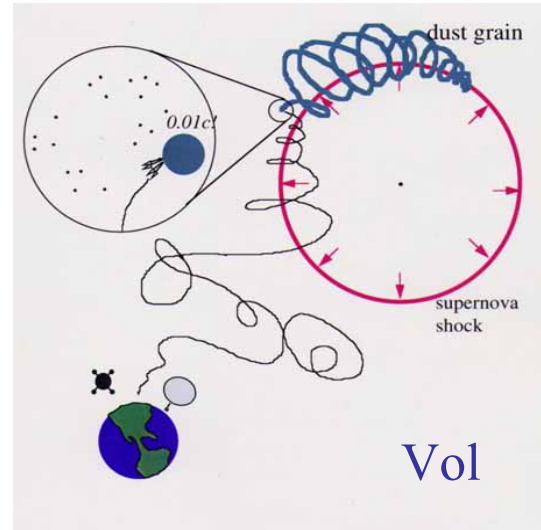
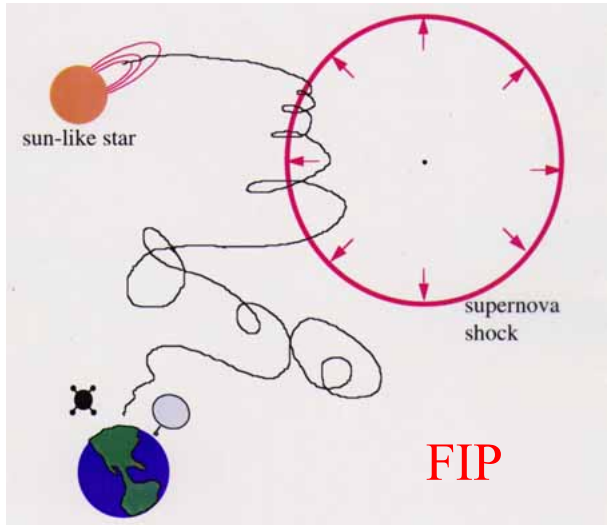


Preliminary results of the CAKE experiment

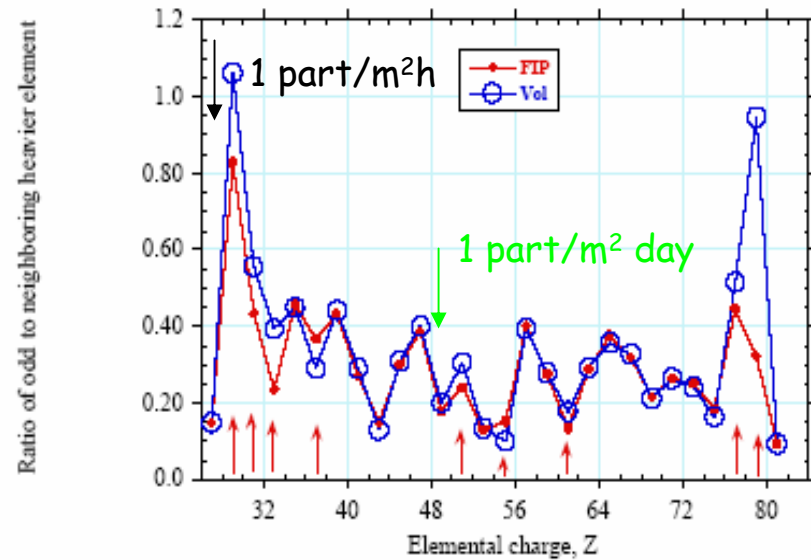
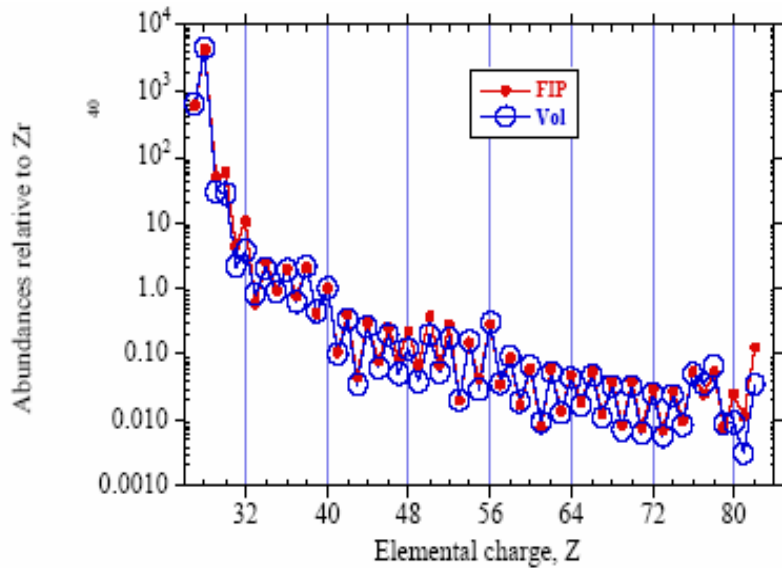
S. Cecchini, G. Giacomelli

