ID de Contribution: **19**   Type: **Poster**

Study of Hilbert-Huang transform using iKAGRA injection data

mercredi 31 mai 2017 17:42 (4 minutes)

Authors : Takaaki Yokozawa on the behalf of KAGRA collaboration

KAGRA detector had test run in March and April, 2016 with room temperature and simplified configuration (called iKAGRA run). At the end stage of this run, we injected some waveforms to end test mass through arm length control system, which is called hardware injection.

Hilbert-Huang Transform (HHT) is one of the time-frequency analysis method which is constructing with combination of Empirical Mode Decomposition (EMD) and Hilbert Spectral Analysis (HSA). Previous study of HHT analysis was applied to white and color gaussian simulated noise with software injection data. We analyzed 100Hz sine-gaussian signal with SNR~100. This study showed the effectiveness of HHT analysis using obtained data with hardware and software injection data.

For the future prospect of HHT analysis, we plan to apply HHT analysis to Supernova waveform. We also showed the preliminary result of HHT analysis of supernova waveform.

Auteur principal: Dr YOKOZAWA, Takaaki (Osaka City University)

Orateur: Dr YOKOZAWA, Takaaki (Osaka City University)

Classification de Session: Posters