My life as a physicist

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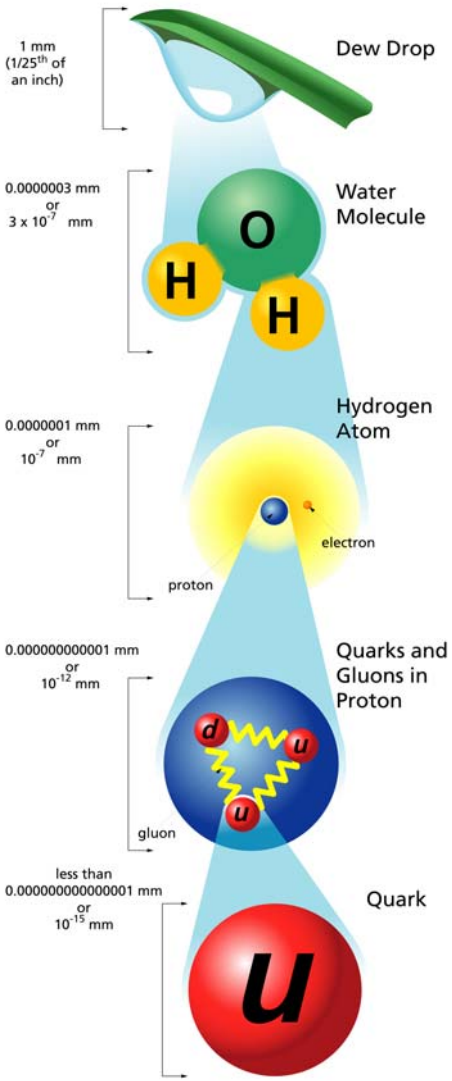
What does a physicist do, anyway?

We try to understand the world around us– its composition, and the fundamental forces that hold it together