Physics Dept. , INAS and INFN Sez. Bologna, Italy

Russian-Italian Cooperation Workshop on CR and Astroparticle Physics
Moscow, Oct 17-20, 2005



CR
Sources ?



High charge resolution

High statistics: large collecting area
+ long exposure

A – CR39 Sheets

B – CR39 Sheets

C – CR39 Sheets

Lexan Sheets

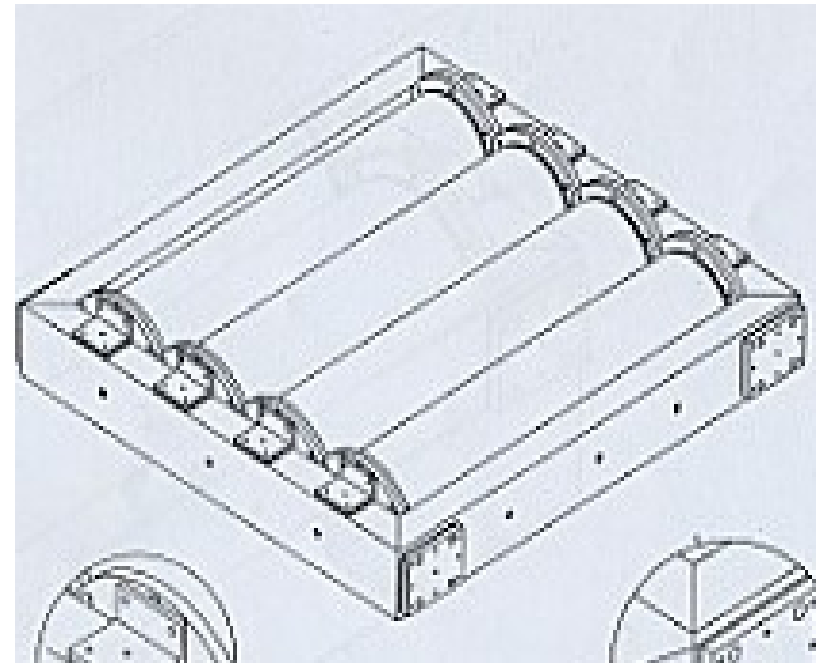
