

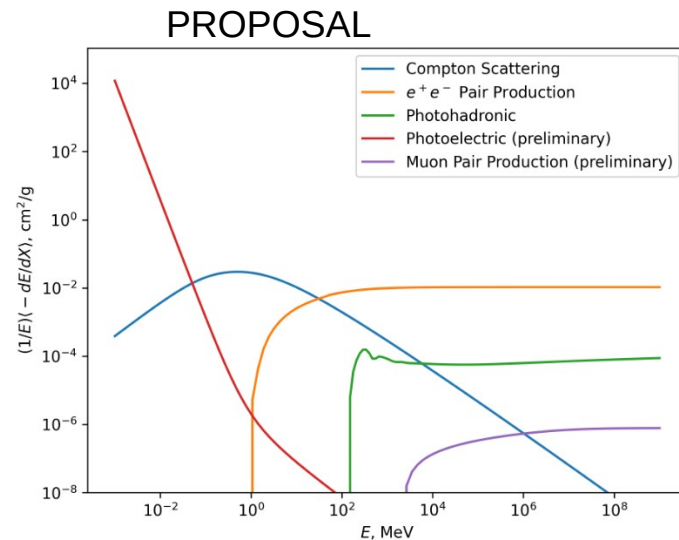
Hadronic photons in C8

- * photon + nucleus \rightarrow hadrons
- * lepton + nucleus (photon* + nucleus) \rightarrow lepton + hadrons

Status in C8 (MR !430):

- cross section: PROPOSAL (pion threshold to HE)
- secondaries:
 - + any HE hadronic interaction model (Elab>80GeV)
 - + NO! secondaries for LE (but trivial to add)
 - + photon \Rightarrow real rho0 meson interaction

```
- corsika::proposal::Interaction emCascade(env);  
+ // energy threshold for high energy hadronic model. Affects LE/HE switch for hadron  
+ // interactions and the hadronic photon model in proposal  
+ HEPEnergyType heHadronModelThreshold = 63.1 GeV;  
+ corsika::proposal::Interaction emCascade(env, sibyll, heHadronModelThreshold);
```



A. Sandrock EM-meeting 03.02.2022

Summary: processes for muon production in EAS covered (?)

Photon – hadron interactions

Photon + nucleus \rightarrow hadrons / neutrons + nucleus'

To do:

- LE interactions (\sim GeV: nucleon resonances)
- Photo-disintegration (\sim MeV: nucleus resonances!)
- realistic photon (direct + hadronic photon), diffraction?
- intra-nuclear cascade

=> DPMjet + FLUKA

- * LE interactions play role for muons ?
- * Disintegration matters for neutrons at ground ?

