

V238c An add-on polarimeter for Subaru/COMICS

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As an upgrade to the Subaru Telescope facility mid-infrared imaging-spectrometer COMICS, we have been developing a polarimeter optimised for the N -band (8–13 μm). It is an add-on mechanism based on the tried-and-tested (i.e., simple and reliable) design of a warm, rotating half-wave plate (HWP) in front of the entrance window, plus a cold wire-grid analyser inside the dewar. Since the analyser is located in the fore-optics section of the COMICS optical assembly, it can be utilised for both imaging and spectroscopy. At the heart of this instrumentation is a CdS/CdSe achromatic HWP, employed, as far as we are aware, for the first time for astronomical applications. We have recently constructed an apparatus to confirm its retardance and hence to estimate accurately the polarisation efficiency. In this poster presentation, we will describe some of the main components of the polarimeter and summarise our on-going efforts to examine the properties of HWP.