BLM THRESHOLDS PROPOSAL FOR 2011 AND COMPARISON WITH MOST CRITICAL SIGNALS

E. Nebot for the BLM team

Motivation

No final results from simulations. Tuning current cold magnet thresholds with measurements from 2010.

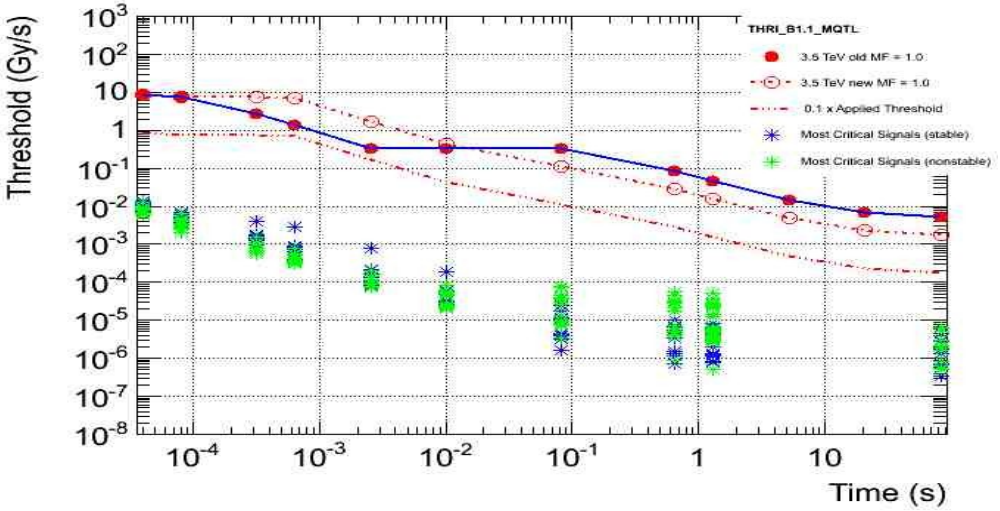
- Increase thresholds by (up to) factor 5 in the ms time scale (ms) and reduce by a factor 3 in the long RS (except for triplets).

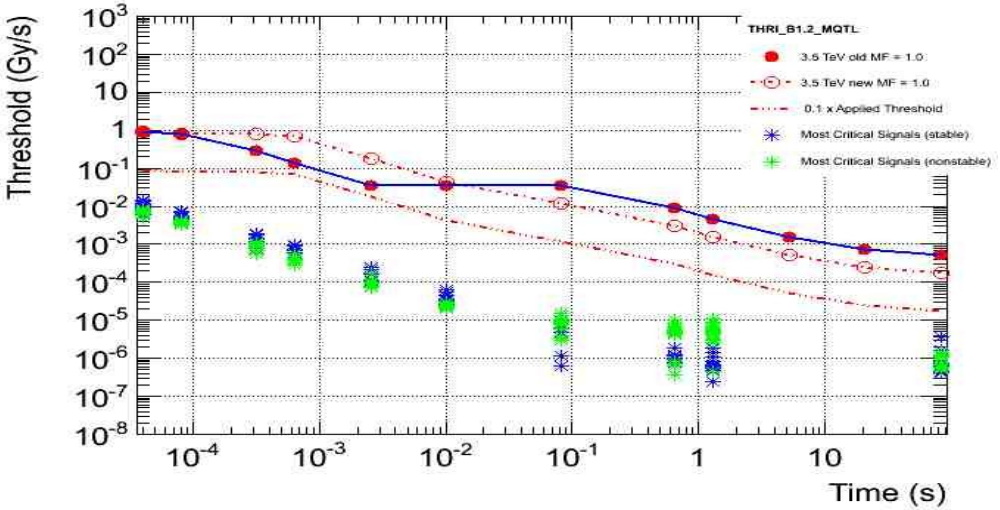
- Comparison of the Thresholds

- Comparison of Thresholds with most critical signals (all RS) for last 5 proton fills.

MQTLH – 6 families (24 monitors)

Threholds for monitors at Position 3 are set to maximum:
THRI_B1.3_MQTLH and THRI_B.2_MQTLH

