2.3 Controlling Smiley

Podcast: 2.3 Controlling Smiley
The Podcast is **8:05** min in length.

P **Presentation Slide 2.3**

Student Guide: P.6

Q *Quiz 2.3*

USING SMILEY

1. Access Smiley by logging into the Smiley Control Room Manager.

2. From the Control Room Manager, select and click on Start Control Session and the Smiley Internet Telescope Control window pops up. You now are in control of Smiley. (Review 2.2)

SMILEY INTERFACE

3. **It is important to _understand_ Smiley's interface before use.**

4. The interface is divided into several **_control_** panels.

5. In the upper right is **_Current Session Status,_** which gives information on the session.

6. In the middle is the live video feed of Smiley.

7. Upper right box is for administrators only to post important information.

8. The **_Coordinate_s** Box: Refer to the blue box located in the center right of the page. Every object in the sky has a series of coordinates. The coordinate box is the true control panel center for Smiley.

9. To the right of the coordinates box is **_Local   Sidereal   Time._** Astronomers use sidereal time as a way to keep track of the direction in which their telescopes need to be pointed to view any given star in the night sky.

10. Below is the **_Hand Paddle_** box which allows manual control of Smiley. It is only to be used under close teacher supervision.

11. You can move smiley UP, DOWN, CW (**_Clockwise),_** and CCW (**_Counterclockwise.)_**

12. The status box to the left indicates Smiley's present Movements.

13. Since Smiley has certain **_Physical_** limitations, only use the hand paddle mode under teacher supervision.

14. You must Click and **_Hold_** the cursor down on the hand paddle buttons down to manually control Smiley.

15. The Coordinate box is divided into two headers, ***Current*** and ***Target.***

16. On the right side is the Target, which uses two coordinate systems.

17. The two systems used are the ***Azimuth*** and ***Altitude*** Coordinate System and the Right ***Ascension*** and ***Declination*** System.

18. Both systems use the same units: ***Degrees***, ***Minutes***, and ***Seconds***.

19. The left side of the coordinate box displays Smiley's current position in both formats.

20. Smiley's current coordinates will change as it moves toward the target until they match up.

21. In the bottom middle of the coordinate box is the ***limit brakes***. It notifies you if Smiley is nearing its physical limits. If any of these boxes turn yellow or red, stop and notify your teacher immediately. (NOTE: Teacher, if this occurs- immediately move smiley to a safe position. Use the hand paddles if necessary. Smiley's parameters are between 350-10 AZ and 20-80 Alt.)

22. Below are the GO and STOP buttons. Go: starts Smiley's movements and Stop: Stops it's movement.

23. To the right you can choose track or drift. Track will continue to follow the target through the sky. Drift will allow the object to move away. End Session, ends the session and exits you out of the control room.

24. To the left is the ***Source*** Box. It is a drop down menu of several common and interesting radio emissions sources.

25. Below is the status box mentioned earlier.

26. The bottom half of the control Center is comprised of a large five-tab window.

27. The First tab is the ***Sky Map*** tab, which displays an overview of the sky. It lists many interesting target sources.

28. Smiley's ***current position*** is indicated on the map by a white crosshair or plus mark (+).

29. Many target sources are indicated on the map. A small yellow circle marks the Sun and the Moon is a small ***white*** circle.
30. Most target sources are distant sky objects.

31. Targets include the ***Galactic*** Poles.

32. There are three ways to select your target. First, all the objects indicated on the sky map are also available on the source drop down menu.

33. Secondly, clicking on a position/target on the Sky Map will automatically load its coordinates into Smiley's target coordinates.

34. Another way to choose the target is to manually enter its coordinates.

35. The next three tabs are the scanning methods you will learn about and use in PARI Pod 2.4.

36. These scans are ***Spectrum***, ***Continuum***, and ***Mapping***

37. The last tab you see on the screen is weather, which gives the current weather conditions at ***PARI***.

38. When done observing, click on End Session, then Exit Control Room

Proceed to 2.4