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CATALOG OF LARGE AMPLITUDE OSCILLATIONS (LAO CATALOG)

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GENERAL INFO							
START DATE/TIME	END DATE/TIME	POSITION	OSCILLATION TYPE	REPORTED SOURCE/TRIGGER	EUV WAVE MOVIE LINK (1997-2010 NEMO; 2010- N.NITTA catalog)	REFERENCE	
2013-03-15 06:00:54	2013-03-15 10:22:54	SW of AR11692	LATO	M1.1 flare (AR11692)/ halo CME		Pant et al (2015)	
2005-07-30 06:45:00	2005 07 04 00 45 00	NE of AP10702	LATO-horizontal	EUV WAVE/X1.3 flare (AR10792)	http://sidc.be/nemo/catalog/movies_soho.php?event_date=30/07 /2005&event_id=2	Horebow et al (2011)	
2005-07-30 17:07:42	2003-07-31 00.43.00	NE OF AR10792	LATO-horizontal	EUV WAVE/C8.9 flare (AR10792)	http://sidc.be/nemo/catalog/movies_soho.php?event_date=30/07 /2005&event_id=3	nersnaw et al (2011)	
2012-03-07 00:33:00		north limb		EUV WAVE/X5.4 flare (AR1429) & CME	http://aia.lmsal.com/aia_cadence/aia_0193_rdiff_0144_sum_20 120306_2350/AIA_0193_RDIFF_0144_SUM_20120306_2350_m.m pg	Takahashi et al (2015)	
2011-08-09 00:08:10	2011-08-09 00:08:30	NW limb, south of AR11263	LATO				
2011-08-09 09:35:00	2011-08-09 16:00:00	in the STEREO-A obs: close to the meridian line (SW of AR11263)	LALO	EUV WAVE/X6.9 flare (AR11263)	http://aia.lmsal.com/aia_cadence/aia_0193_rdiff_0144_sum_20 110809_0745/AIA_0193_RDIFF_0144_SUM_20110809_0745_m.m DE	Shen et al (2014)	
2011-09-06 22:00:00	2011-09-06 23:30:00	NE of AR11283	LATO-vertical	X2.1 flare (AR11283) & EUV wave		Yuandeng et al (2014)	
		NW of AR11283	LATO-vertical		http://aia.lmsal.com/aia_cadence/aia_0193_rdiff_0144_sum_20 110906_2200/AIA_0193_RDIFF_0144_SUM_20110906_2200_m.m DE		
		NW of AR11283	LATO-vertical				
		NW of AR11283	LATO-vertical		7		

April 2010 – Today: SDO/AIA EUV waves catalog March 1997 – February 2010: NEMO catalog

AIM: EVENT LIST Should we add other information?

PROPERTIES							
No CYCLES	PERIOD (min)	DIMENSION (Mm)	DAMPING TIME (min)	DISPLACEMENT AMPLITUDE (Mm)	VELOCITY AMPLITUDE (km/s)	TIME-DISTANCE FIT	COMMENT
>4	61-67	235±8	92-117	8-13	12-22	damped harmonic	measured at different vertical slices close to the appex
~5	94.2±4.9	cca 165	169±90	40.1±2.3	50.6±3.2	damaged barmania	measured at different heights (from foot to apex); indications that filament actually oscillates as a collection of separate but interacting threads
~3	104±16	CCA 105	121±59	16.9±7.5	15.9±8.0	uampeu narmonic	
							only prominence activation (not oscillations afterwards)
2	13.5	cca 265	31.3-54	cca '8-10	37.8-82.7	damped harmonic	measured at 3 different heights
~4	80.3	cca 130		cca 22	26.8	damped harmonic	
2-3	22	cca 290	30-40		10-14		measured at 4 different slices along filament axis
2-3	11	cca 220	25		6	damped harmonic	
			<u> </u>	<u> </u>	<u> </u>		

Some provide measurements at different heights or slices, some give average values... What is the best approach? Average values?

What in case when period depends on time?

No CYCLESPERIOD (min)DIMENSION (Mm)DAMPING TIME (min)DISPLACEMENT AMPLITUDE (Mm)VELOCITY AMPLITUDE (km/s)TIME-DISTANCE FITCOMMENT measured at different vertice to the appex measured at different vertice to the appex>461-67235±892-1178-1312-22damped harmonicmeasured at different vertice to the appex~594.2±4.9169±9040.1±2.350.6±3.2measured at different heigh to apex); indications that actually oscillates as a company~3104±16169±9016.9measured at different heigh to apex); indications that actually oscillates as a company213.5cca 26531.3-54cca 'i	PROPERTIES							
$\begin{array}{c c c c c c c c c c c c c c c c c c c $								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	al slices close:							
~3 104±16 121±59 16.9: (d) SDO/AIA 171Å 20-Aug-2010 20:2:2: - - - - - - - -300 - <td>nts (from foot at filament</td>	nts (from foot at filament							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ollection of							
2 13.5 cca 265 31.3-54 cca 'a								
~4 80.3 cca 130 - cca -350	36							
2-3 22 cca 290 30-40 - 30	g							
2-3 11 cca 220 25 - 6	Эн							
The projected length of the filament, determined roughly by approximating filament with the straight lines -450 -150 -100 -50								

Is that "good enough"?

from Luna et al (2014)

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						Tuampeu narmonic	

Other properties? (e.g. phase?) Calculate Alfven velocity? Calculate damping time/period? Other suggestions?

SO FAR....

12 papers

19 events (not all have properties measurements)

9 LATO, 9 LALO

44% triggered by EUV wave

78% LATO's triggered by EUV wave (11% LALO's)

61% triggered by flare

89% LATO's triggered by flare (33% LALO's)





Damping time vs period (damped harmonic only)

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Period vs "length" (all damped harmonic events)

Period vs "length"





all damped harmonic events

LATO's



What to make of this?

What would be useful regarding the statistical analysis?