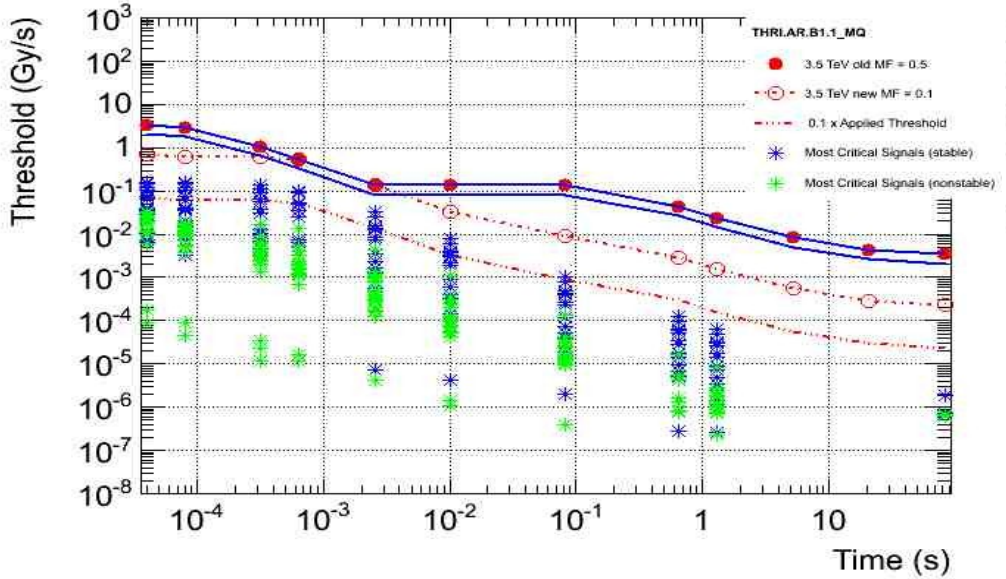


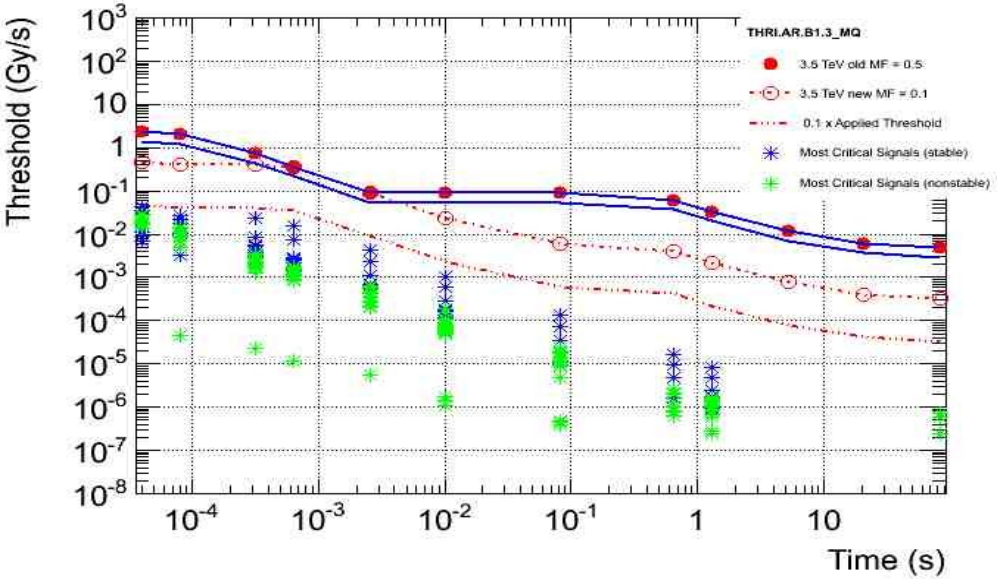


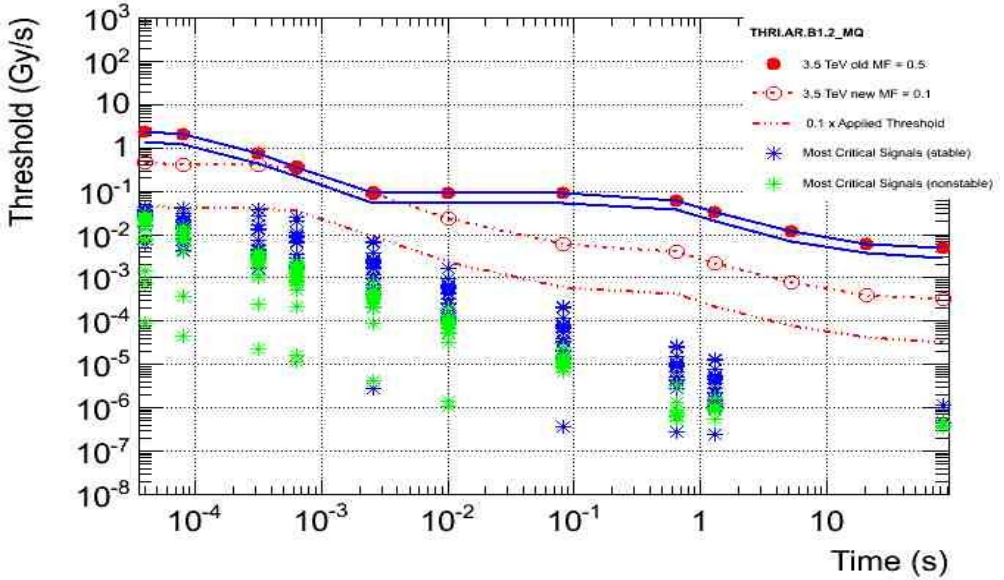
Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold

MQ.AR – 6 families (2160 monitors)



