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Abstract for an Invited Paper
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Models of Dilute Relativistic Plasmas Around Black Holes

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In some regimes, mass flowing onto a central black hole can become sufficiently hot and low density that the collisional mean free path is appreciable compared to the size of the system. I describe new analytical and numerical models of these relativistically hot low collisionality plasmas around black holes. I also describe the application of these models to interpreting observations of the accreting black holes being observed by the Event Horizon Telescope.