

# Update on background energy rate in FastSim

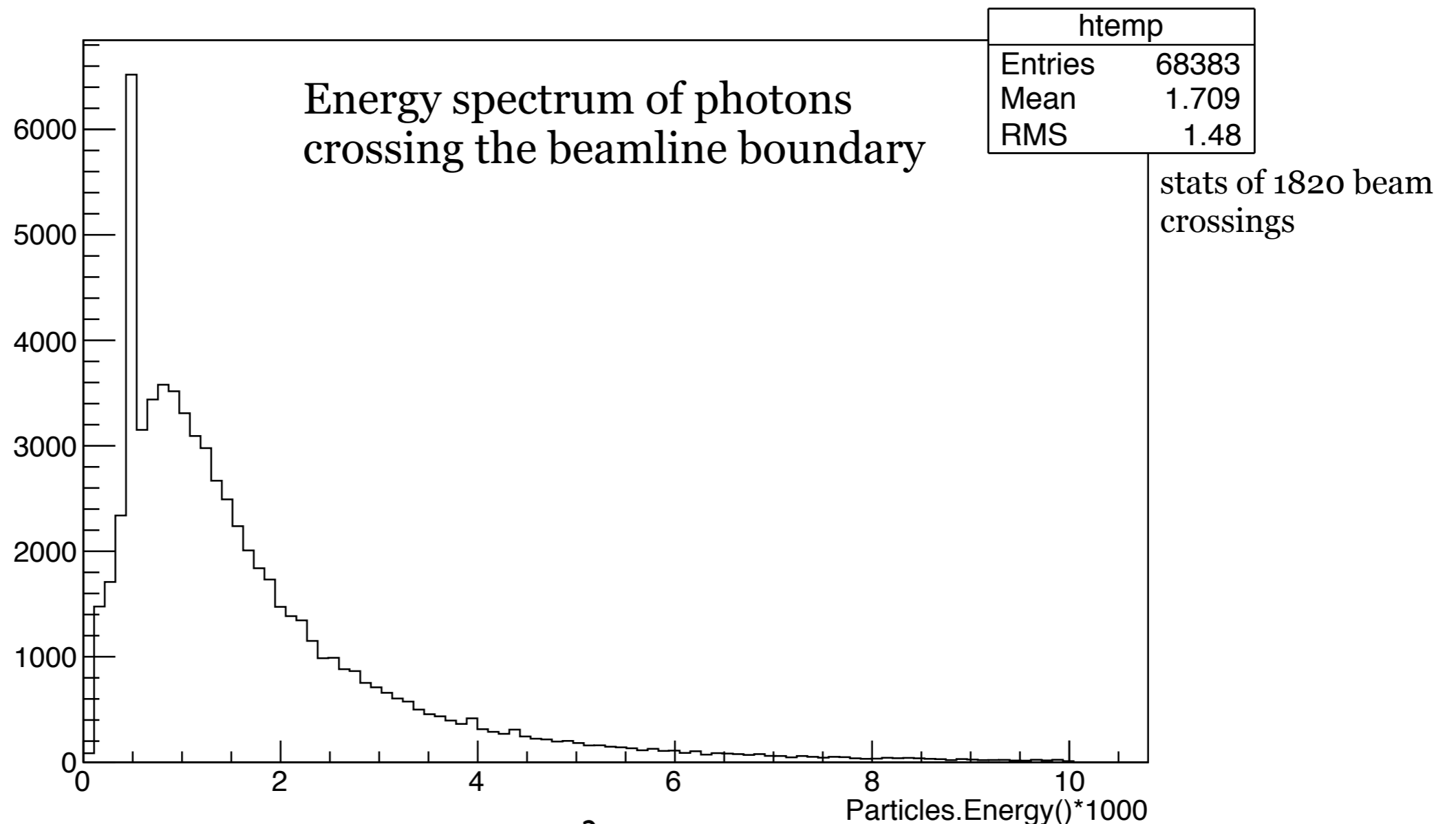
*Chih-hsiang Cheng  
Caltech*

*SuperB EMC R&D Meeting  
2012/04/10*

