

Atomic Spectra of Iron at Black Hole Accretion Disk

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The black hole accretion disks contain highly ionized Fe, including C_{IV} , N_V , and O_{VI} at a temperature of about 10^8 K. The relatively hot accretion disk (10^8 K) and the relatively cool surrounding medium (10^6 K) are mixed and the iron is ionized and recombined to release the X-ray. This paper investigate the physical properties of turbulent mixing layers and the production of highly ionized irons, by using hydrodynamic simulations with radiative cooling and non-equilibrium ionization (NEI) calculations.

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