

Western University

Scholarship@Western

Inspiring Minds – A Digital Collection of
Western's Graduate Research, Scholarship and
Creative Activity

Inspiring Minds

September 2023

Observing the Gas Disturbed by Supermassive Black Holes in Dwarf Galaxies

Adrien Hélias

Western University, ahelias@uwo.ca

Follow this and additional works at: <https://ir.lib.uwo.ca/inspiringminds>

Citation of this paper:

Hélias, Adrien, "Observing the Gas Disturbed by Supermassive Black Holes in Dwarf Galaxies" (2023).
Inspiring Minds – A Digital Collection of Western's Graduate Research, Scholarship and Creative Activity.
540.

<https://ir.lib.uwo.ca/inspiringminds/540>

Observing the Gas Disturbed by Supermassive Black Holes in Dwarf Galaxies

By Adrien Hélias

Dwarf galaxies are tiny, dim galaxies, and they are the building blocks of our universe. We believe they were the first ones to appear in the early universe, and they are fundamental in our theory of galactic evolution. In addition, they can host supermassive black holes, which emit an enormous amount of energy and can disturb the gas rotating in the disk of dwarfs. Studying supermassive black holes in dwarfs through time can also tell us more about how larger galaxies originated. However, our understanding of dwarf galaxies is mainly based on observations of the nearby universe. My research attempts to push the analysis of the gaseous motion in dwarfs beyond the current distance limits, and refine this analysis by making use of a technique which allows to identify several phases of the gas, such as cold and warm, with high precision.