

# Learning the 'Match' Manifold to Accelerate Template Bank Generation

Introducing LearningMatch and TemplateGeNN...

Susanna Green, Andrew Lundgren, Xan Morice-Atkinson

## LearningMatch: The Aim

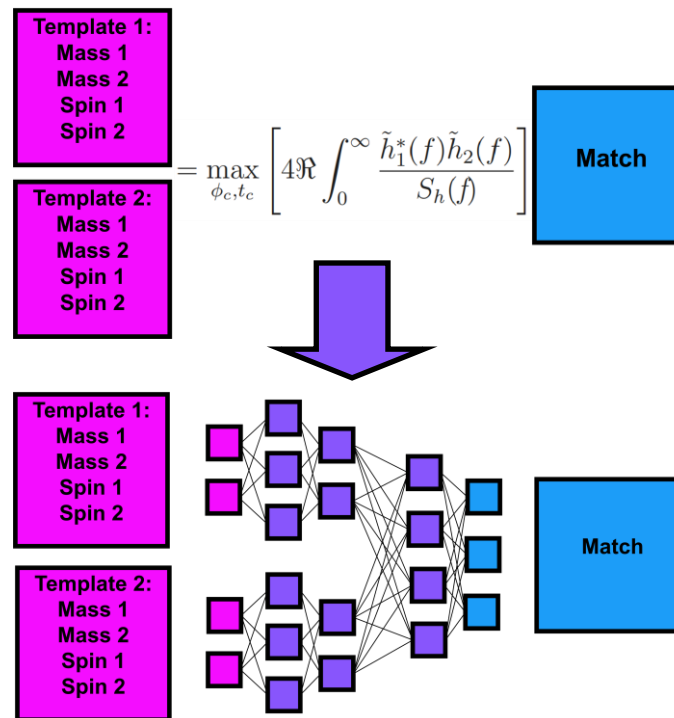


Figure 1: The aim of LearningMatch is to learn the mathematical relationship between the template parameters (specifically the mass and aligned spin of the black holes) and the 'match'.

# TemplateGeNN: The Results

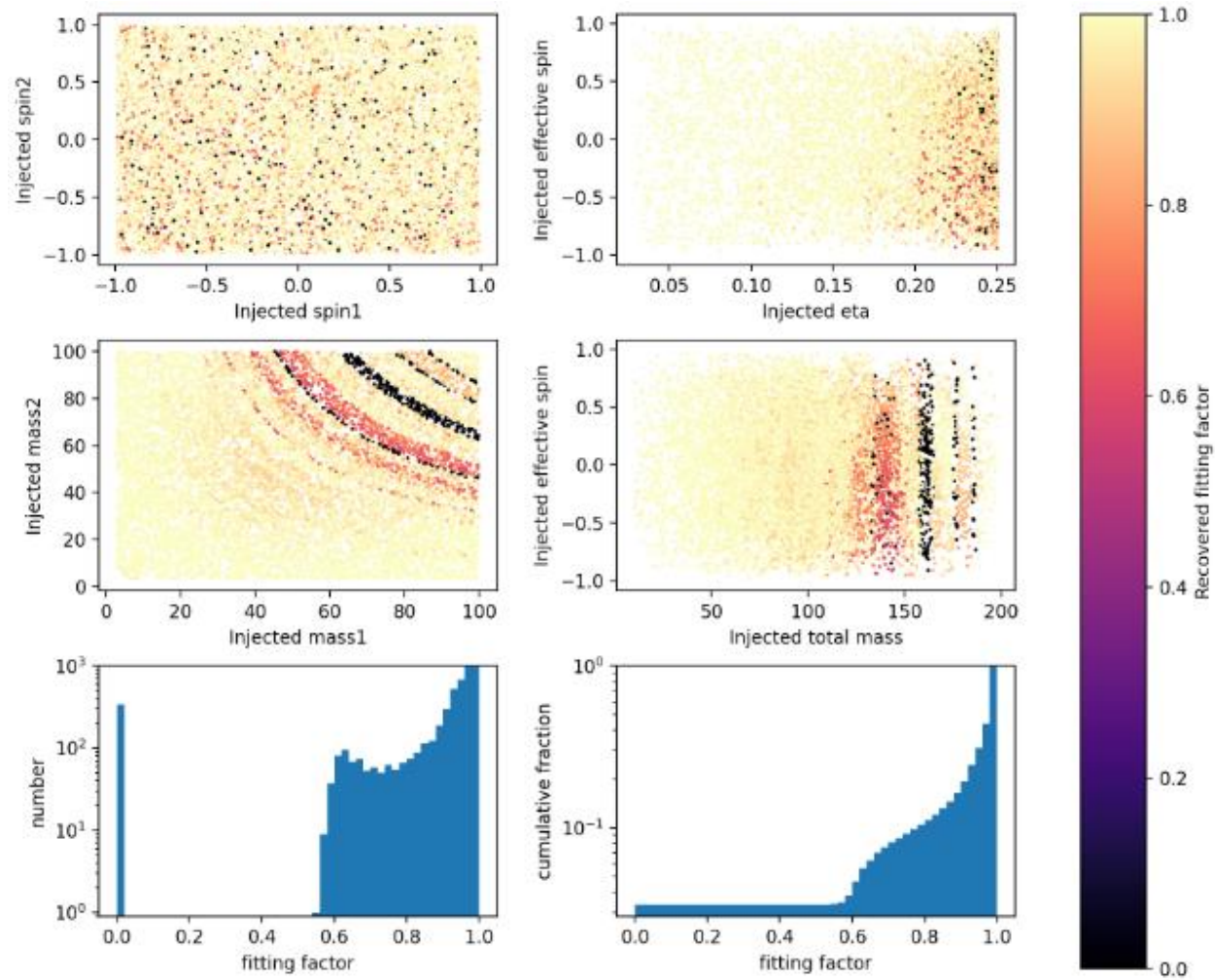


Figure 2: Results from PyCBC template bank verifier.