# Noise Checks for New Threshold Families
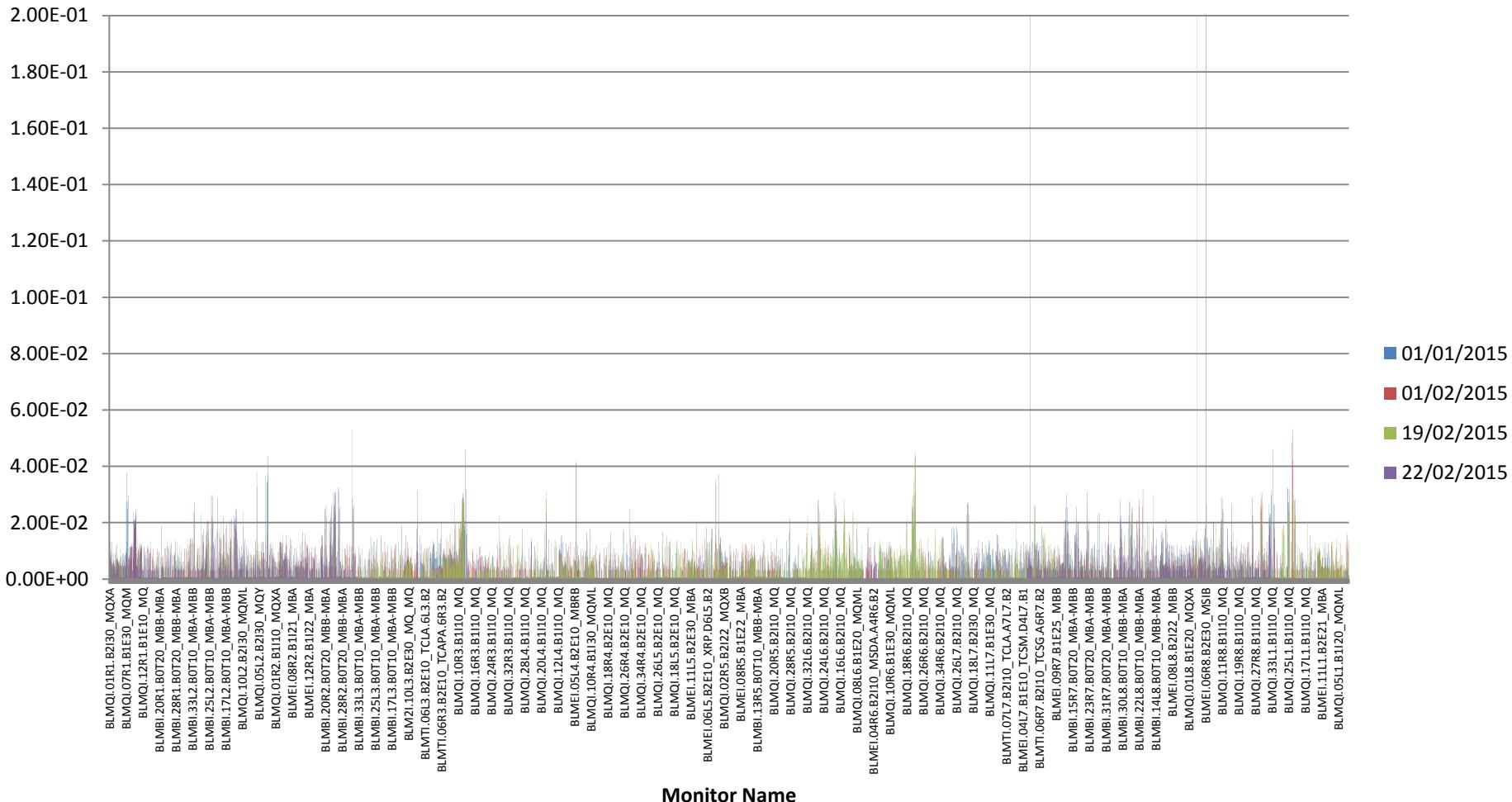
Matti Kalliokoski

11th BLM Thresholds WG Meeting
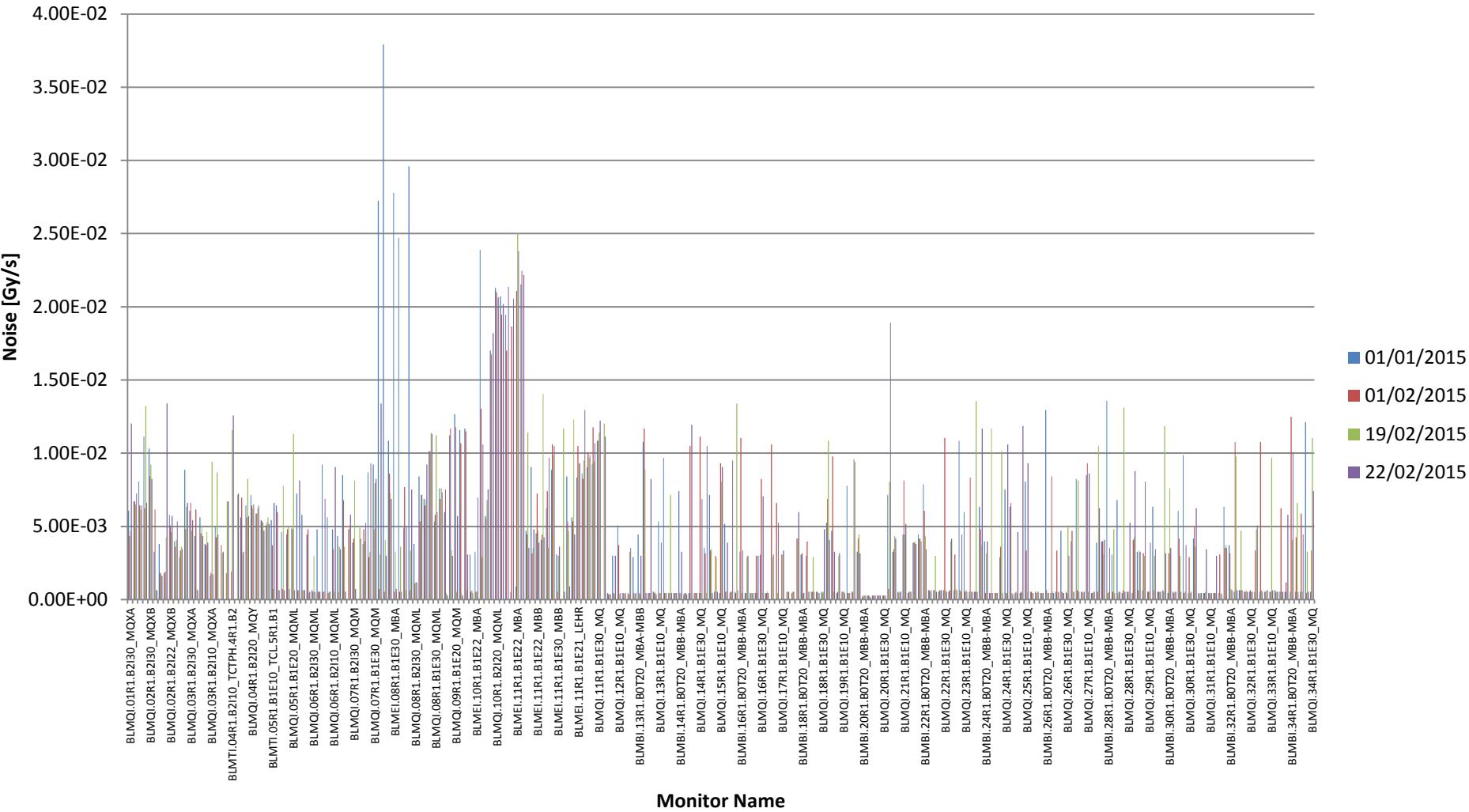
31/03/15

Noise in the LHC
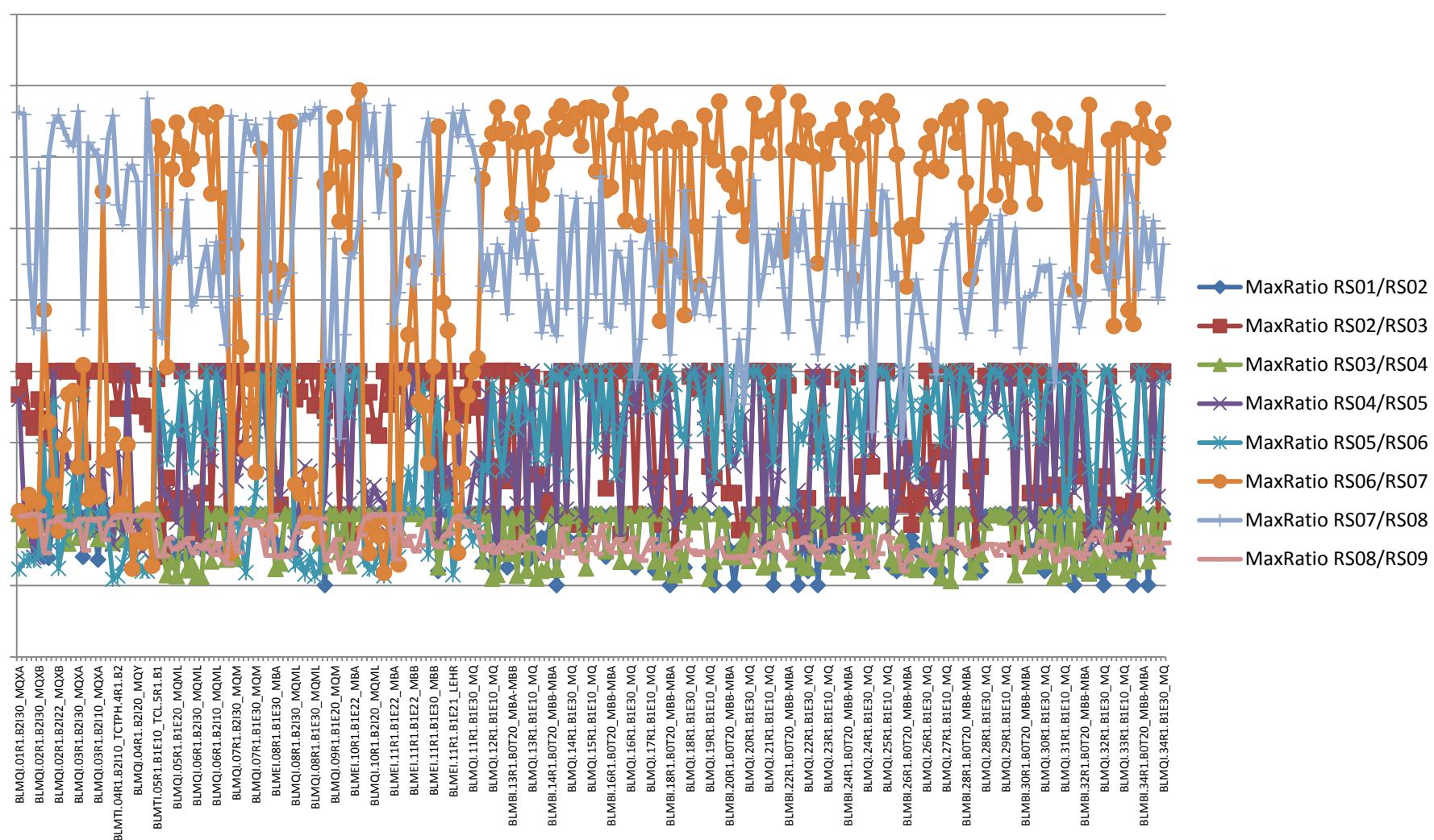
Noise in R1

Difference Between Running Sums

Numerator/Denominator	RS01	RS02	RS03	RS04	RS05	RS06	RS07	RS08	RS09	RS10	RS11	RS12
RS01	1											
RS02	2	1										
RS03	8	4	1									
RS04	16	8	2	1								
RS05	64	32	8	4	1							
RS06	256	128	32	16	4	1						
RS07	2048	1024	256	128	32	8	1					
RS08	16384	8192	2048	1024	256	64	8	1				
RS09	32768	16384	4096	2048	512	128	16	2	1			
RS10	131072	65536	16384	8192	2048	512	64	8	4	1		
RS11	524288	262144	65536	32768	8192	2048	256	32	16	4	1	
RS12	2097152	1048576	262144	131072	32768	8192	1024	128	64	16	4	1