B – CR39 Sheets

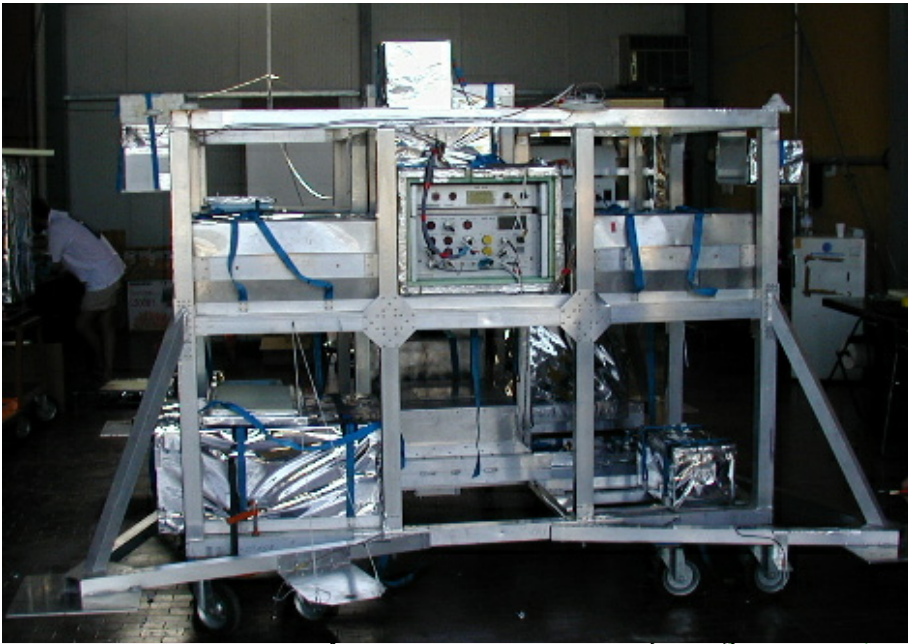
A – CR39 Sheets



The CAKE experiment :
 $A \sim 2 \text{ m}^2 \text{sr}$ for Fe nuclei

CAKE is a prototype
for demonstrating
the feasibility of the
full analysis chain

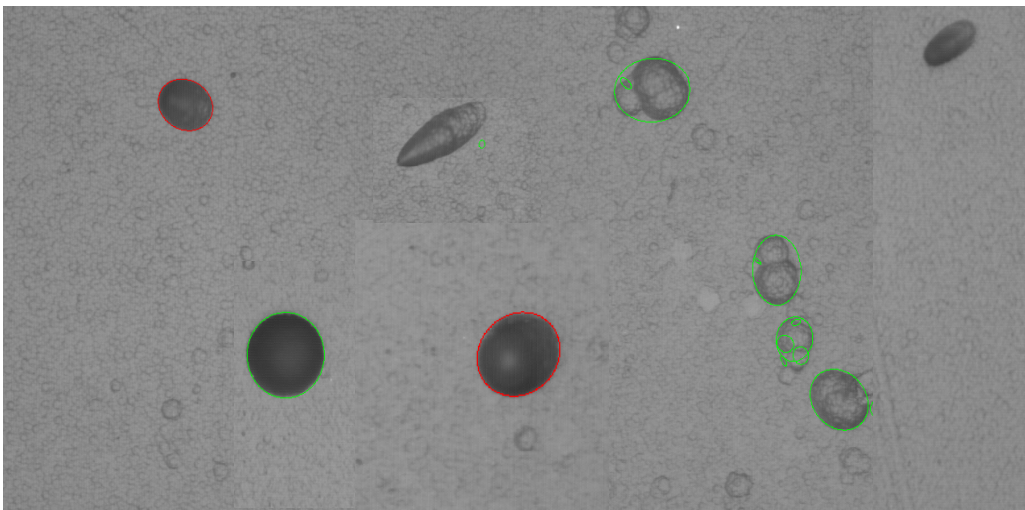
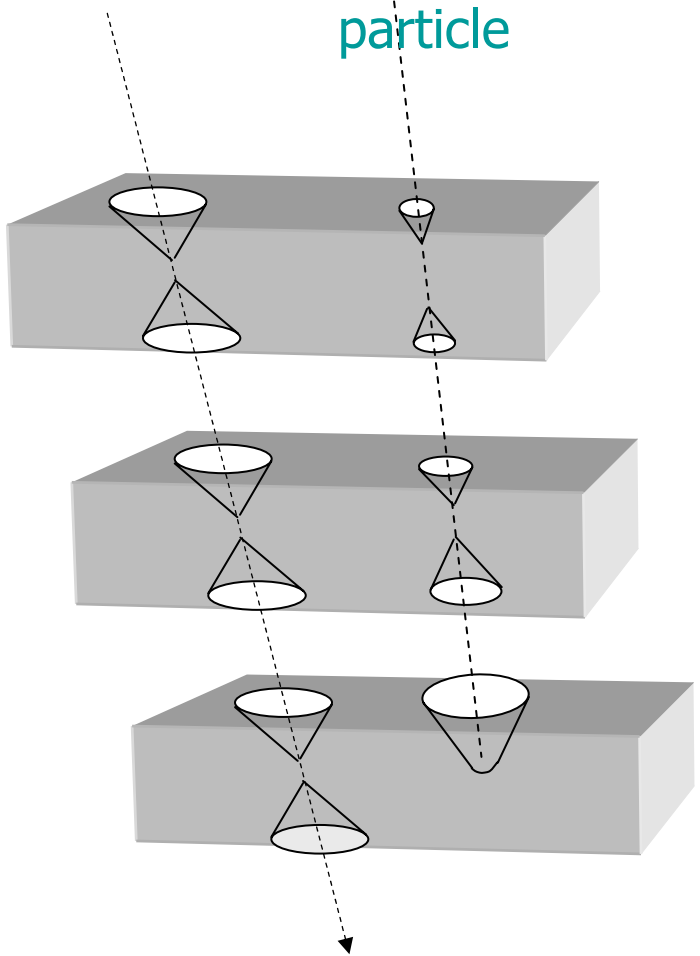




