Analysis of RE data from JET Gamma-ray Camera

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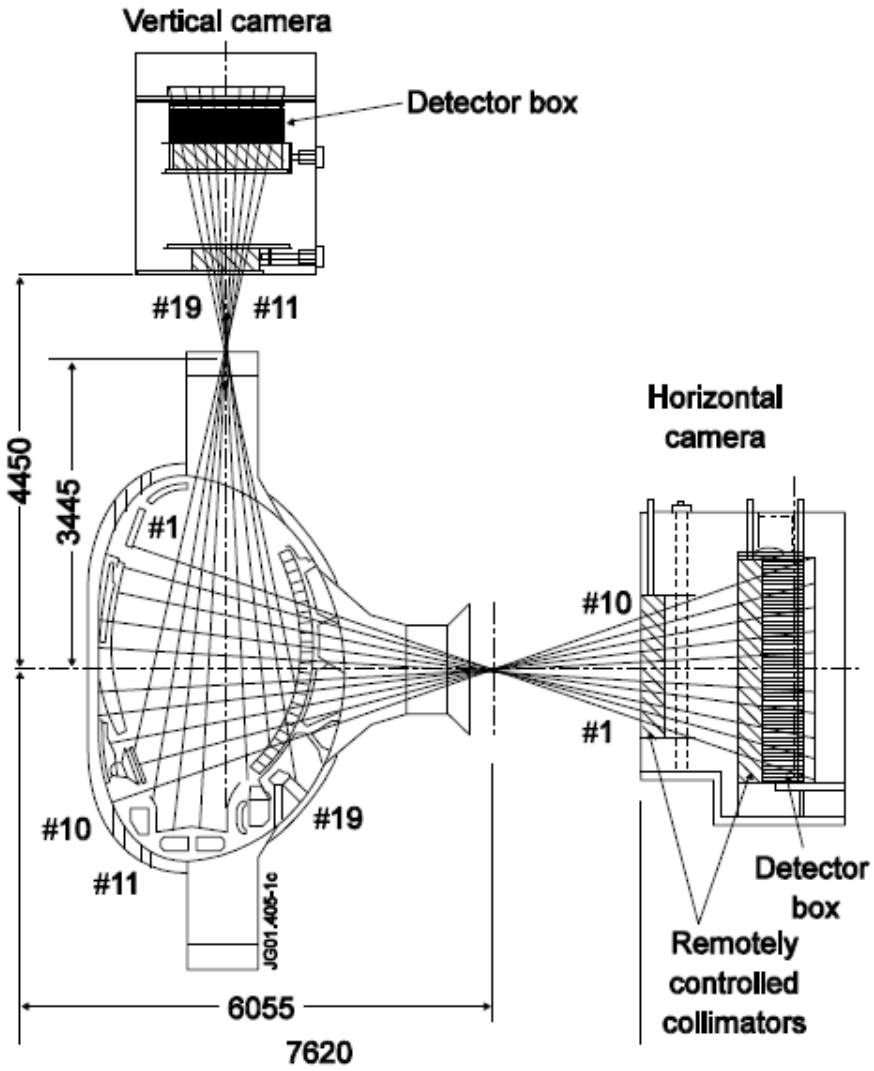
Gamma Camera: Overview



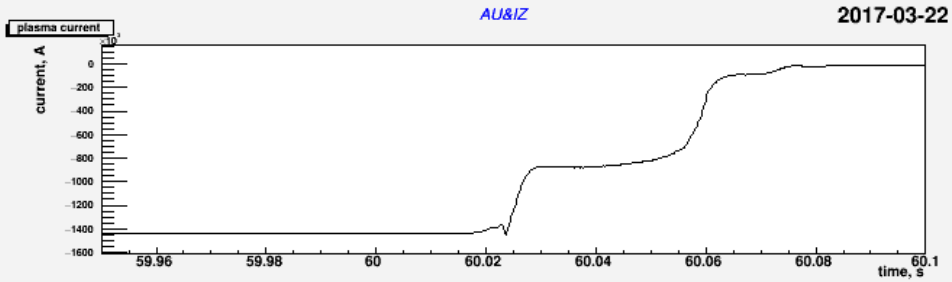
Vertical Camera: 9 detectors
CsI(Tl) in #11 ... #19

Horizontal Camera: 10 detectors
CsI(Tl) in #1 ... #8
$CeBr_3$ in #9 and #10 has been tested

