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Multimessenger Astrophysics with AMON: Current and Future Alerts

The Astrophysical Multimessenger Observatory Network (AMON) is connecting observatories around the world in order to enable real-time coincidence searches across all four astrophysical messengers: neutrinos, cosmic rays, photons, and gravitational waves. AMON analyses deliberately extend into the \"sub-threshold\" regimes of these experiments, and are conceived so as to enable near real-time alerts, and rapid follow-up observations, in search of associated transient or variable counterparts. AMONrsquo;s first real-time alerts were commissioned in 2016 with ldquo;pass-throughrdquo; notices of IceCube likely-cosmic (HESE and EHE type) neutrino events, which have been followed up with great interest by the astronomical community.
Given the new dawn of multimessenger astronomy recently realized with the GW 170817A / GRB 170817A and IceCube-170922A events, we are planning to commission multiple multimessenger alert streams, including gravitational wave + gamma-ray and high energy neutrino + gamma-ray coincidence alerts, over the course of the next year. In this talk I will give an overview of the current alert streams and describe the up-coming coincidence alert streams that are currently under development.

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