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VISUALIZATION FAR-SIDE MAGNETIC IMAGES FROM HELIOSEISMIC HOLOGRAPHY

**Abstract**

Active regions on the Sun are the sources of energetic phenomena (e.g., solar flares and coronal mass ejections); which present a direct threat to telecommunications and power transmission on the Earth and pose significant hazards to astronauts and spacecraft. Seismic imaging of far-side of the Sun allows anticipation of the appearance of large active regions ahead of their arrival on the front-side. This improves space weather forecasting. Direct imaging of the far-side is currently not available and we rely on seismic holography to infer the far-side magnetic field. However, mapping between holograms and magnetic field images is non-trivial. In this work, We use supervised generative network to map far-side networks magnetic images from helioseismic holography images.