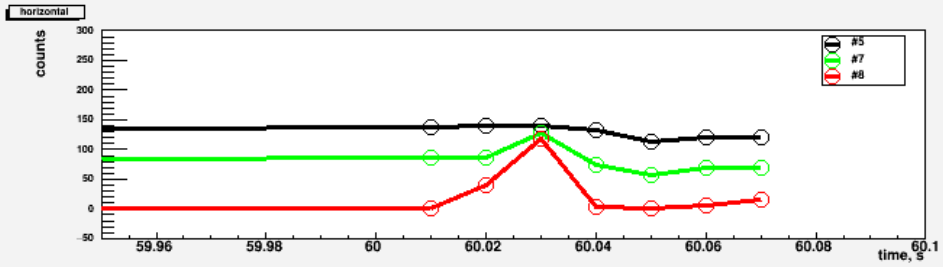
Gamma Camera Upgrade

All of the old detectors will be replaced by $LaBr_3$:Ce scintillators. Upgrade of HC has been already done.

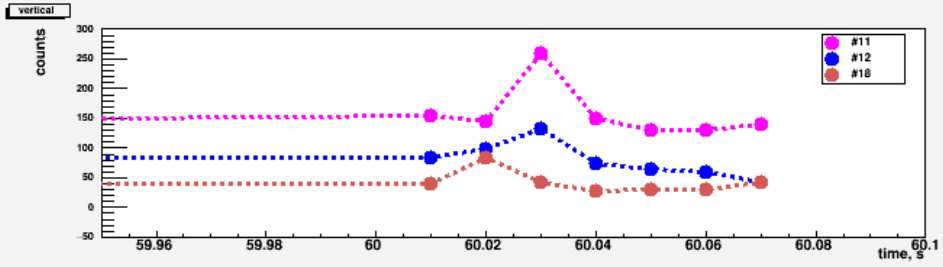
Preliminary results: #91069



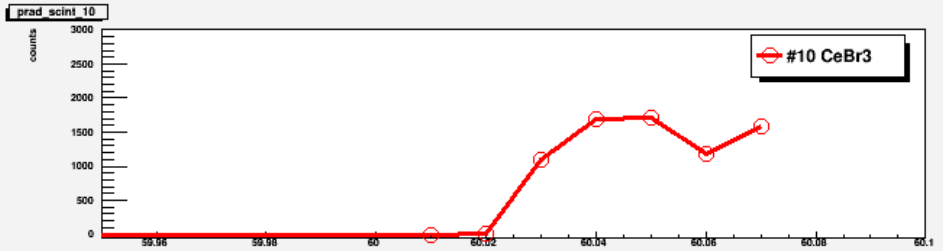
Plasma current



Horizontal Camera: CsI



Vertical Camera: CsI

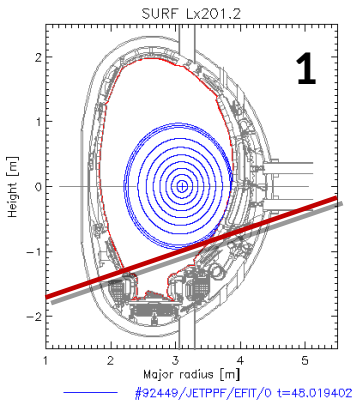


Horizontal Camera: $CeBr_3$

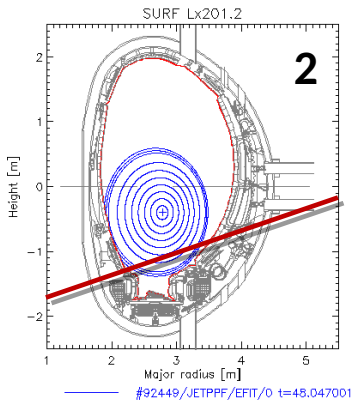
Data analysis: #92449

Time range [s]
48.01 – 48.10

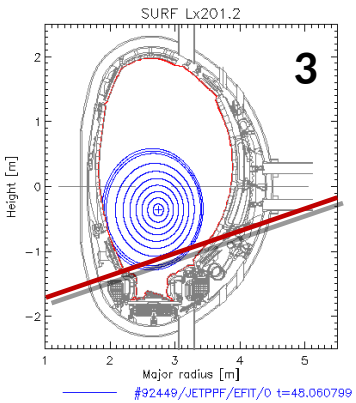
The field of view of #10 is marked on red



