Sunquake and Moreton Wave

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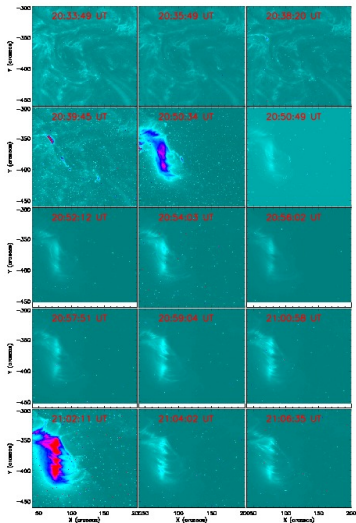[2] MoCA, School of Mathematical Sciences, Monash University,
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University of Bucharest, Măgurele, Romania
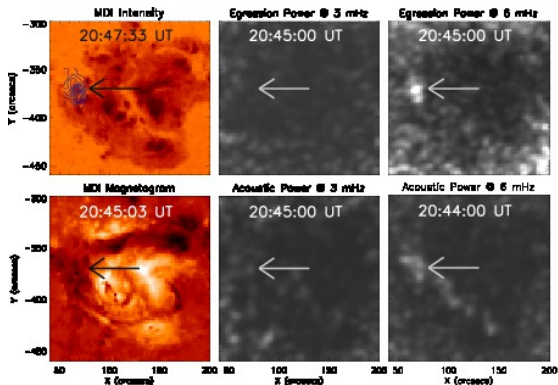[4] Royal Observatory of Belgium,
Ringlaan 3, 1180 Brussels, Belgium

2 Oct 2012

29 Oct 2003

Solar Flare X10.0

20:37 20:49 21:01
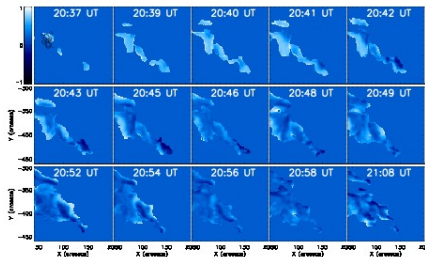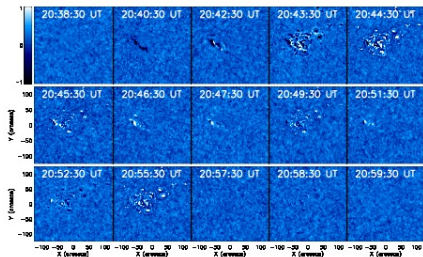
$\beta\gamma\delta$ AR 10486

Seismic Emission

SunQuake

20:35 20:43 20:50
2.3×10^{26}ergs
(Donea and Lindsey, 2005)

MWL Analysis

(Beşliu-Ionescu, 2010)

WL – Hα Doppler Maps

Chromospheric Shock – "Back-warming"
(Donea, 2011)

Moreton Wave

1100–1200km/s   (Balasubramaniam et al., 2007)

Discussion

seismic emission is temporally & spatially correlated

- to SXR
- to central kernel in WL
- to chromospheric plasma displacements

Thank you!

Balasubramaniam, K., Pevtsov, A., and Neidig, D.: 2007, *Astrophys. J.* **658**, 1372

Beşliu-Ionescu, D.: 2010, *Ph.D. thesis*, School of Mathematical Sciences, Monash University

Donea, A.: 2011, *Space Science Reviews* **158**, 451

Donea, A.-C. and Lindsey, C.: 2005, *Astrophys. J.* **630**, 1168