

2.4 Scanning Basics



PARIPod: 2.4 Scanning Basics

The Podcast is **5:13** min in length.



Student Guide: P.8



Quiz 2.4

SCANNING BASICS:

1. There are three methods of collecting data from Smiley: Spectrum, Continuum, and Mapping. Each scan will have different individual parameters, but there are similar controls and features on all three.

THE CONTROLS

2. Controls are located to the left and are the same in all three scan interfaces.
3. Begin Scan. Once the scan starts the green button will change to a red stop scan.
4. Save Scan: allows you to save your current data.
5. Clear: clears the present data.
6. Open Data file: allows users to open previously saved data files to be re-analyzed. Files are saved to a location on the PARI server.
7. IF Gain, the IF stands for Intermediate Frequency which magnifies the amplitude of the incoming radio waves. It is the “volume” for radio scans.
8. Plot Rate: determines the rate at which Smiley collects data and is then plotted. It can be increased or decreased. Increasing the rate plots data more quickly but less data is collected.
9. Base Frequency: 1.42 GHz is the default base frequency because is the target frequency for neutral hydrogen. There are others frequencies.

THREE TYPES OF SCANS

10. Spectrum Scan graphs the intensity over frequency.
11. The intensity scales ranges from 0-10.
12. Continuum Scanning measures Intensity over time.
13. Mapping Scans take samples of several scans to form an overall map.

GRAPHING FEATURES

14. Graphs can be accessed and modified by right clicking, including:
Show unconnected points, Zoom in and Out, Translate: up, down, left, and right, Show Grid, and Data point color.

Proceed to 2.5