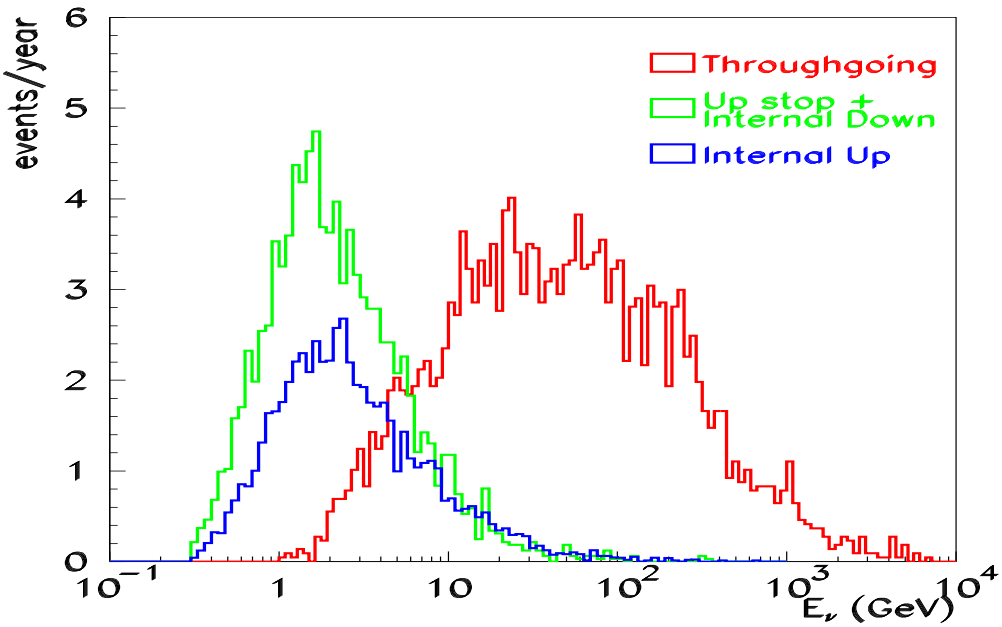
Neutrino energy spectra in MACRO



(1) $\langle E_\nu \rangle \sim 80$ GeV for Throughgoing μs ;

(2) $\langle E_\nu \rangle \sim 4$ GeV for UpGoing Stopping muons and

(4) for Internal Downgoing events ;

(3) $\langle E_\nu \rangle \sim 5$ GeV for Internal Upgoing events

The shape of the angular distribution of throughgoing μs is quite stable for different ν fluxes and cross sections (see Lipari,Lusignoli Ph. Rev. D57) $\Longrightarrow$ good sample to test ν_μ oscillations

Low energy events (IU ,UGS+ID) allow to investigate a wide overlapping region of the oscillation parameter space with respect to throughgoing μs.