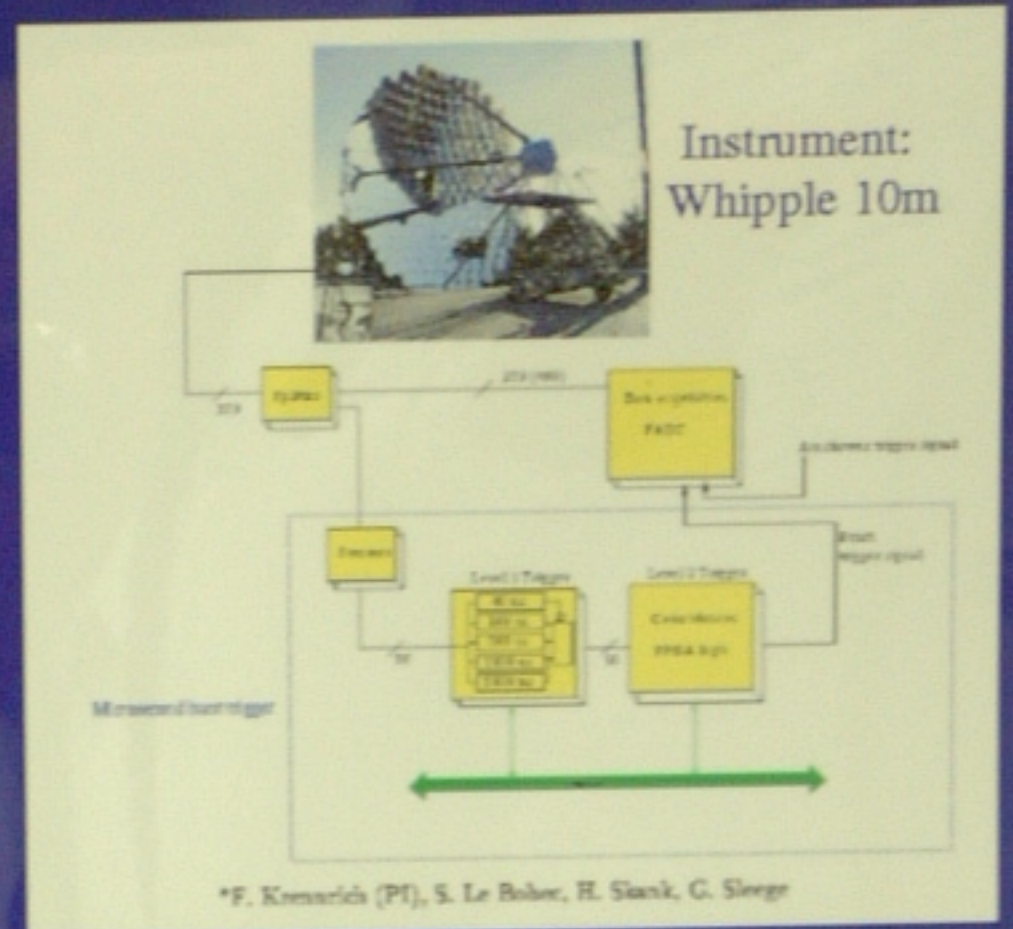
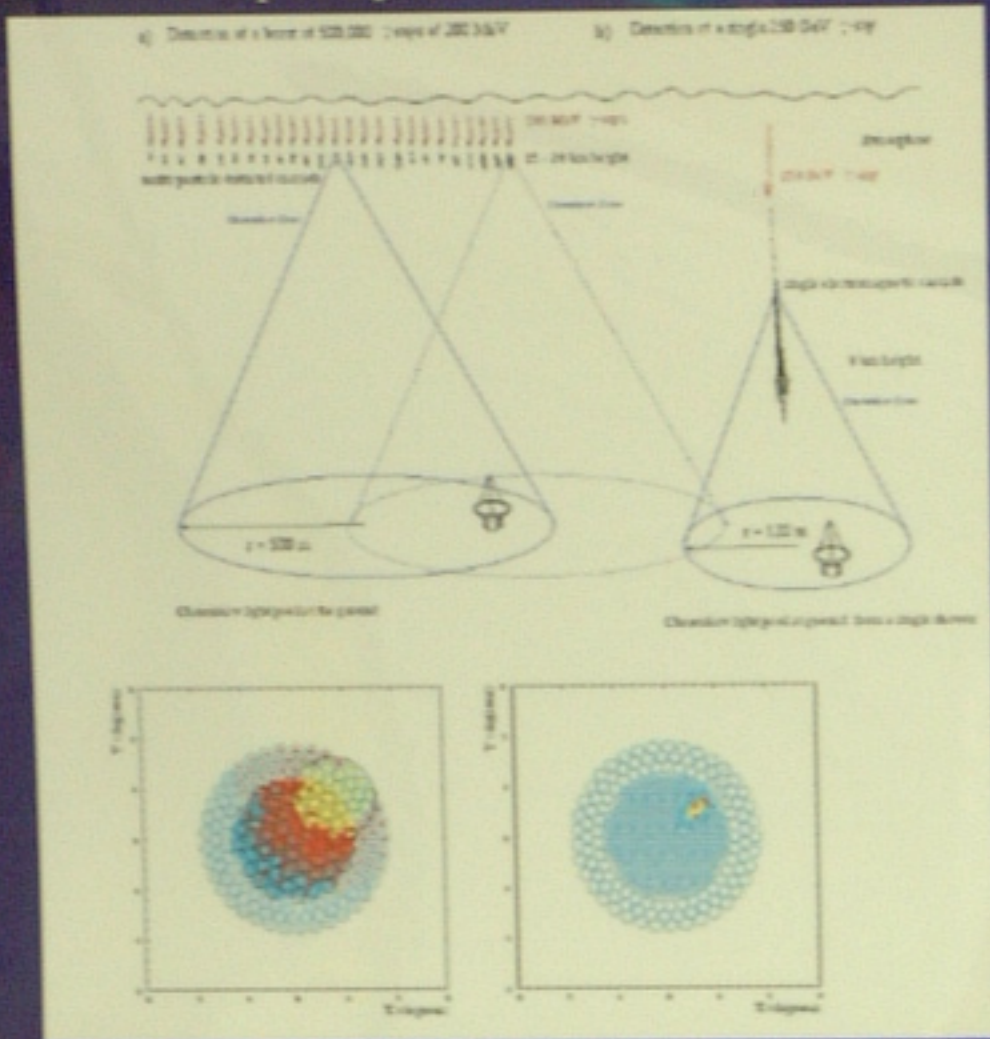


