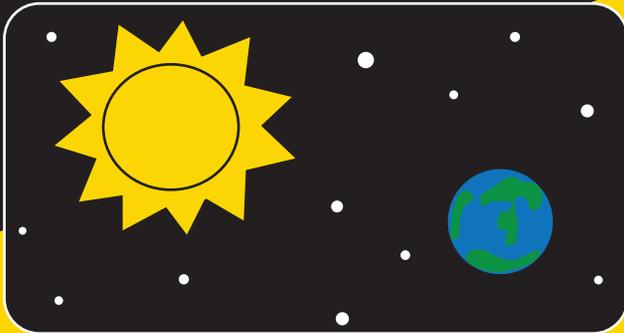


Scientists measure two types of radiation that humans are exposed to: background and man-made.

BACKGROUND RADIATION

Background radiation is what is naturally emitted from the Earth, the sun, and outer space.



HUMAN-MADE RADIATION

Human-made radiation is the radiation that humans have created through products, like exit signs, microwaves, cigarettes, and nuclear energy and weapons development.

EXIT

FOR MORE INFORMATION

Please visit our webpage at www.srel.uga.edu or visit us on social media (@ugasrel or #UGASREL).



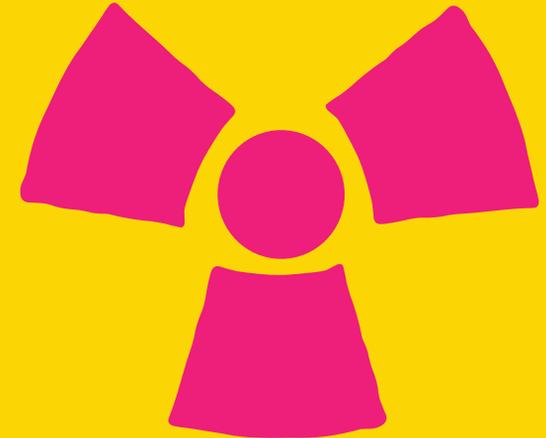
The University of Georgia's Savannah River Ecology Laboratory pursues basic and applied research at multiple levels of ecological organization, from atoms to ecosystems. The SREL is located near Aiken, South Carolina, on the Savannah River Site, a Department of Energy facility, and the first national environmental research park. The lab's research extends beyond the site to regional and global projects. To date, the lab has more than 3,000 peer-reviewed publications.

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Savannah River Ecology Laboratory
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CAUTION

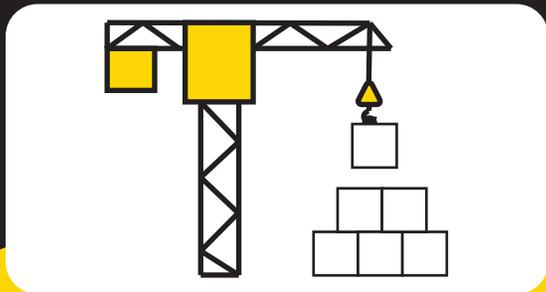


RADIATION

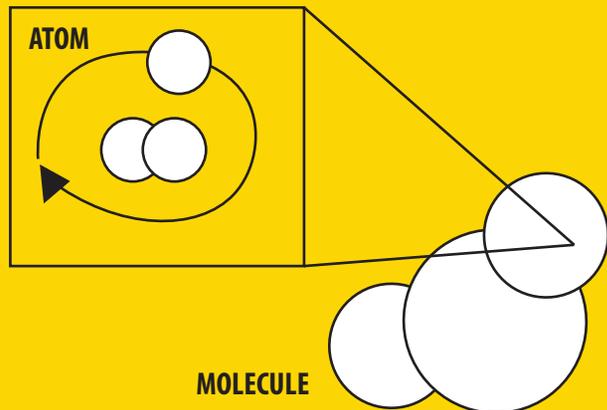
WHAT IS RADIATION?

Radiation comes from elements that have energy.

