



Ongoing Multiwavelength/ Multimessenger Opportunities Involving Fermi

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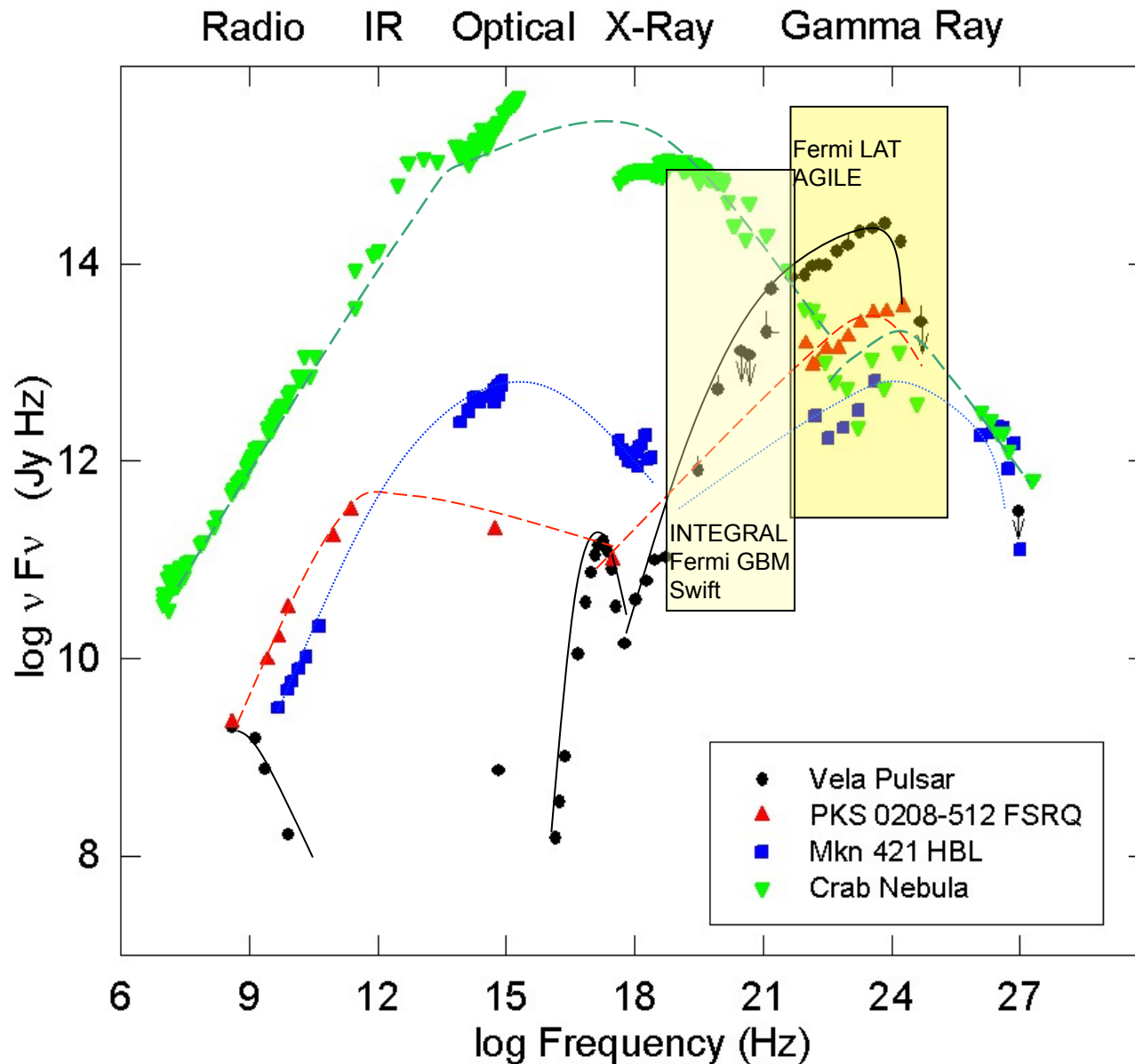
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Fourth International Fermi Symposium



A Slide from the Early Days



Gamma-ray sources are nonthermal, typically produced in interactions of high-energy particles.

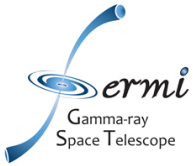
Fermi scientists are therefore interested in the particles and all other products of their interactions.



Reminder of Other Needs for Scientific Analysis

- Distance – redshift, Dispersion Measure, parallax, proper motion, column density
- Composition – spectroscopy
- Precise source locations and imaging
- Velocities
- Polarization
- Magnetic fields
- Theories to connect the observations to physical models

These are all multidisciplinary studies.



What Has Changed? Why Have this Session?

Two Possibilities:

- 1. Emphasis – fewer pre-planned campaigns, more ad hoc, data-driven efforts; to some extent resulting from widespread large data sets. Perhaps it is time to re-consider extended planned campaigns.**
- 2. Environment – resource availability (missions coming and going), growing interest in time-domain astronomy, better knowledge of the gamma-ray sky**

The Fermi mission is less than halfway through its planned 10-years of observations, so it is a good time to look forward.



A suggested goal for this session:

Identify ways in which present and future multiwavelength/multimessenger facilities can work in cooperation with the continuing Fermi mission to produce the best science.