Detecting White Dwarf variables with Gaia

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Our goal is to investigate the capabilities of Gaia G band photometry to assess the performance of Gaia on white dwarf variability detection. For our analysis first we build a database of simulated Gaia CCD time series of white dwarf variables. This database is built using the Gaia nominal scanning law, the expected photometric precision of Gaia and various multiperiodic light-curve models with increasing complexity. After the database is built we carry out two independent analyses on the time series: 1) we check the variability of each field of view transit by statistical tests and decide if the source is variable or not; 2) we perform a Fourier analysis of the simulated time series in order to quantify the possible period recovery rates. We present this work in this talk.