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Probing the magnetic field structure in Sgr A* on Black Hole Horizon Scales with Polarized Radiative Transfer Simulations ROMAN GOLD, JONATHAN MCKINNEY, Univ of Maryland-College Park, MICHAEL JOHNSON, CfA Harvard-Smithsonian Center for Astrophysics, SHEP-ERD DOELEMAN, CfA Harvard-Smithsonian Center for Astrophysics, MIT Haystack, EVENT HORIZON TELESCOPE COLLABORATION — Accreting black holes (BHs) are at the core of relativistic astrophysics as messengers of the strong-field regime of General Relativity and prime targets of several observational campaigns, including imaging the black hole shadow in SagA* and M87 with the Event Horizon Telescope. I will present results from general-relativistic, polarized radiatiative transfer models for the inner accretion flow in Sgr A*. The models use time dependent, global GRMHD simulations of hot accretion flows including standard-and-normal-evolution (SANE) and magnetically arrested disks (MAD). I present comparisons of these synthetic data sets to the most recent observations with the Event Horizon Telescope and show how the data distinguishes the models and probes the magnetic field structure.

> Roman Gold Univ of Maryland-College Park

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