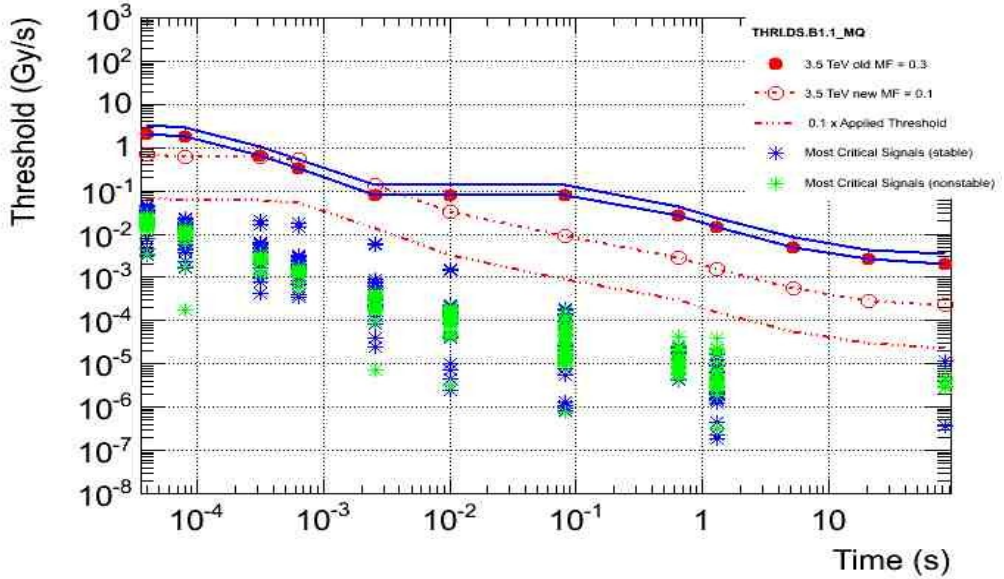


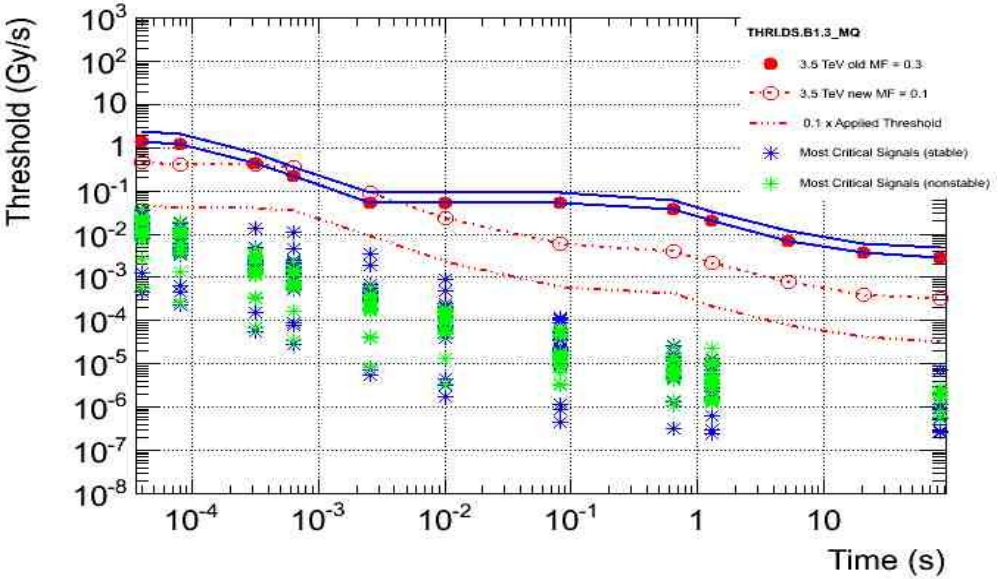


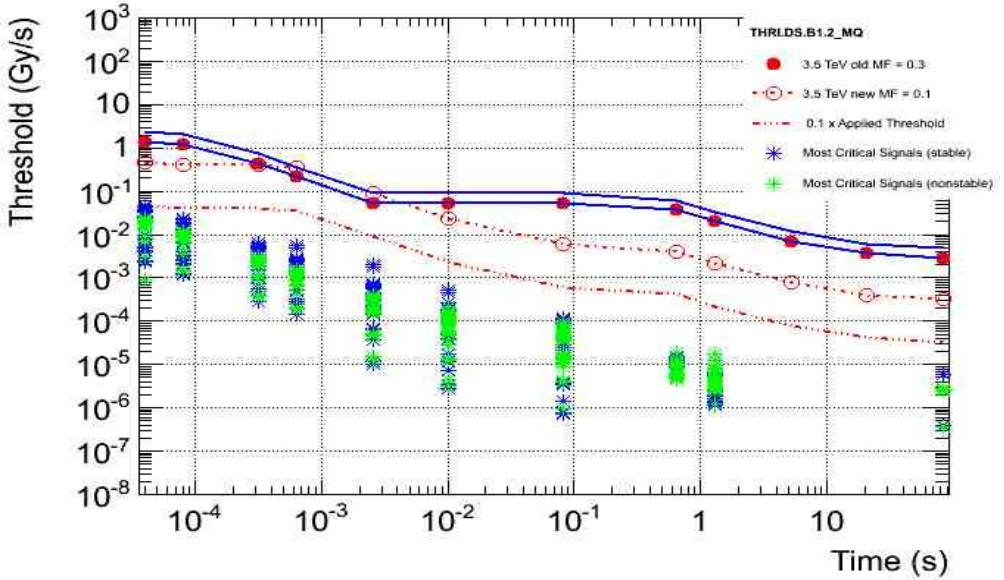
Same Thresholds for B1 and B2 families

All most critical signals > 10% of applied Threshold correspond to UFOs

MQ.DS – 6 families (181 monitors)



