

# Lecture Week No. 2



Experimental Lectures	Power Spectral Density and friends	Shot Noise, Power Recycling, SR, RSE	Transfer Functions, Bode diagrams etc.	Control systems	Gaussian optics, DWS
General Relativity Lectures	Review: linearized theory, action on detectors	Generation of GWs in linearized theory	Post-Newton gravity; full Schwarzschild solution	Spherical stars and rotating black holes	Cosmology
Data Analysis	Basic statistic Bayes, Neymann Pearson	Likelihood, matched filtering for GW detection	Signal vetoes, chi-square, significance of signal	Gaussian and non-Gaussian noise and statistics	Multiple detector burst searches