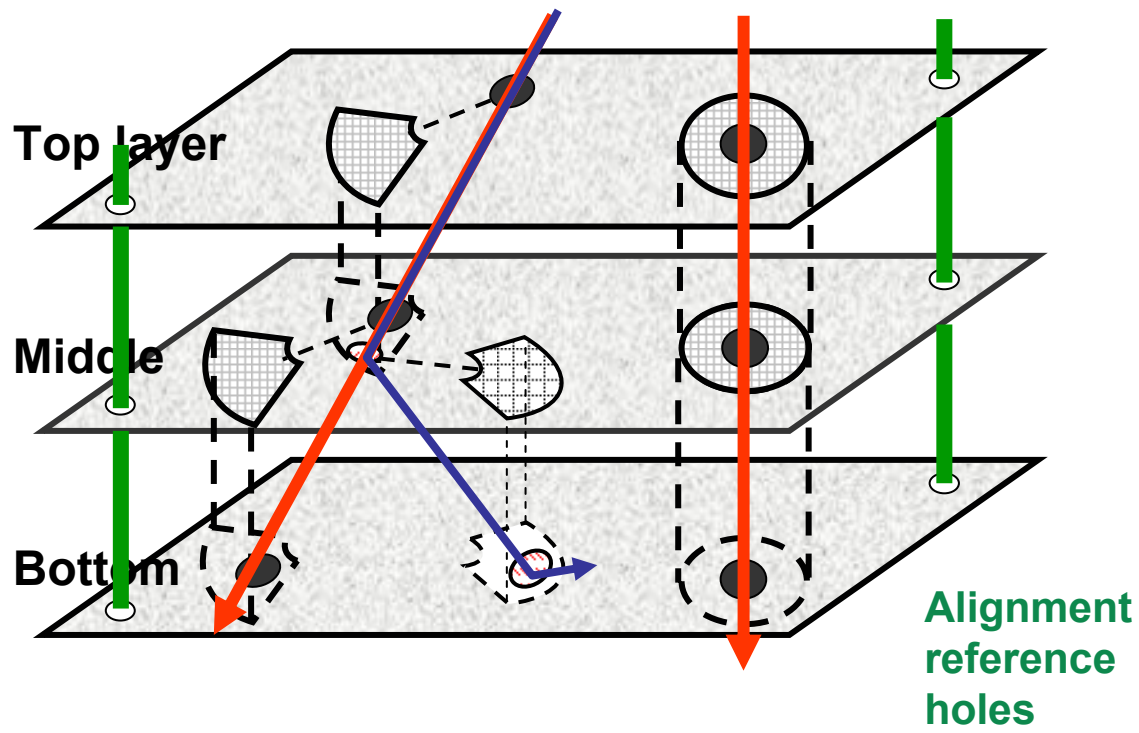
38 km plafond altitude
Residual atmosphere 3.2g/cm^2
Flight duration 18h