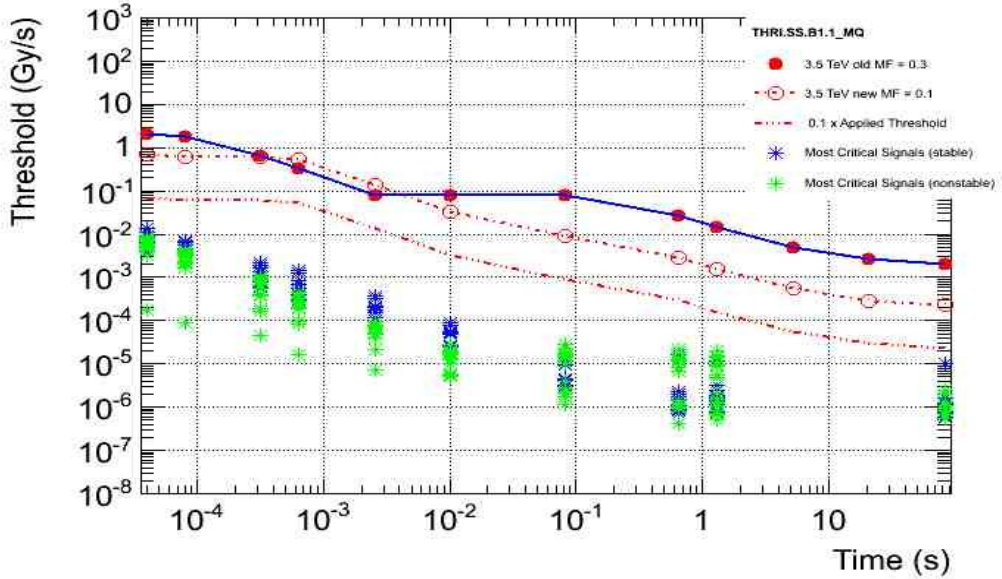


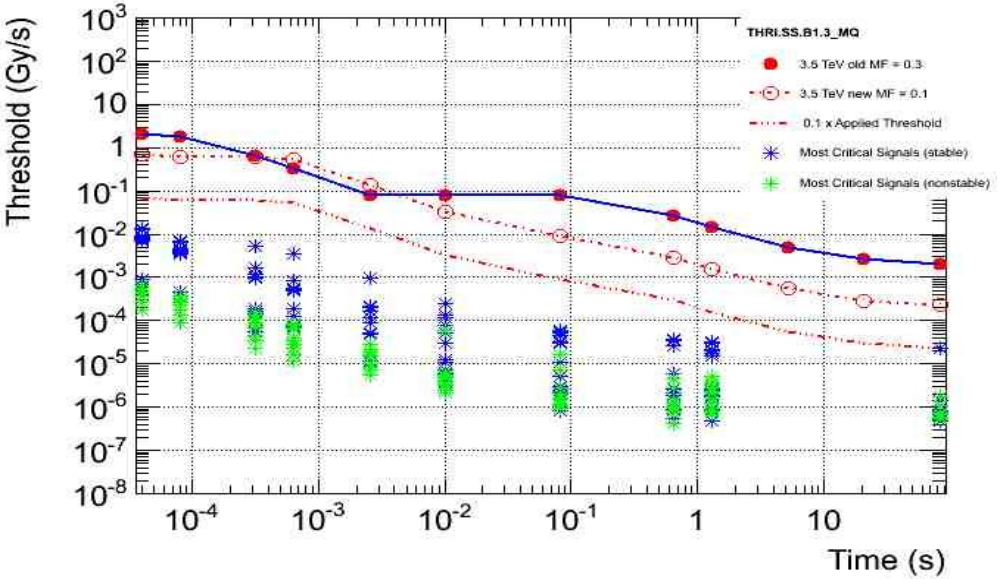


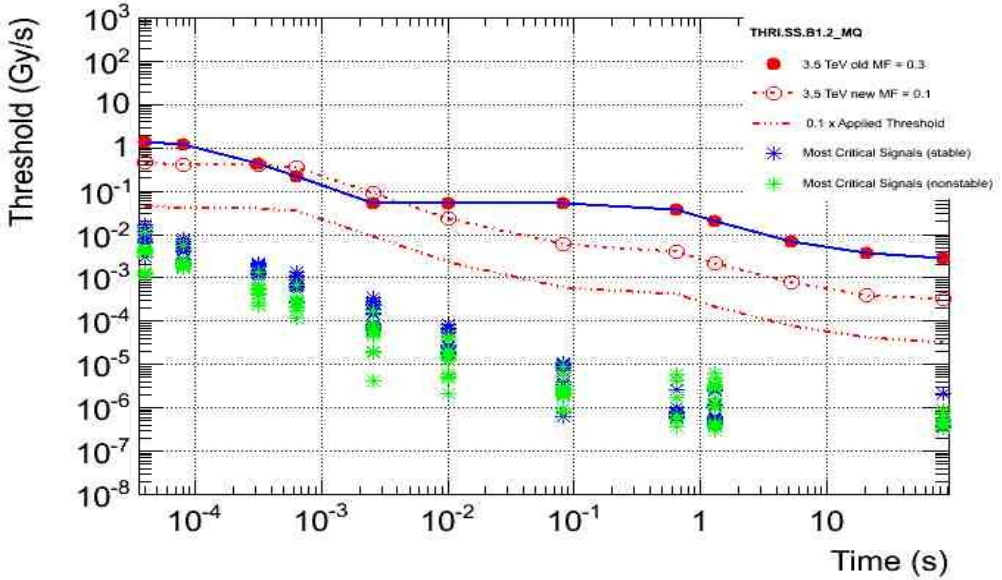
Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold

MQ.SS – 6 families (18 monitors)



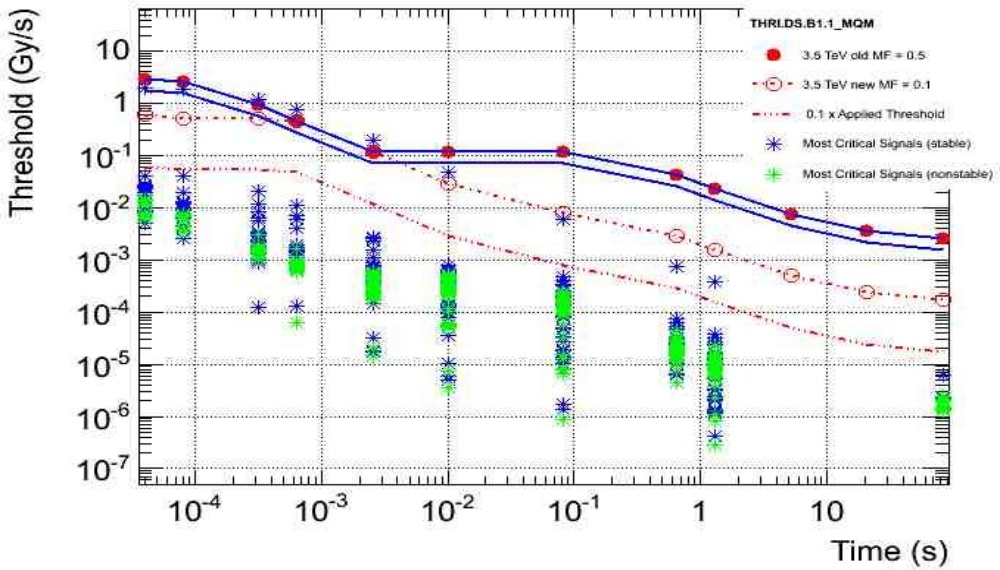


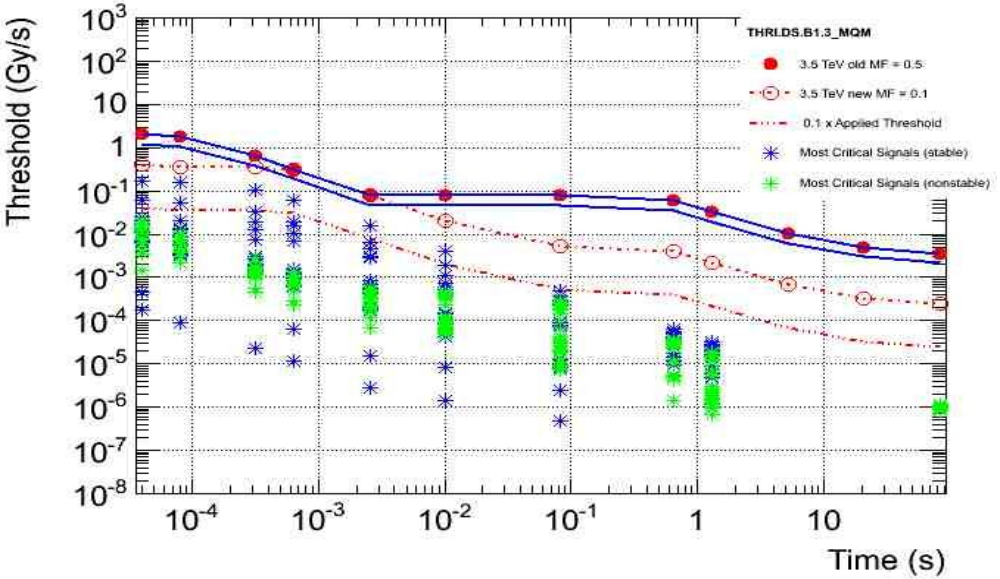


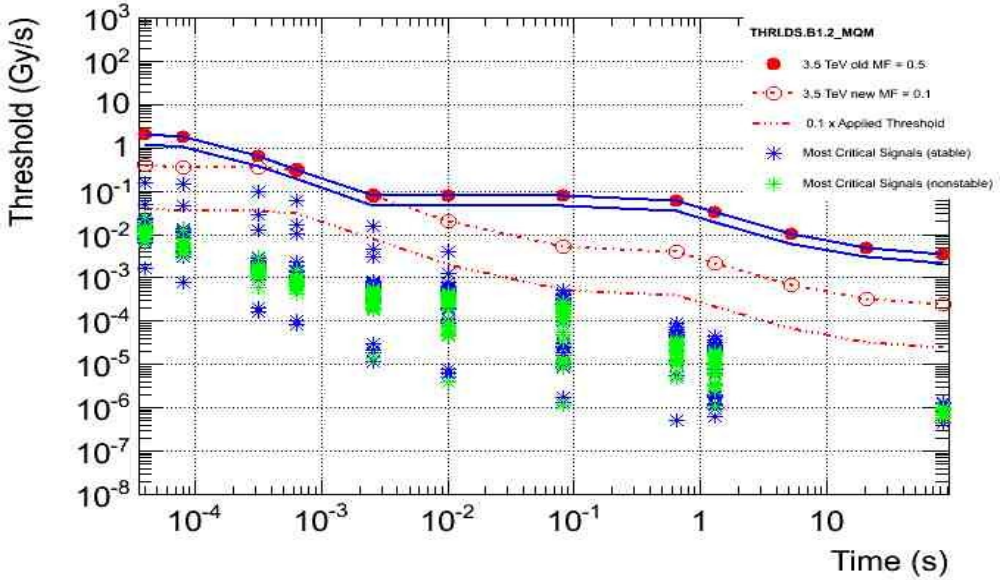
Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold

