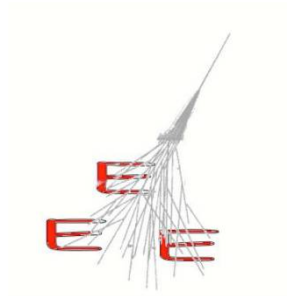


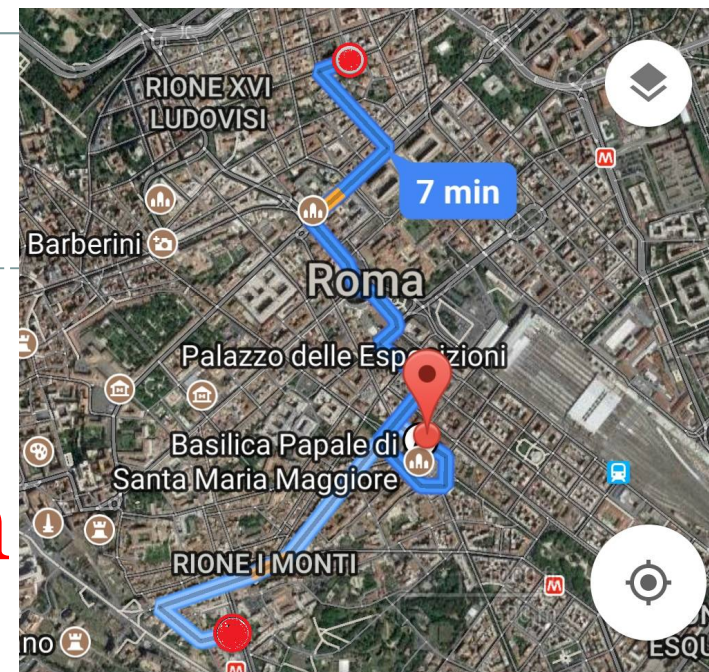
# Extreme Energy Events (EEE)



Liceo Augusto Righi  
Liceo Pilo Albertelli  
Roma



# A little on our story: A story of collaboration



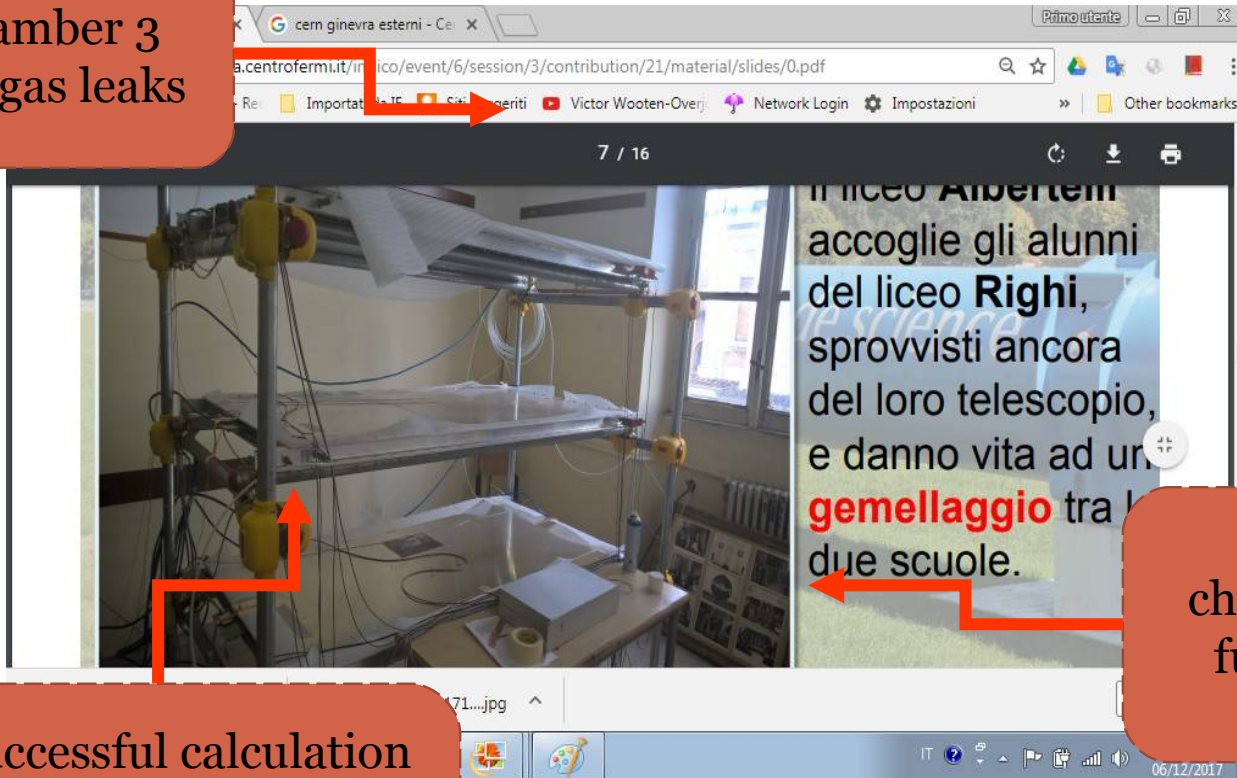
Centro Fermi wanted to build a telescope in the city-center of Rome.  
Due to limited funding and disponibility it was decided to establish  
the telescope only in one of the three schools interested (Righi,  
Albertelli and Cavour)  
This was the beginning of our strong partnership...



