



**ABBAA TAAYITAA SAAYINSII FI
TEEKINOLOOJI OROMIYAA**

QABIYYEE HOJII
D/T/F/T/BALAQQE

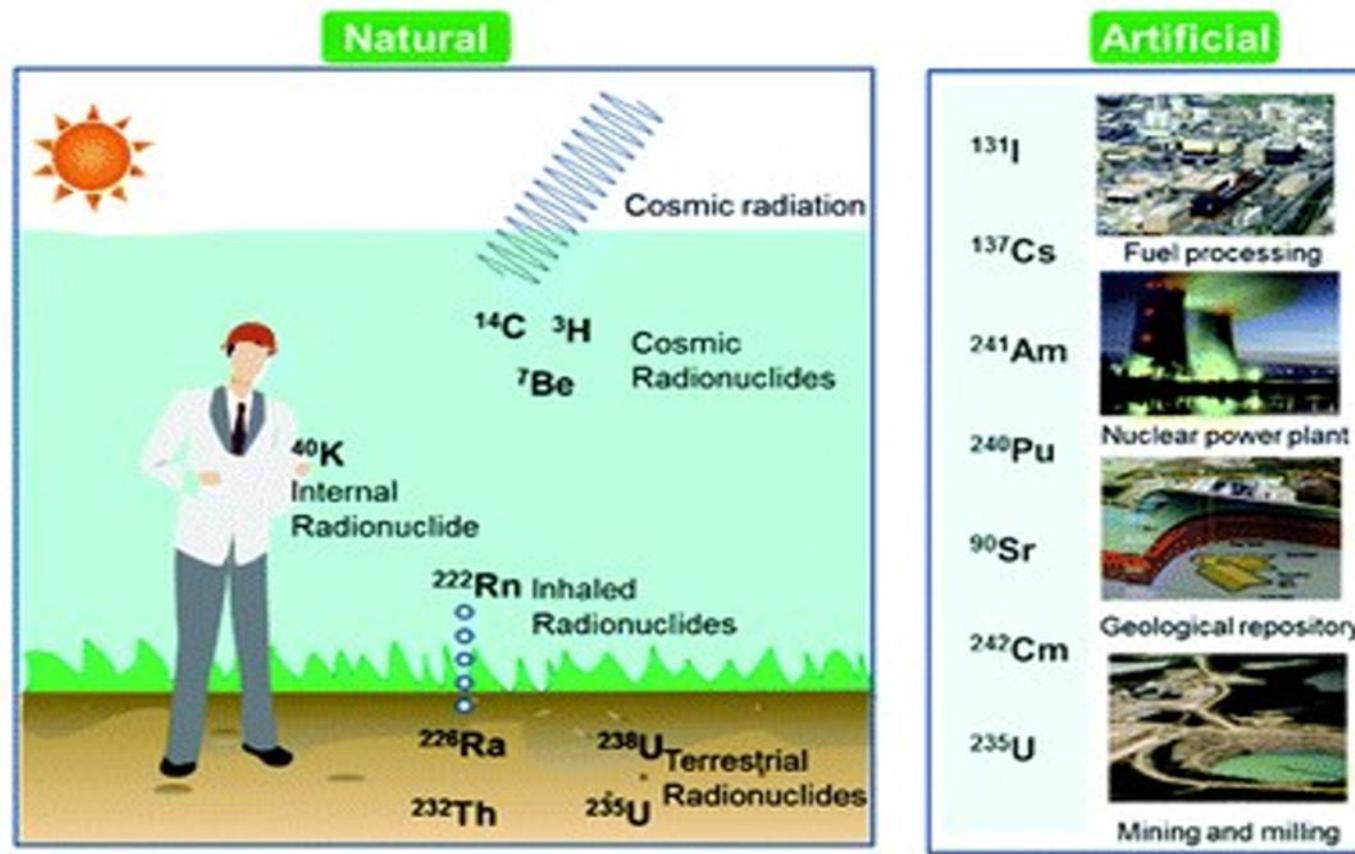


Hojiwwan Akka Daay. To'annoo fi Itti Fayyadama Teekinoolojii Balaqqeetti Hojjetaman

