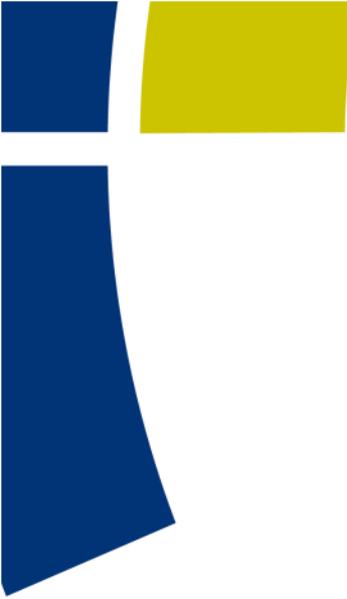


Aktuelles Astroteilchen-Projekte



Neue Experimente

- Kamiokannen, CosMO und Nebelkammern werden wieder gebaut
- bei Anregungen zum Design bei Caro melden
- Muonic 2.0 wird verteilt → bitte testen und Rückmeldungen geben
- neues Image für Umstellung auf Ubuntu 12.04
- Bauanleitung für CosMO zum selber nachbauen ist verfügbar
- Einkaufsliste Nebelkammern wird erstellt → aus unseren Erfahrungen wollen Lehrer sowas haben



Astroteilchen-Masterclass

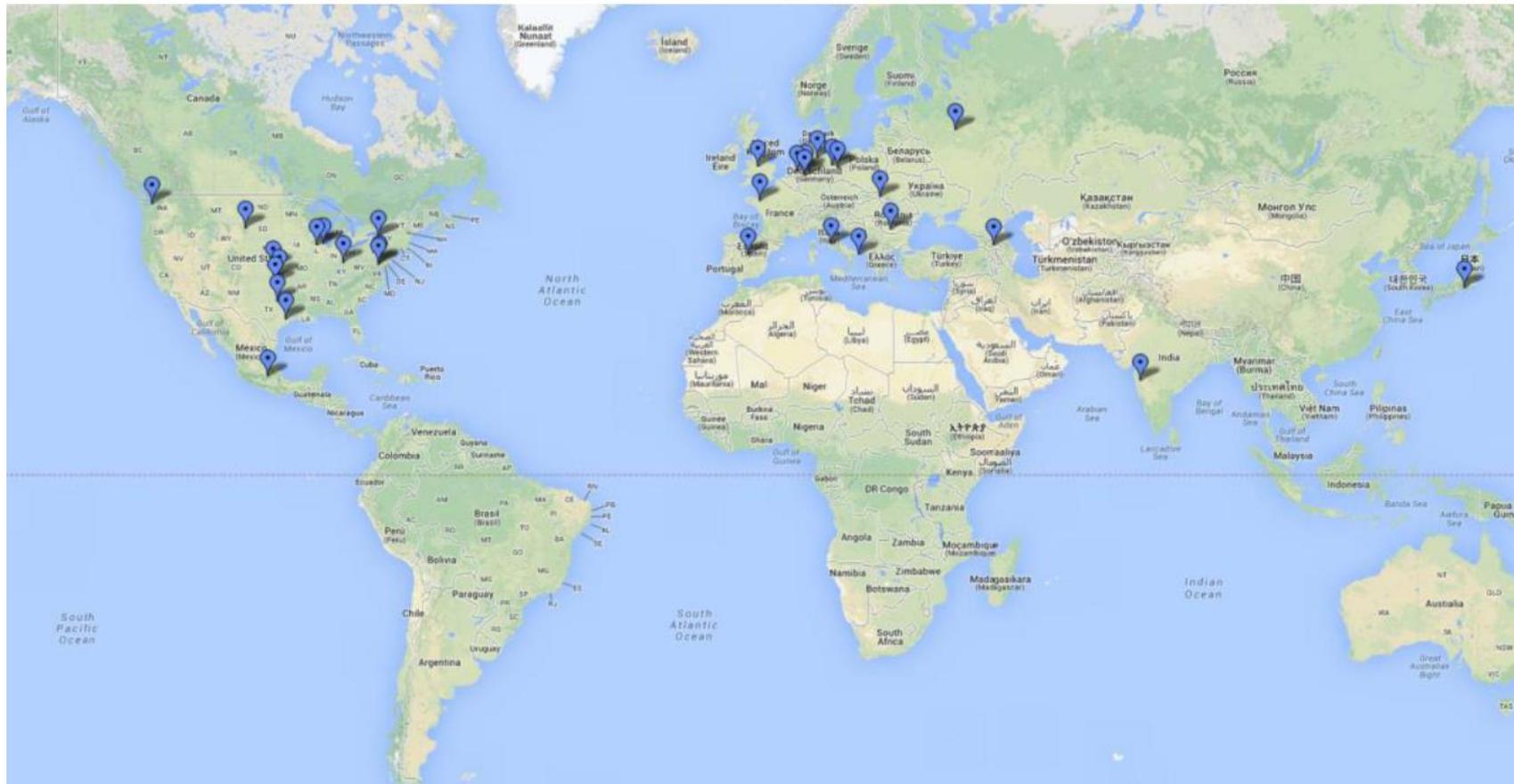
- Masterclass mit Auger-Daten wird entwickelt
- Wuppertal und Zeuthen haben erste Erfahrungen mit Auger-Masterclass gesammelt
- Daten: <http://auger.uni-wuppertal.de/AUGER/>
- Rekonstruktion von Schauern und Energiespektrum
- nächster Schritt: Dokumentierung + Testphase

