

NORTHERN ILLINOIS UNIVERSITY

PHYSICS DEPARTMENT

Physics 162 – Introductory Astronomy

Spring 2026

Problem Set #6

Problem Set Due: Thurs., March 5, 2026

Read OpenStax: Chapter 6.1, Chapter 7 (Note: read only Section 6.1 of Chapter 6)

There will be a Quiz #2 on Week of March 16-22

Show explicitly all your work for full credit.

Chapter 6, Section 6.1

1. Expert TA: 6.1.2 multiple choice
2. Expert TA: 6.1.3 multiple choice
3. Expert TA: 6.3.1 v1 draw figures
4. Expert TA: 6.6.2 true/false
5. Expert TA: 6.6.3 true/false

Chapter 7

6. Expert TA: 7.1.2 multiple choice
7. Expert TA: 7.1.5 multiple choice
8. Expert TA: 7.1.8 multiple choice
9. Expert TA: 7.1.16 multiple choice
10. Expert TA: 7.1.32 multiple choice
11. Expert TA: 7.1.37 multiple choice
12. Expert TA: 7.2.1 show calculation
13. Expert TA: 7.6.2 true/false
14. Expert TA: 7.6.6 true/false
15. Expert TA: 2.7.8 simulation

16. Click on the following link and listen to the video:

<https://illinois.pbslearningmedia.org/resource/tdc02.sci.phys.matter.radiodating/radio-metric-dating/>

- (a) The relative amount of which two elements lead to the discovery of the age of the earth to be around 4.5 billion years?
- (b) If NASA sent you to Mars, which radioactive element would you look for (with your Geiger counter, like the person in the video) to determine the age of Mars?