- Daayirektoreetiin To'annoo fi Iti Fayyadama Teekinoloojii Balaqqee Caaseeffama Abbaa Taayitaa Saayinsii fi Teekinoloojii Oromiyaati dame ce'umsaa Teekinoloojii keessaa isaa tokkoo yemmu ta'u garee lama kan of jalati qabuu fi garee tokkoffaan To'annoo fi Duuka bu'iinsa Balaqqee fi garee lamaffaaPn Itti fayyadama teekinoloojii Balaqqeeti.
- Hojii ijoon labsiidhan kallattin daayirektoreetii kanaaf kenname “Hojiwwan himmoota balaqqee(radiation) naannicha keessatti gaggeeffamu ol'aantummaadhaan ni to'ata; hojii irra oolmaa isaas ni hordofa” kana ka'umsa gochuudhan hojiwwan daayirektoreetii kanaa: -
 - ▣ Dhimma Balaqqee irratti hawaasa garaagaraf hubannoo laata;
 - ▣ Qo'annoo fi Qorannoo madden balaqqee irratti gaggeessun bu'aa irratti hunda'uun kallatti ka'a;
 - ▣ Meeshaalee madda balaqqee/ balaqqee maddisiisan qaamni itti fayyadamuu barbaade dursa heeyyama fi ulaagaa barbaachisaa ta'ee guutachuu isaa mirkaneessa;
 - ▣ Inispeekshinii meeshaalee namtolchee madda balaqqee/ balaqqee maddisiisan irratti gaggeessun, bu'aa isaa irratti hunda'uun tarkaanfii sirreffama ni fudhata;
 - ▣ Meeshaalee madda balaqqee ta'an kan tajaajila isaanii xumuran akkaata itti dhabamsiifamanii, iddo ka'aman fi itti to'ataman irratti ni hojjeta.

