**Idaho State University
Physics Colloquium**

***The Health Effects of Low Level- Radiation***

**Dr. Jay F. Kunze
Emeritus Professor of Nuclear Engineering and retired Dean of Engineering
Idaho State University**

From the dawn of the nuclear era, students in physics, engineering, medicine, and chemistry have been taught to avoid any radiation with wavelengths shorter than 400 nm, and especially alpha, beta, gamma and neutron radiation.  The initial data was compelling, with the cancer deaths of Marie Curie, radium dial workers, workers in uranium mines, etc.  The horrific suffering of the survivors from the Hiroshima and Nagasak nuclear bombs was widely disseminated around the world. In the early 1950's, USA regulators (then the Atomic Energy Commission) set limits for workers and the public, which were then believed to be reasonable risks, and which are still in the CFR today. But in 1978 the Nuclear Regulatory Commissions established a philosophy and regulatory requirement of As Low As Reasonably Achievable (ALARA) as a requirement for all licensees, TV adds today tell us to check our homes for radon-222 levels and to take preventive action if above a certain level, and we are shielded with a lead apron when having a dental x-ray taken. HOWEVER, there is a wide body of evidence that has come forth in the last 40 years that debunks most all of these concerns for radiation doses as high as the upper limit of those initially established for radiation workers by the Atomic Energy Commission about 1950.  There are huge amounts of demographic data that shows that these (large) doses are actually beneficial to health compared to natural radiation doses.

**Monday, August 31, 2020**

**PS108**

**Or Zoom (https://isu.zoom.us/j/97078078829)
4:00 – 4:50 pm**

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