IceCube++/ DekaCube/
DecaCube

Part I - Introduction



David Altmann / Christopher Wiebusch (david.altmann@desy.de) MANTS Meeting Munich October 15th, 2013

What will IceCube++ be?

- HE extension to IceCube
- About 100 additional strings
- Increased spacing between strings provides large volume

How does it look like? (Answer: awesome ;))



david.altmann@desy.de

PeV muon track in IC++ (125m)



October 15th 2013

PeV muon track in IC++ (250m)



October 15th 2013

PeV muon track in IC++ (375m)



October 15th 2013

Effective Area for NuMu



Does not scale with volume

October 15th 2013

Then came HESE

- We want cascades
- We want containment

• How does IC++ performs for cascades?

Effective Area for NuE cascades



- Nchannel >= 15
- Nstring >= 3

That would be an Ernie/Bert event ...

375m is not feasible for contained tracks/cascades → 250m spacing prefered

October 15th 2013

- Geometry optimization for contained events
- Veto options