- Status of the $Z \to e^+e^-$ calibration
- Looking for events with 2 electrons in the first RunIIa data

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Off-line calibration meeting - Lyon - 29 Juin 2001

EM calibration : $Z \rightarrow e^+e^-$

- BEFORE: A standalone software in fortran (S. Negroni - Thesis) using a function of NAGLIB (expensive) for the maximum likelihood estimation.
- NOW: A CVS package (in C++) using a function (DMAXLK) from LEAMAX (free - in the CERNLIB) for the maximum likelihood estimation.

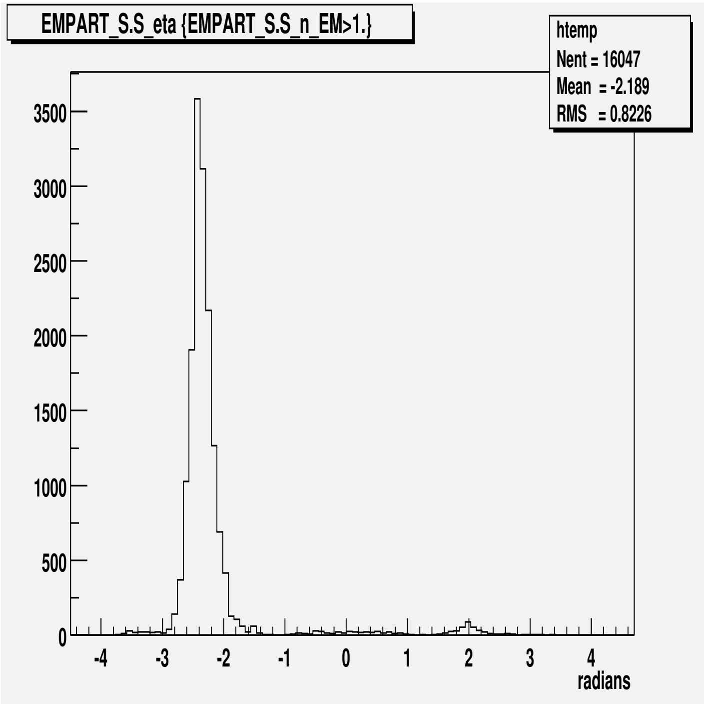
tested by Alexis Cothenet : he has obtained results compatible with those from Sylvain

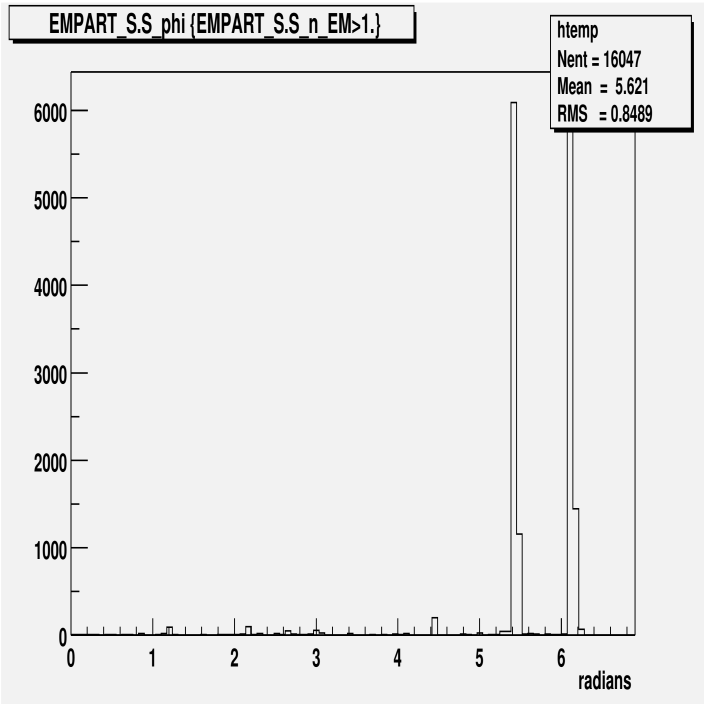
(coming from the DEA Champ-Particules-Matière - We hope that he will prepared a thesis with us starting next september).