# Test background frame

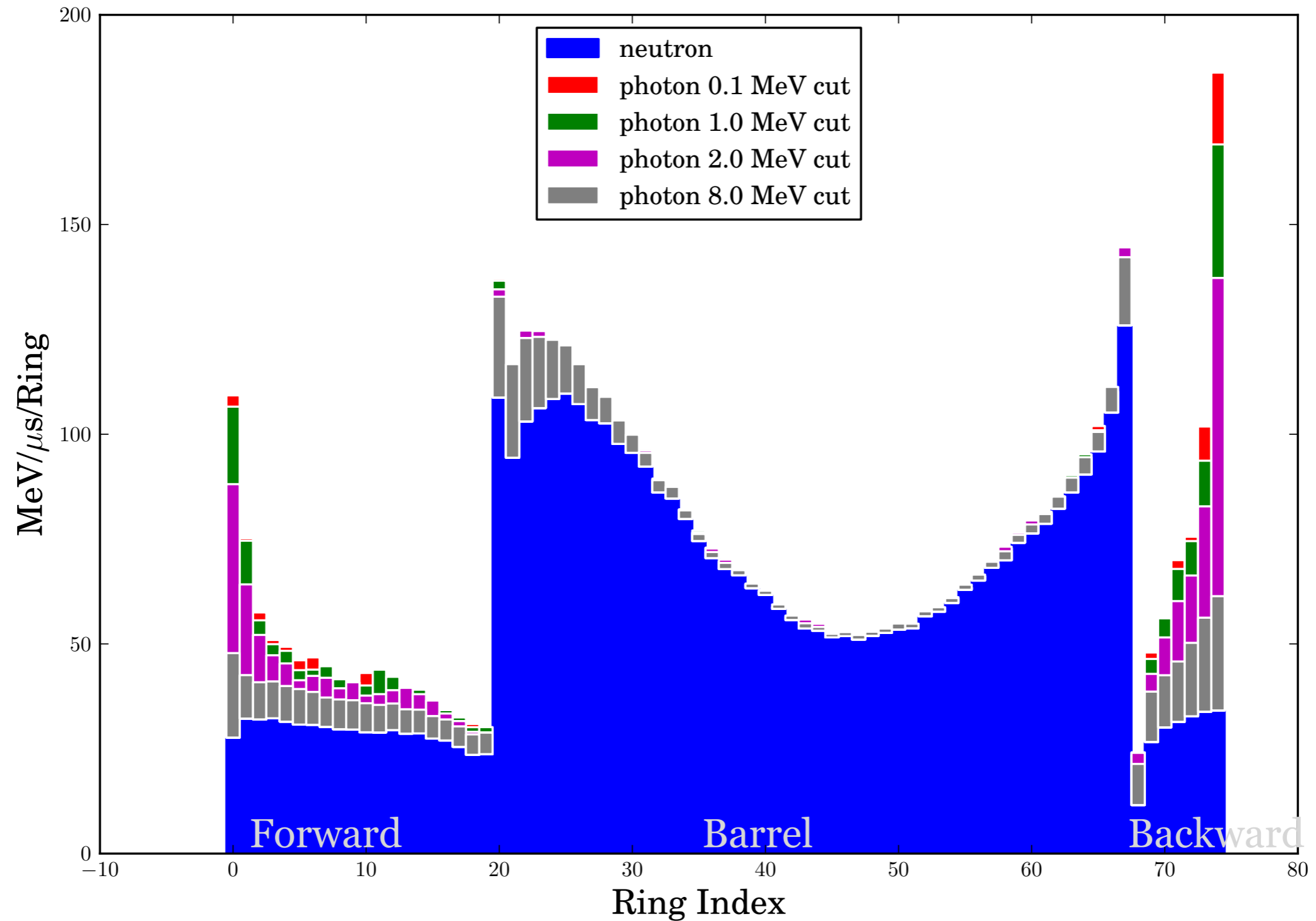
- Exactly the same configuration except for lowering photon energy cut from 8 MeV to 0.1 MeV.
- 49k beam crossings are generated for testing.