Technique:

Detection principle:



Abstract:

SGARFACE is sensitive to 0.1ms to 100 ms bursts of γ -rays with $E > 200$ MeV. The detection of low energy γ -ray bursts is provided by the accumulative Cherenkov-light of a large number of low energy showers arriving within a short time. The fluence sensitivity is 2-3 orders of magnitude higher than previous satellite telescopes (EGRET).

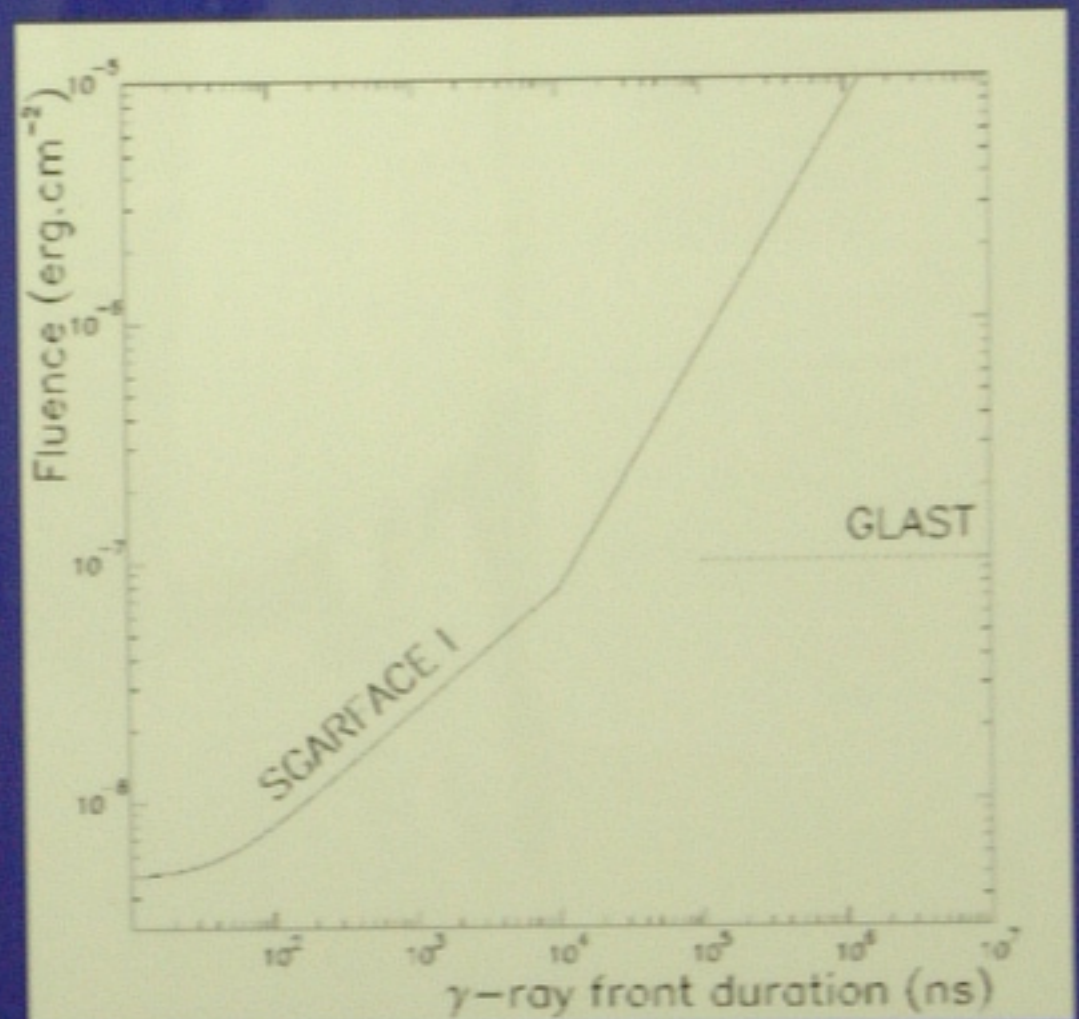
References:

- [1] Krennrich, F., LeBohec, S. & Weekes, T.C., 2000, ApJ, 529, 506ps
- [2] LeBohec, S., Krennrich, F., 2001, Proc. 27th ICRC (Hamburg), 2756

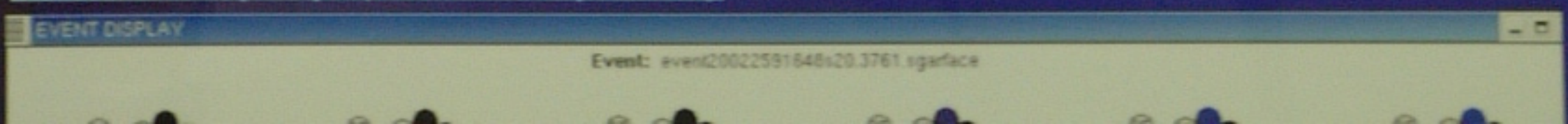
Acknowledgements:

This research is supported by grants from the US Department of Energy and Iowa State University.