Relativistic charged particle

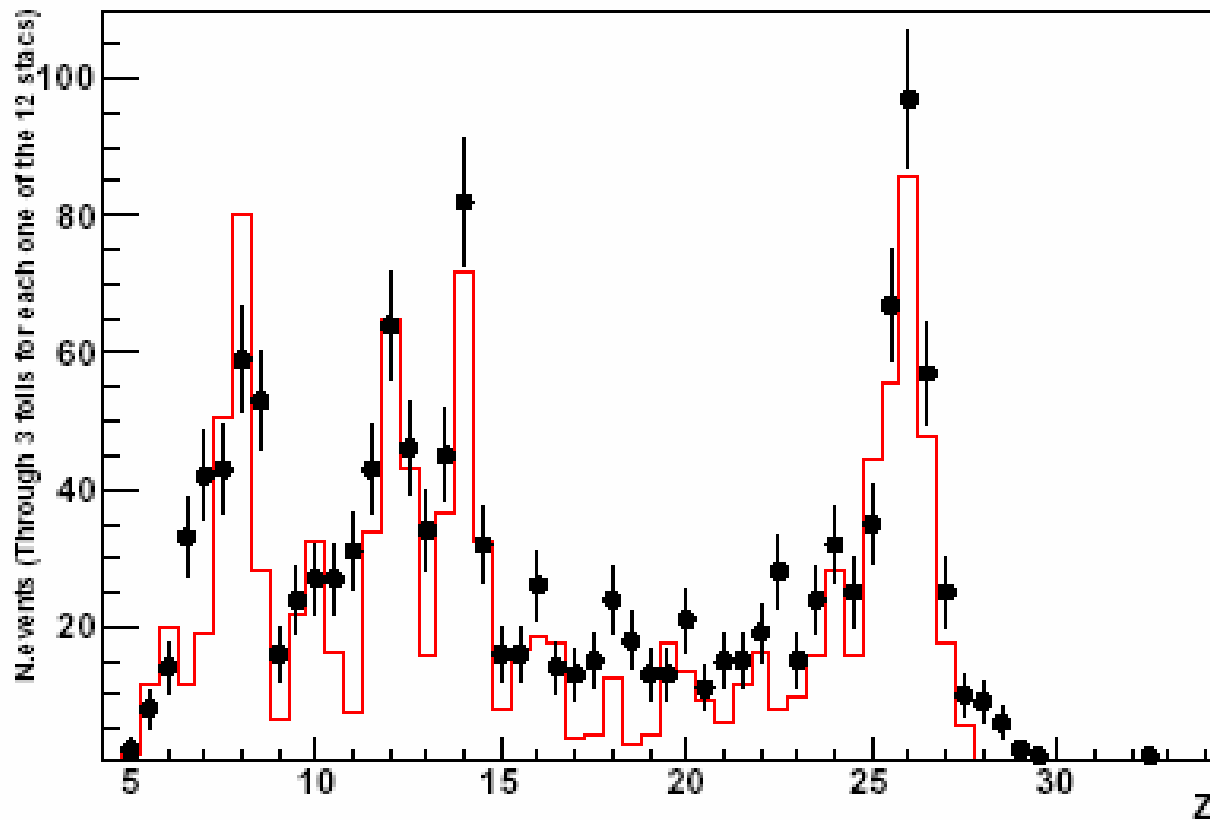
Low-energy stopping particle



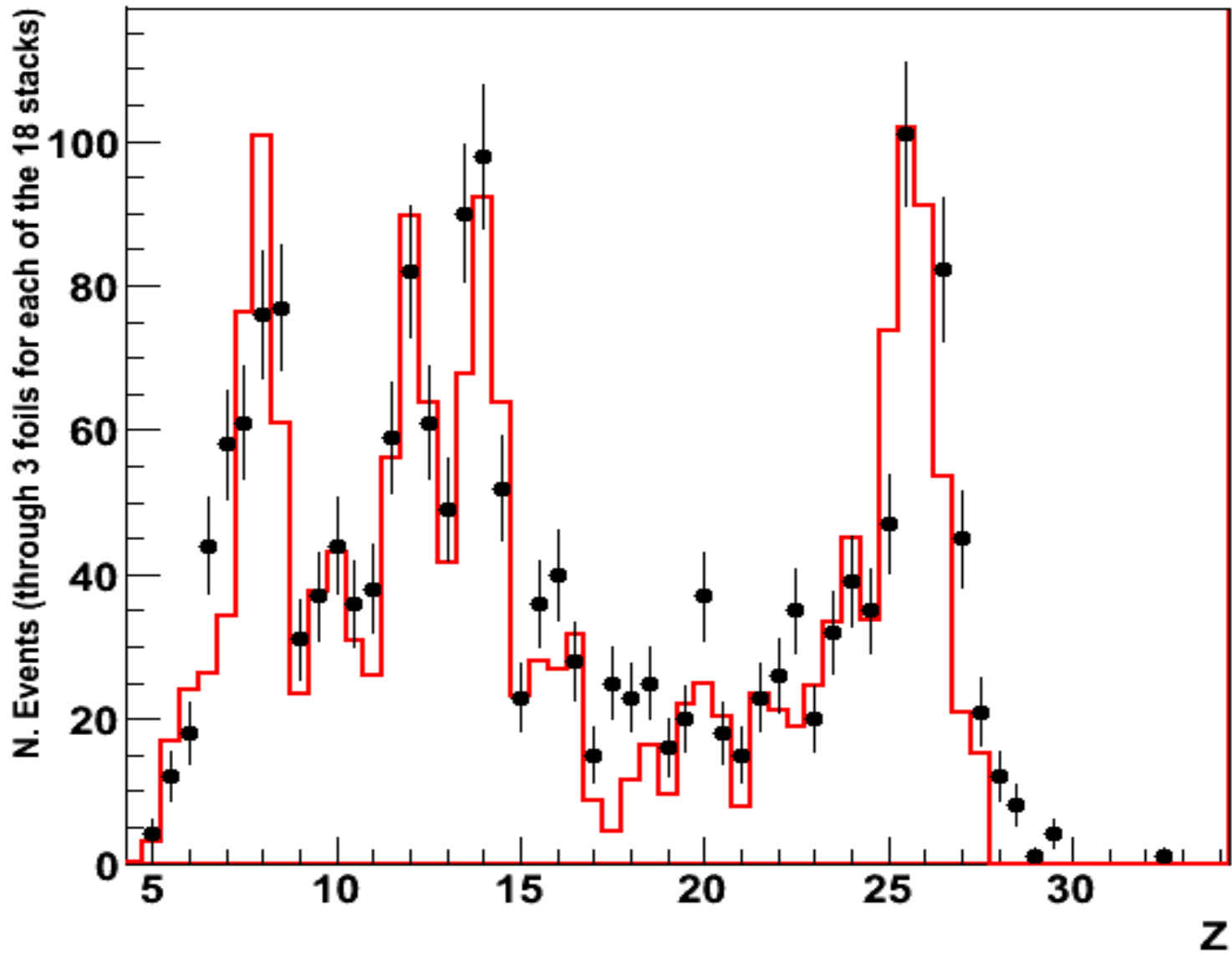
Tracking algorithm



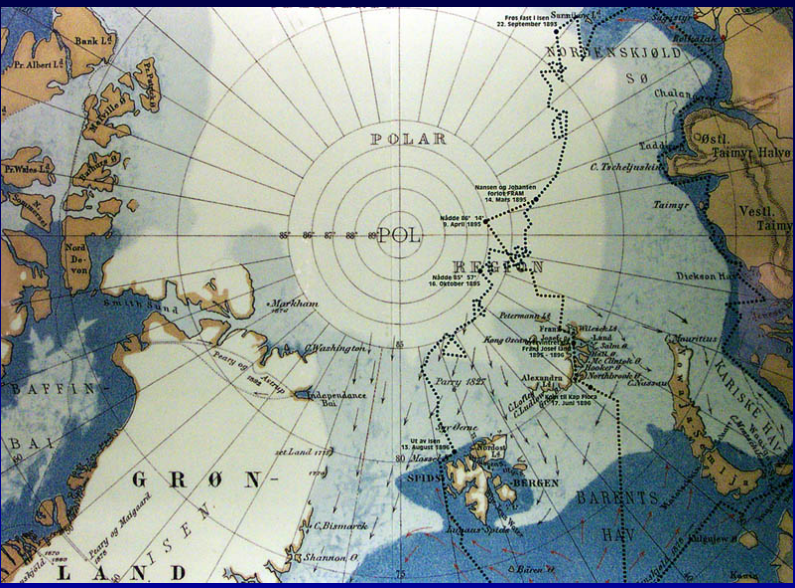
