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Constraining Startrack Binary Evolution with Gravitational Wave Observations VERA DEL FAVERO, Rochester Institute of Technology — "Gravitational wave observations can now strongly differentiate between assumptions for how binary compact objects form. Different models for compact binary formation can be ranked by their similarity to GW observations, as a marginal likelihood. In this work, we show how to carefully interpolate this marginal likelihood between model parameters, enabling posterior distributions for these model parameters. Using the StarTrack binary evolution code, we compare models with three dimensions of variability to the compact binary mergers reported in GWTC-1 as well as the O3a Catalog.

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