Radio waves - Wikipedia

Radio waves are a type of electromagnetic radiation with wavelengths in the electromagnetic spectrum longer than infrared radiation. Radio waves have frequencies as high as 300 gigahertz to as low as 30 hertz. At 300 GHz, the corresponding wavelength is 1 mm (shorter than a grain of rice); at 30 Hz the corresponding wavelength is 10,000 km (longer than the radius of the earth). Gamma (γ) radiation consists of photons with a wavelength less than 3x10^-11 meters (greater than 10^19 hertz and 41.4 keV). Gamma radiation emission is a nuclear process that occurs to rid an unstable nucleus of excess energy after most nuclear reactions. Both alpha and beta particles have an electric charge and mass, and thus are quite likely to interact with other atoms in their path in the medium.

Electromagnetic Radiation Safety

Deo, P, 2021. “The evidence that weak radiofrequency (RF) and low-frequency fields can modify human health is still less strong, but the experiments supporting both conclusions are too numerous to be uniformly written off as a group due to poor technique, poor dosimetry, or lack of blinding in some cases, or other good laboratory practices.”

Smart Meters - American Cancer Society

RF radiation is low-energy radiation. RF radiation doesn't have enough energy to remove charged particles such as electrons (ionize), and so is called non-ionizing radiation. Non-ionizing radiation has enough energy to move atoms in a molecule around or cause them to vibrate, which can lead to heat but it can’t damage DNA directly.

Detective quantum efficiency | Radiology Reference Article

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Radiation Studies: CDC - Radiation in Medicine - Fluoroscopy

MRE procedures, which can last from 30-60 minutes, use magnetic fields and radio waves to produce images of specific parts of the body. MRI scans are often performed along with other medical imaging procedures to provide a more detailed view.

Milliamperes-seconds (mA) | Radiology Reference Article

Aug 09, 2021. Milliamperes-seconds, also more commonly known as mAs, is a measure of radiation produced (milliampere second) over a set amount of time (seconds) via an x-ray tube. It directly influences the radiographic density, when all other factors are constant. An increase in tube current (mA) results in a higher production of electrons that are inside the x-ray tube...

Safety Radiation Training Module: Diagnostic Radiology

• Tests for High Frequency generators
• Radiation Dose test (CTDI measurement) object containing two small radio-opaque markers, separated by a fixed distance (ex:20 cm) Dosemeter - CTDI in Peronit Phantoms Central and peripheral CTDI's were used to calculate the exposure.

Health risks from radiofrequency radiation, including 5G

Jul 13, 2020 Background dosimetry is discussed in Appendix A of the KNIIRP 2020 guidelines. The discussion on 'Relevant Biophysical Mechanisms' should be criticized. Sprayes Dawley et al used this to whole-body radio frequency radiation at a frequency (90 MHz) and modulations (GSM and CDMA) used by cell phones.

Radiation protection of pregnant women in nuclear medicine

Particular discretion is required to ascertain the possibility of pregnancy in an adolescent. In order to minimise the frequency of unintentional radiation exposures of the embryo or fetus, advisory notices should be posted at several places within the nuclear medicine department, and particularly at its reception area. For example:

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