

## Summary of the ongoing activities of the Italian M&S team (May 11<sup>th</sup> 2015)

- FLUKA, Epics, G4 simulation benchmarks. Normal incidence protons and electrons at 10, 100, 1000, 10000 GeV/n. Comparison of TASC and IMC response. (C. Checchia, L. Pacini)
- Further validation and debug of CALET CAD model implemented in G4 simulation (L. Pacini & N. Mori)
- Development of sw tools to analyze CAL & COM volumes of 1-day long L1 simulated data recently distributed by Asaoka-san. (N. Mori, P.Maestro)
- Development of algorithms based on IMC for particle tracking, search for the first interaction point of nuclei, and charge identification by multiple dE/dx measurements. Study and evaluation of performance with proton and helium. ICRC paper on this topic. (P. Brogi, P. Maestro)
- e/p discrimination. About  $1.2 \times 10^6$  protons have been generated with Epics 9.165 in the energy range 1-100 TeV with  $E^{-1}$  spectrum, and within the CALET acceptance. Analyses based on consecutive selection cuts and Boosted Decision Trees, respectively, are ongoing. Comparison between FLUKA and Epics results will be presented at the TIM and will be the topic of an ICRC paper. (see preliminary presentation by F. Palma)
- Calibration of TASC with electron beam test data and comparison with simulation is going to be finalized for ICRC poster. Study of TASC response with ion beam data is underway. (G. Bigongiari)