Miguel's Medium Term Burst Search

- Draft paper circulated at end of February
- *Astroparticle Physics* paper (Morales, Williams & DeYoung) on the technique has been submitted. Available on http://umdgrb.umd.edu/archive/mmorales_p.w3archive/0303/msg00008.html and as astro-ph/0303178
- Memo on the calculation of the cosmological corrections posted on the memos page
- Thesis is on the Publications page: http://scipp.ucsc.edu/milagro/papers/morales_thesis.pdf
- Many constructive comments sent to mmorales_p@umdgrb mailing list.
- A new (final?) version addressing these comments is in preparation
- Publications Committee has endorsed trying to stay within the *ApJLett* format, as agreed upon at the December, 2002 Milagro meeting.
- Miguel's window of opportunity to work on this paper is closing
- DAW will try to pick up the slack

The Weighed Analysis Method

- Many comments that paper does not sufficiently describe this method
- Will be addressed in next version, consistent with *ApJLett* page restrictions, meaning…
- We will have to rely on thesis as documentation of many details of the method
- Sensitivity…

Sensitivity of the Technique

Caveats:

- No X2 information (sensitivity advantage will increase when X2 is added, and could be very significant due to the large changes in X2 with angular resolution)
- Old trigger condition (>53 tubes hit)
- Large number statistics (not limit GRB search is in)
- Assumes parameterization of the angular resolution is correct (as presented in Miguel's thesis).
- Hot off the press

The weighted analysis technique is 35% more sensitive than a binned analysis in this limit.

The binned analysis had a circular bin of 1.376 degrees (reassuringly close to 1.4), which was the optimum for Miguel's parameterization of the angular resolution.

Presentation of the Limits

- Use of “intrinsic” will be expunged
- Conflicting comments
  - Some want more discussion of impacts of the model assumptions on the limits
  - But the current presentation was an attempt to get away from such dependence in response to earlier comments
- The probability tables are intended to be the results
- The one model described is meant to illustrate their use, not to be a presentation of the result
- Should we be on a different tack?