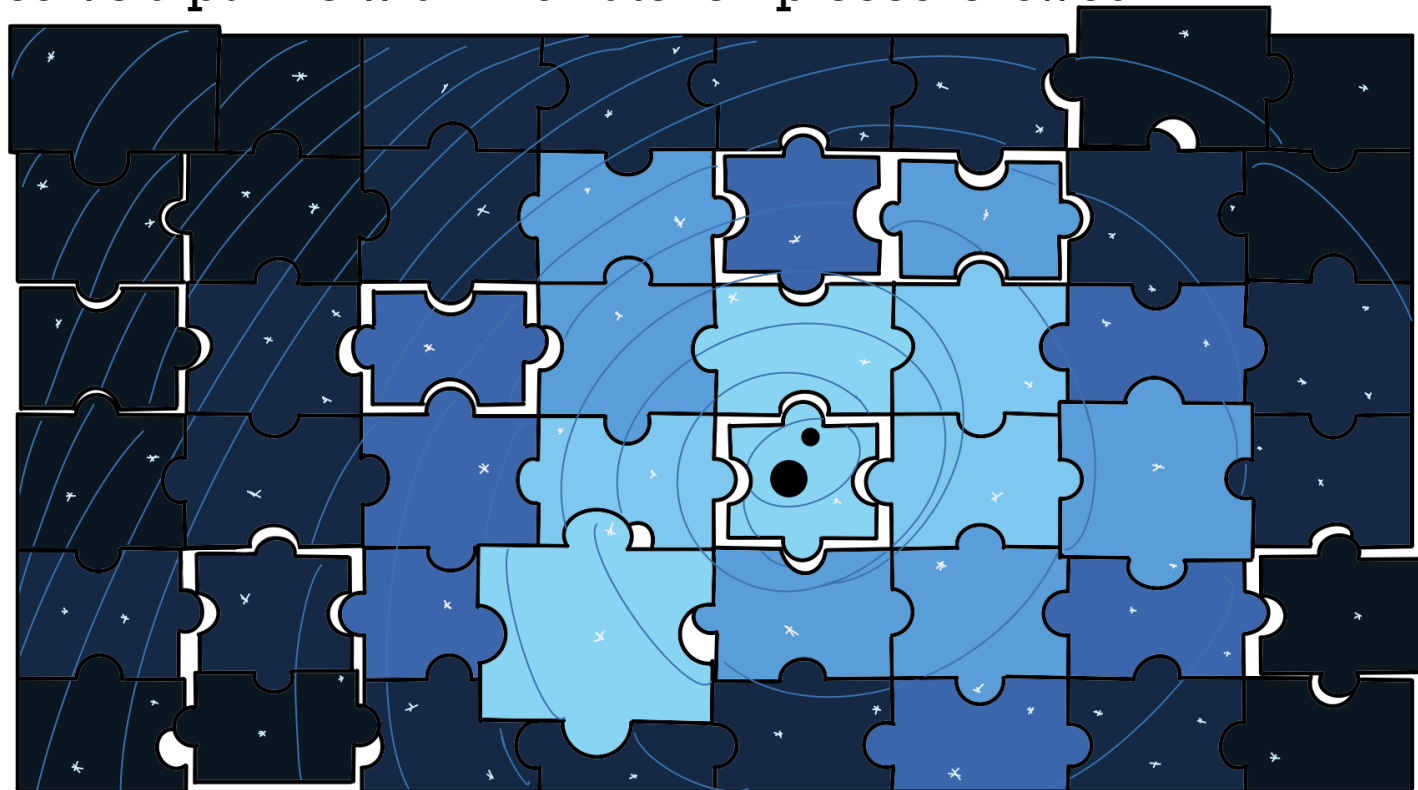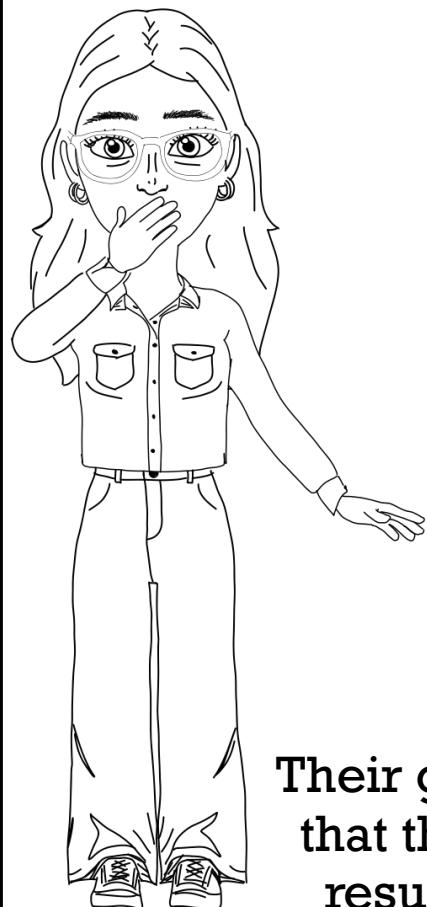When plans for next-generation detectors were unveiled, Dr. Carl Haster and Dr. Michael Pürrer explored how waveforms based on NR performed at this new level of sensitivity.
The GW signals were so loud that using these waveforms was like trying to solve a puzzle with mismatched pieces: *skewed*.

