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ARC Seminar

*Seminars by grad students, for grad students!*

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# *The anti-aligned spin of GW191109: Glitch Mitigation and its Implications*

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## Abstract

One of the most interesting events in the third LVK observing run was GW191109, which was found to have spins which were confidently anti-aligned with the orbital angular momentum - one of only two such cases which has been released - and high masses. This implies GW191109 may be of dynamical origin, making it our first probe of this formation channel. However, GW191109 was coincident with a transient noise source known as a "glitch," which may affect these conclusions dramatically. I will discuss the origins and modelling of the glitch in question, and work I have done to fully characterize the astrophysical properties of GW191109 in the presence of this glitch. If time allows I will also discuss additional aspects of glitch modeling, and statistical tests to identify the impact of glitches on parameter estimation.