1125-VM-270 **L Patton*** (critique@vt.edu), Virginia Tech, 220 Stanger St., Blacksburg, VA 24061-0126.

Time-frequency methods for parameter estimation using gravitational waves. Preliminary report.

"On September 14, 2015 at 09:50:45 UTC the two detectors of the Laser Interferometer Gravitational-Wave Observatory [LIGO] simultaneously observed a transient gravitational-wave signal" (http://dx.doi.org/10.1103/PhysRevLett.116.061102). The LIGO researchers concluded that the signal emanates from a binary black hole (BBH) system. The LIGO researchers use an estimate of the chirp mass of the system (the initial mass minus the mass radiated as gravitational waves) to estimate the parameters of the BBH system. I present and analyze a "time-frequency" method from Chassande-Mottin and Flandrin (App. and Comp. Harmonic Analysis) to model a range of expected values for the chirp mass, and the effect of changing values on the time-frequency method for detection of gravitational waves. (Received August 22, 2016)