
KOLOKVIJ FIZIČKOG ODSJEKA

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Breaking the 1 mmag barrier

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Astronomical CCD photometry habitually gets near to the 1 mmagnitude (0.1%) noise level, but very rarely breaks through this barrier. I discuss how this can be done, and why it is worth trying. An elegant option is to go into space: I present a light curve of a bright eclipsing binary containing 30000 datapoints with a point-to-point scatter of 0.3 mmag. A less elegant option is brute-force defocussing of ground-based telescopes, which may be the way forward to studies of transiting extrasolar planet. I present pioneering observations of WASP-4 and WASP-5 which use major defocussing (PSFs covering thousands of pixels) to approach noise levels of 0.5 mmag per point.

Voditelj seminara FO

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