008

# Spectral analysis (DOY 25-125)



# Correlation coefficients between CH areas and CR measured at 8 different NM stations

	CH E	CH M	CH W	$v$	B	$n$
NM South Pole	-0.33 (6)	-0.31 (4)	-0.30 (3)	-0.21 (0)	-0.31 (2)	-0.24 (4)
NM Thule	-0.16* (7)	-0.20 (4)	-0.14* (3)	-0.09* (0)	-0.37 (2)	-0.23 (4)
NM Magadan	-0.34 (7)	-0.33 (5)	-0.34 (3)	-0.24 (0)	-0.33 (2)	-0.20 (4)
NM Jungfraujoch	-0.31 (8)	-0.26 (5)	-0.32 (4)	-0.21 (2)	-0.35 (3)	-0.22 (4)
NM Climax	-0.34 (7)	-0.31 (5)	-0.31 (3)	-0.20 (1)	-0.38 (3)	-0.33 (4)
NM Hermanus	-0.27 (7)	-0.27 (5)	-0.27 (3)	-0.11* (1)	-0.38 (3)	-0.32 (4)
NM Haleakala	-0.23 (7)	-0.26 (5)	-0.32 (3)	-0.20 (1)	-0.34 (3)	-0.16* (4)
NM Tibet	-0.34 (7)	-0.39 (5)	-0.41 (3)	-0.27 (1)	-0.38 (3)	-0.18 (4)
average	-0.29 (7.00)	-0.29 (4.75)	-0.30 (3.13)	-0.19 (0.75)	-0.36 (2.63)	-0.24 (4.00)
$\sigma$	0.065	0.056	0.078	0.062	0.026	0.063

- The highest correlations with CR was obtained for the magnetic field B with the CR time delay of 2 to 3 days
- Reductions in GCR flux at 1AU: 0.5%–2 %

# SOHO EPHIN data & CIR

- SOHO EPHIN data 2004-2011 (Counter B, Anticoinc., Counter F)
  - CH data for 2007 (possible extension to 2008 and 2009)
  - Longer time periods allow better statistics
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- use periods with low or no CME activity -> how to define CME thresholds? (SOHO/LASCO CME catalogue and ICME catalogue Richardson & Cane, 2010)
  - Check the dependence on mag. polarity
  - Use solar wind parameters (eg. ACE)