ATMPD detector simulation

main

GZEBRA

Modified to handle
1. decay-electron 2. NUANCE input

☐ : Different between ATMPD and Low E

SGINIT ── GINIT ── GUKINE （Define kinematics)

SGCARD
SGFFIN
DSINIP
DSCARD
SGGEOM (define SK geometry, Tank size, PMT shape etc..) ◄── Size of Inactive space is corrected.

Different parameters

GRUN ── GUTREV (called event by event) ◄── Modified to handle secondary particles

Bank creation

GTREVE

GGCKOV* (generate cherenkov light) ◄── # of photons are reduced according to q.e.

GTCKOV (tracking cherenkov light) ── SGABSC* (scattering / absorption in the water) ◄──

GTMUON (tracking Muon) ◄── Treatment of decay-e is modified.   Different parameterization.

GTELEC (tracking Electron)

GUSTEP

DSxxxx*

GLAST

GUOUT

SGPMT (when the photon arrives at the surface of PMT…) ◄── Different Treatment of 1. Q.E. 2. PMT bands

SGREFPMT (reflection by the surface or generate photo-electron?)

PMTQESG ◄── Q.E. is modified.   Polarization is not considered.

SGPMTA

SGBST ◄── Reflection index is different.

SGTYVK ◄── Different reflection index for bottom,top,barrel