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## Neural Networks for Parameter Estimation of Orphan Afterglows in Rubin and Roman Data

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The Rubin and Roman telescopes will come online soon and are expected to detect over 1000 "orphan afterglows" per year: broad-band long lasting emission from a gamma-ray burst (GRB), but without the GRB. Having a method to extract the physical parameters of these orphan afterglows will give us a better understanding of the progenitor systems. We start with a model that takes physical parameters of a GRB and computes the spectra and light curves. We will use this physical model to train a neural network to emulate these results in a fraction of the time. The reduced computational costs will allow us to solve the inverse problem: getting parameters from spectra or light curves.

## Section

High Energy

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