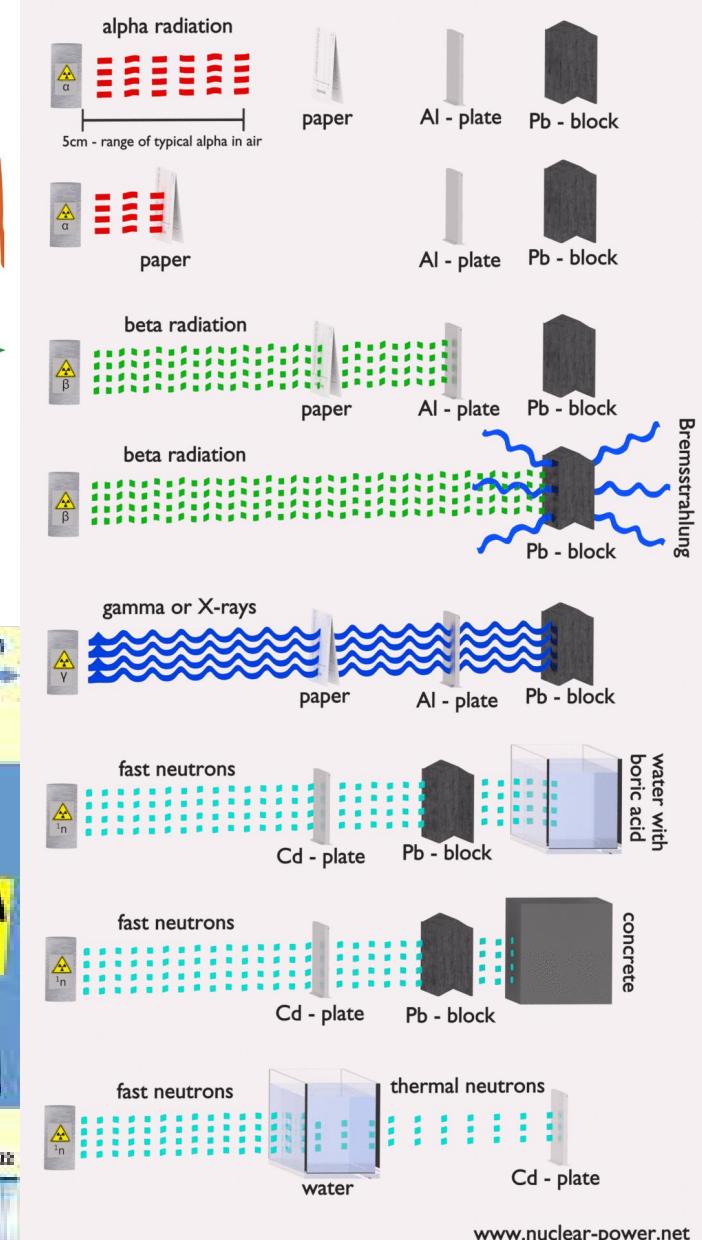
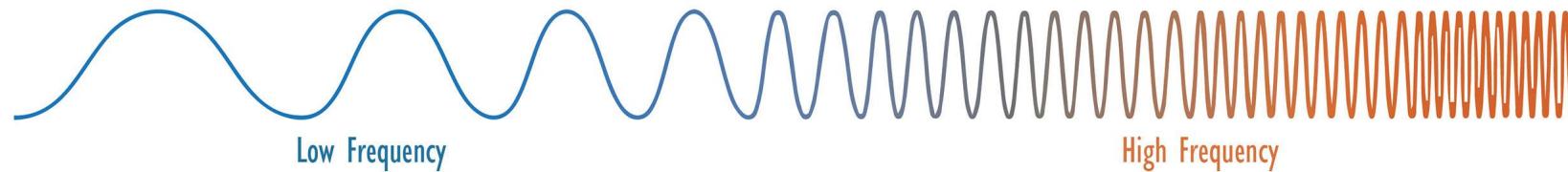
Balaqqee(Radiation)

Radiation is the emission of energy either by means of electromagnetic waves or particles. It is all around us.