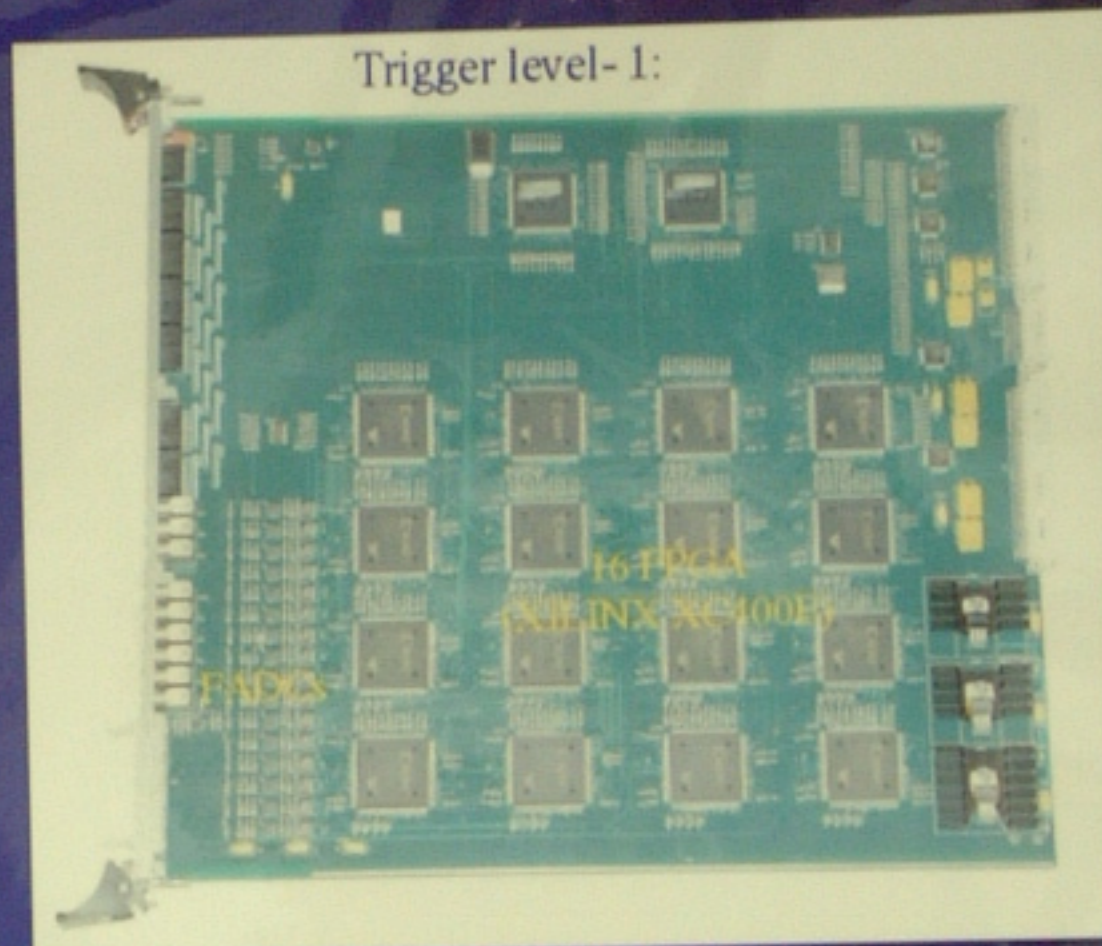
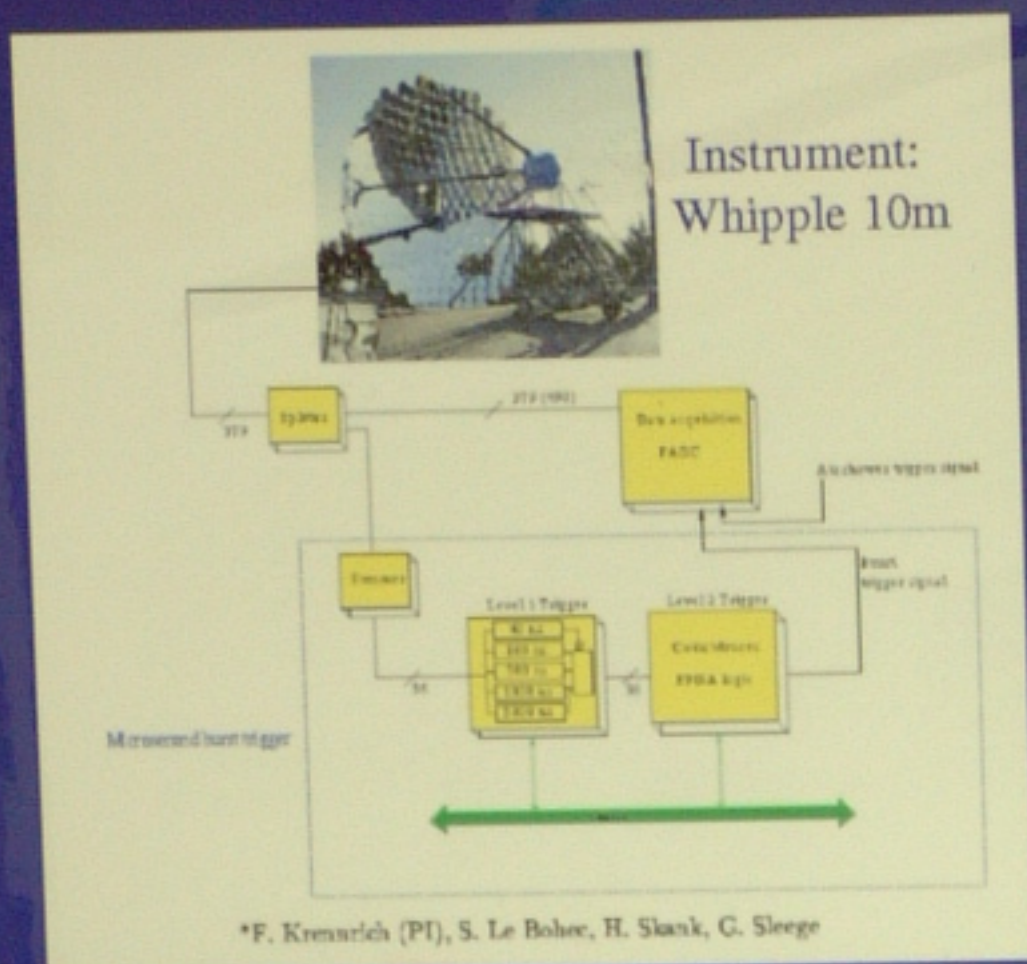
Fluence sensitivity:



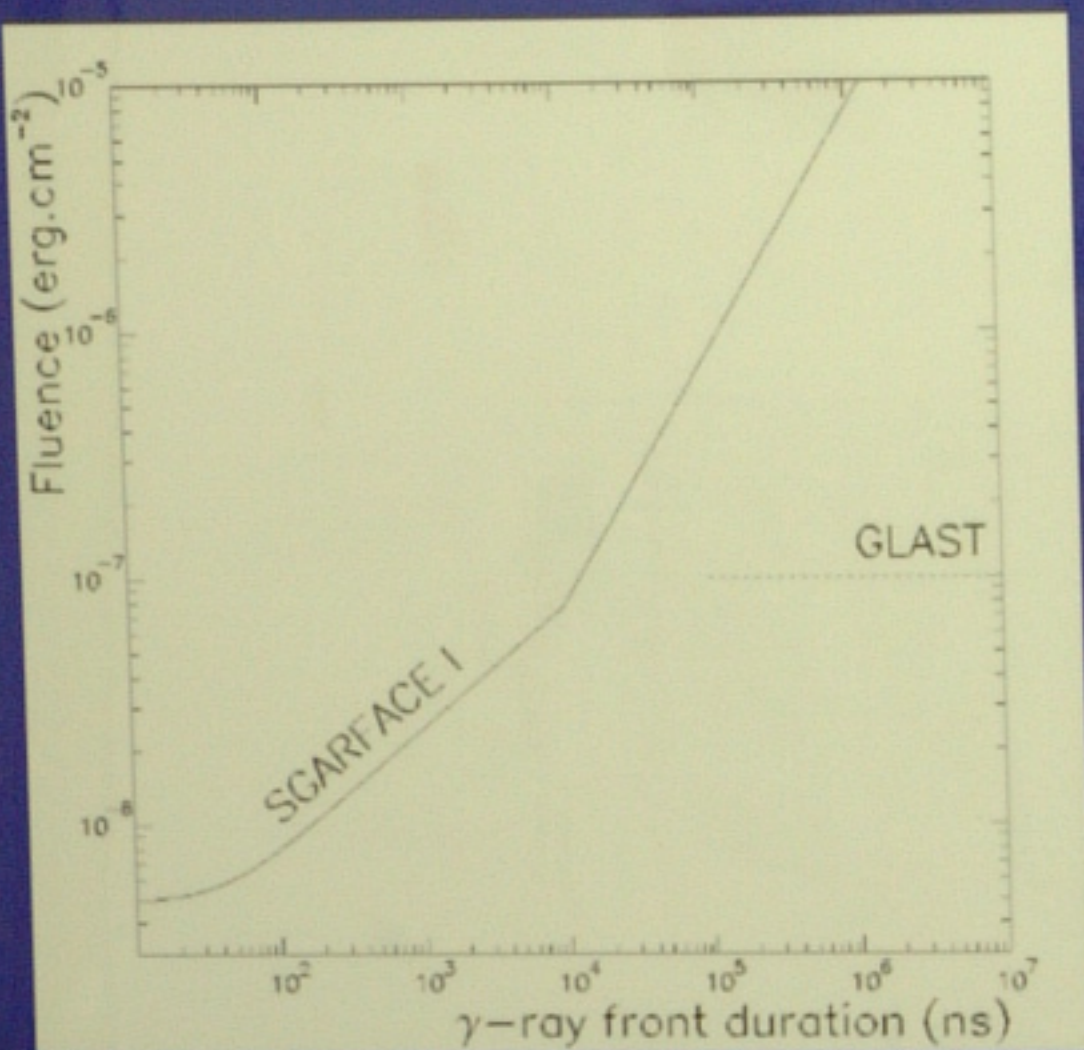
Event display (artificial pulse):



