

World Astronomy Day (WAD) Project N°3: "Astrophysical and cosmological tests using gravitational lenses"

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Five observational projects associated with the World Astronomy Days (WAD) campaign^(*) have been selected in the context of the International Space Year. One of these projects (WAD project # 3) concerns "Astrophysical and cosmological tests using gravitational lenses".

A short scientific description of this project, concerning mainly the observational study of micro-lensing effects in the well known gravitational lenses H1413+117 and 2237+0305 will be presented. A questionnaire will be distributed to those astronomers possibly interested in participating actively in this project (observations, data reduction, analysis and interpretation).

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IMPLICATIONS FOR THE STUDY OF COMETS FROM NEAR-NUCLEUS IMAGING

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The Vega 1, Vega 2, and Giotto missions provided remarkable observations of the nucleus of comet P/Halley and its immediate environment. Despite their limited durations, these observations have deepened our understanding of the cometary nucleus, its surface activity, and the production of gas and dust. The most obvious example of this concerns the albedo of the nucleus. At the time the missions were conceived, cometary nuclei were assumed to be highly reflecting, icy bodies. We now know they are darker than charcoal. In this paper, we provide an overview of the results of the imaging systems and emphasize where the observations have assisted in consolidating or modifying our concept of comets. Possible implications for the formation of the Solar System will also be discussed. Finally, we note that the forthcoming fly-by of comet P/Grigg-Skjellerup by