

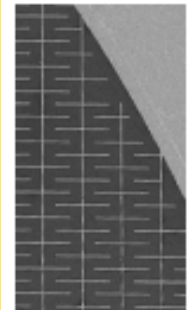
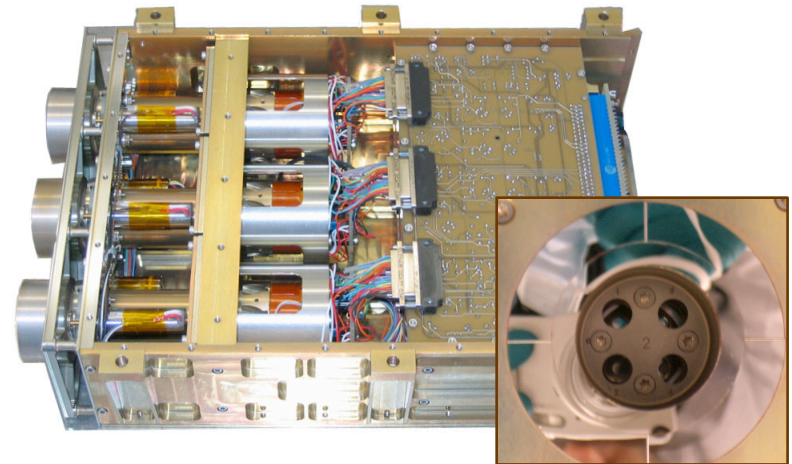


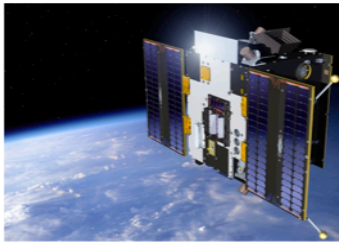
LYRA status update

M. Dominique, I. Dammasch, D. Ryan, L. Wauters,
T. Katsiyannis

LYRA highlights

- ❑ 3 instrument units (redundancy)
- ❑ 4 spectral channels per head
- ❑ 3 types of detectors,
Silicon + 2 types of
diamond detectors (MSM, PIN):
 - radiation resistant
 - insensitive to visible light
compared to Si detectors
- ❑ High acquisition cadence up to
100 Hz (nominal 20Hz)





