

Transients in Middle Earth



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The Keck Wide-Field Imager - the future of transient astronomy

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The Keck Wide-Field Imager (KWFI) is a 1 degree UV-optimised optical prime focus imager for the Keck telescopes. KWFI will fill several large wide-field imaging capability gaps that exist now and will be critically needed with the recent and upcoming billion-dollar ‘mega-facilities’ operating at all wavelengths and messengers. For example, KWFI will provide very deep ($m \sim 28-30$) wide-field u-band imaging capability, fast readout and filter change (~ 10 seconds each), ToO capability for all types of transients, 5 broadband, 20 narrowband, and 20 medium-band filters, and a multiplexing mode that includes ~ 2 -minute image reduction and source identifications and a deployable secondary mirror to enable deep Keck optical or IR spectroscopy minutes after the KWFI images are acquired. I will discuss the KWFI design, touch on some science cases, and end with the current status of the instrument.

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