



An IceTop module for The IceCube MasterClass

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The IceCube Masterclass



Your chance to be an IceCube researcher for a day!

Go to <http://icecube.wisc.edu/masterclass>

- Outreach program for high-school students
- Yearly in Spring since 2014
- At 10 institutes in US and Europe

Web-analyses are open for **everybody**
 Try them! :)

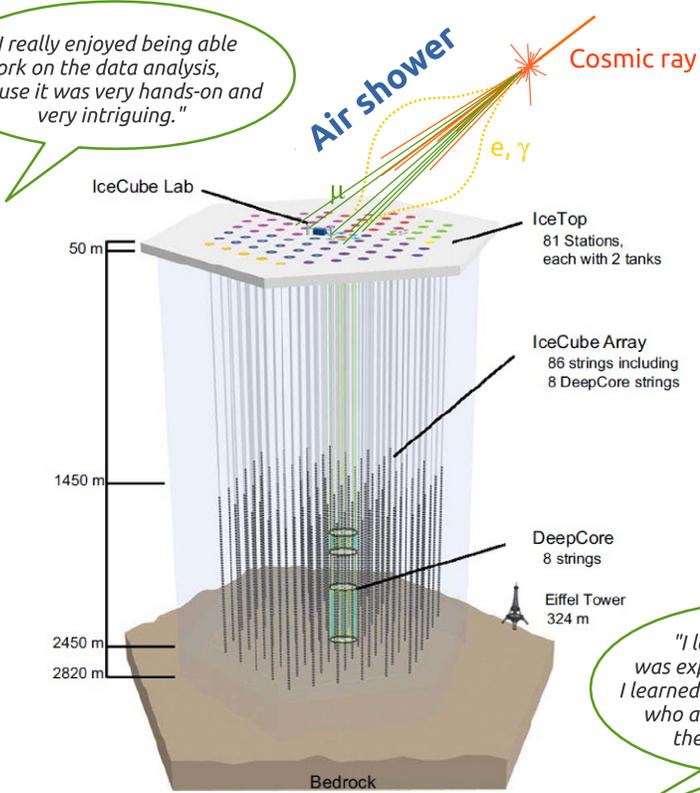
Activities

- "I am a Higgs boson!" – The Particle Game
- **Live call to the South Pole**
- **Analysis of IceCube data** – in your Web Browser!
- Talks & experiments
- South Pole gear in action
- Interactions with researchers and students all over the country

"[I will remember from the Masterclass that] it takes a massive amount of people to complete a large project and there is always something new to be discovered"

New web-based analysis for IceTop

"I really enjoyed being able to work on the data analysis, because it was very hands-on and very intriguing."



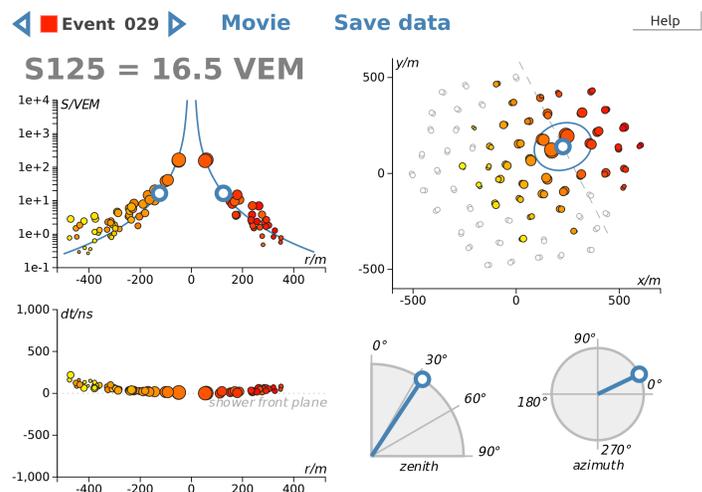
"I loved how everything was explained and the amount I learned as well as meeting people who are currently working on the project."

Measure the flux of **Cosmic Rays** at the **South Pole**

- **Reconstruct** real events – in your web-browser
- **Calibrate** your events using simulations
- **Compute** the flux from an energy histogram



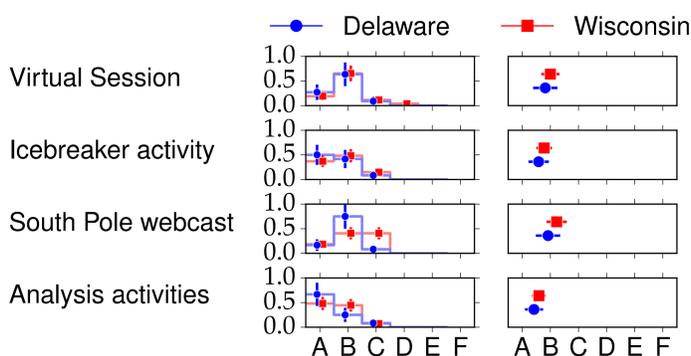
Look at real events and fit the energy proxy S125



Take a guess! The event is... **Real**

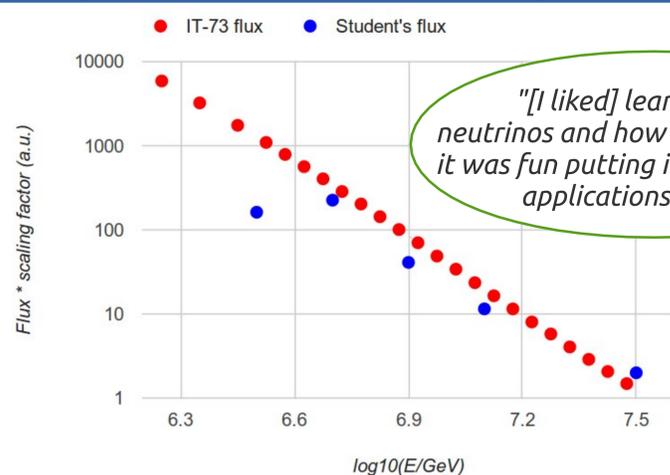
30 guesses
50% correct

Feedback from students



- Analysis activities get the best grades
- Students greatly enjoy the hands-on experience

Download your fitted events and make your own spectrum



"[I liked] learning about neutrinos and how they're detected, it was fun putting it into real world applications."