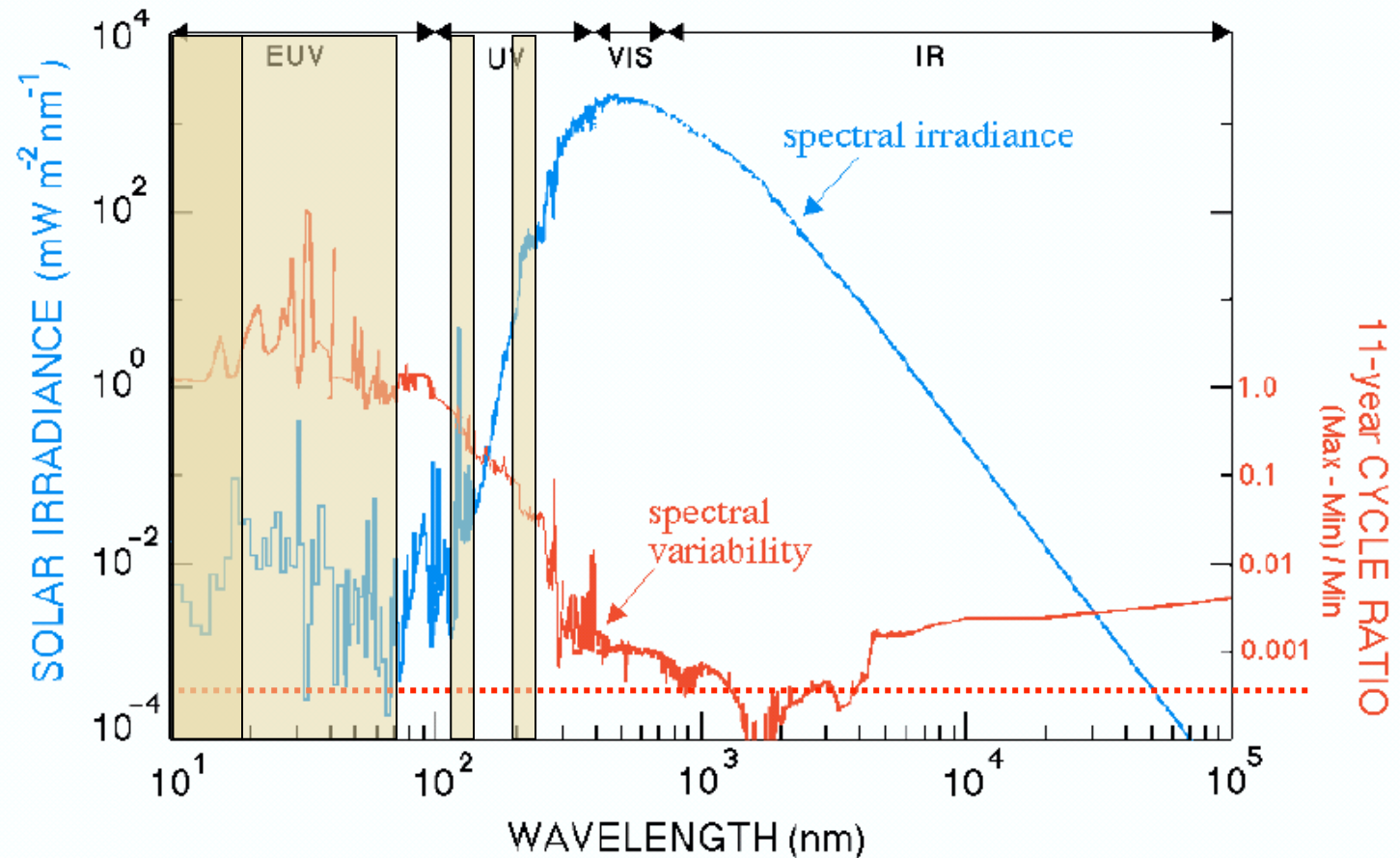
The LYRA channels

Zirconium
6-20 nm + < 2nm

Aluminum
17-80 nm + < 5nm

Lyman alpha
120-123 nm

Herzberg
190-222 nm





In brief ...

- ❑ Mission currently funded till end 2016, funded by ESA science directorate and SSA
- ❑ PROBA2 website: <http://proba2.oma.be>
- ❑ Currently running our sixth Guest Investigator Programme
- ❑ New dark current correction: data have been reprocessed – to be put on-line before the end of the year
- ❑ LYRA team: I. Dammasch, T. Katsiyannis, D. Ryan, L. Wauters, M. Dominique



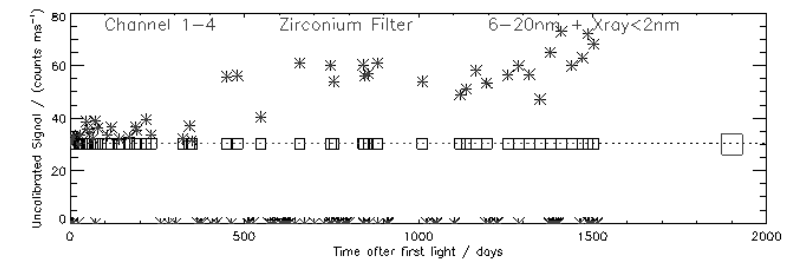
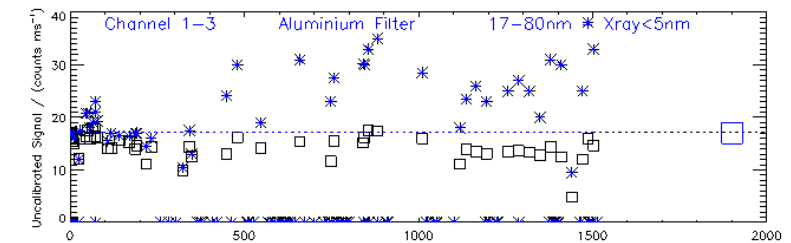
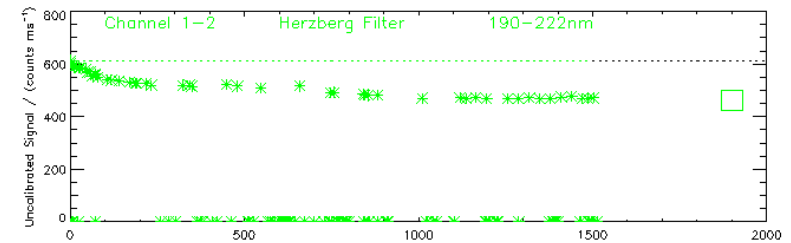
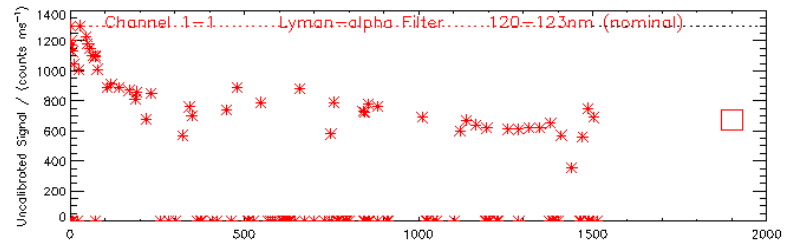
Response on 20 March 2015

