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Searches for Neutrinos from the Galactic Center Region Using IceCube XINYUE KANG, NAOKO KURAHASHI NEILSON, Drexel Univ, ICECUBE COLLABORATION — The Galactic Center (GC) region has long been subject to intense astrophysics interest. A strong radio source has been detected and identified as the super-massive black hole, Sgr. A* at the GC. The dynamics of the GC region (within 300 parsecs) is largely affected by Sgr. A*. Many interesting phenomena, including supernova remnants, high-mass X ray binaries, pulsar wind nebulae, and etc., can be found in this region. These phenomena are thought to emit high energy neutrinos, and the close proximity increases the likelihood of detection. IceCube, a neutrino detector at the geographic south pole, could see these neutrinos if the emission is strong enough. However, because this region is in a less sensitive part of the sky for IceCube, a dedicated data set can be created optimizing sensitivity at this location. In this talk, we present on a binned analysis using high energy track events, and progress towards a more advanced event selection using machine learning methods with IceCube data.

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