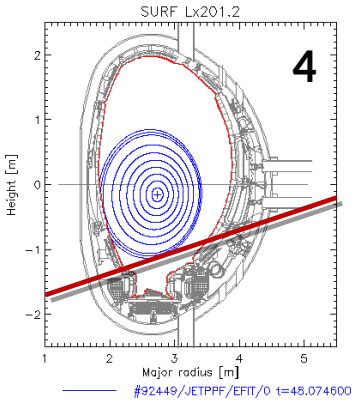
48.02 s



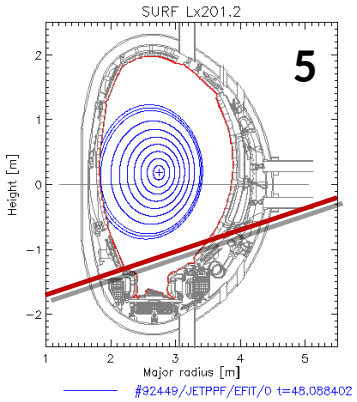
48.05 s



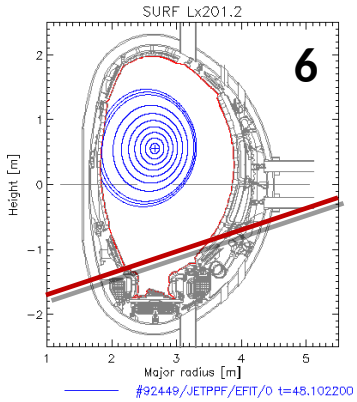
48.06 s



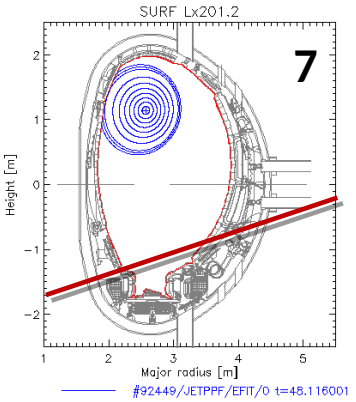
48.07 s



48.09 s

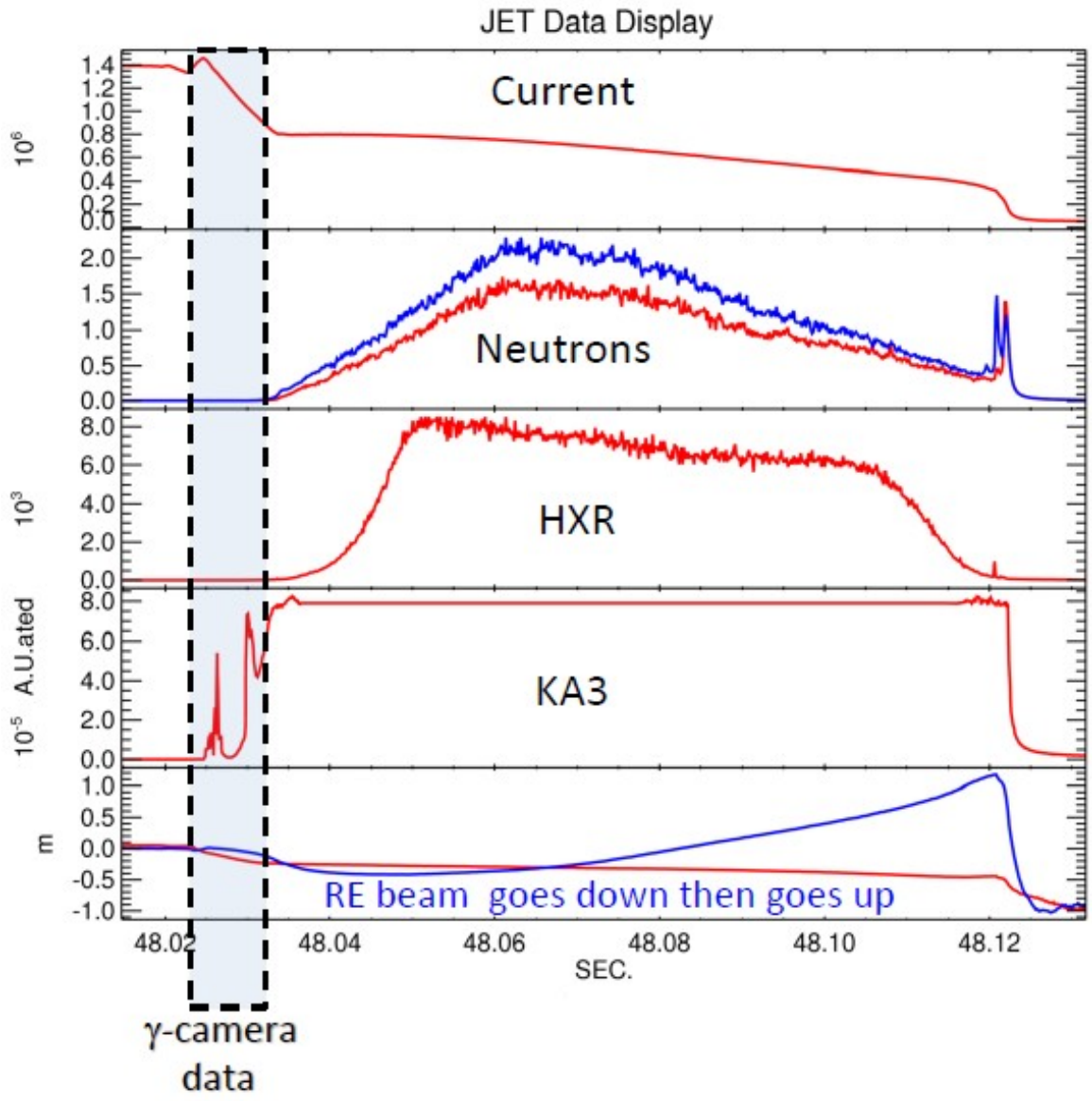


48.10 s

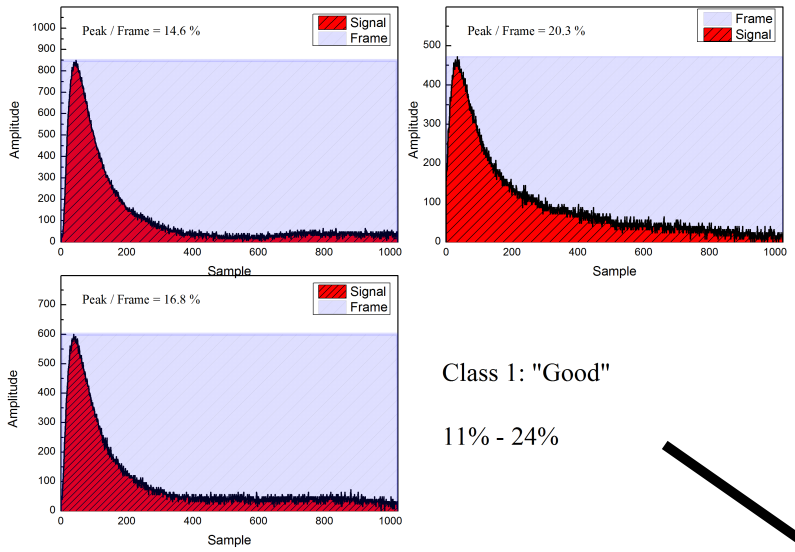