ch1-1 52%

ch1-2 75%

ch1-3 100%

ch1-4 100%





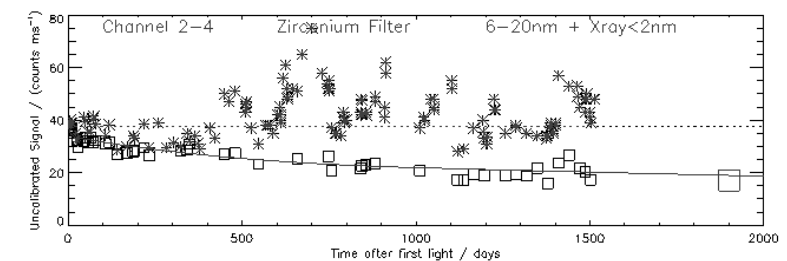
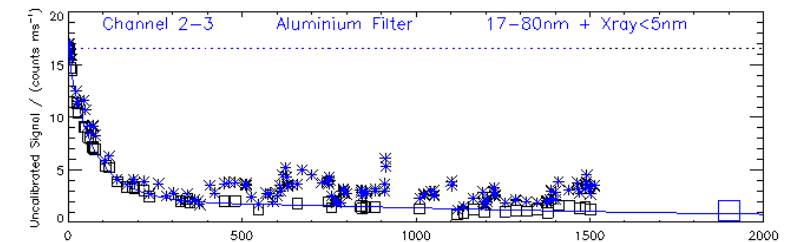
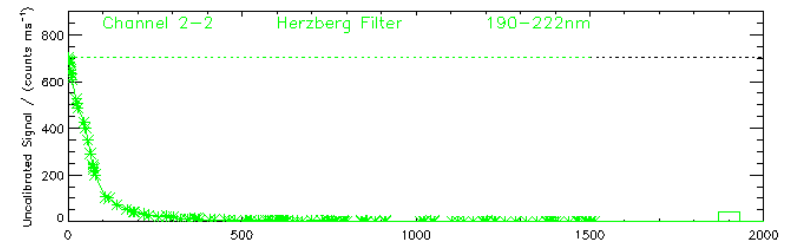
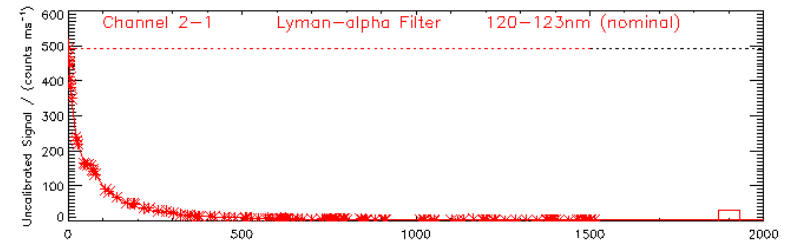
**Response on 20 March 2015
after 1900 days :**

ch2-1 0.3%

ch2-2 0.01%

ch2-3 7%

ch2-4 44%





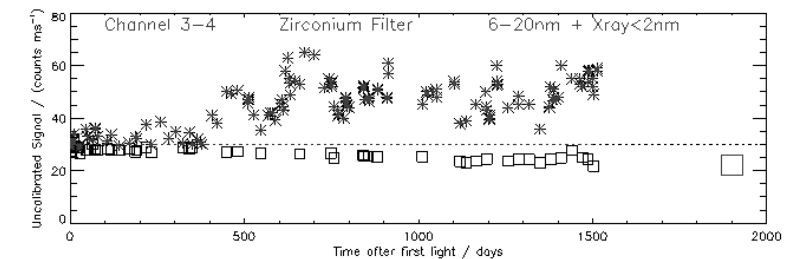
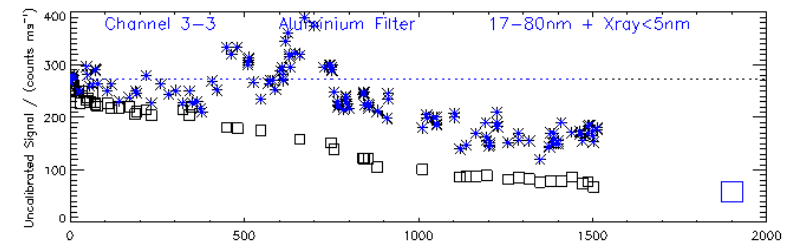
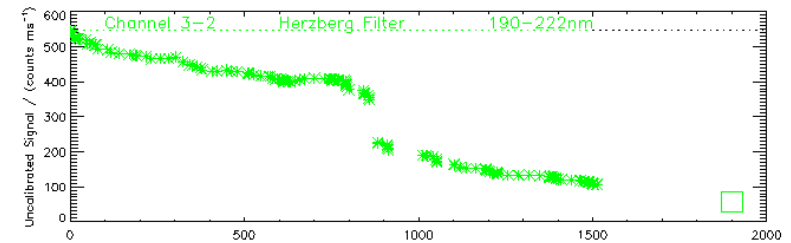
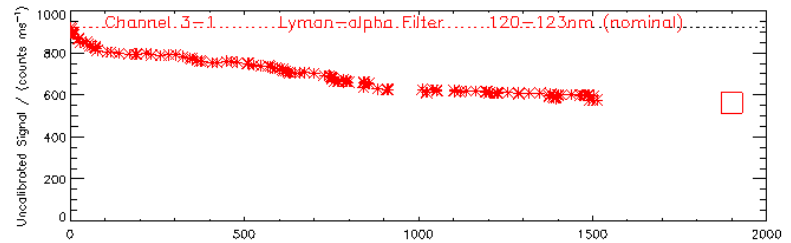
Response on 20 March 2015