Gamma Ray Front Air Cherenkov Experiment

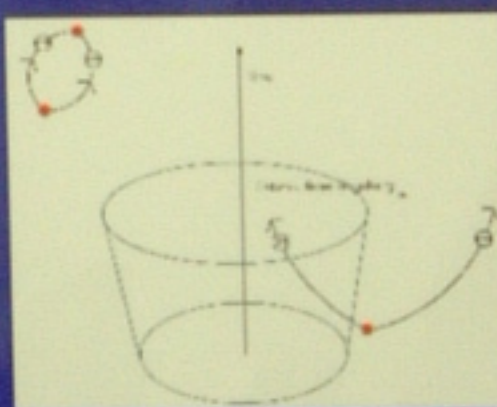


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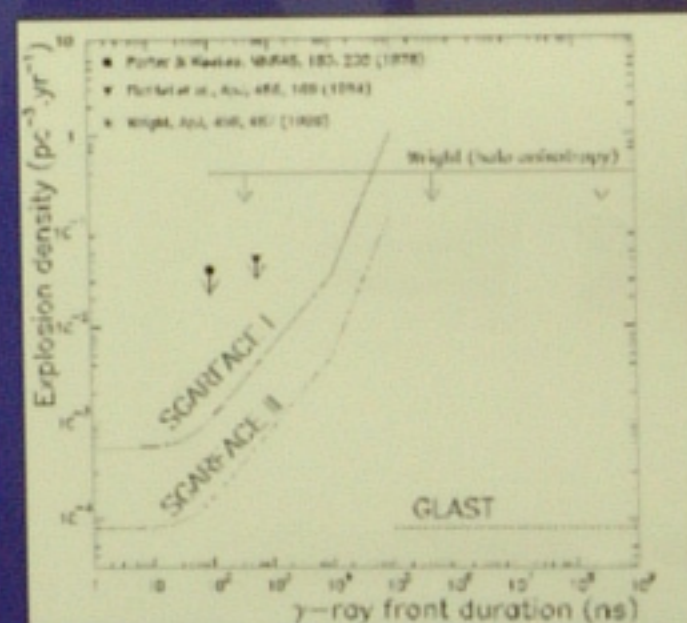


Science:

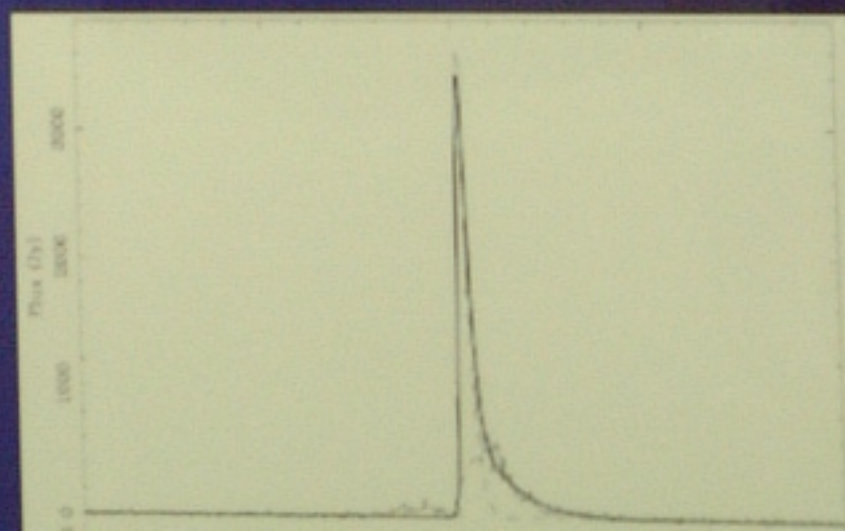
- Evaporation of primordial black holes:

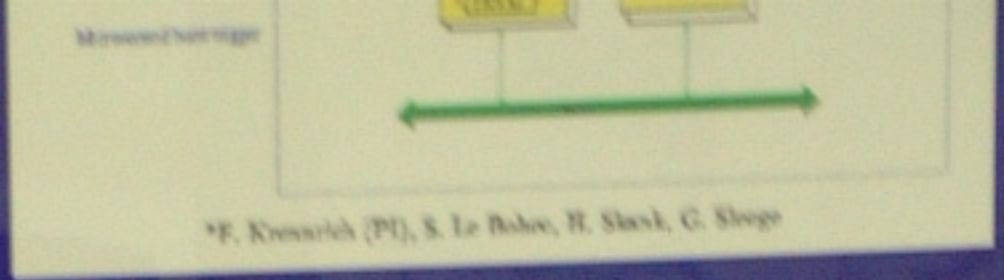
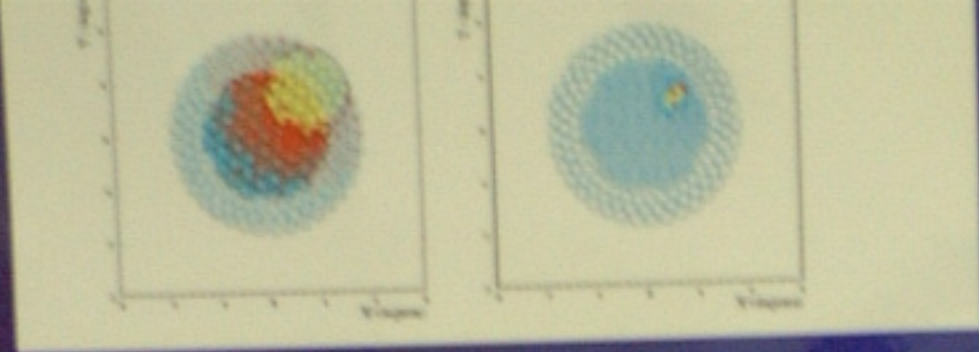


S. W. Hawking, *Nature*, 248, 31 (1974)



- Search for giant pulses from radio pulsars





Abstract:

SGARFACE is sensitive to 0.1ms to 100 ms bursts of g-rays with $E > 200$ MeV. The detection of low energy g-ray bursts is provided by the accumulative Cerenkov-light of a large number of low energy showers arriving within a short time. The fluence sensitivity is 2-3 orders of magnitude higher than previous satellite telescopes (EGRET).