# Setbacks



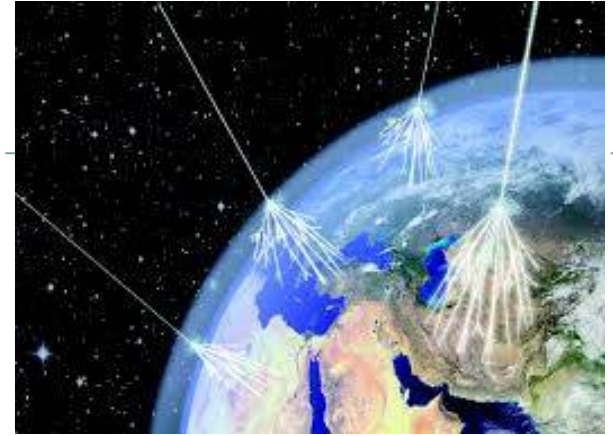
Chamber 3  
has gas leaks



chamber 1 isn't  
functioning

After a successful calculation  
of the North the telescope  
was moved, tempering with  
its orientation

# What we learned



## Masterclasses

- What are EEE Telescopes?
- How and what are they made of?
- Why are they important?



## Two-day EEE bootcamp

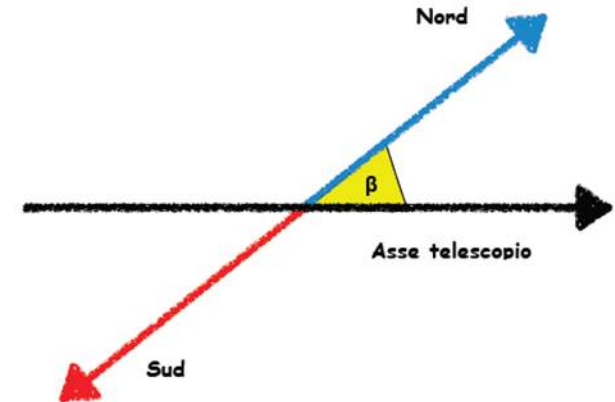
- Finished measurements of North
- Learned to analyze and evaluate data from various telescopes
- Learned to input data to elaborate EEE graphs
- Seminar by Dr. Silvia Pisano

