

Geant4 10.0.cand01 validation on the GRID

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Changes in 10.0.cand01

- Bug fixes mostly
- No physics changes expected

Exceptions

TRACK001

`G4VParticleChange::CheckSecondary`

Secondary with illegal energy/momentum.

- no occurrences

had012

`G4HadronicProcess::CheckResult()`

Warning: Bad energy non-conservation detected, will re-sample the interaction.

- a few occurrences only in LhcbECAL

Errors and warnings

G4Fragment::CalculateExcitationEnergy()

- FTFP_BERT: #61/70/62, FTFP_BERT_HP: #58/68/62, FTFP_BERT_TRV: #65/59/67
- QGSP_BERT: #60/55/59, QGSP_BERT_HP: #57/70/63, QGSP_BIC: #61/96, QGSP_FTFP_BERT: #62/61/73

Warning from NeutronHP

could not find proper reaction channel. This may cause by inconsistency between cross section and model. Unchanged final states are returned.

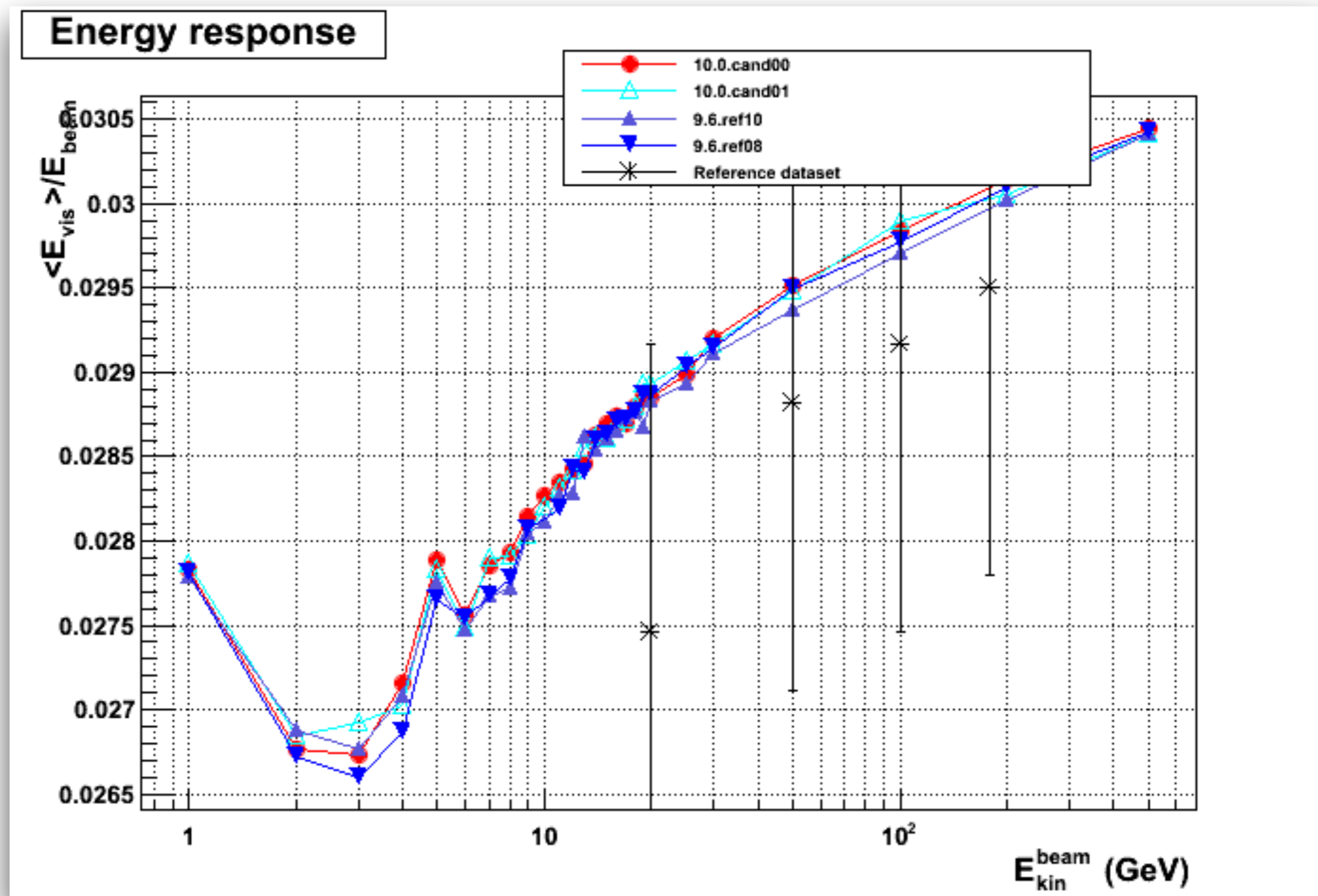
- FTFP_BERT_HP: #2/2/1, QGSP_BERT_HP: #2/0/0