References:

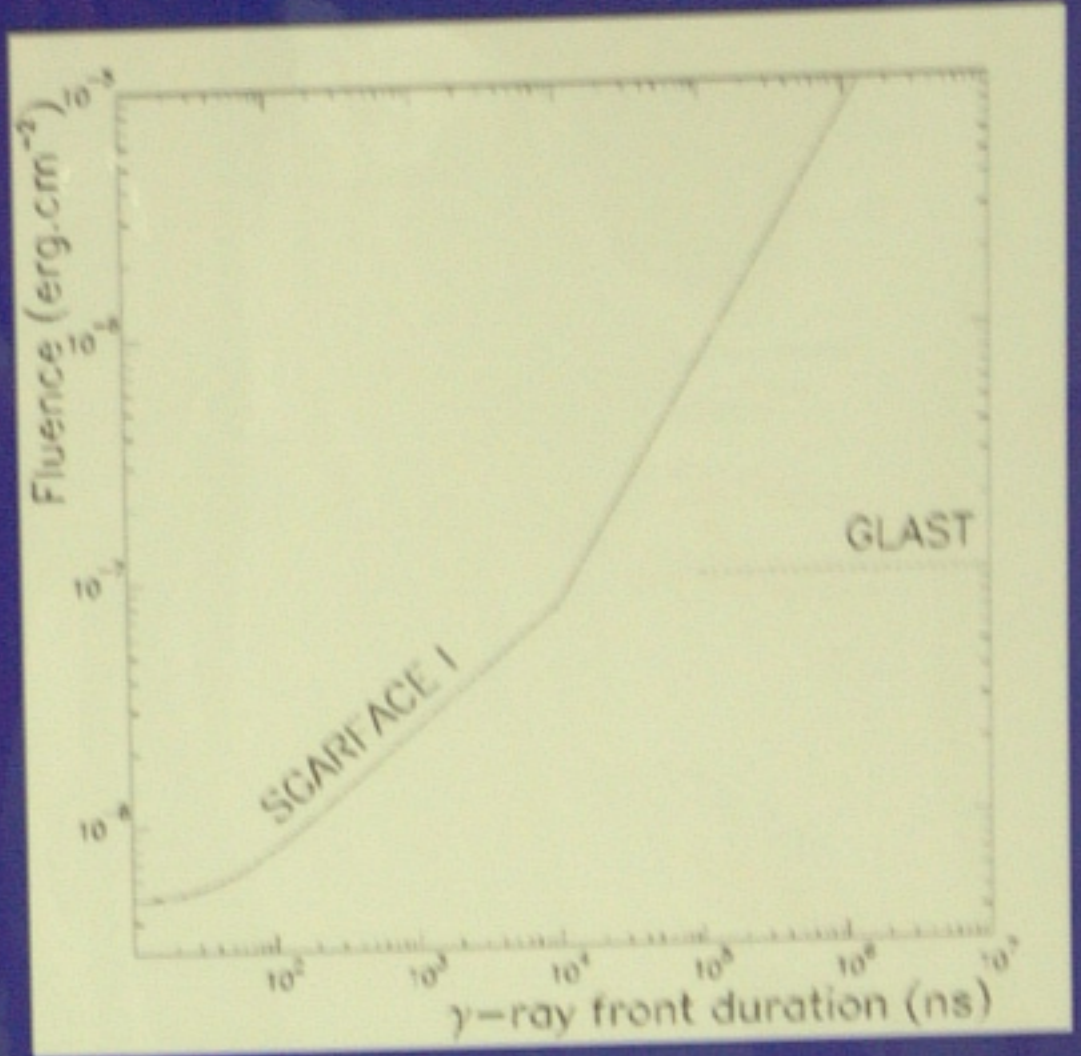
[1] Krennrich, F., LeBohec, S. & Weekes, T.C., 2000, ApJ, 529, 506ps

[2] LeBohec, S., Krennrich, F., 2001, Proc. 27th ICRC (Hamburg), 2756

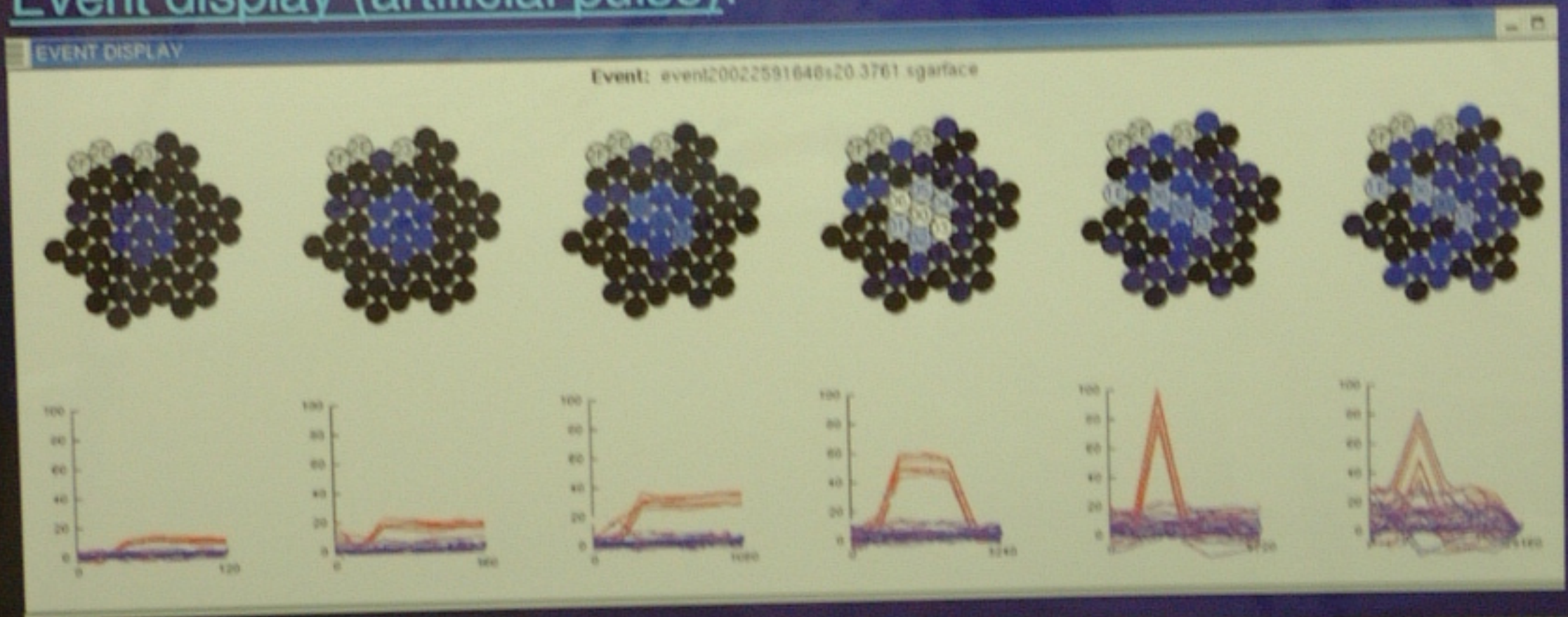
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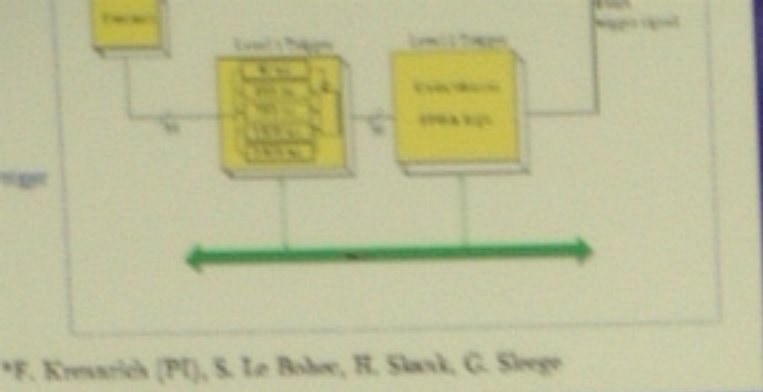
This research is supported by grants from the US Department of Energy and Iowa State University.

