



## Expected Performance of CALET

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FOR THE CALET COLLABORATION

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**Abstract:** As described in an accompanying paper (OG1.5/645: S.Torii et al) of this conference, CALET is a versatile detector for exploring high energy universe by observing gamma rays ( $> 20$  MeV), electrons ( $> \text{GeV}$ ) and other charged particles ( $> *10$  GeV). It is planned to be on board the JEM (Japanese Experiment Module, Kibo) of the International Space Station.

In earlier papers[1, 2], many results of CALLET detector simulation have been presented. Since then, the detector structure was modified: the area was reduced and Si array is added etc. Some of the earlier results, for example, the energy resolution or angular resolution may not change much. However, we decided to start new simulations which include every details of the CALET structure for much comprehensive and intensive treatment.

We will be presenting results based on the new simulations: the effective area, energy resolution, particle identification capability (especially, distinguishability of gamma- rays, electrons and protons), angular resolution. They will cover the energy range of few GeV to 10 TeV for electrons, 20 MeV to a few TeV for gamma-rays, several 10's GeV to 1000 TeV for protons and other heavy ions.

## References

- [1] J.Chang et al., Expected Performance of CALET from Simulation; Proc. of 28th ICRC, Vol.4 (2003)2185.
- [2] J.Chang et al., Simulation Study on High Energy Electron and Gamma-ray Detection with CALET; Proc. of 29th ICRC, OG1.5 Vol.3(2005)273.