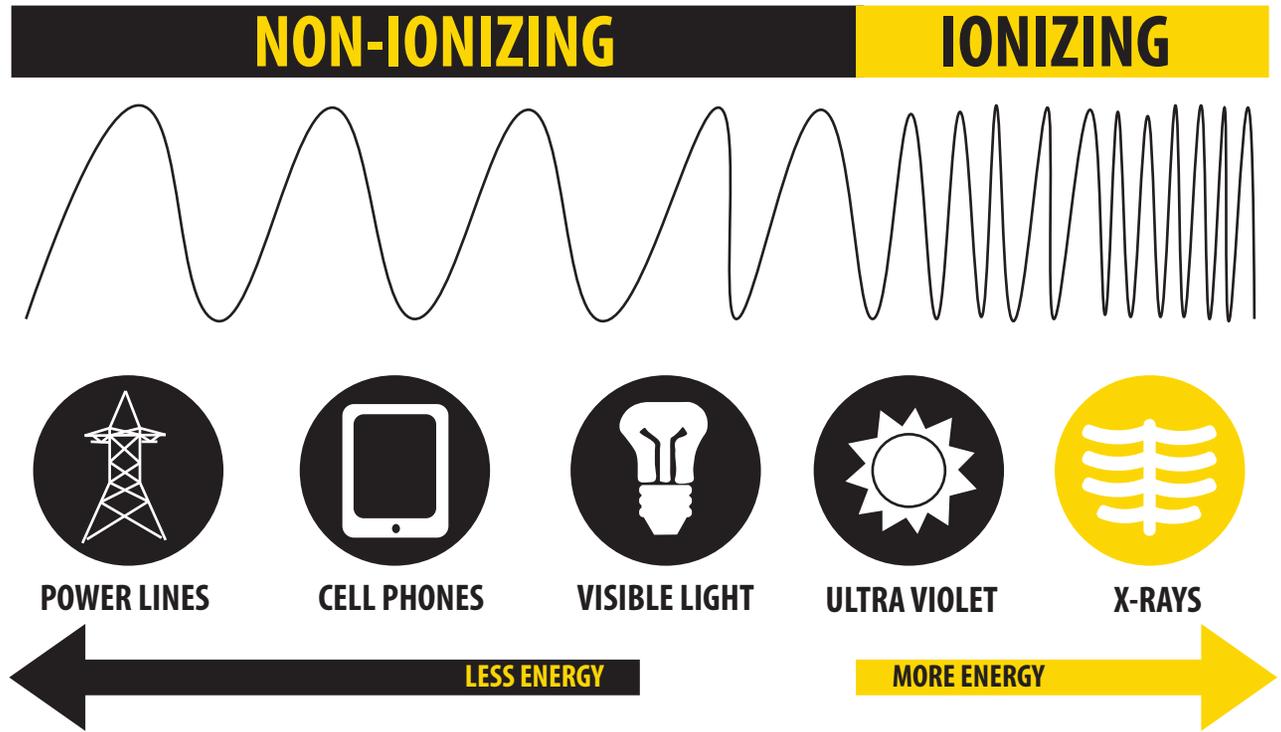
Elements are the building blocks of everything - including us!



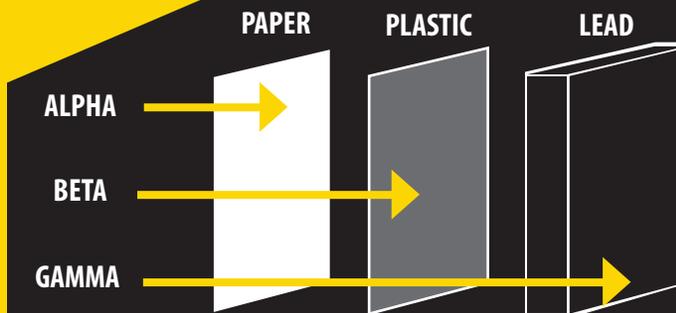
Elements are made of **atoms**. Atoms are made up of a central nucleus and the electron cloud. The nucleus is made up of **protons** (positive charge) and **neutrons** (neutral charge). The electron cloud is made of high-energy **electrons** that move around the nucleus. Atoms combine together to make **molecules**.



Radiation is a type of energy that can be categorized into ionizing radiation and non-ionizing radiation.



Some elements emit energy, which scientists categorize into 3 types of energy: alpha particles, beta particles, and gamma rays.



Measuring Radiation

There are many different terms scientists use to describe the type of radiation they are measuring. This includes the radiation emitted from a radioactive source, the radiation a person can be exposed to (radiation dose), or the risk of potential negative health effects (biological risk).

In radiological environmental monitoring reports in the CSRA, biological risk is often measured using millirems (mrem).