Difference Between Running Sums
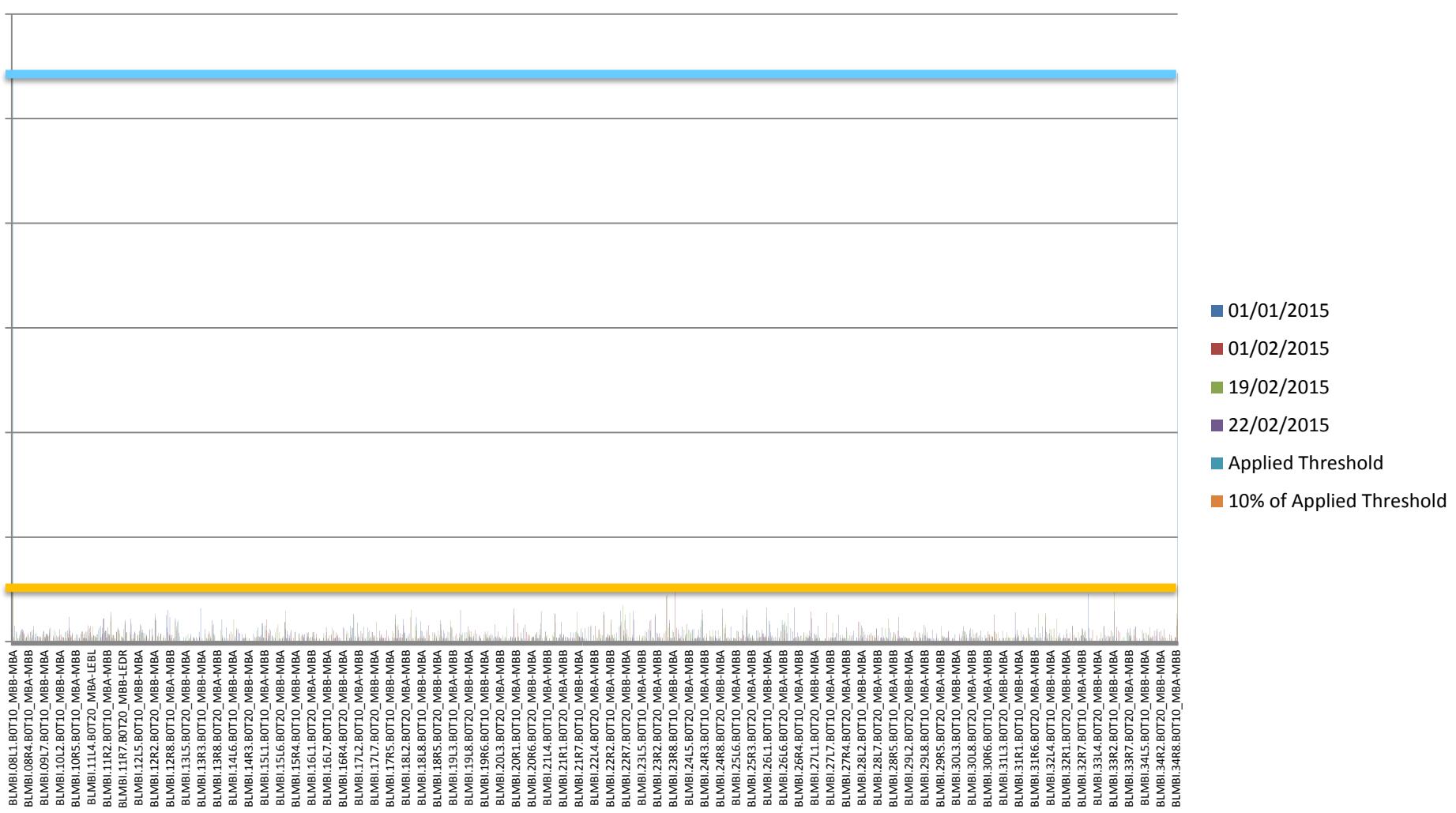
Legend:
- MaxRatio RS01/RS02
- MaxRatio RS02/RS03
- MaxRatio RS03/RS04
- MaxRatio RS04/RS05
- MaxRatio RS05/RS06
- MaxRatio RS06/RS07
- MaxRatio RS07/RS08
- MaxRatio RS08/RS09

