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Moving to Learn to See

Monday 9 June 2025 15:00 (15 minutes)

The Event Horizon Telescope (EHT) is a very long baseline interferometry (VLBI) array that has the capacity to resolve images of supermassive black holes such as Sagittarius Aand M87. Turbulence in the interstellar medium distorts images of objects near the galactic center, e.g., Sagittarius A*. This reduces the angular resolution that could be resolved. The scattering screen changes on time scales that are longer than the scales that EHT uses. We utilized a recurrent neural network to mitigate these effects. The model resolves multiple images concurrently by using the long-time scale property of interstellar scattering. We used training samples that are agnostic to General Relativity.

Keyword-1

Neural networks

Keyword-2

Interstellar scattering

Keyword-3

Supermassive black holes

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