The run 124137

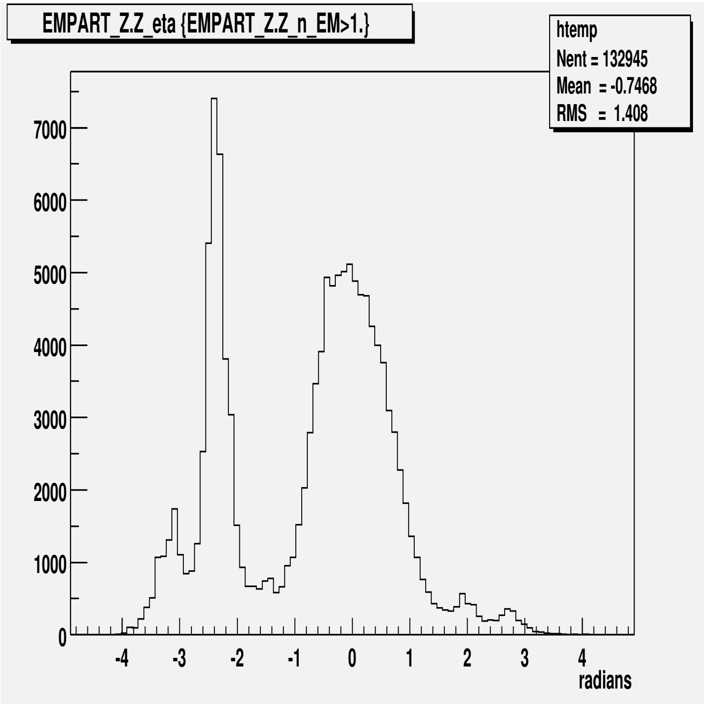
- 46 root files : 61808 events
- Events with 2 (or more) EM particles :
  - EMPART-S-S-xxx Initial cluster finder : a simple cone algorithm - see plots
  - EMPART-Z-Z-xxx: Initial cluster finder : CellNN - see plots - selection of EM particles in the central part of the calorimeter : $-1. \leq \eta(EM) \leq 1.$ - 4640 events
- $Et_{EM1} \geq 6.$ GeV and $Et_{EM2} \geq 6.$ GeV : 1807 events.