48.12 s

Data analysis: #92449

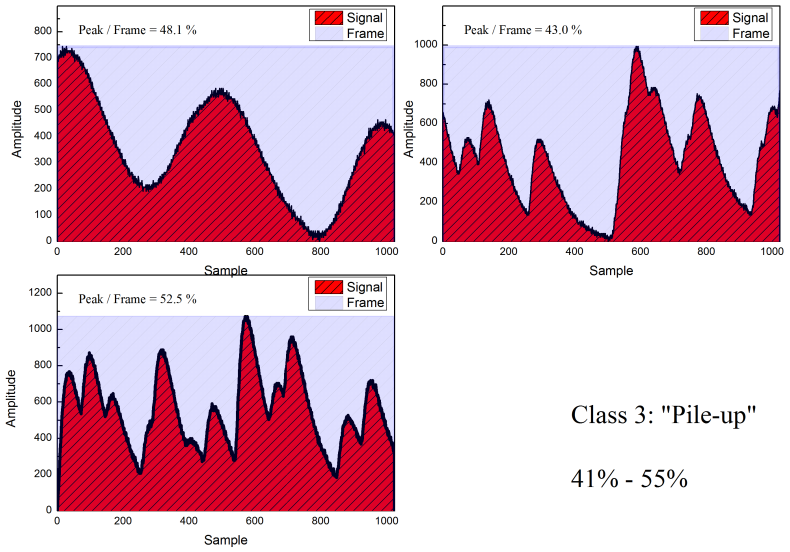


Data analysis: #92449 channel 10



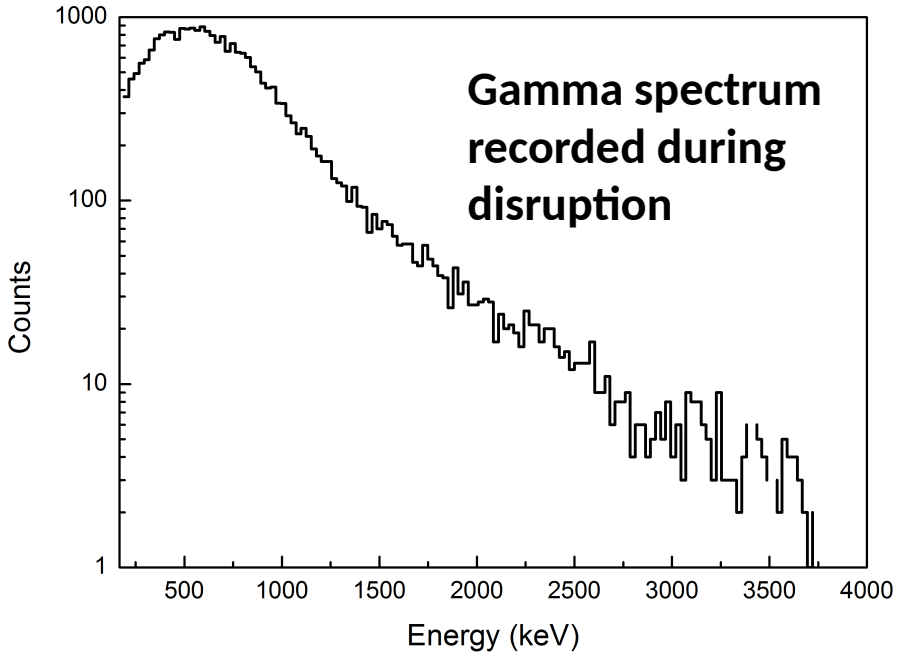
Class 1: "Good"

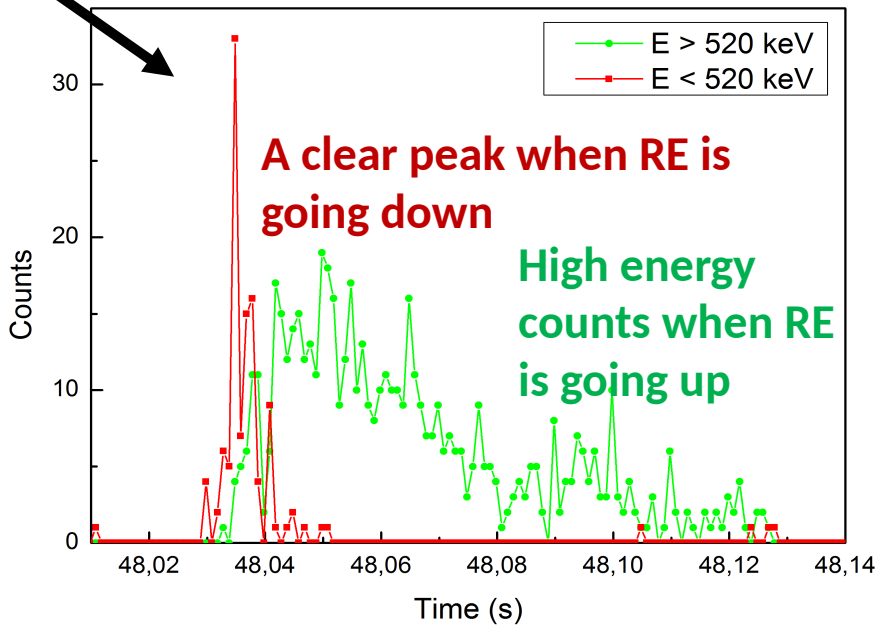
11% - 24%



Class 3: "Pile-up"

41% - 55%





Conclusion

Shots **#91067, #91069, #92448 - #92461** have been successfully analysed: we obtained very promising results.

The pile-up filter must be **created** and **applied** – the majority of signals is formed by pile-ups.

Data analysis performed for all detectors will enable to find **the response function**: it will be possible to obtain the electron energy spectrum.