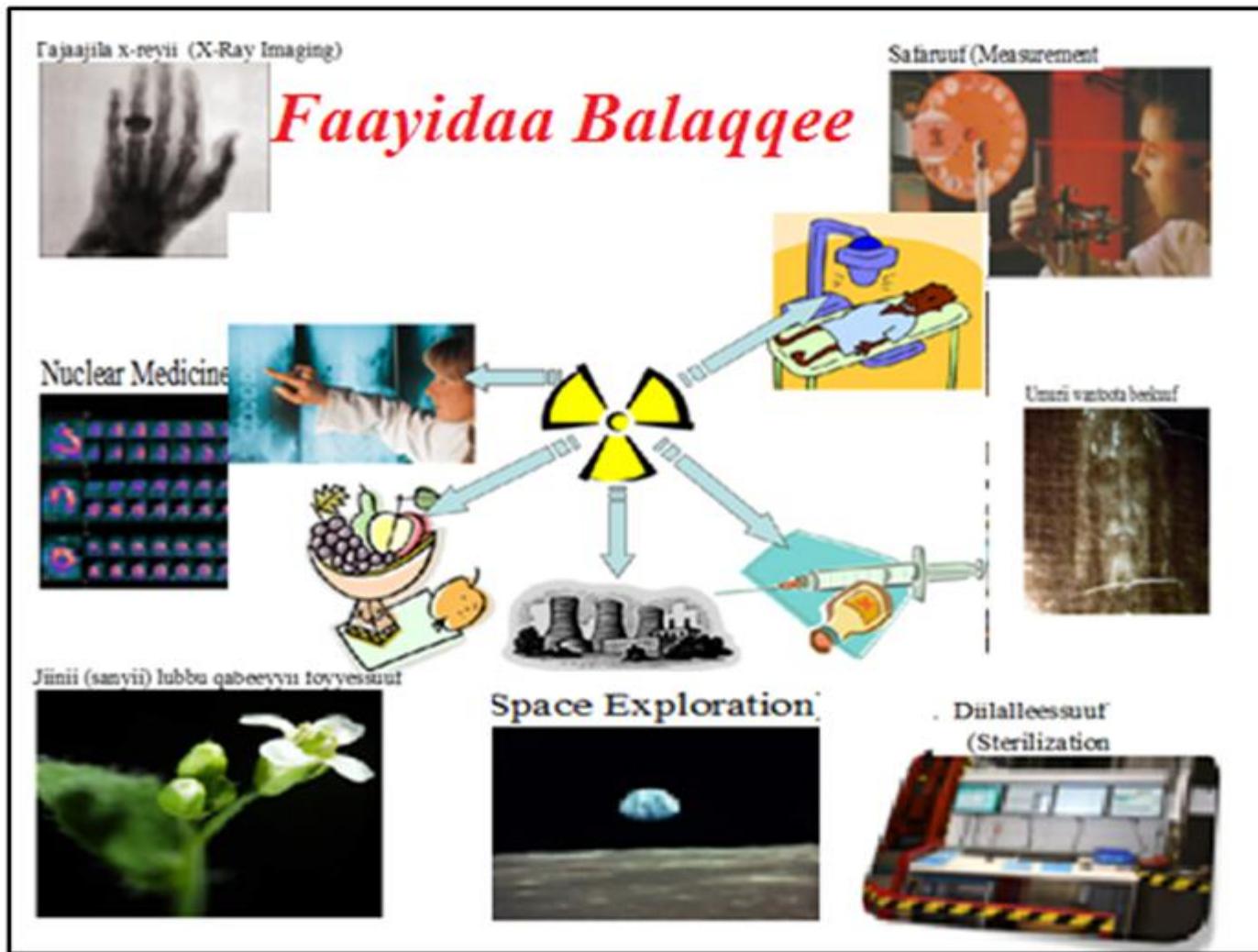


Electromagnetic Spectrum

Non-ionizing



Faayidaa Balaqqee (Uses of Radiation)



Types & Biological Effects of Radiation

Deterministic effects



Death



Skin Burns



Cataract



Infertility



Cancer



Genetic effects



The Effects of Radiation Depends on:

- p ① Type of radiation
- p ② Amount of exposure
- p ③ Rate of Exposure
- p ④ Area of body irradiated
- p ⑤ Individual Biological Variability



Maloota ittin miidhaa Balaqqee Xiqqeessan (Principles of Radiation Protection)

1. Basic system of Radiation protection /ICRP



Justification



**Optimization and
Dose limitation**



2. Practical means of Radiation Protection



Time

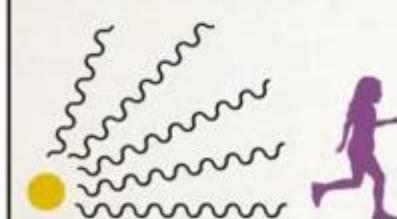


Distance and



Shielding

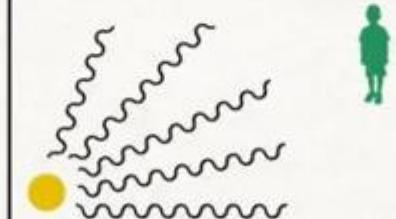
TIME



Less time spent
near source: less
radiation received.

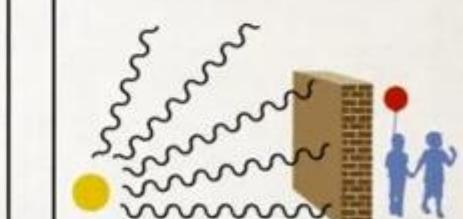


DISTANCE



Greater the distance
from source: less
radiation received.

SHIELDING



Behind shielding
from source: less
radiation received.

