

CLOUDY Workshop & Research Interests

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Accretion flows are well known in astrophysical processes. One such paradigm of flow in which the fluid accretes on the central body by transporting its angular momentum outwards and leads to the formation of disk like structures are quite ubiquitous. Currently as a part of my doctoral research, I am working on simulating such disk like structures using state-of-the-art HRSC Godunov-type codes like PLUTO. The motivation is to have an α -disk treated with all the required physics modules like dissipative terms (viscosity, resistivity), radiative cooling (FLD) and interaction with magnetic fields. Recent developments on the computational & numerical fronts have paved way for interfacing of two different codes, thereby broadening the gamut of simulating more realistic scenarios in astrophysics. One such effort led to the development of **TPCI**: The PLUTO-CLOUDY Interface [1]. I am investing my efforts to develop sophisticated numerical schemes, at the same time exploit the existing computational resources for deeper understanding of accretion flows.

References

1. TPCI: The PLUTO-CLOUDY Interface A versatile coupled photoionization hydrodynamics code. M. Salz et.al