Instead of using a microscope to look at small objects, we use particles

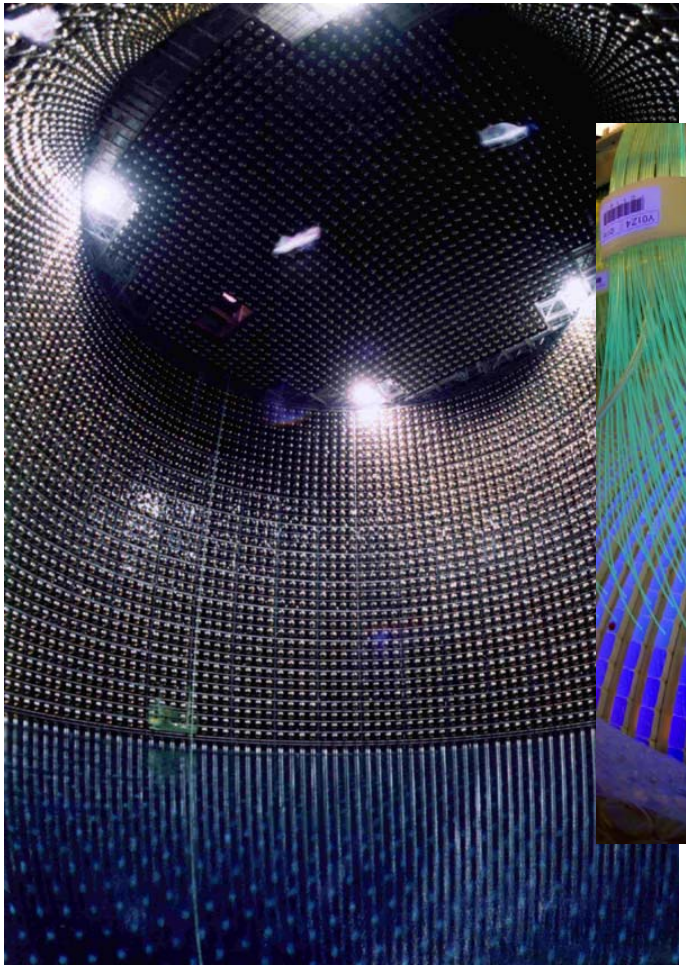


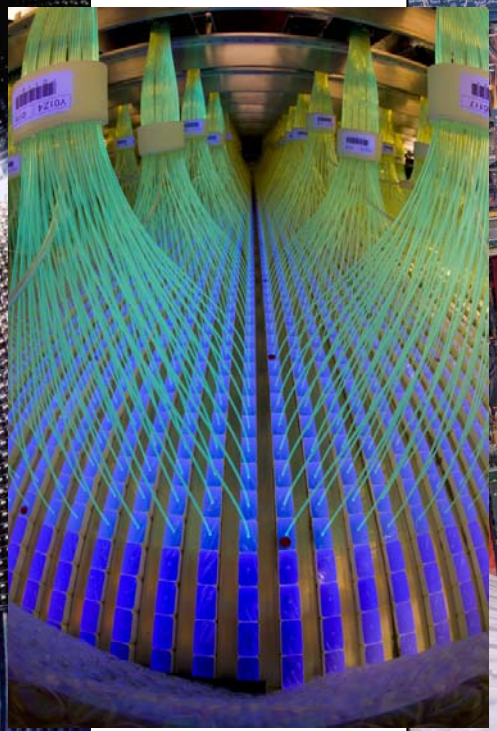
Fermilab

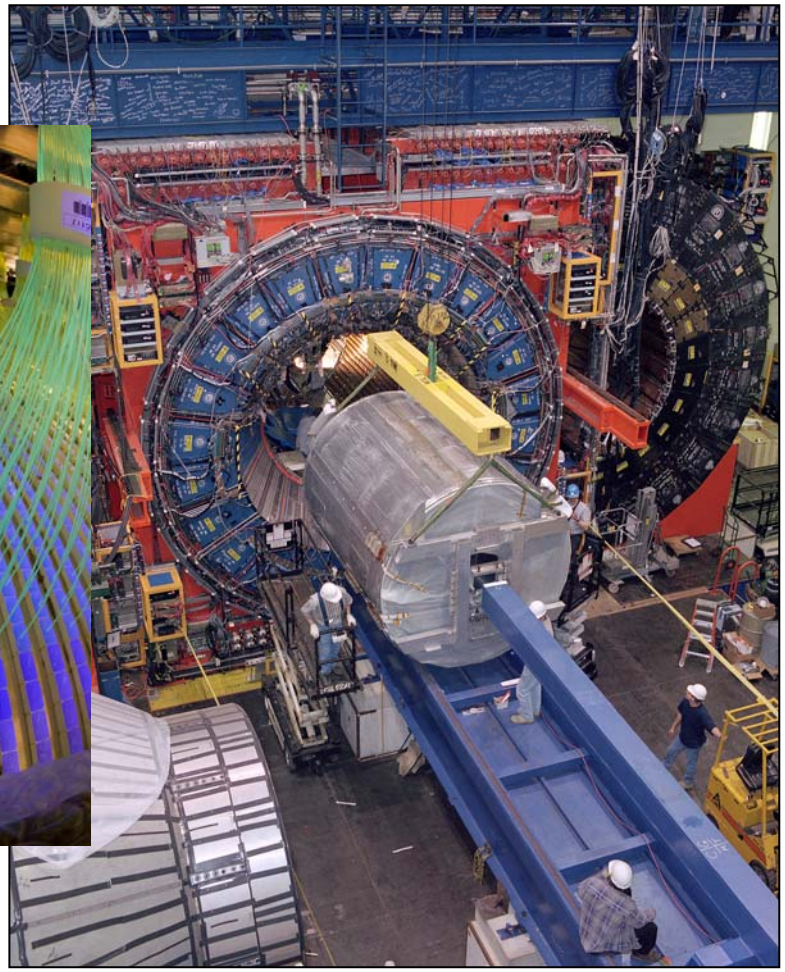
where I work
We have a large particle accelerator in Batavia, IL

