

## The submillimetre satellite ODIN

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ODIN is a Swedish-international satellite for astronomy and aeronomy, with foreign partners being from Canada, Finland and France. ODIN will be launched in early 2001. To achieve its twofold objectives, ODIN will use its tunable heterodyne receivers to collect spectroscopic data in primarily the submm spectral domain of both astronomical objects and the atmosphere of the Earth.

ODIN's astronomical science focuses naturally on similar areas as FIRST's, with a strong weight on the physics and chemistry of the star forming interstellar medium in our own and in other galaxies. First ranked observations will specifically address the key molecules H<sub>2</sub>O and O<sub>2</sub>. To achieve optimum sensitivity for the detection of molecular oxygen, a 119 GHz receiver will be flown on ODIN. For water, the 557 GHz ground state line will be observed as well as the H<sub>2</sub><sup>18</sup>O isotopomer. In addition, transitions from other species (C, CO, CS, NH<sub>3</sub> etc.) are also admitted by the receiver bands.

The expected scientific capabilities of ODIN, resulting from the wide frequency coverage and the comparatively small beam size (2 arcmin at submm wavelengths) will be discussed with respect to the achievements of SWAS and also be put into perspective to those foreseen for FIRST. At this stage of FIRST planning and programmatic discussions, the adopted philosophy regarding the implementation of the ODIN programme may also be of interest.