Fluence sensitivity:



Event display (artificial pulse):

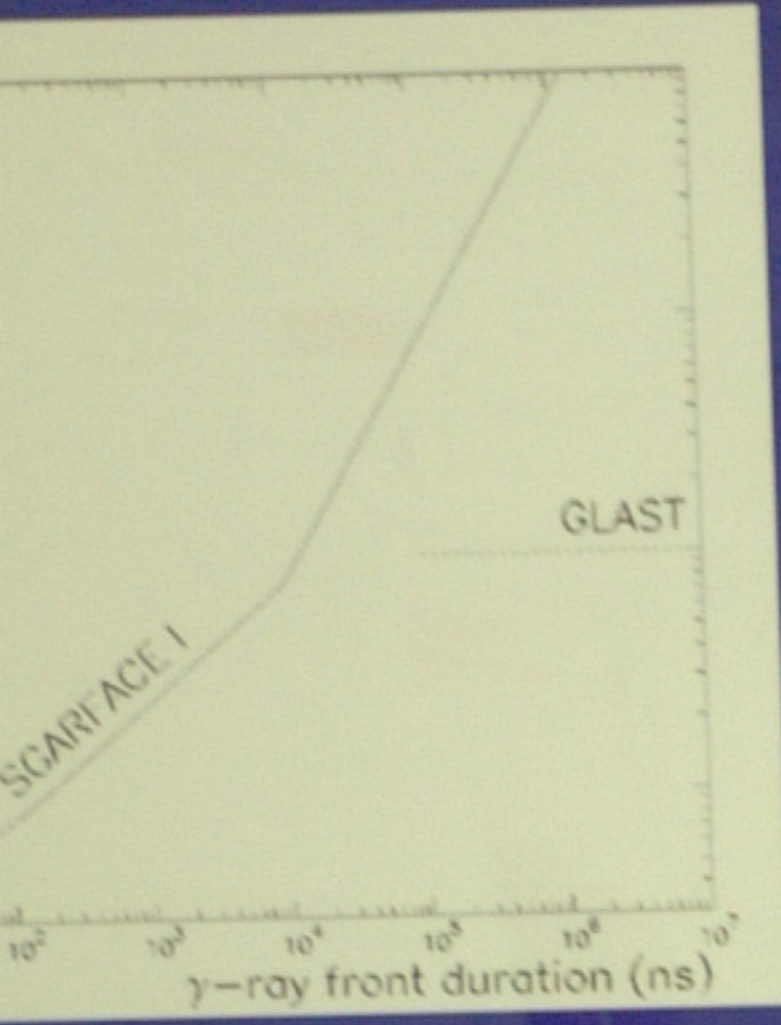




F. Krennrich (PI), S. Le Bohec, H. Slawik, G. Slesge

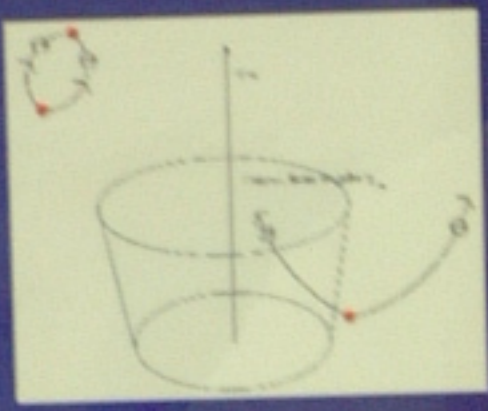


sensitivity:

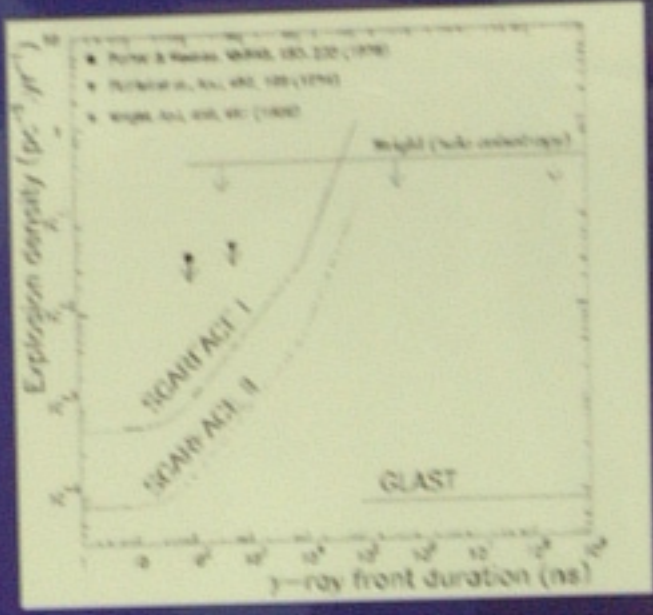


Science:

