

## Z111a Early jet-cocoon emission in future GW170817-like events

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Multi-messenger observations of the gravitational wave event GW170817 and its association with the short Gamma-Ray Bursts sGRB 170817 provided clear evidence for relativistic jet launch in neutron star mergers. In parallel, late optical-to-infrared observations revealed clear evidence for r-process nucleosynthesis powered “kilonova” (KN) emission. These observations identified an early blue KN component, whose origin is still under debate. Here, I will focus on the emission expected from the jet-cocoon at early times. I will show that this can power a blue emission peaking in UV in the first hours, and discuss its possible contribution to the blue KN. Considering this jet-cocoon emission and the soon to be operational wide field observatories (e.g., ULTRASAT, Einstein probe, and LSST), I will explain its potential usage for future localization and study of GW170817-like events.