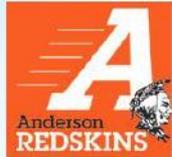
- IceCube entwickelt auch MC, näheres unklar, aber wenn es Informationen gibt, werden diese im Netzwerk verteilt

ALL PARTICIPATING GROUPS

INTERNATIONAL

COSMIC DAY



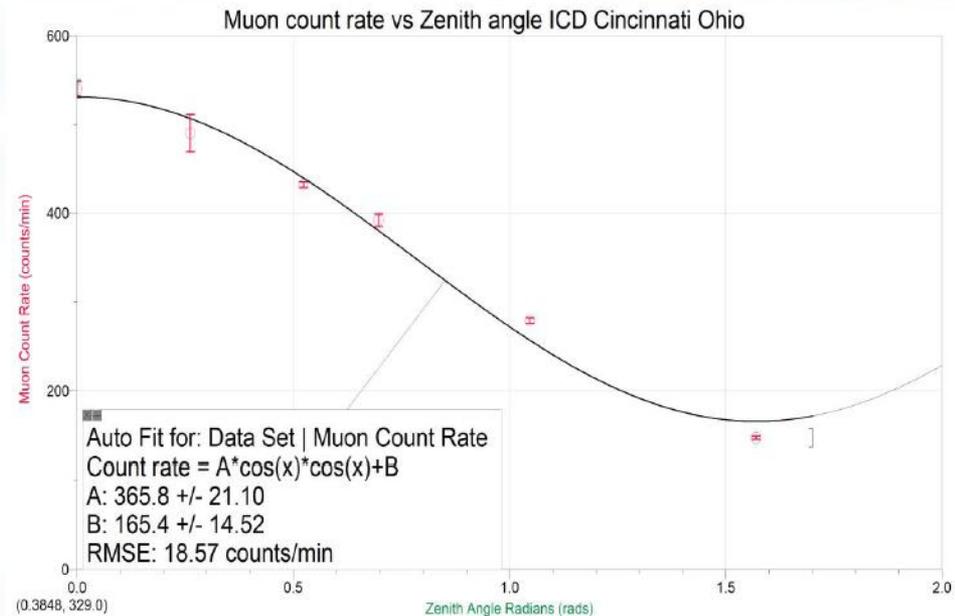


Anderson High School Cincinnati Ohio Zenith Angle Distribution of Air Shower Particles

The goal was to measure the rate of air shower particles as a function of the zenith angle.