preliminary old



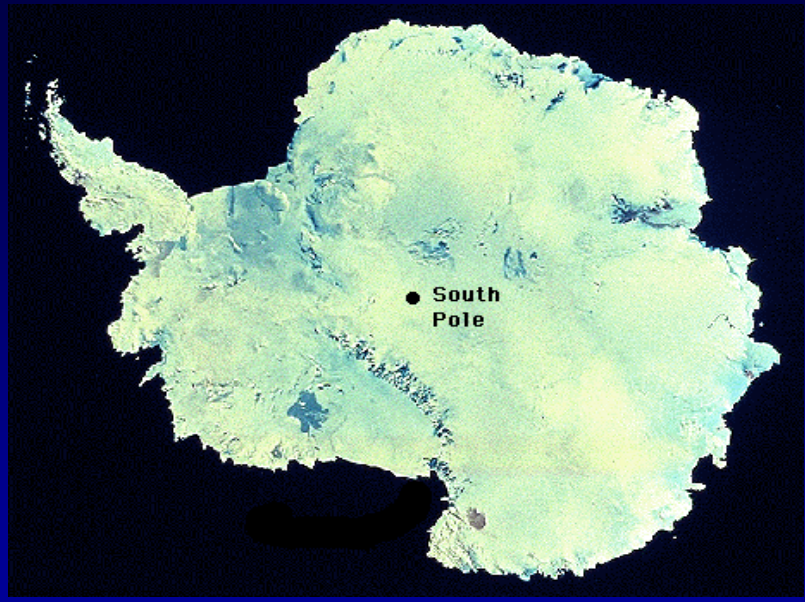
Charge spectrum of 1409 events from the measurements of 15% area
Data (black dots) with statistical errors are compared to a MonteCarlo