MQM.DS – 6 families (181 monitors)



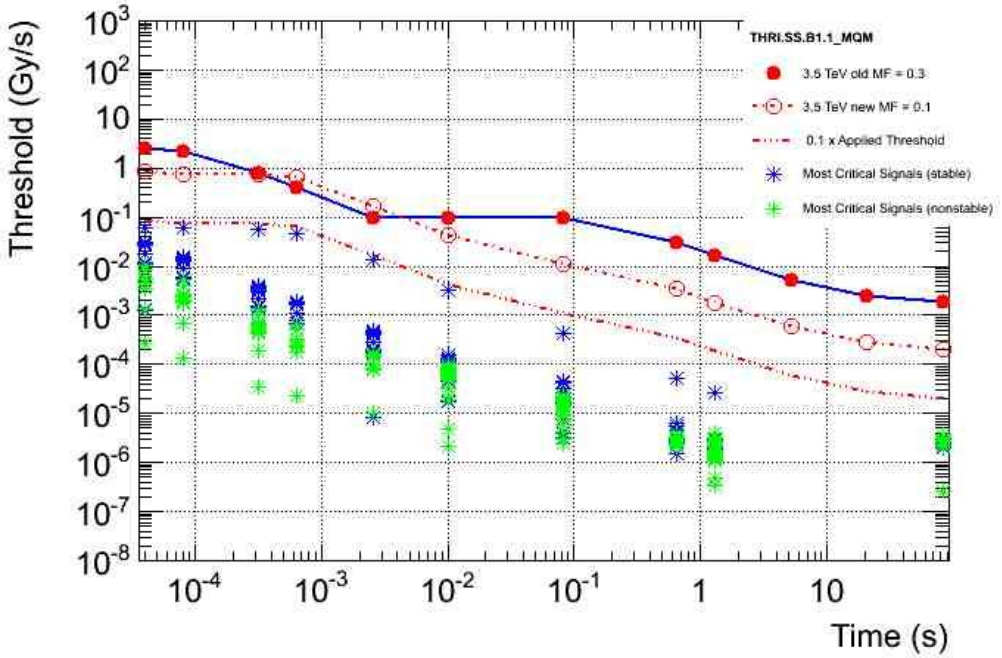


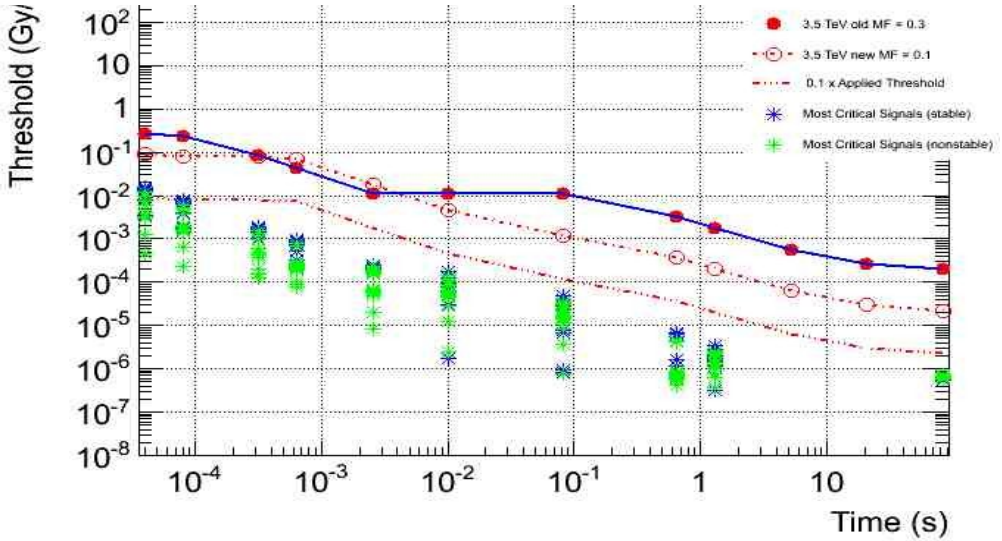


Same Thresholds for B1 and B2 families

All most critical signals > 10% of applied Threshold correspond to UFOs. One UFO would stil dump after change.

MQM.SS – 6 families (80 monitors)



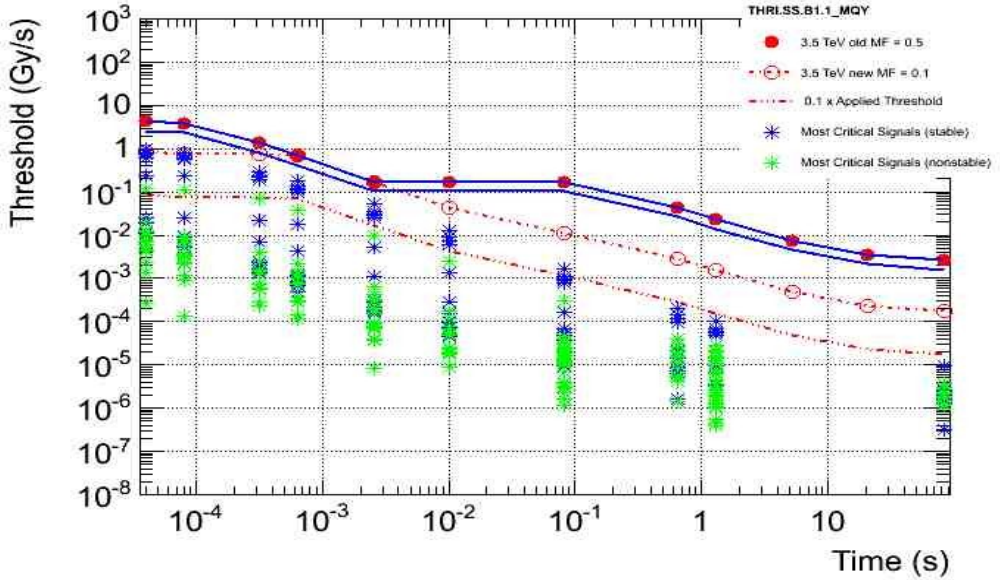


Threholds for monitors at Position 3 are set to maximum:
THRI.SS.B1.3_MQM
THRI.SS.B2.3_MQM