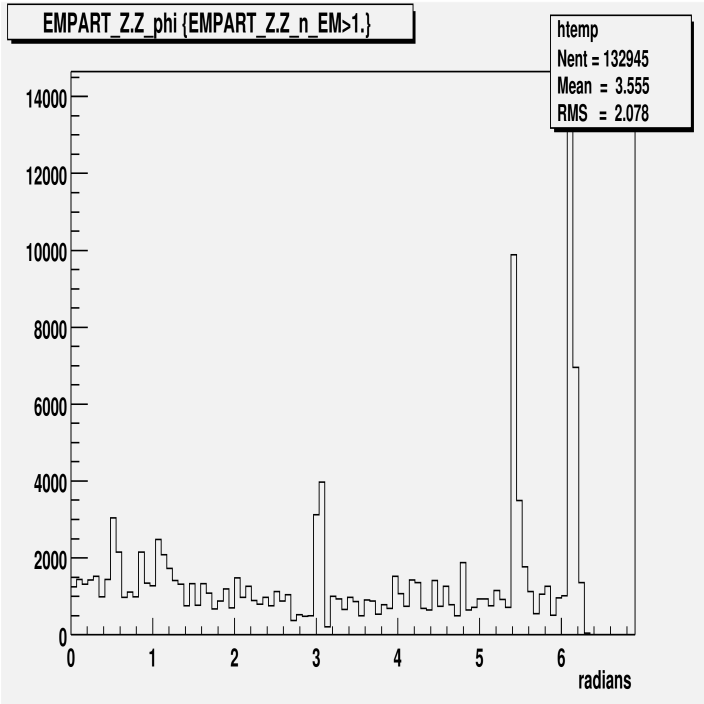
2 EM particles - Simple cone



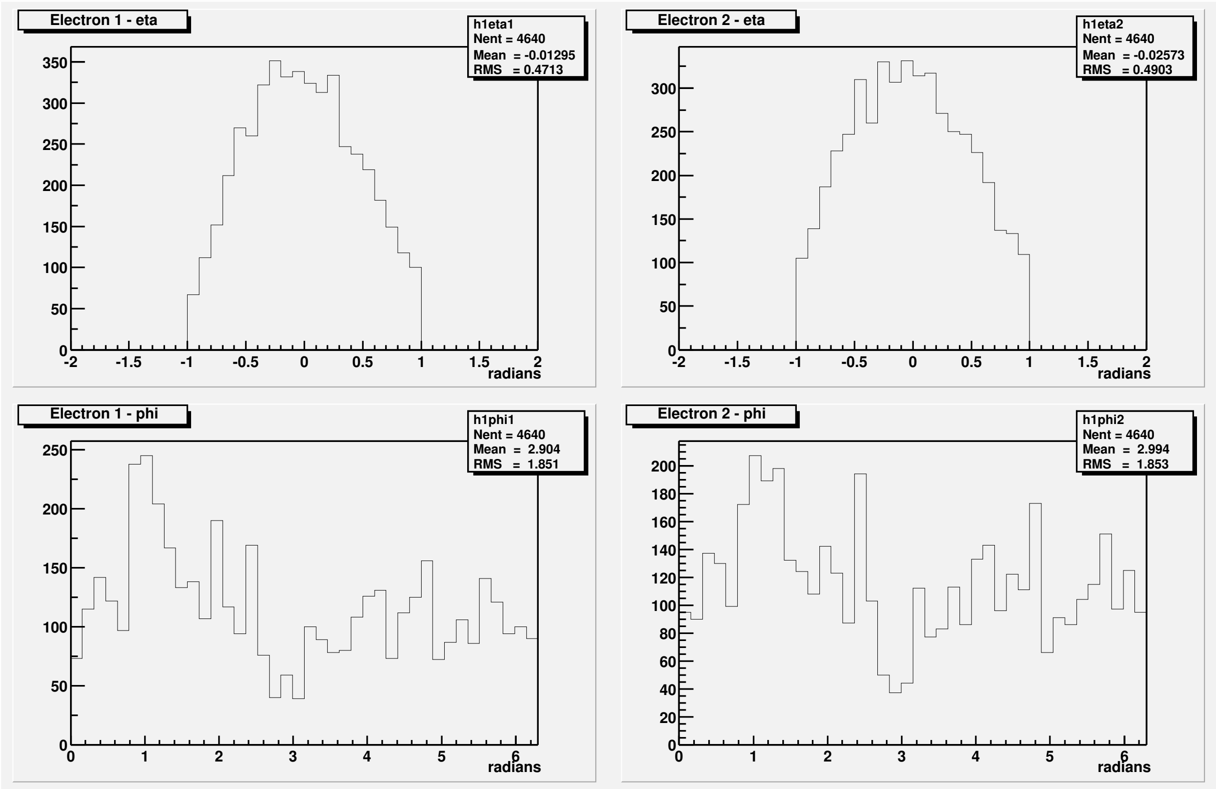


2 EM particles - CellNN

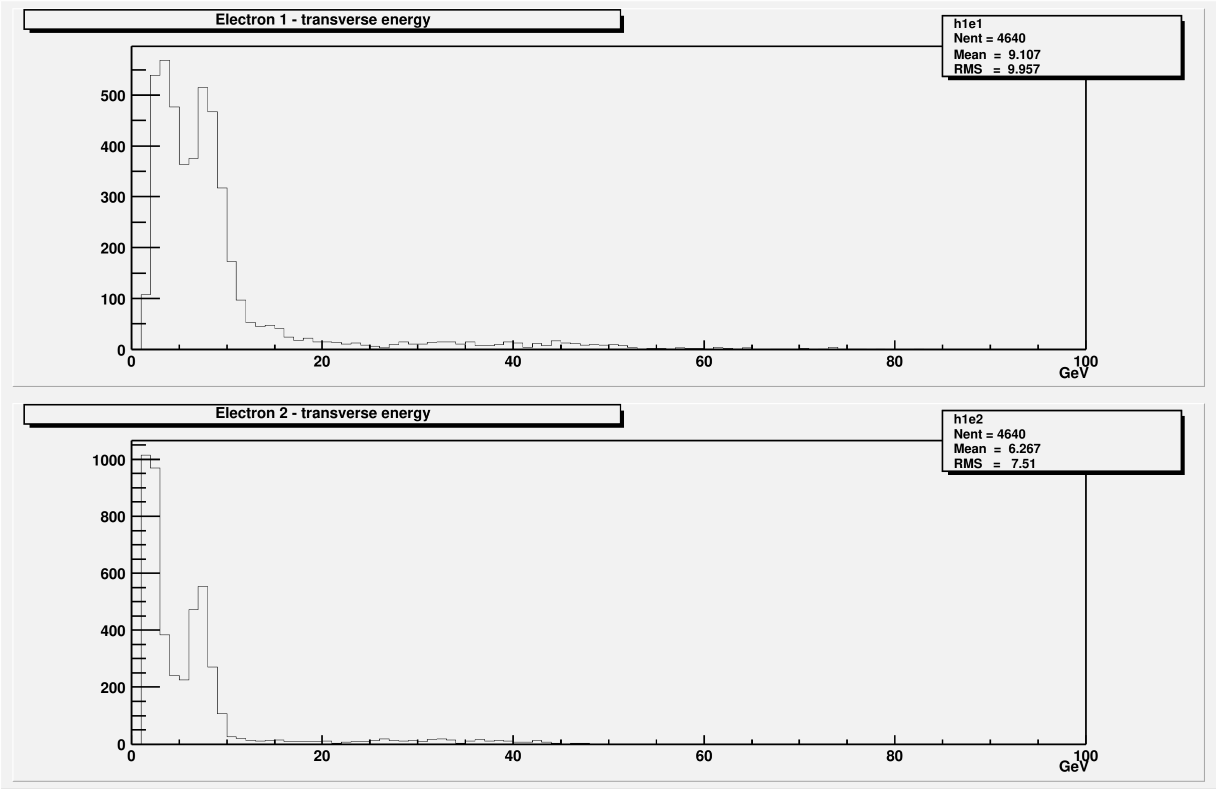




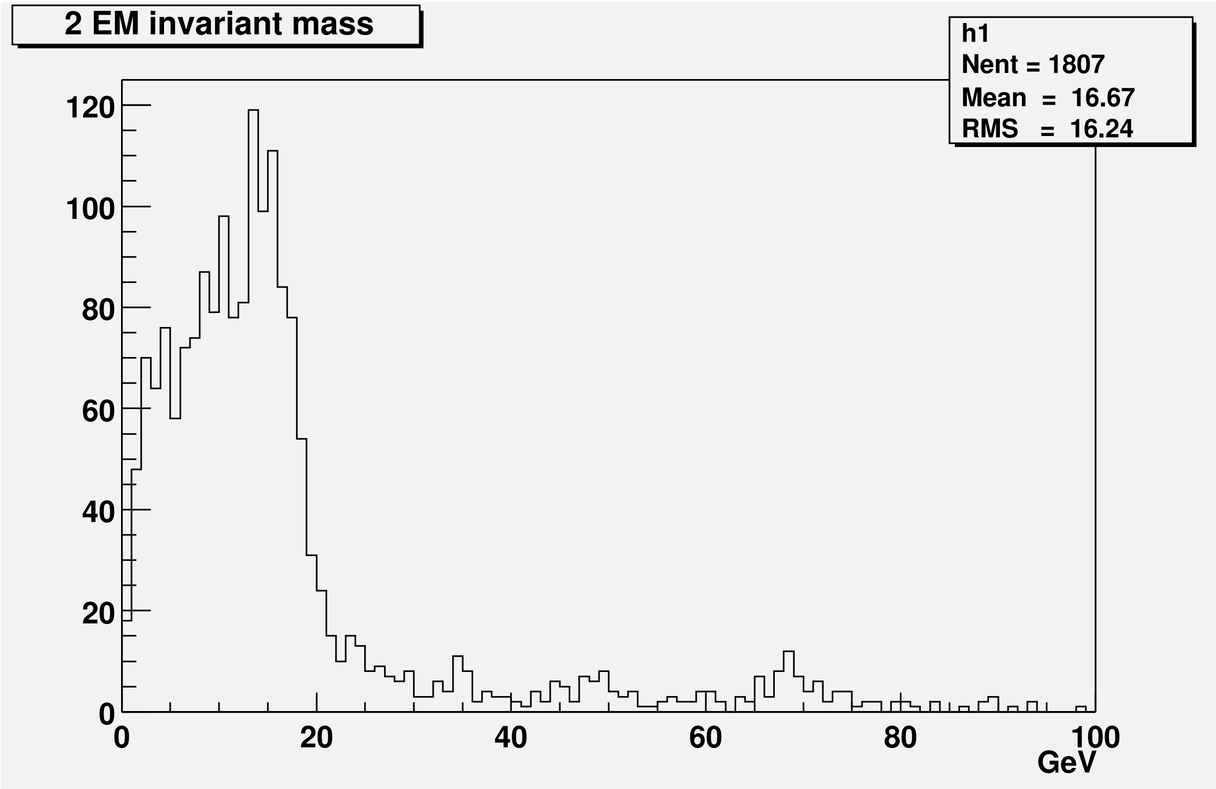
Events with at least 2 EM particles : angles



Events with at least 2 EM particles : transverse energies



Events with at least 2 EM particles : invariant mass



Events with at least 2 EM particles : jets