



Contribution ID: 628

Type: **Invited talk in a parallel session**

The Parsec to Sub-Parsec Scale Environment

Thursday, 11 July 2024 15:00 (25 minutes)

The galactic black hole is not very active at present, but at about 1 pc there is a large reservoir of material that will eventually trigger a more intense phase of activity. Smaller-scale processes can also accrete material onto the black hole producing short peaks in activity. Here, I present the structure and dynamics of the interstellar medium from the parsec to sub-parsec scale and how each component potentially contributes to the accretion flow and trace the influence of the black hole on stars and clouds. In particular, I will highlight the unexpected presence of molecular hydrogen in the central parsec (where the strong UV field is supposed to dissociate it) and the unveiling of several dust-enshrouded objects, orbiting close to the central black hole. The latter include the “G objects”, likely the dusty product of binary mergers, and X7 a tidally stretching gas cloud possibly ejected by a stellar collision.

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Session Classification: Latest results from Galactic center observations