G4HadronElastic WARNING

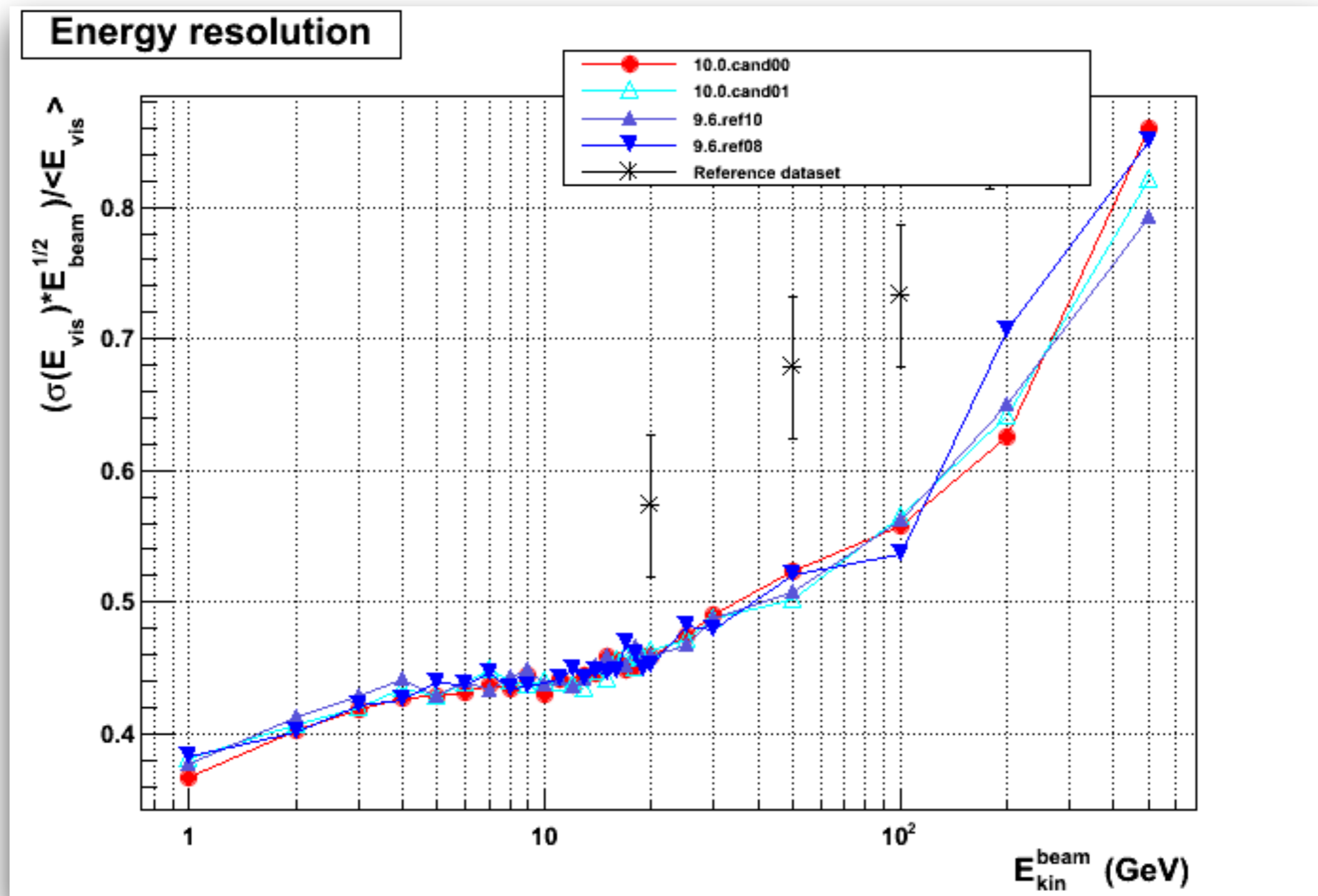
- QGSP_BERT: #0/1/0, QGSP_BERT_HP: #0/0/1