Simulation (histogram)



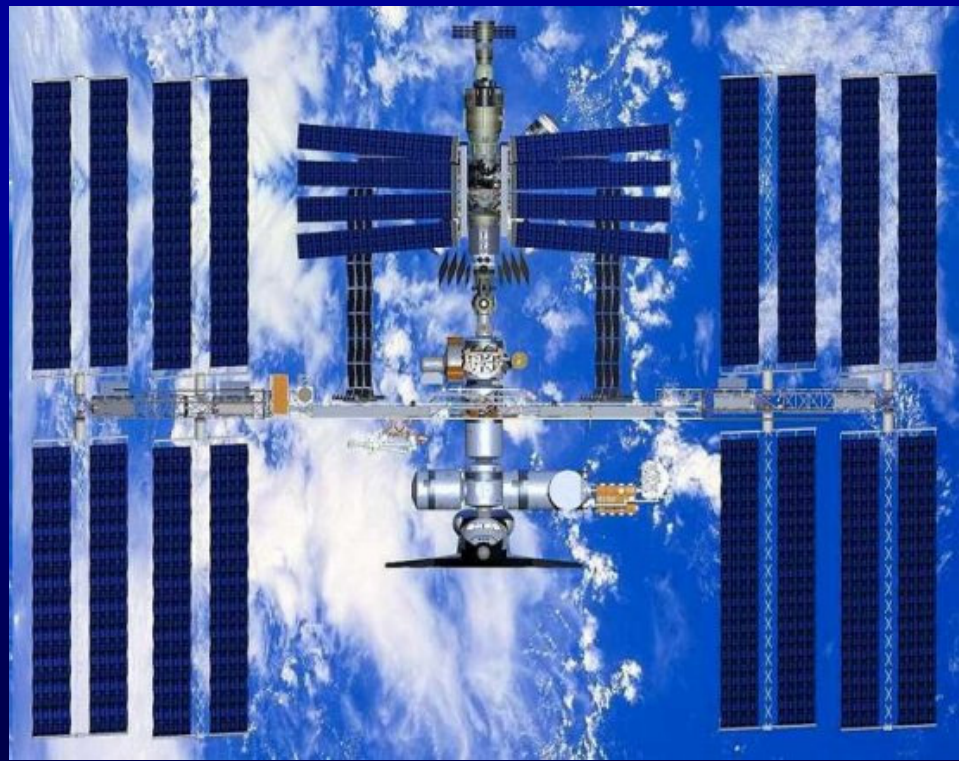
Preliminary - 2051 events



LDB
15-40
days



3
months



- Recovery
- Large area
- Long exposure