ch3-1 61%

ch3-2 10%

ch3-3 21%

ch3-4 72%

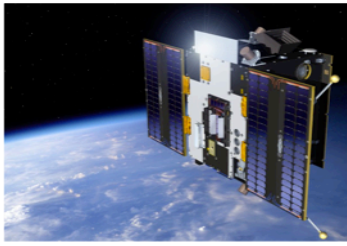




Degradation ...

- ❑ ... was addressed in several papers and communications: a.o. BenMoussa et al. (2013)
- ❑ ... is discussed during annual meetings of the “Solar EUV irradiance working group”, most of which were organized by STCE
- ❑ ... was the chosen topic of three guest investigators

**Poster from
I. E. Dammasch
on Monday!**



Recent Achievements

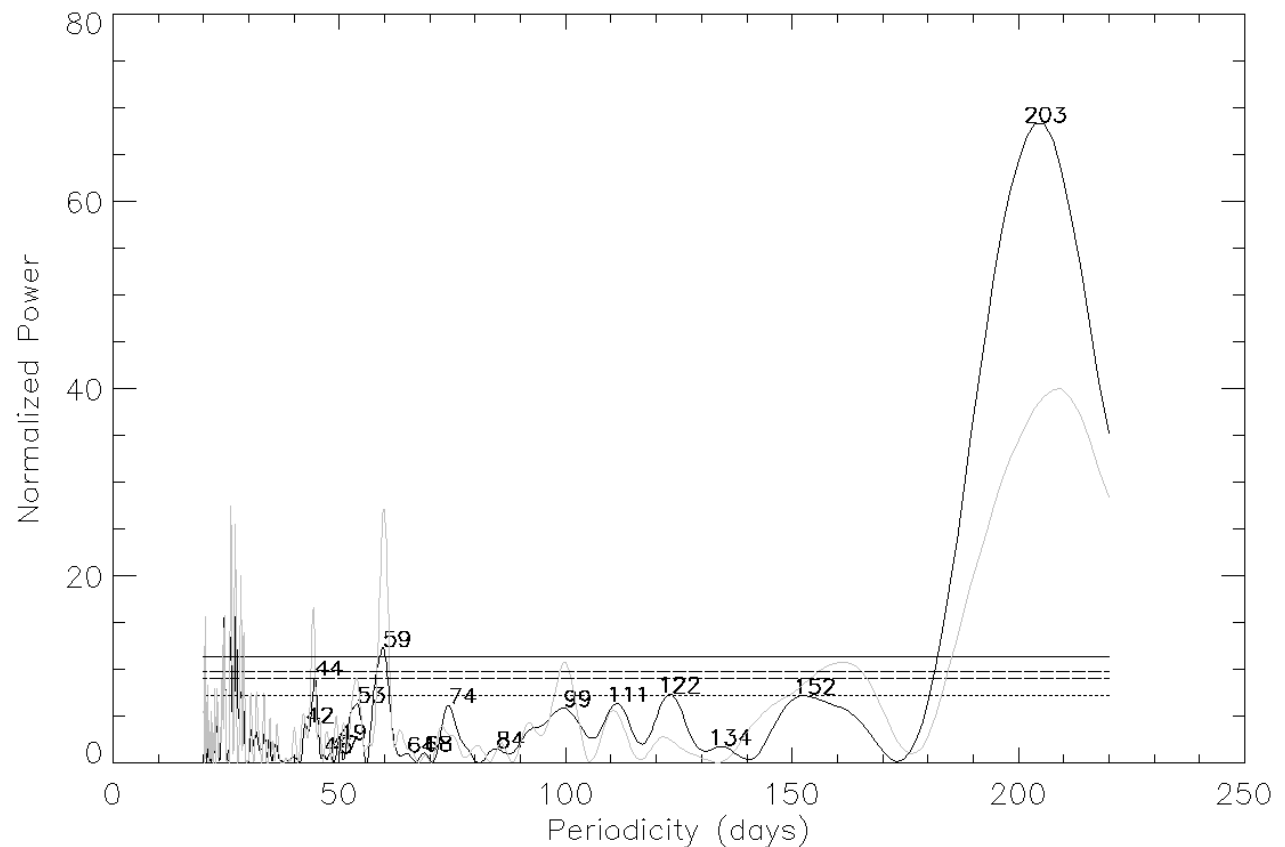
End of November, ROB hosted the Solar Metrology Symposium II: Four presentations about LYRA