Pion shower

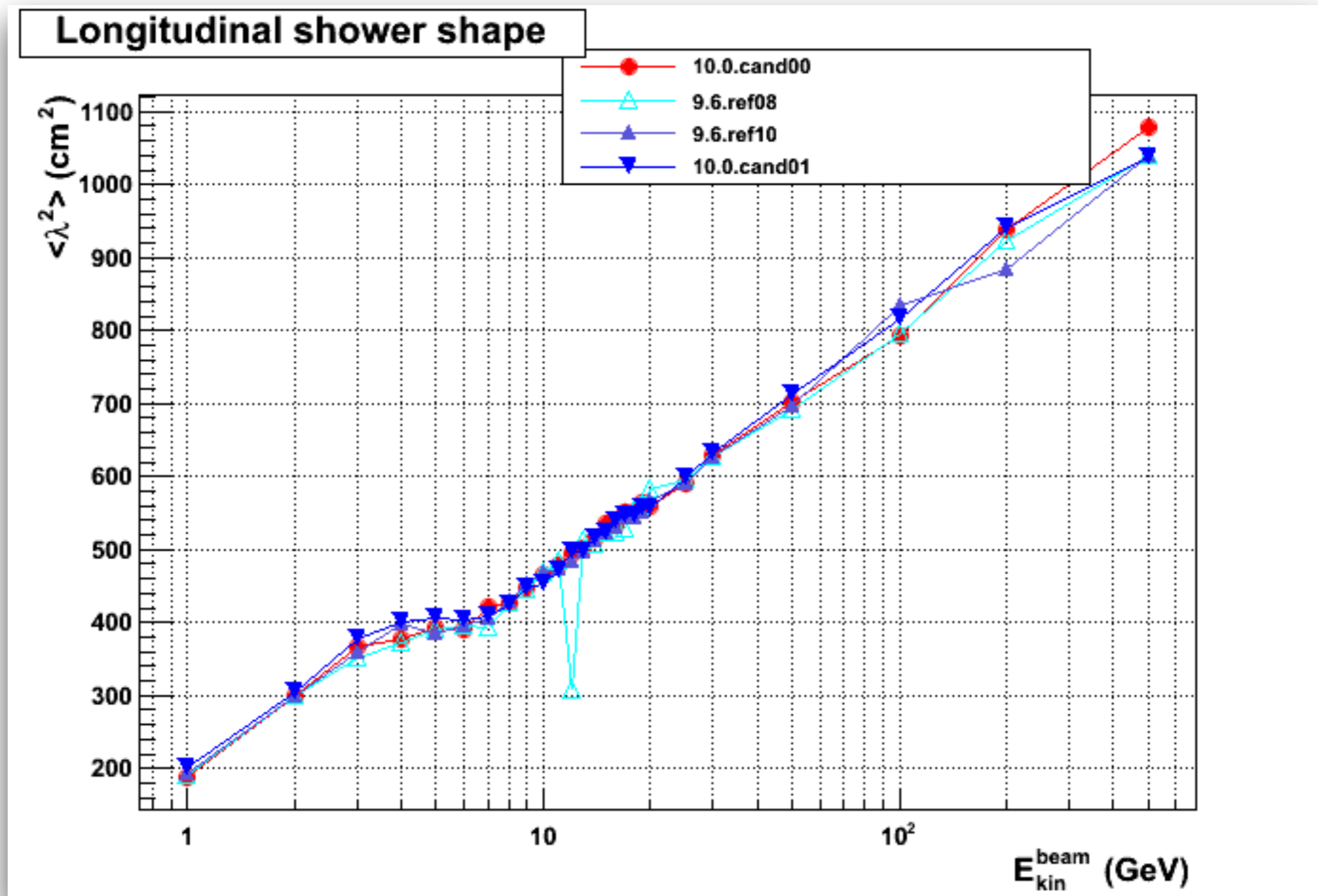
FTFP_BERT with TileCal



