

LLS - Low Light Signal Measurements

Signature Sheet

Student's Name _____ Partner's Name _____

Pre-Lab Discussion Questions

It is your responsibility to discuss this lab with an instructor before your first day of your scheduled lab period. This signed sheet must be included as the first page of your report. Without it you will lose grade points. You should be prepared to discuss at least the following before you come to lab:

1. What is the purpose of having the SR760 FFT Spectrum Analyzer? What mathematical operation does it perform on an input signal? Give several examples of what goes in and what comes out.
2. Why don't we just put a filter in front of our photodiode which only passes light at the frequency given off by the LED (e.g. 635 nm)?
3. Explain how chopping the steady-state signal from the LED helps you to recover the signal from the LED.

Staff Signature _____ Date _____

Completed before the first day of lab? (Circle one) Yes / No

Mid-Lab Discussion Questions

1. Before beginning Experiment X, you should have produced a plot of the Johnson noise signal using the measurements obtained in Experiment IX.

Staff Signature _____ Date _____

Completed before proceeding with Experiment X? (Circle one) Yes / No

Checkpoint Signatures

1. Fourier Components

Staff Signature _____

2. Slope/Oct and Time Constant

Staff Signature _____

3. 1/f Noise

Staff Signature _____

4. Capacitive Noise

Staff Signature _____

5. Johnson-Noise Measurement

Staff Signature _____