Difference Between Running Sums

Numerator/Denominator	RS01	RS02	RS03	RS04	RS05	RS06	RS07	RS08	RS09	RS10	RS11	RS12
RS01	1											
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RS03	8	4	1									
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RS07	2048	1024	256	128	32	8	1					
RS08	16384	8192	2048	1024	256	64	8	1				
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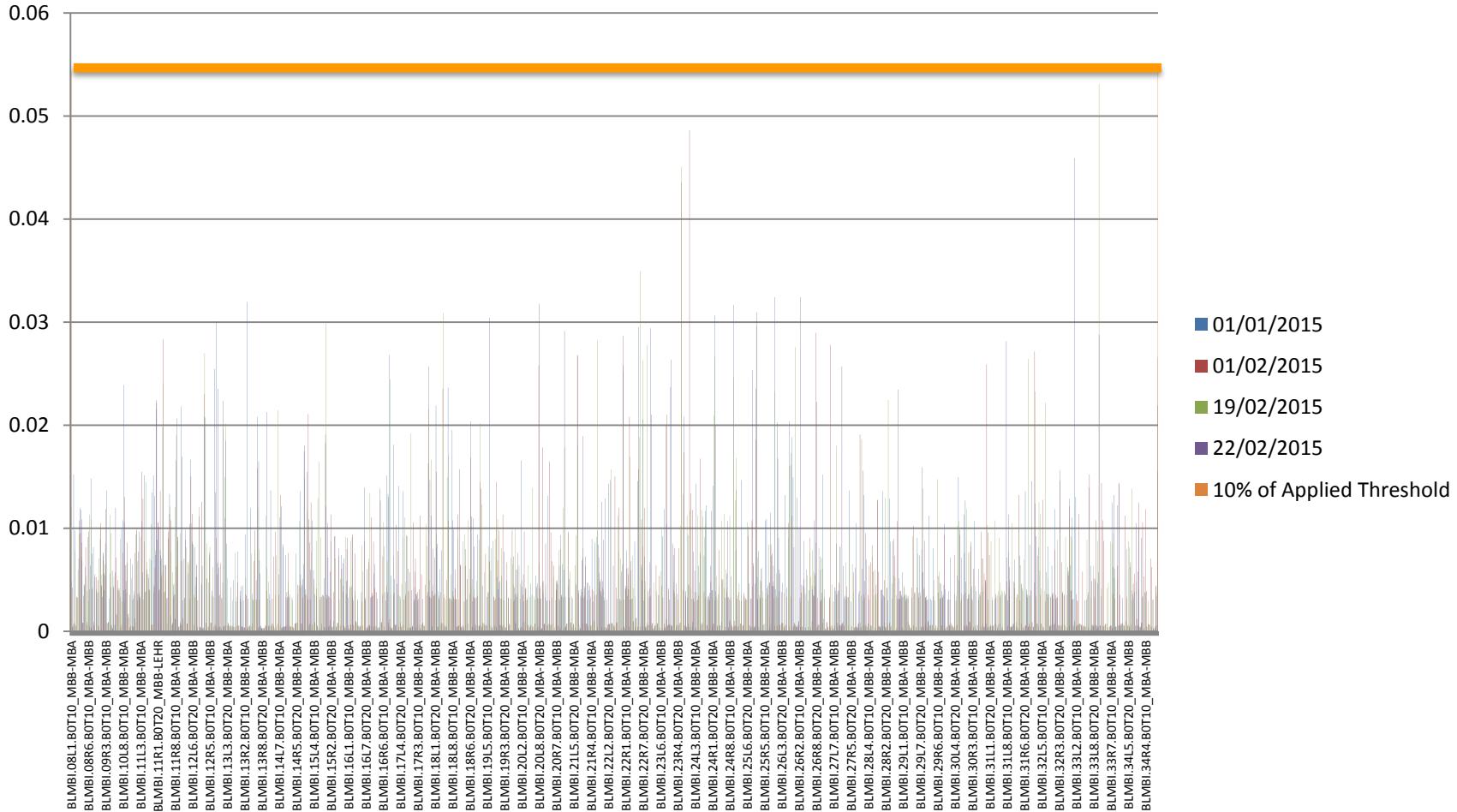
THRI.ARDS_MBMB

THRI.ARDS_MBMB 6.5 TeV RS01

Legend:
- ■ 01/01/2015
- ■ 01/02/2015
- ■ 19/02/2015
- ■ 22/02/2015
- ■ Applied Threshold
- ■ 10% of Applied Threshold

THRI.ARDS_MBMB 6.5 TeV RS01

Next Steps

- Complete the noise analysis plots for all the new families

- Fix the old noise analysis tools

- Verify the current noise level of the noisy monitors after some repairs

  - Changes of cards