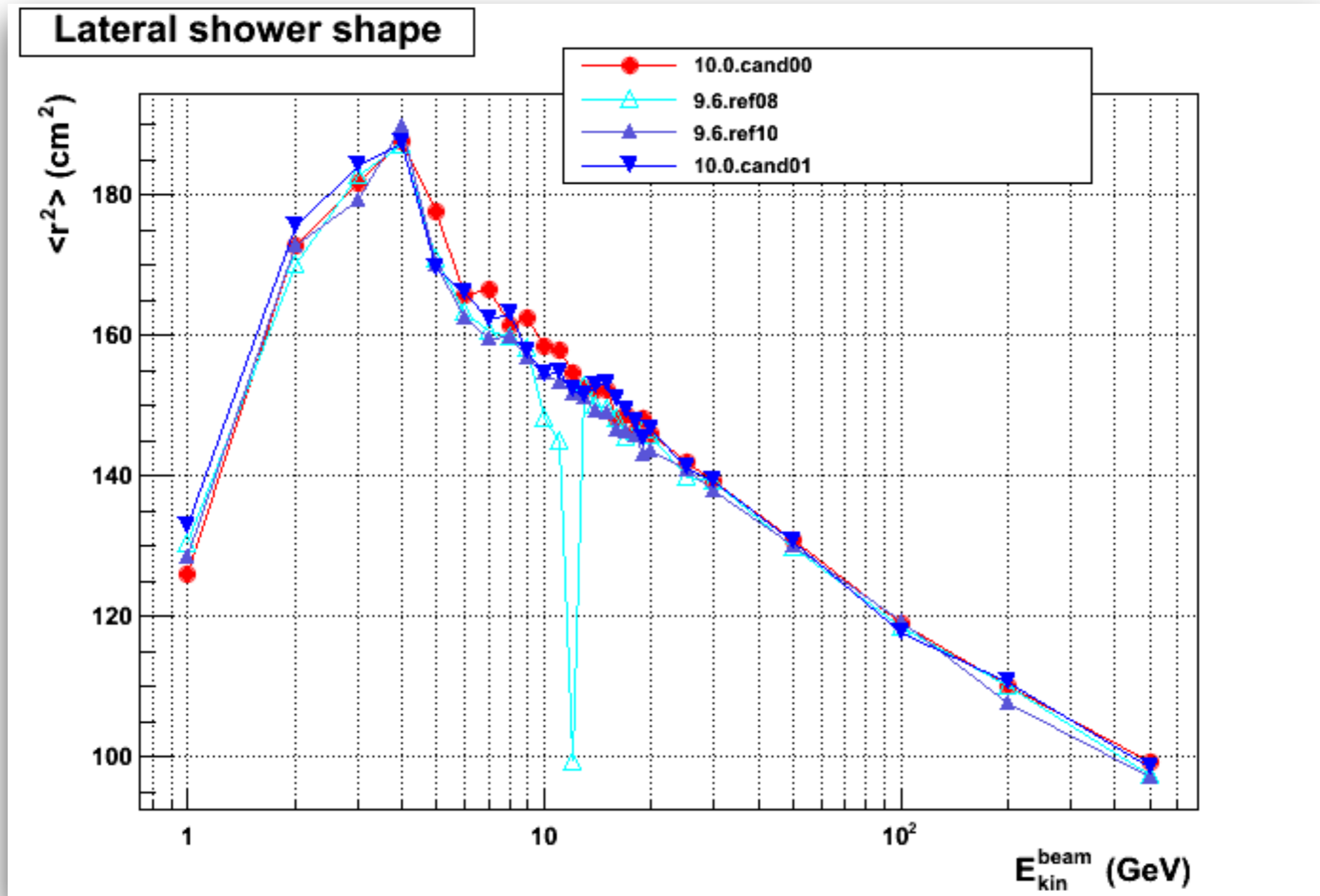
FTFP_BERT with TileCal



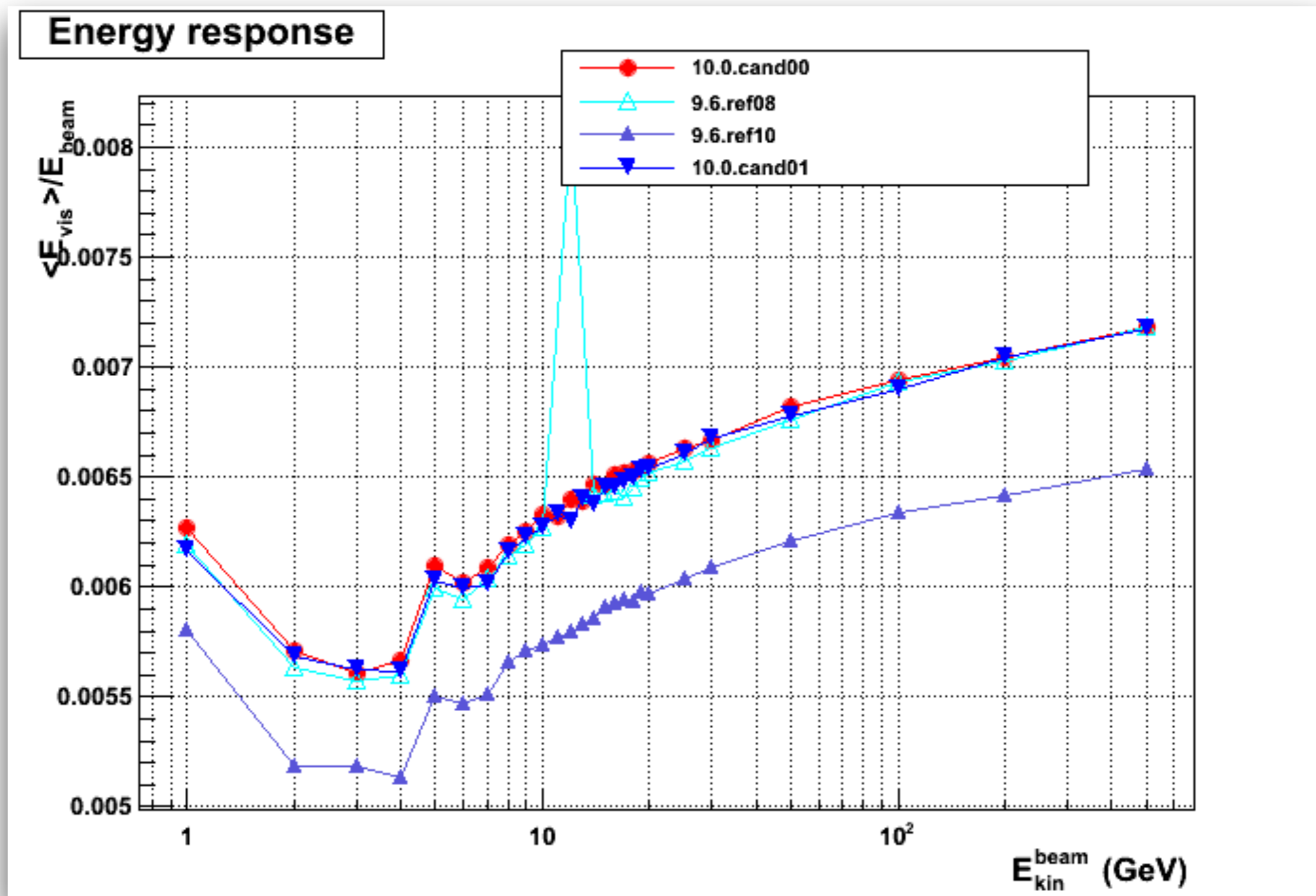
