

- The observed voltage  $V_{obs}$  is proportional to the neutrino energy  $E_\nu$ :

$$V_{obs} \sim E_\nu y h_{eff} R^{-1} \exp\left(-\frac{\beta^2}{2\sigma_{\beta^2}} - \alpha d\right)$$

$y$  is the fraction of neutrino energy in the cascade

$h_{eff}$  is the effective height of the antenna (gain)

$R$  is the range to the cascade

Gaussian in  $\beta$  from observer position on Cerenkov cone

(estimated from RF spectrum)

Exponential is attenuation in ice at depth  $d$ .

(estimated from RF spectrum and polarization effects)

Gives:  $\Delta E_\nu / E_\nu \sim 1.9$  (60% of which is intrinsic from  $y$ )