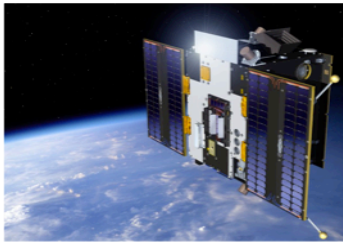




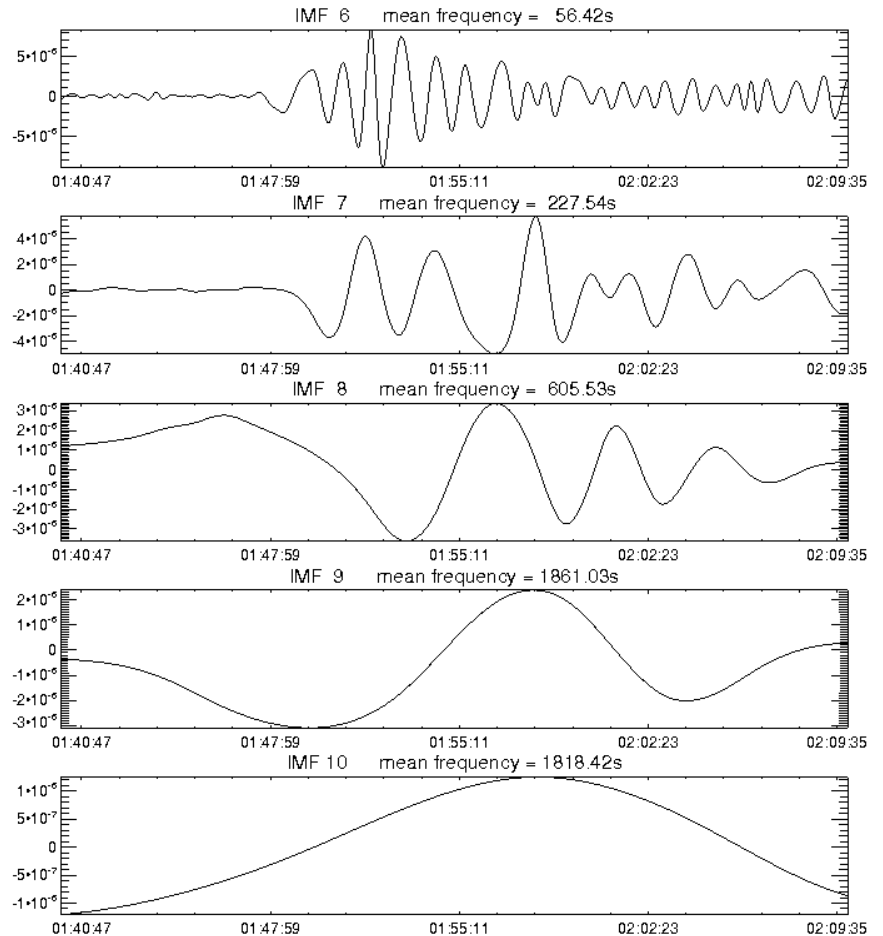
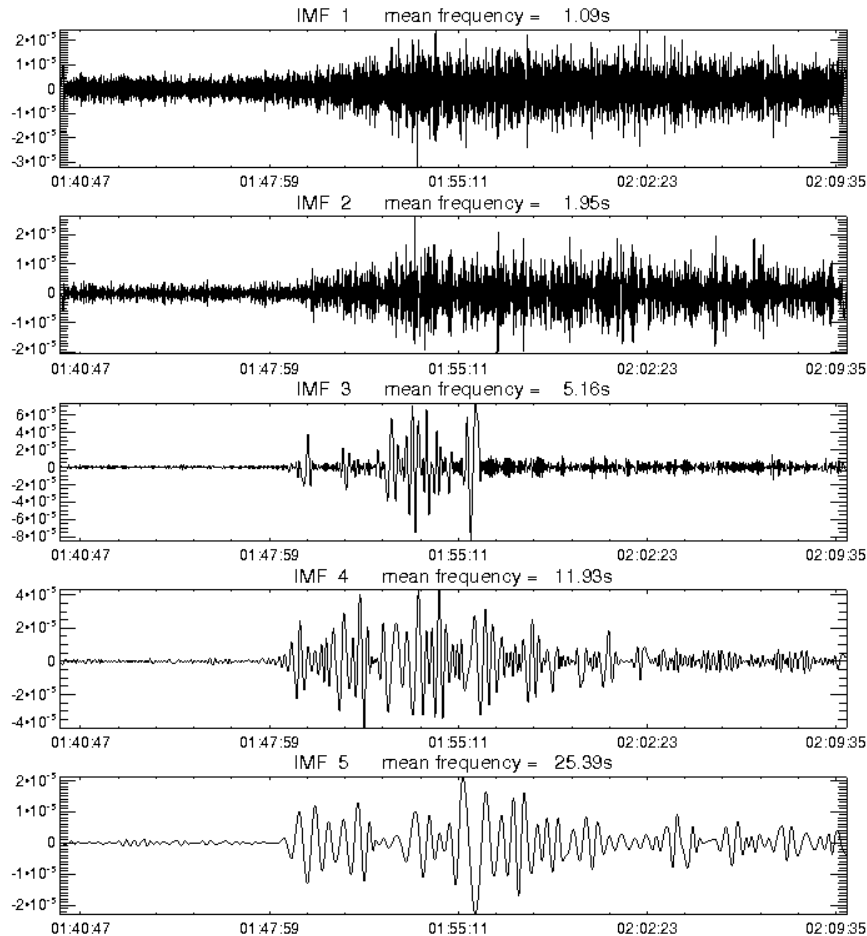
Table 1. Periodicities found in the Lomb-Scargle periodograms with a significance larger than 90% and between 50% and 90 % in parenthesis