FTFP_BERT with TileCal



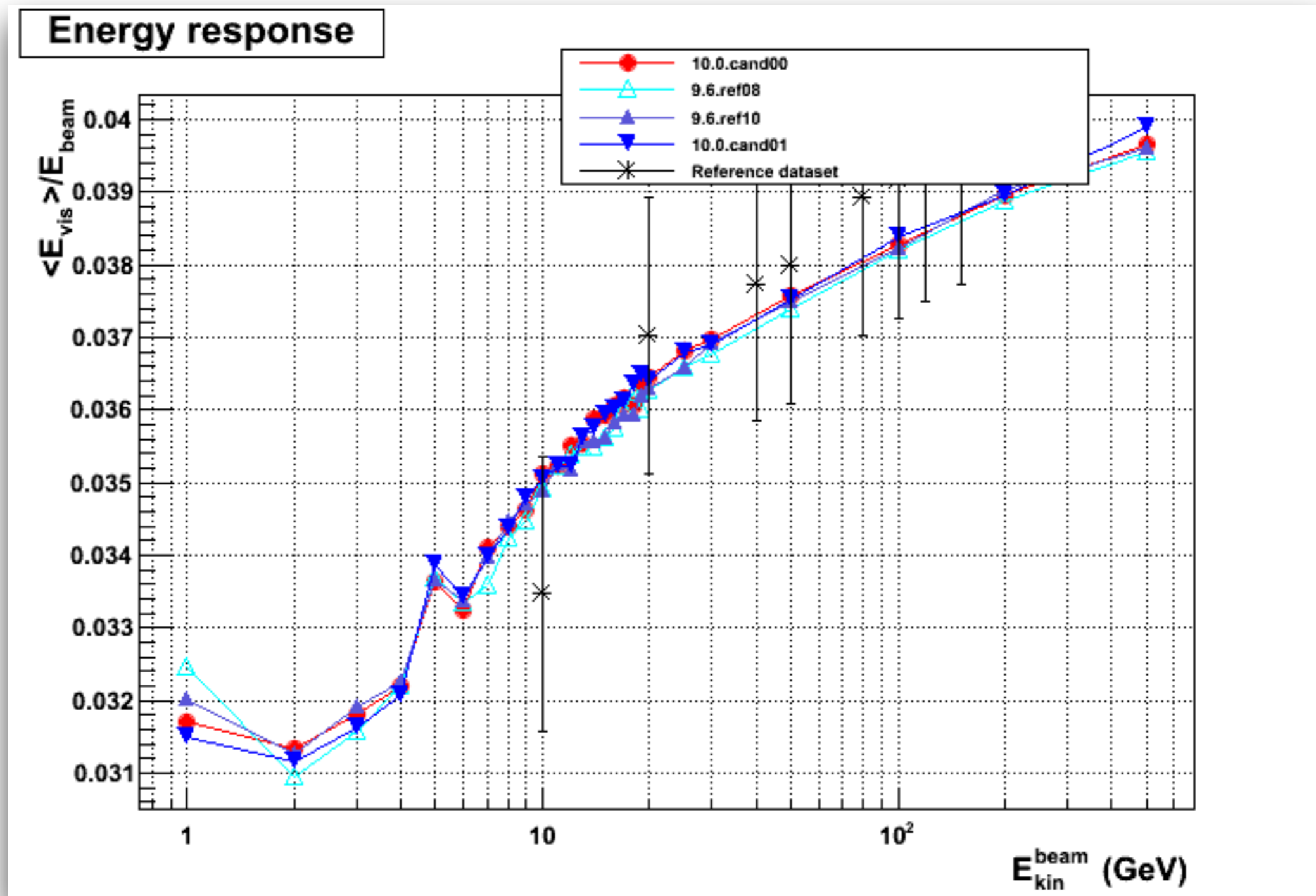
FTFP_BERT with TileCal



