**Discussion topics for the power spectrum.**

1. Define the frequency resolution. How do you “improve” it?
2. Define the Nyquist frequency. How do you “improve” it?
3. Consider the case in which a collaborator demands a frequency resolution of 0.0001 Hz. How much data must be recorded? What are the disadvantages of recording the data required?
4. Describe in words (or equations) what the Fourier transform does?
5. What are the units on the power spectrum axes?
6. What is “negative power” (i.e., decibels)?
7. Given a time series, estimate (in your head) the power spectrum.
8. Given a power spectrum, estimate (in your head) the time series that created it.