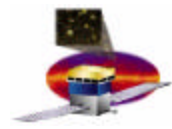


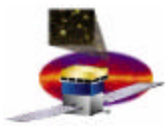
Interstellar emission model and tool

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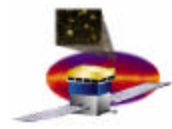
Interstellar emission model

- **ISRF cube:**
 - work in progress in Garching & Bochum/Santa Cruz
- **Gas cube:**
 - HI inversion at GSFC
 - HII surveys available
 - H₂ inversion... further down
 - M(CO-g) vs M(IR-g) problems ahead
- **Radiation processes:**
 - p-p, p-n, p-He, p-C interactions, resonances: DPMJET v3 (Bochum), GEANT4
 - Review of cross sections vs. data (SLAC, Italy)
 - Brem with He etc...
- **CR propagation:**
 - GALPROP at Garching, prop. model at Bochum
 - Nearby sources and propagation: Bochum & Saclay
 - CR/matter coupling at GSFC



IS emission model

- **Tests**
 - On standard EGRET data
 - On 'cleaned up' EGRET data
- **ISM Workshop**
 - Next year in Paris
- **People support (~ 12)**
 - Garching, Bochum, Saclay, HEPL, Goddard, Italy?, SLAC



Interstellar emission tool A8

- **Input =**
 - IS emission cube + E band + region
 - + Gmult + Gbias (within limits for choice of E and region)
- **Output =**
 - space-energy array with differential intensities
- **Tessellation**
 - IS emission cube probably in inertial Gal. Ref. Frame and (l,b)
 - gridding scheme to be tested with simulated data
 - Gridding decision: when? how?
 - (x,y,z), (l,b), (a,d) to final grid module to be called by many other modules