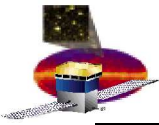


GLAST Large Area Telescope

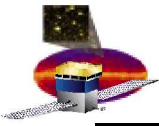
L1 client interface

Warren Focke
SLAC
I&T Science Verification Analysis and Calibration
Engineering Physicist
focke@slac.stanford.edu
650-926-4713



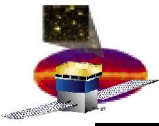
The Issue

- **L1 will have 10s of client tasks**
 - **ASP, IRF monitoring, calibrations, ...**
 - **want to compartmentalize functionality as much as feasible, so they shouldn't be part of L1**
- **They will have different criteria for when they want to run**
 - **timespan**
 - **accumulated events that pass various cuts**
 - **?**
- **I don't want to entangle our release schedules**
- **I don't want to know what their criteria are**
- **I don't even want to know what the tasks are**



Solution? (Simplified)

- Have a database table that would contain (at minimum PARENT_TASK, CHILD_TASK (both strings), LAST_LAUNCH (a timestamp), MINIMUM_ELAPSED (a time delta).
- When a task was ready to launch children (clients?), it would run a shared script that would do something like (sorry about the Python/SQL mix):
 - `children = select CHILD_TASK from TASKLAUNCH where PARENT_TASK == os.environ['PIPELINE_TASK'] and time() > LAST_LAUNCH + MINIMUM_ELAPSED`
 - for child in children:
 - `os.system('pipeline createStream %s' % child)`
 - `update TASKLAUNCH set LAST_LAUNCH = time() where CHILD_TASK = child`
- Then the authors of downstream tasks could enter records into this table themselves, and the authors of the upstream tasks wouldn't even have to know what they were launching or how often.



Potential Criteria

- **Accumulated events**
 - **only ones that pass some cut**
 - **potentially different for every task**
 - **DB could include pointer to a client-maintained filter program**
 - **include “old” data?**
- **Actual ground time of stream creation.**
 - **I think only elapsed makes sense here.**
 - **Trivial to implement.**
- **Elapsed time on the satellite.**
 - **Defined by the last event in the delivery?**
- **Science (or total? engineering time only?) ontime delivered.**
 - **Pretty easy to implement.**
- **Science ontime acquired (and delivered).**
 - **Not too hard to implement.**