

Name: (Answer Key)

Directions: Consider the following 4 statements about the structure of our galaxy and about how astronomers discovered that structure:

#1: Our Sun resides in the halo portion of our galaxy.

#2: Based on star counts, William Herchel concluded that the Sun is near the center of our galaxy. However, he was incorrect because he did not know about interstellar extinction.

#3: Harlow Shapley used observations of globular clusters to show that our Sun is very near the center of our galaxy.

#4: Interstellar dust absorbs and scatters starlight, making distant stars appear dimmer than they would be if the dust were not there. This dimming, called interstellar extinction, is greater at visible wavelengths than at infrared and radio wavelengths.

Question: Which 2 of these statements are true?

- A) 1+2
- B) 1+3
- C) 1+4
- D) 2+3
- E) 2+4
- F) 3+4

Answer: E