zr	al	ri	f10	flares	area
28	28	29	28	28	29
44	44	44	(44)	43	44
-	54	54	-	54	54
-	-	-	-	57	-
59	59	59	59	61	59
-	-	73	-	-	75
-	-	-	(88)	-	(81)
-	98	96	(95)	98	94
-	-	112	-	-	106
(122)	-	123	-	-	-
-	-	134	-	-	-
(152)	153	149	-	157	-
-	-	(167)	-	-	-
199	203	207	207	199	199





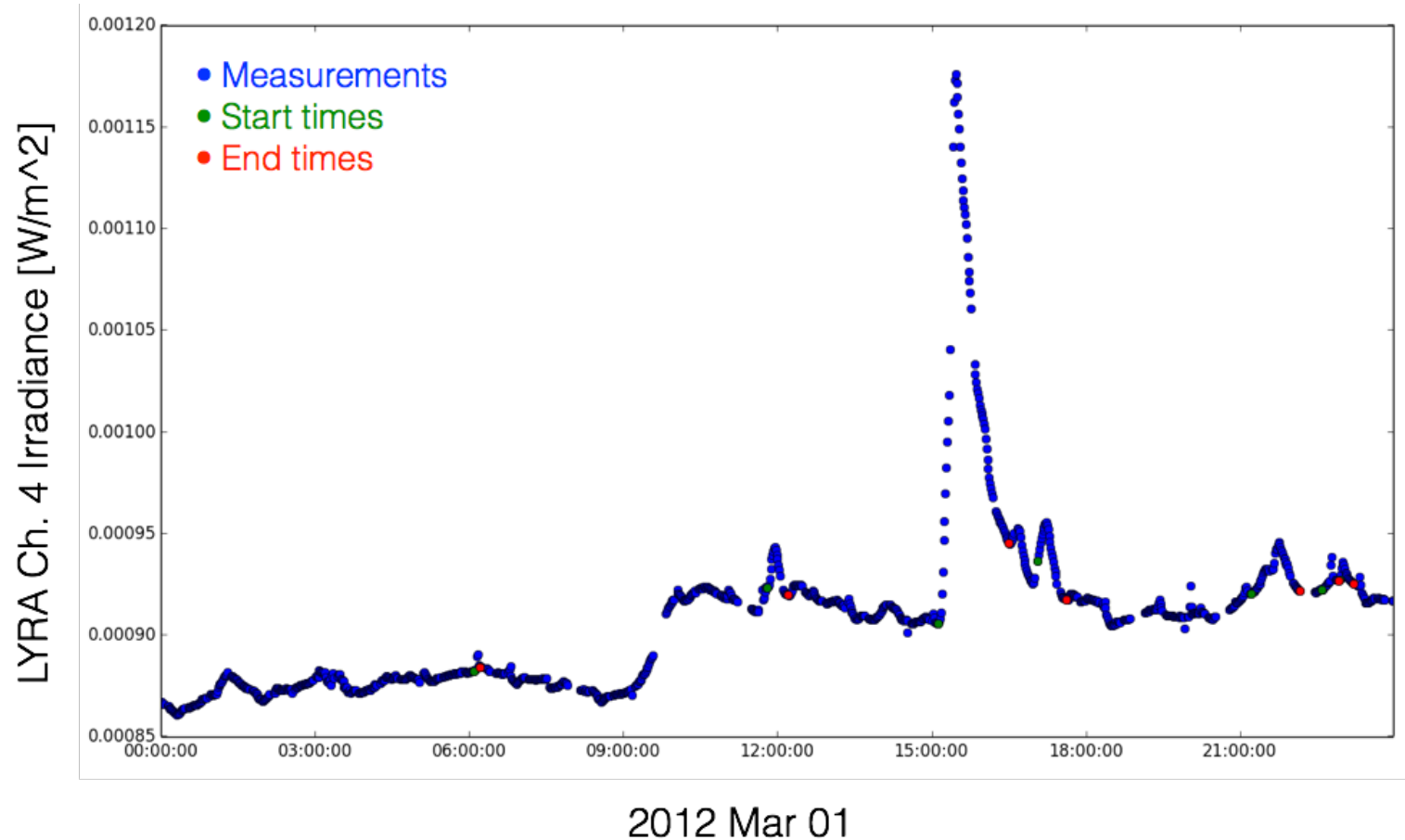
Recently investigated topics: QPP

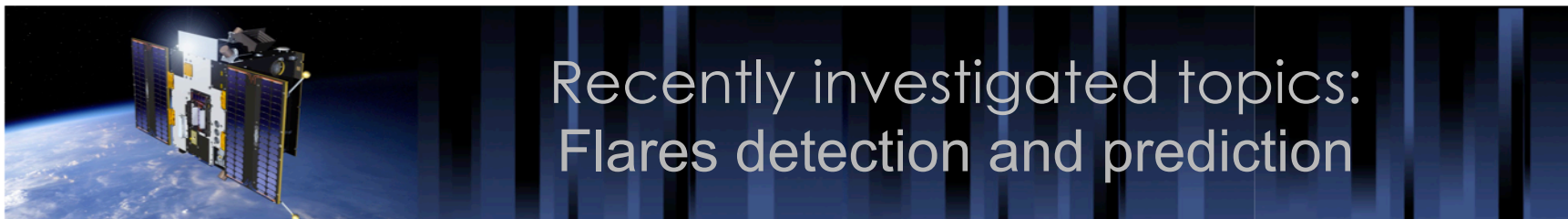




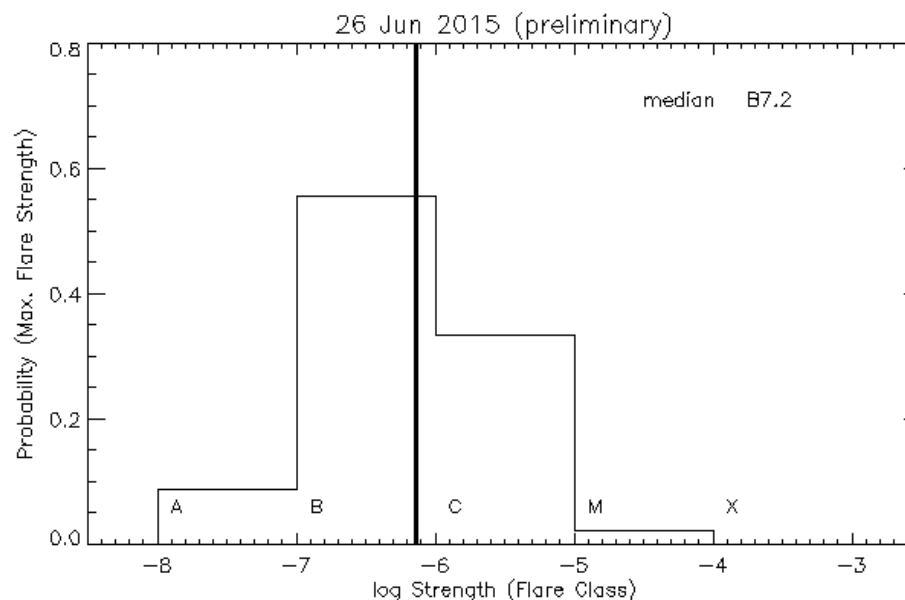
Recently investigated topics:
Flares detection and statistics

