

# **RICH SOFTWARE SESSION (CIEMAT 13.Dec.06)**

## **AIM:**

**Provide a “complete” RICH Software package ready for AMS  
integration phase at CERN**

**Real Detector simulation, reconstruction & calibration methods  
implemented in AMS Software**

## **Issues:**

**B. software needs**

**C. schedule and commitments**

# A. software needs

## 1. Real Detector Simulation

### 1. Radiator

1. Geometry: Tile shape (including metrology?)
2. Optical Parameters: Ref. Index & Transmittance (maps?)

### 2. Mirror

1. Geometry: CGS (?)
2. Optical Parameters: Spectral Reflectivity map

### 3. Detector Plane

1. Geometry: GRID metrology (?)
2. Calibrations: Pedestals, Thresholds, Gains & Efficiencies

## 2. Reconstruction Algorithms

1. Real Detector in reconstruction
2. New/Improved reconstruction algorithms

# A. software needs (cont'd)

## 3. Calibration Methods

1. Detector Plane
2. Radiator
3. Mirror

## 4. Additional tools

1. Online Monitoring
2. Event Display
3. Benchmark Distributions

## 5. Technicalities

1. Standalone and/or AMS package implementation
2. Software Repository
3. Database Interfacing

# B. schedule & commitments

- All missing parts must be ready, i.e., completed & tested, before RICH is shipped to CERN for integration
- A “software development group” with defined task assignments and a follow-up procedure have to be set up
- I propose to start the definition process during this meeting and to update/refine it in the next RICH meeting