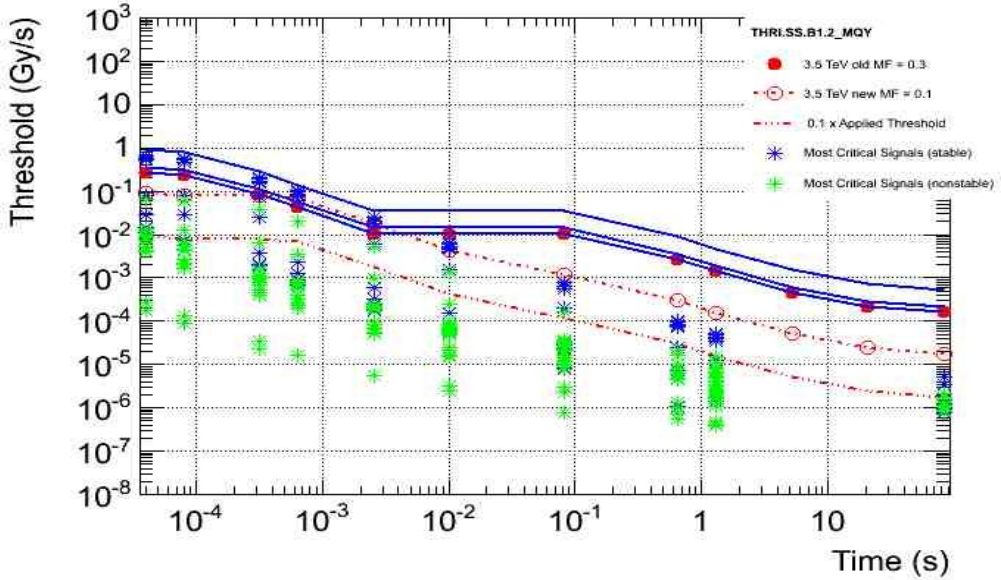
Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold (except RS01)

MQY – 6 families (106 monitors)



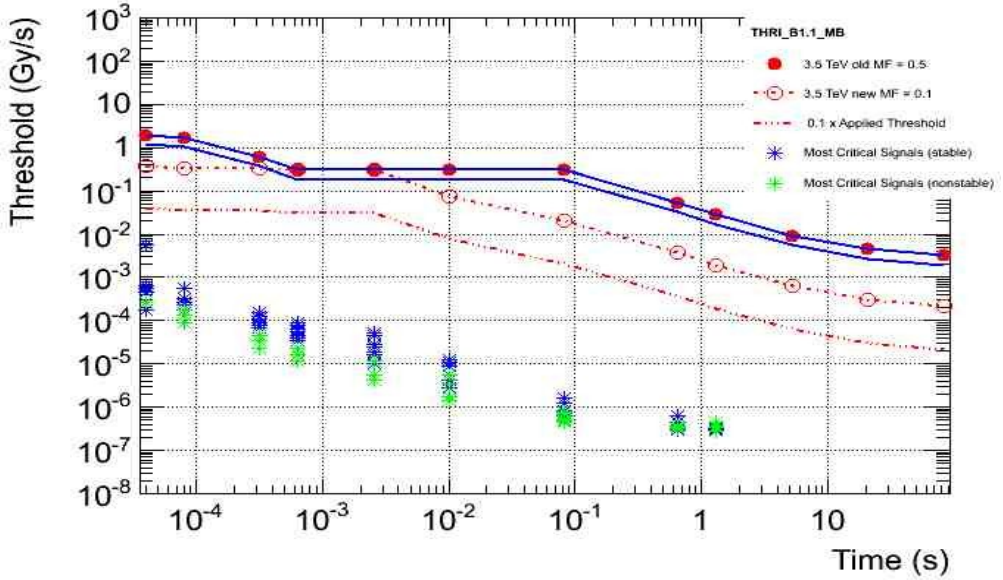
Threholds for monitors at Position 3 are set to maximum:
THRI.SS.B1.3_MQY
THRI.SS.B2.3_MQY

