

# Top 10 Things You Didn't Know You Loved About Nuclear Physics

1. **Radiocarbon Dating** - This technique that revolutionized modern archeology was developed by researchers studying cosmic rays in the 1950s.

2. **Smoke Detectors** - This technology was first discovered in 1890 "by accident" during an experiment on the light-refracting properties of ionized gases.

3. **Well Logging for Modern Oil and Gas Exploration** - Radiation sensors are commonly used to measure the potential of new oil field finds before major drilling commences.

4. **Medical CT Scanners** - The first CT imaging concept was developed in by an Italian radiologist exploring early uses of photographic film to study radioactive decay.

5. **Disease Resistant Crops** - Irradiation of seeds has been used to produce plants with improved resistance to common diseases.

6. **Food Irradiation** - First employed widely during World War II to help preserve rations for U.S. troops, use of gamma rays for food irradiation now helps extend the shelf-life of more than 500,000 tons of food each year.

7.



8. **Radiation Detectors at Ports** - The first practical radiation detector was invented in 1908 by scientists searching for the nature of the atomic nucleus.

9. **MRI Imaging** - The concept of nuclear magnetic resonance was discovered in the 1930s by researchers studying the nuclear physics of radio waves.

10. **Modern Computer Processors** - The thickness of the incredibly thin films used to deposit transistor on modern microprocessors are regulated by sophisticated sensors that can detect a single out-of-place atomic nuclei.

11. **The Next Big Thing** - Right now a nuclear physics researcher - possibly even one of the FRIB users - is working on research that will need to the next innovation that will change the world!

