



BISHOP HEBER
HIGH SCHOOL

Nuclear Instability

A.C. NORMAN

Bishop Heber High School

Card Sort

Lesson Objectives

- 1 To know the properties of α , β and γ radiation.
- 2 To be able to identify these from absorption experiments.
- 3 To find examples of the origin of background radiation.

Textbook pp. 153–155,160

REMINDER: Office hours are week 1 Tuesdays 3.45–5.0 p.m. in Rm. 19.
Next office hours: Tuesday 26 February 2013

Specification Requirement

α , β and γ radiation

Their properties and experimental identification using simple absorption experiments.

Background radiation; examples of its origins

[AQA GCE AS and A Level Specification Physics A, 2009/10 onwards]



Nuclear equations practice

► *alpha*: ^{150}Gd

► β^- : ^{161}Gd

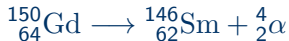
► β^+ : ^{149}Gd

► Electron Capture: ^{151}Gd



Nuclear equations practice

- ▶ *alpha*: ^{150}Gd



- ▶ β^- : ^{161}Gd



- ▶ β^+ : ^{149}Gd



- ▶ Electron Capture: ^{151}Gd



Penetrating power of radiations

Background radiation