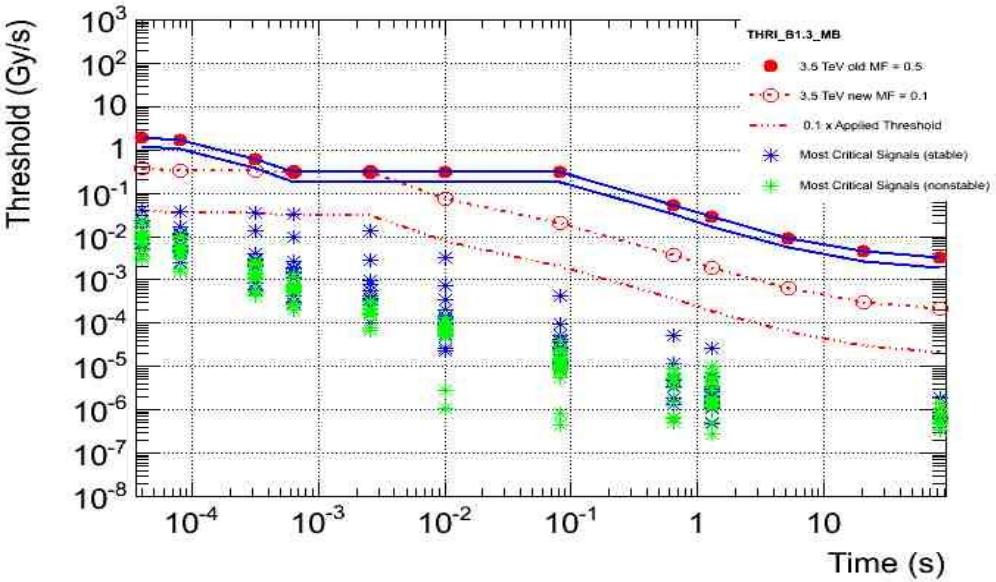


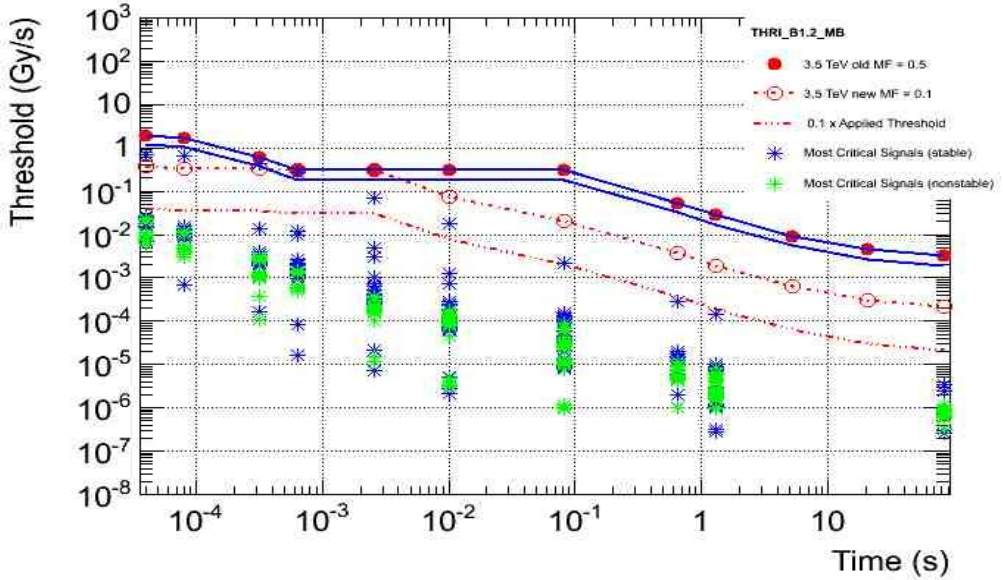
Same Thresholds for B1 and B2 families

Needs to be further invertigated

MB – 5 families (239 monitors)

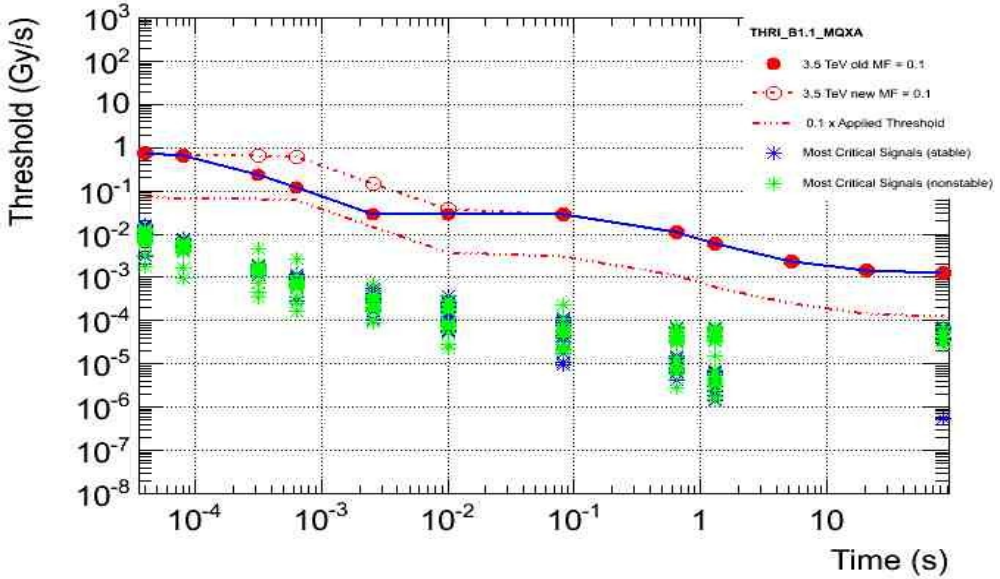


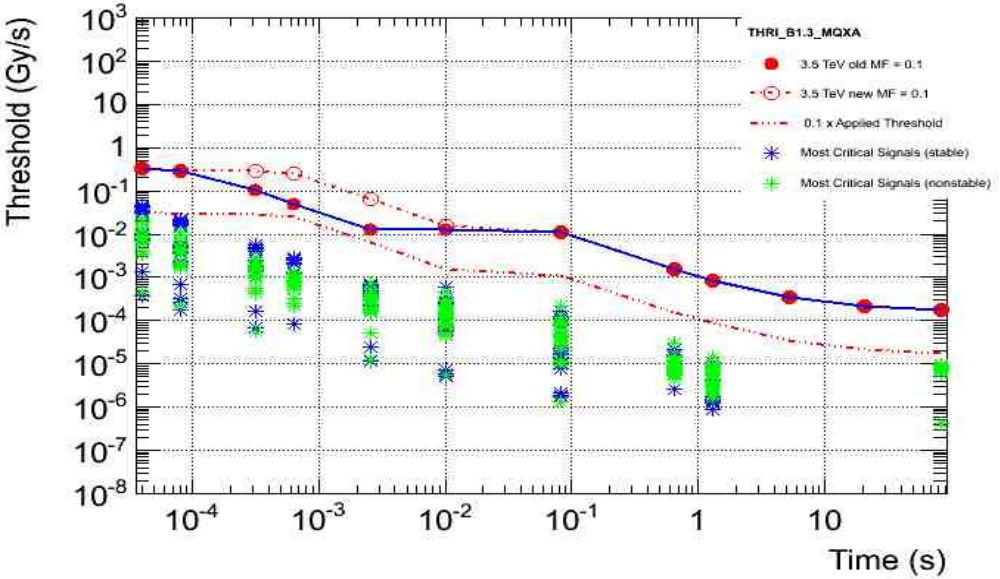


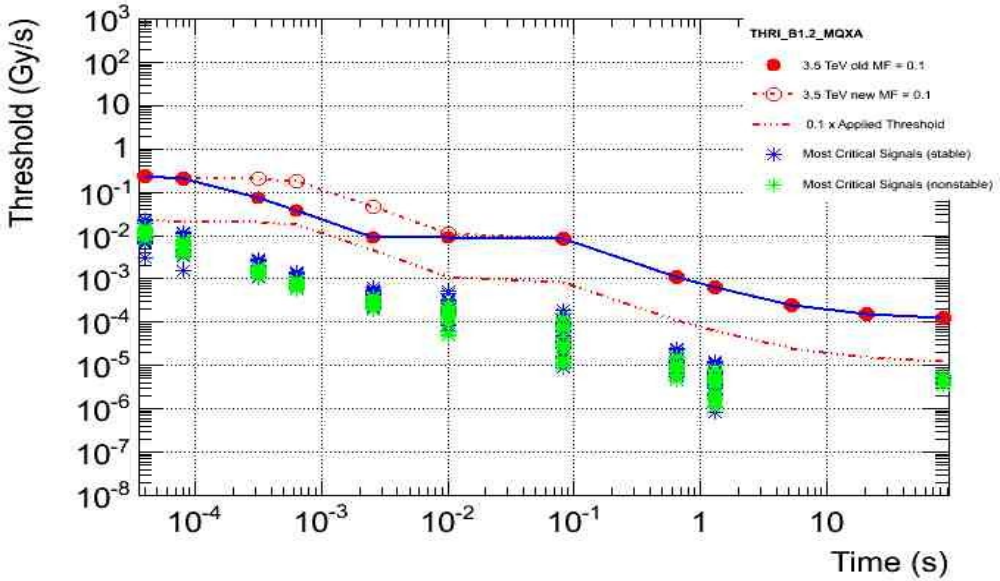


Same Thresholds for B1 and B2 families

MQXA – 6 families (67 monitors)







Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold except RS01

Families to change

Beam Position

- THRI.AR.B(1,2).(1,2,3)_MQ (2160)
- THRI.DS.B(1,2).(1,2,3)_MQ (181)
- THRI.SS.B(1,2).(1,2,3)_MQ (18)

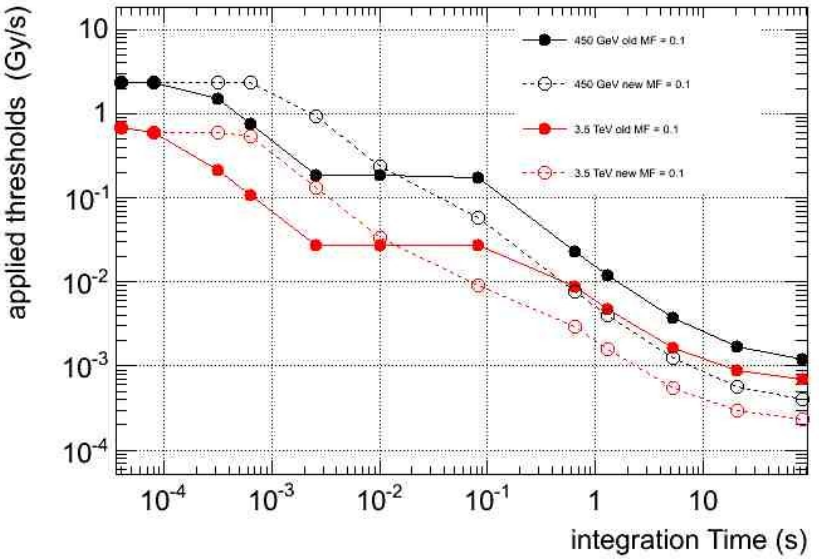
- THRI_B(1,2).(1,2,3)_MB (239)

- THRI.SS.B(1,2).(1,2,3)_MQM (80)
- THRI.DS.B(1,2).(1,2,3)_MQM (181)

- THRI_B(1,2).(1,2,3)_MQXA (47)
- THRI_B(1,2).3B_MQXA (12)
- THRI_B(1,2).(2,3)_MQXB (64)

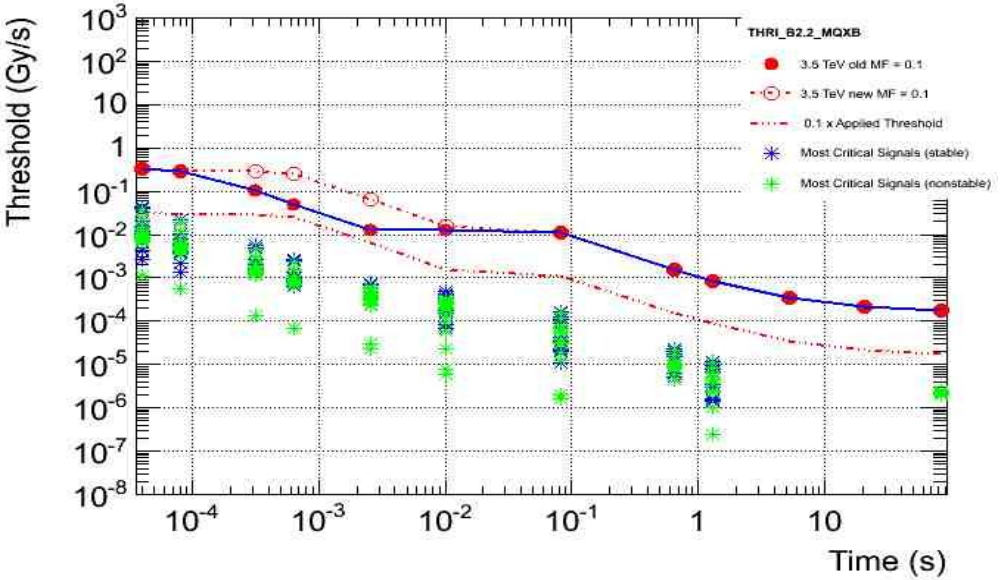
- THRI_(1,2)_MBX (3)

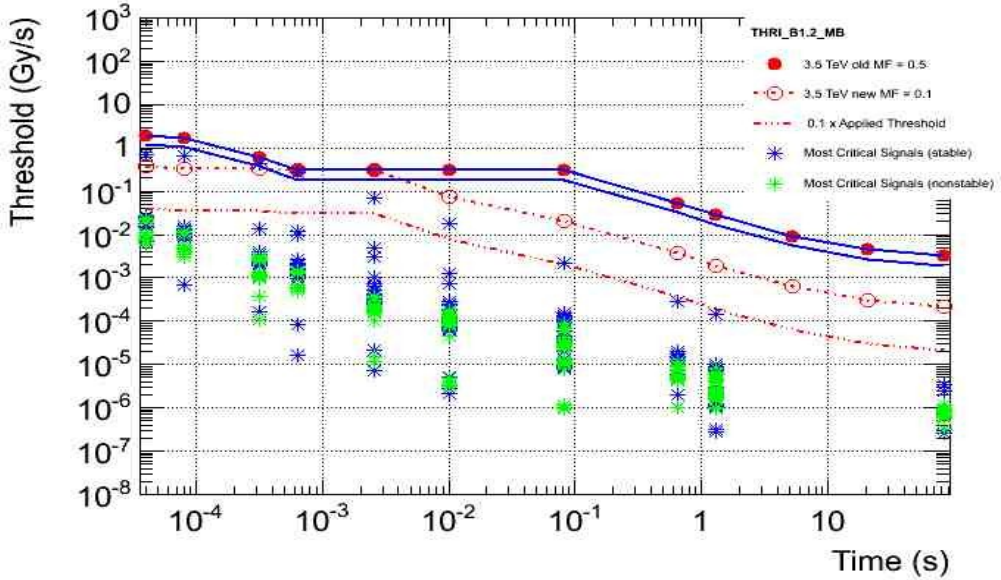
THRI.AR.B1.1_MQ



Up to a factor 5 increase of the threshold in RS03, RS04 and RS05. Factor 3 reduction for RS07 and higher.

MBX – 5 families (106 monitors)





Same Thresholds for B1 and B2 families

All most critical signals < 10% of applied Threshold