Low-Level Quality Parameters

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Online Processing

Linefit Speed
Angle (LF/LLH)
Single SPE Pandel Direction
Reduced Likelihood
Total Charge
Number of Pulses
(Direct) Length

Anything else is luxury!
PSF Basics I

CORSIKA Single Muon Zenith Angle Resolution

No Effect

Reduction
PSF Basics II

![Graph showing events per bin vs. Δθ_{zen}(llh)[°].]

- **Single (Filter Level)**
- **Single (Quality Cut)**
“Coincident”
Coincident?
Coincident!

Single = Single * 1.3
Coincident = Coincident - 0.3 * Single
Coincident

All except the green are available online!

Single
Paraboloid Sigma
Reduced Likelihood

2.5!
“Jon Dumm's Plot”

IC22, October Data
Direct Hits Channels is Obsolete!
Angle LF/LLH
A Tail of Two Reconstructions
Muons, Slant Depth > 11 km

Channel

-100m to 200m

Data
CORSIKA

-50m to 0m

Data
CORSIKA

0.1

-400m to -300m

Data
CORSIKA

0.1
IC22 Data, Muon Filter, No Cuts

(Direct) Length

\( \cos(\theta_{\text{zen}}(\text{lhb})) \)

\( L_{\text{dir}}[\text{m}] \)
“SPEFit16TimeSplit2Bayesian”
Keep It Simple!

More Information:
/Quality_Parameters
/Depth_Dependence
/Seasonal_Variations
/Energy_Estimators