Data shows a good \cos^2 relationship

Zenith Angle	Count rate trial 1/min	Count rate trial 2/min	Count rate trial 3/min	Mean Count rate /min	Standard Error Count rate /min
0	535	530	555	540	8
15	502	449	518	490	21
30	427	433	436	432	3
40	385	386	405	392	7
60	282	273	281	279	3
90	150	148	143	147	2



International Cosmic ray day Sept 25th 2013, University of Birmingham, UK

-Measurements in a Building



Handwritten data table with columns for location, count rate, and other measurements. The table is organized into several rows, each representing a different location or measurement point. The data includes numerical values and some text annotations.

Location	Count Rate	Other Measurements
2nd floor	2.89	3.27
1st floor	2.24	
Ground floor	2.20	3.34
Basement	1.99	

Counts per second and error

Location	Count Rate	Count Rate
Second floor	2.89	Bakery Outside 3.27
First floor	2.24	
Ground floor	2.20	Ground Outside 3.34
Basement	1.99	

Conclusion:

- The higher up the building you get, the higher the count per second.
- At this scale, changes in height alone are much less significant.
- The differences between inside and outside occurred because muons are absorbed by the building.

Azimutal Cosmic Ray Flux

**INTERNATIONAL
COSMIC DAY**

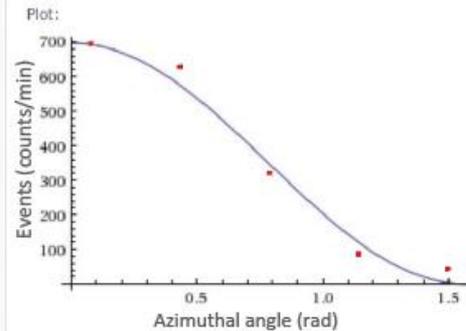
IBERO
CIUDAD DE MÉXICO

Diego Berdeja
Genoveva González B.
Rodrigo Roman
Kleomedes Stamatziades



MUON RATE VS. ZENITH ANGLE

plot $y(x) = 348.665 + 348.665 \cos(2x)$ $x = 0$ to $\frac{\pi}{2}$



KINGFISHER HIGH SCHOOL COSMIC RAY CLUB KINGFISHER, OK 73750



Set up: 4 Channels stacked, with a
1 ½ cm separation between channels
Channel #1 located at the bottom of the
Stack (2 cm) and Channel #4 at the top (10.5cm)
Data: (4-fold coincidence)



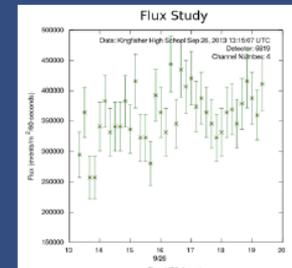
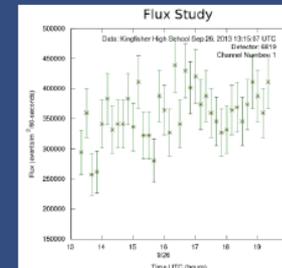
Four-fold coincidence scheme

International Cosmic Ray Day in Kingfisher, Oklahoma
September 25, 2013

PARTICIPANTS:
MICAH AND
DANIEL TAUTKUS
DAWSON LEFFINGWELL
ELIJAH LOWMAN
TEACHER MRS. CYNDI ICE



Results: The regular decrease of events rate with growth of the required minimal event dimension is evident. A higher percent of events (muons) detected on Channel #4, being on top, then on channel #1 at the bottom. Event rates were rather low.





Aufgaben

- Muonic testen + Messungen (speziell Geschwindigkeit und Lebensdauer) intensiv erproben
- Auger-MC mitentwickeln
- Handreichungen für Lehrer erstellen
 - zu kleinem Themenbereich
 - übergreifende/allgemeine Themen
- Netzwerk-Gedanken weiter tragen (Lehrerfortbildungen, Ausleihen, vertiefende Projekte)