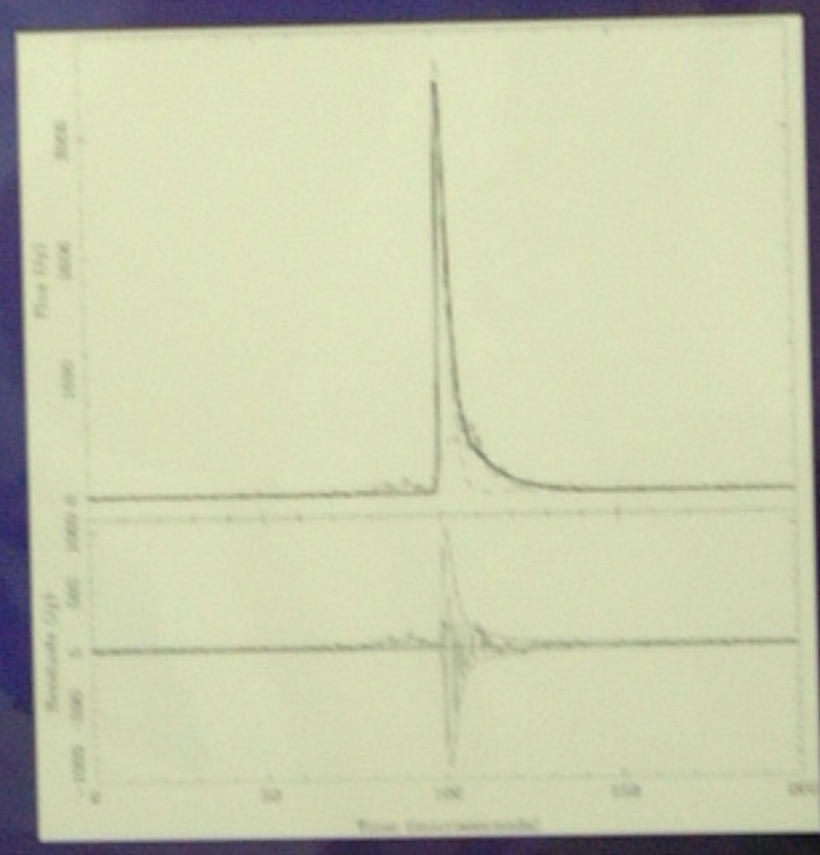
- Evaporation of primordial black holes:



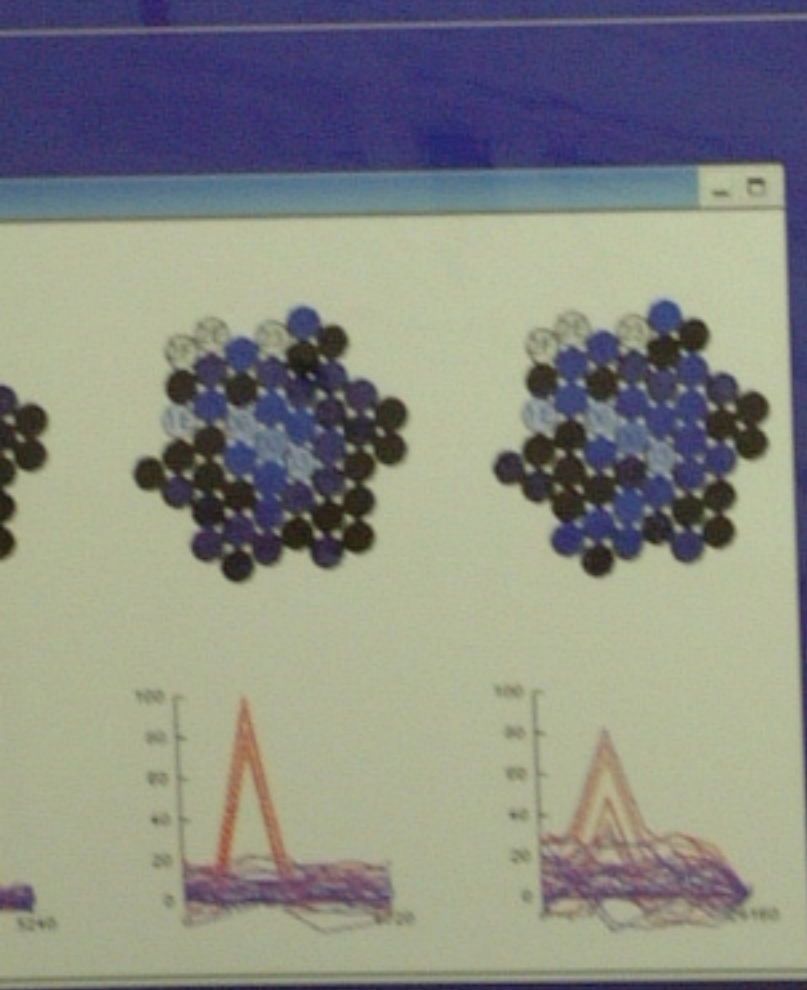
S. W. Hawking, Nature, 248, 31 (1974)



- Search for giant pulses from radio pulsars



Sallmen et al., 1999, ApJ, 460



Stephan LeBohec, Frank Krennrich,
Patrick Jordan & Gary Slesge,
September 16th 2002