# Measurement of the Telescope Orientation



$$\beta = (+ 38,4 \pm 0,8)^{\circ}$$

- Calculation of Magnetical north
- Calculation of Geographic North using Solar Shadows using the azimuth



	Angle	Value	Time	Place	Asimuth
$\alpha_1$		$(45,5 \pm 1,0)^{\circ}$	12/06/2017 16:43	41°53'53.5"N 12°29'55.5"E	$(364,3 \pm 0,2)^{\circ}$
$\alpha_2$		$(46,5 \pm 1,0)^{\circ}$	12/06/2017 16:44	41°53'53.5"N 12°29'55.5"E	$(364,5 \pm 0,2)^{\circ}$

A different Asimuth is associated to a different  $\alpha$ .  
Therefore we want to calculate  $\beta$  in both cases  $\alpha_1$  (B1) and  $\alpha_2$  (B2)  
 $B1 = A\alpha_1 + 180^{\circ} - \alpha_1 = (364,3 \pm 0,2)^{\circ} - (45,5 \pm 1,0)^{\circ} = (318,8 \pm 1,2)^{\circ}$   
 $B2 = A\alpha_2 + 180^{\circ} - \alpha_2 = (364,5 \pm 0,2)^{\circ} - (46,5 \pm 1,0)^{\circ} = (318,0 \pm 1,2)^{\circ}$

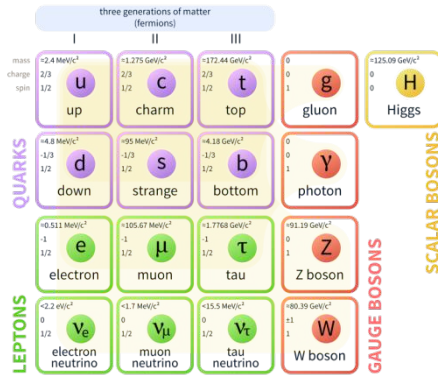


# Two day EEE bootcamp

EEE lessons with Dr. Silvia Pisano

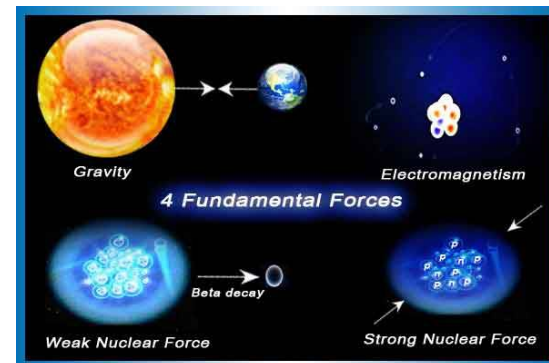


Standard Model of Elementary Particles



- Different elementary particles( their importance, discovery, and predominance)
- Different Types of forces
- Introduction to Relativity
- Introduction to Quantum Mechanics
- Possible discoveries and progress in such fields

- Evaluation of Italy's EEE telescope venues
- How to access EEE telescope data
- How to analyze and input data in excel
- How to create a data scatter plot graph of a certain event



# Our Hopes for the coming year



- Fix the Albertelli's telescope and replace chamber A1
- New calculation of the North
- Introduce the new-comers to the EEE project
- Masterclasses to learn how to use Root
- Build a new telescope chamber at CERN (Righi)
- Borrow/Build a Cosmic Box
- Develop a communication system between Albertelli and Righi to regulate and control telescope from both schools



# Acknowledgments



- Centro Fermi  
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Dott. Fabrizio Coccetti  
Dott.ssa Marta Pepe  
...and the entire EEE collaboration

- Team Albertelli  
Prof.ssa Antonietta Corea (DS)  
Prof.ssa Viviana Amati

- Team Righi  
Prof.ssa Monica Galloni (DS)  
Prof.ssa Francesca Sartogo  
Lorenzo Versini, Michele Surano  
Ruggero Valli, Giorgio Del Castello