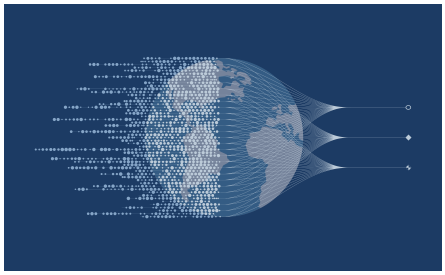

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synthetic simulations and waveforms for enhanced characterization

The ability to generate waveforms up to 10 Hz through modeling provides a necessary tool to understand the full extent to which a signal may be characterized. Using HPC resources we demonstrate the current capability of SW4 to generate waveforms to compare measurements. The observed features help us understand the differences in source properties and our ability to resolve them with the models. While a major constraint of the simulations is a detailed model of the region of interest, we show that for different model resolutions you are still able to pull out relevant characterization features. These waveforms can also be used as training aids and injects into exercises. The primary goal is to define the source; however, the location, size and other measurements determined by analysts or inspectors can also be validated for consistency.

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