The IceCube experiment at the South Pole

IceCube Laboratory (ICL)

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South Pole history

1911: Roald Amundsen and Robert F. Scott reach the South Pole



1975: Geodesic dome as new station



1957: Deep Freeze I, permanent US base for the winter



South Pole: 2008 - present







Inside the station



and the

BRAD

South Pole facts:

Temperatures around -76°F / -60°C for most of the winter

One of the driest place on earth

9300ft / 2834m above sea level

Isolated from February to October

6 months of darkness

March 22nd

April 5th











ICL server room

- ~200 machines
- Power the sensors and receive the data
- Send 10% of the 1TB/day of produced data via satellite
- Alert other experiments in case of interesting event detection (high energy, supernova)

Calibration and inclinometers

IceTop DOMs calibration

Inclinometer measurements



Summer repairs and upgrades







SPT & BICEP telescopes

South Pole Telescope Background Imaging of Cosmic Extragalactic Polarization





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South Pole Remote Earth Science and Seismological Observatory Atmospheric Research Observatory



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Questions?



Size of Antarctica: Comparison



