

Name(s): _____

Section: _____
Date: _____

In Search of Cosmic Rays

Activity 2: Particle Direction

Investigation Questions:

- 1. Do these background radiation particles move in any particular direction?*
- 2. Are they coming from above, below, or one side or the other?*

Lab Procedure

1. The first button, named “Single”, allows you to see one event at a time.
2. The second button, named “Show Track”, allows you to see the track of the moving particles.
3. The third button, named “Scroll Events”, allows you to scroll quickly through the particle events.
4. The fourth button, named “Exit”, will stop the events and take you to the analysis questions.
5. Using these buttons, run the experiment and pay attention to things like direction of travel, time of travel, etc.

Analysis Questions

1. How could you tell what direction the particle was traveling?
2. The timing data was given in nanoseconds (ns), how many nanoseconds are in one second?
3. What information can you gain about these moving particles from the timing scope data?
4. In what direction do most of the particles appear to be moving?
5. How could you modify this experiment to check the directions and angles of particle arrival more specifically?