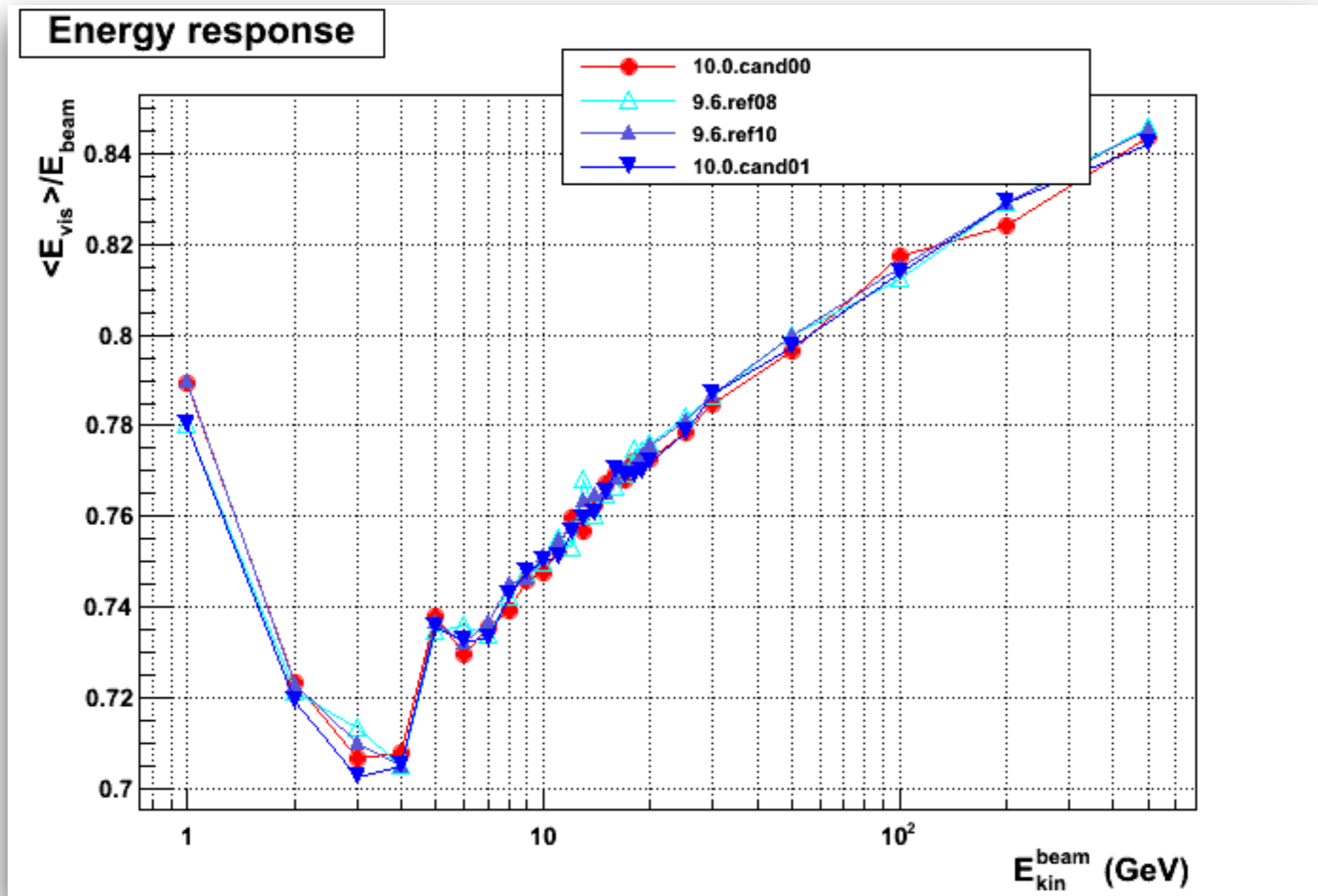
FTFP_BERT with AtlasFCAL



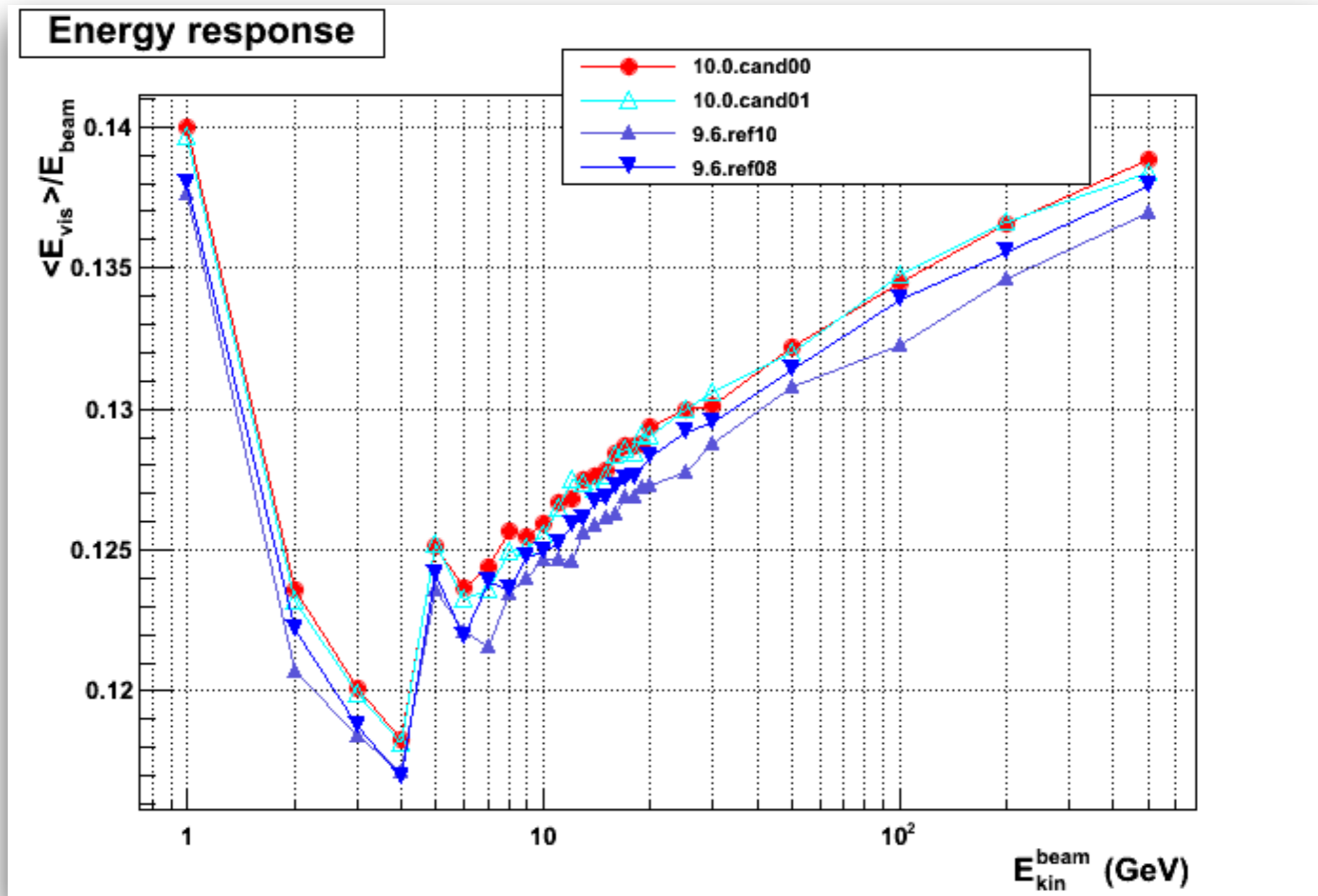
FTFP_BERT with AtlasHEC



FTFP_BERT with CmsECAL



FTFP_BERT with AtlasECAL



Conclusion

- **No crashes in 10.0.cand01**
- **No physics / errors - warnings changes w.r.t. 10.0.cand01**