Particle accelerators

Particle Detectors





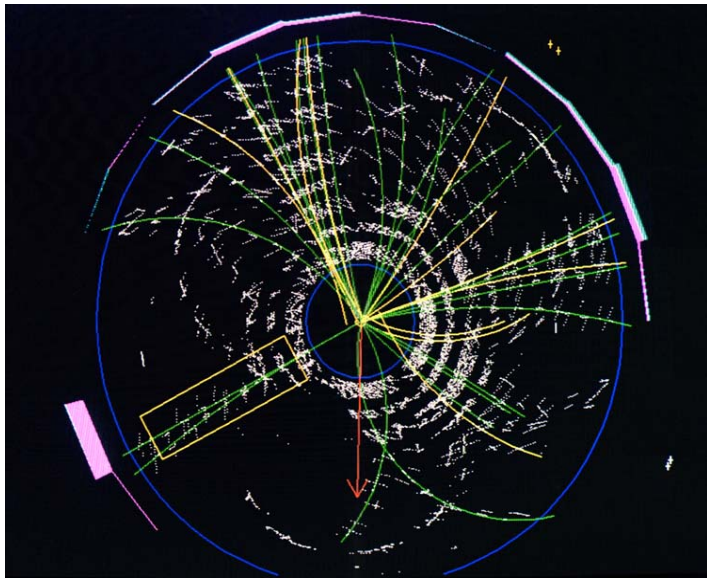


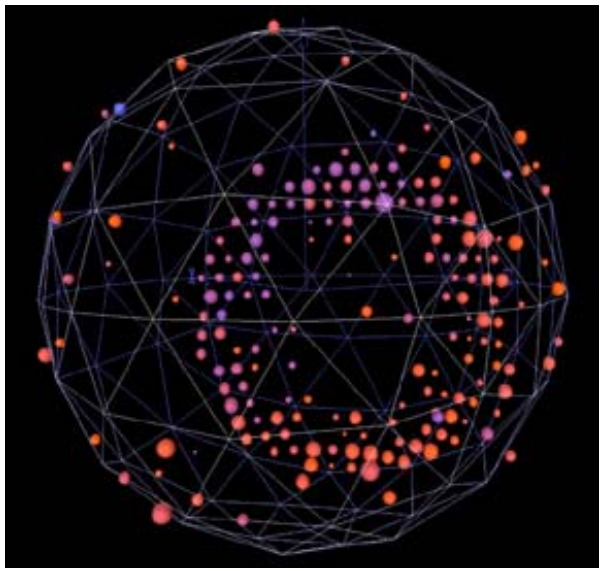
We observe the resulting interactions in a variety of detectors

We build these ourselves! Often we push our knowledge of materials, construction, and electronics to the limit

Data Monitoring and Analyzing

We check our data as it is taken





... and we infer interactions from light patterns on a wall, or the trajectory through a tracker

Science and people

Science isn't done alone– it's done in groups of fifty to thousands of people all working toward the same goal

These people are from all over the world

Why I have the best job ever

1. I am paid to conferences around the world
2. I meet amazing people, both in and outside physics
3. I build detectors from scratch, and make them work
4. Computers no longer scare me
5. I solve problems no one else has ever solved before

Physics opens doors

Physics teaches you how to think, which makes them very marketable for nearly any job

People with degrees in physics, either from college or more advanced can become:

- **Wall Street analysts (finance)**
- **Teachers, professors**
- **Database management**
- **Radiation/medical physicist**
- **Governmental advisor (science policy)**
- **Science journalism**
- **Forensic science**

Jobs at Fermilab

Fermilab also employs more than just physicists:

- Technicians
- Engineers
- Educators
- Medical researchers

All of these people contribute to the success of our laboratory