LYRA Flare Finder (LYRAFF)





Estimated Flare Probability ("Var" 2.0)

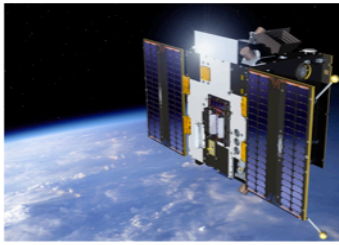


**Poster from
I. E. Dammasch
on Wednesday!**

based on		A[%]	B[%]	C[%]	M[%]	X[%]	median
LYRA ch2-3 =	1.05254e-05	8	76	15	1	0	B4.9
LYRA ch2-4 =	1.16019e-05	10	67	23	0	0	B6.7
GOES Xray =	1.13126e-07	2	20	73	5	0	C1.6
est. ISN =	19.0000	15	59	23	3	0	B3.6
together		8.75	55.50	33.50	2.25	0.00	B7.2

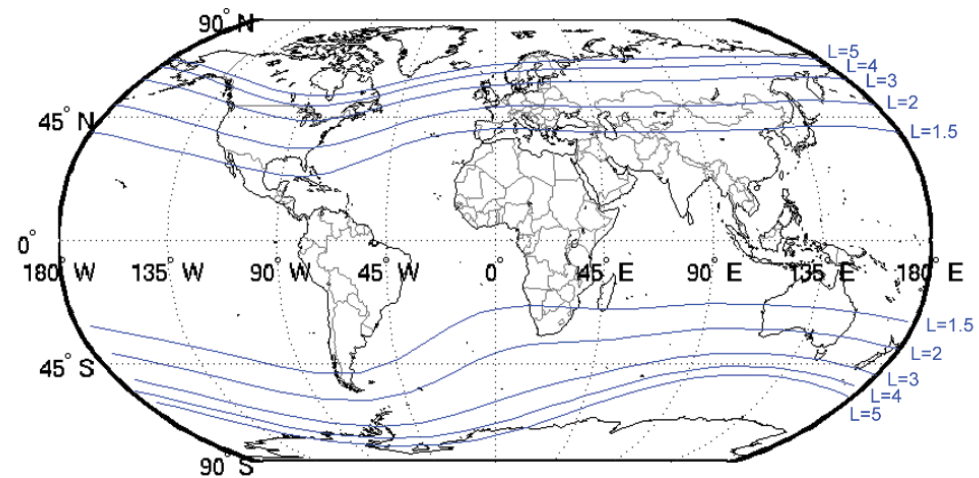
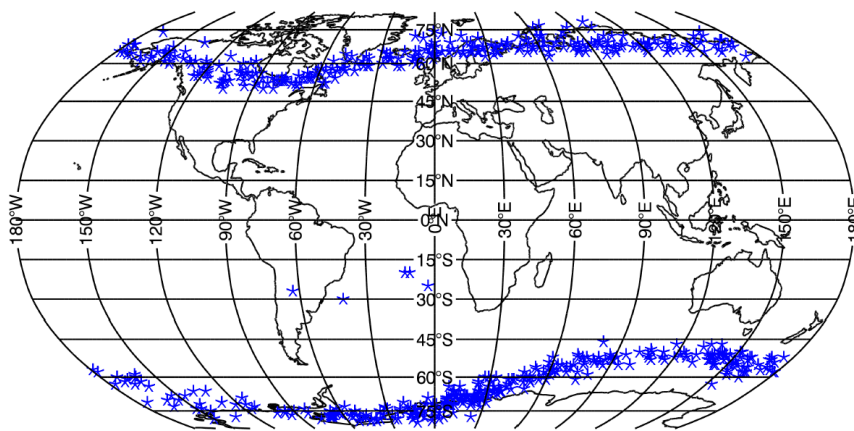
<http://solwww.oma.be/users/dammasch/flares/FlareProbability.html>

<http://solwww.oma.be/users/dammasch/flares/FlareProbabilityVar.html>



Recently investigated topics: Auroral perturbations

Channel: Aluminium



**poster of
T. Katsiyannis
on Thursday!**

