Please grab a snack, get up off the sofa, look at something that isn’t a screen for 5 mins!

Please turn on your video (if possible) and mute yourself.

These slides are at: 
bit.ly/2201Rec5
Outline + Intended Learning Outcomes (ILOs)

Burning isotopes in a reactor

- Turn mass of an isotope into a number of atoms
- Set up a differential equation for burning an isotope in a reactor
- Find relevant parameters from KAERI and JANIS
- Calculate the removal rate of an isotope
- Determine the quantity of an isotope after a given time
Burning isotopes in a reactor

1kg of Fe-55 is put into a reactor with thermal flux = 1E14 [n/cm^2/s]

- What is the removal rate of Fe-55? [atoms/s]
- How much Fe-55 will there be after 1 year? [kg]
Burning isotopes in a reactor

1kg of Fe-55 is put into a reactor with thermal flux = 1E14 [n/cm^2/s]

- What is the removal rate of Fe-55? [atoms/s]
  9E16

- How much Fe-55 will there be after 1 year? [kg]
  0.767
P Set 4 - Question 3

22.01 Intro to NE Ionizing Radiation Lecture

Sep 18, 2020 2:00 PM Eastern Time (US and Canada)
ID: 934 0290 9537
P Set 4 - Question 5.1

“Draw the approximate, to-scale solution to this system of equations...”
22.01 - Recitation #5

Office Hour 3-3.45pm Monday

Questions?

Please grab a snack, get up off the sofa, look at something that isn’t a screen for ~X mins!