Lecture 1

Experimental Nuclear Physics
PHYS 741

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Henri Becquerel

1896
The Curies

1903

Nobel prize for the discovery of radioactive elements: radium and polonium
Rutherford

1911

The models of the Thomson's atom and Rutherford's atom; and the expected aberrations of alpha particle in both cases.
Kepler’s supernova

1604

\[ \text{log(flux)} \]

\[ \text{exp}( -t / 111 \text{days}) \]

\[ t \text{ (days)} \]
Chart of the Nuclei

- half-life $> 10^8$ yr
- $\beta$ decay
- $\alpha$ decay
- nucleon emission
- spontaneous fission
Nuclear Radii
Binding Energies
Binding Energies