Their groundbreaking study, *Ready For What Lies Ahead?*, discovered that the best waveforms from 2019 produced inaccurate and biased results when tested on simulated binary black hole (BBH) events.

Since then, developments within waveform modeling have provided faster and more advanced models than previously tested ones.

*WEE!*
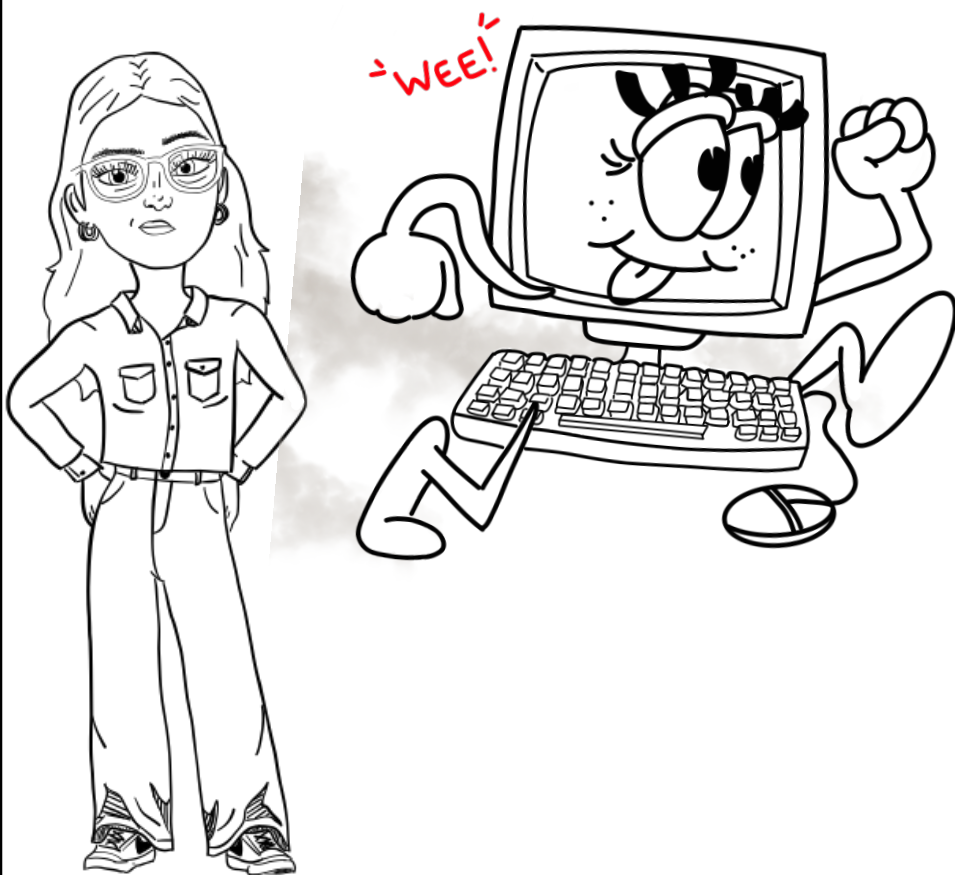
I am now investigating three new waveform models at advancing detector networks as was done previously, such as:

NR
IMRPhenomXPHM
IMRPhenomXO4a
IMRPhenomXPHM-SpinTaylor

GW Strain

0          Time [s]   50