Particles.Energy()\*1000 {Particles.GetPdgCode()==22&&Particles.Energy()<0.010}



# Energy rate in each ring

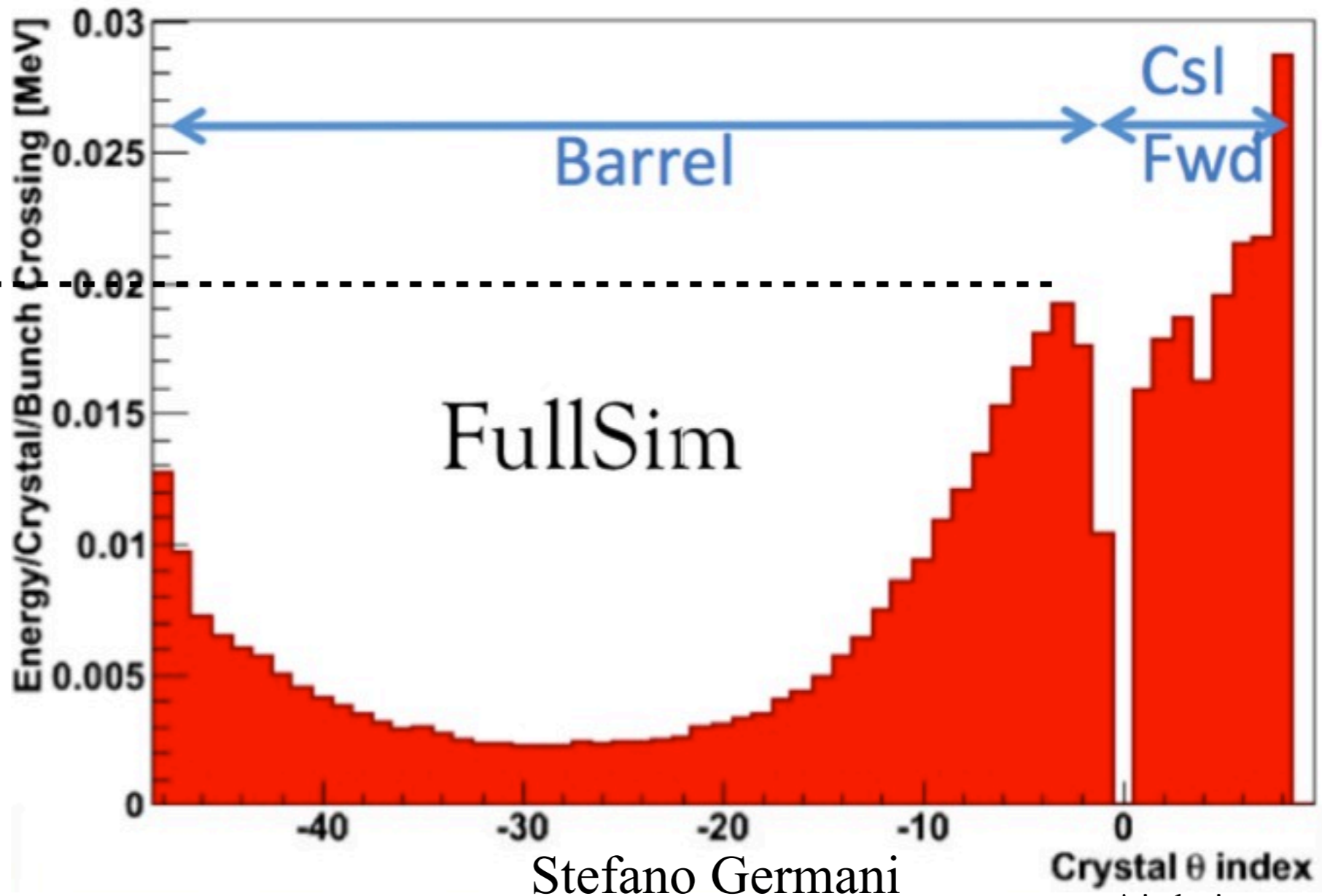
Assume 226.7 MHz beam crossing



# Compared to fullsim

$\sim 4.5 \text{ MeV}/\mu\text{s}/\text{crystal}$  ←

There are 120 crystals in a ring in barrel.



\* indexing system is different (reverse order)

# Conclusion

- Lowering photon energy threshold in background frame has a large effect in very forward and backward regions, but very little effect in barrel.
- Fastsim still shows background dominated by neutrons.
- Still a factor of 4-5 lower than what is found in Fullsim.