

"Wish List" for H.E.S.S.

Working version of the things LAT would like the HESS team to share with us.

LIST 1 - General and Programmatic Topics

Number	Item Wished from HESS	Rationale
1	Observing schedule	Enable LAT collaboration to react in a timely way on particular objects of interest on the basis of LAT observations. Community service for HESS.
2	Observing history	Enable LAT collaboration to check if VHE exposure is present. Helps reach conclusions on LAT science topics.
3	Tool to show visibility/sensitivity for any sky position at any time	If LAT sees something (like a flare) of interest, this tool would determine whether HESS should be notified. In addition, this information might determine whether a pointed Target of Opportunity for GLAST might include HESS.
4	Information about telescope performance /sensitivity,	Enable LAT collaboration to estimate usefulness of (any/further) VHE exposure for a particular scientific problem/approach. To be used in conjunction with the visibility tool and the response rationale in 3 - ToO.
5	Information about data formats and open-source analysis tools.	Enable LAT team to determine the best approaches for common analysis with the LAT FITS format data and FTOOLS- and ROOT-based analysis.
6	A procedure to obtain science products (lightcurves and skymaps) adapted to GLAST time and spatial resolution	Having comparable science products (e.g. in terms of rebinning) optimizes the comparison of data sets.
7	Personal point(s) of contact	For efficient working on a well-defined scientific topic (MWL data analysis, joint proposal planning, coordinated observation campaigns etc.) a personal representative for easy, knowledgeable, and daily exchange. Topically distinguishable (via working groups?)

LIST 2 - Science-Oriented Topics

Number	Item Wished from HESS	Rationale
1	Cross-calibration	Joint approach in methodology, feasibility and application. Long term issue.
2	Notifications of observed transient events	If HESS sees a transient event LAT could decide whether this should trigger a pointed GLAST Target of Opportunity. This kind of information is traditionally shared among VHE observatories and could be useful for us as well.
3	Time sharing on HESS observations	HESS might consider to reserve a fraction of its observation time for GLAST-LAT initiated projects (5%? more? with AO Sept. 2007?), to be conducted as joint observations. Possible targets: high-z AGN beyond the H.E.S.S. collaboration target list, variable LAT sources with hard spectra, LAT sources in extraordinary activity states, LAT source with unique/unusual GeV properties etc.
4	Coordinated observation campaigns	A specific and instantly applicable policy to request VHE observations on LAT targets. Somewhat similar to (3), but data sharing may or may not be the determining issue. Min. goal: Back-to-back submissions from both collaborations. Max. goal: see (3). This guarantees that at least data will be taken on a requested source, even if not ad hoc shared.
5	Upper limits or weak detections (below threshold for stand-alone publication) in regions of VHE coverage	Constrain source models for LAT sources on case-by-case base or for systematic studies on the basis of an occasionally updated u.l.-map. Constrain activity states for variable LAT sources if can be issued on custom time scales. If on case-by-case base only, a scientific hypothesis on the real or putative source's nature may govern the request.
6	Repeated monitoring of unidentified galactic sources seen by both H.E.S.S. and LAT	Investigate potential variability to aid in source identification.
7	VHE source spectra & lightcurves	Detailed MWL modeling of a few (t.b.d.) dedicated LAT/VHE objects.
8	Extended VHE source templates	Actual data products of extended VHE-sources to be used as morphology templates in LAT high-GeV analysis and MWL modeling.