

Physics 343 Lecture # 7:
radio antennas

This week's schedule

Thursday, 3/8 at 8:00pm in Physics Lecture Hall:

Dr. Viviana Acquaviva (Rutgers): “The Nature of Cosmic Acceleration”

On-call office hours:

Section A, B, F = Baker

Sections B, C, D = Naudus

Regular office hours: Monday = Baker, Thursday = Naudus.

Lab # 3 due on Monday 3/19 but can be submitted by email before then (PDF preferred; use “export to PDF” option to save in this format).

Data for Lab # 3

Data have been sent to all of you by email. A few hints:

- + data taken in mode 4: **1218.75 kHz bandwidth, 156 channels**
- + be aware of the difference between real emission and radio frequency interference: RFI tends to appear as **sharp, narrow spikes**, while true HI emission from the Milky Way tends to be **broader** in frequency \Leftrightarrow velocity
- + system temperature can vary with frequency
- + relationship between frequency, wavelength, and velocity intervals: $\Delta v/v = \Delta \lambda/\lambda = \Delta v/c$ (in terms of central λ, v)
- + please let me know if there are problems with the data!

Quiz