

DATA MINING: ANALYSIS OF THE HQM AND JOMPQ LIGHT CURVES OF AGNS

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We select a sample of blazars within the Hamburg Quasar Monitoring Programme (HQM) and the Joint Optical Monitoring Programme of Quasars (JOMPQ) with a sampling rate (defined in Borgeest, Schramm 1994) of the long-term light curve larger than 5 to guarantee enough data points. We perform structure function analysis of the light curves and determine the corresponding slopes. The linear trends are interpreted as a change in the viewing angle of the emitting blobs and the corresponding rates are calculated. Colour-magnitude analysis is performed for multi-band data. In the cases of repeated observations during the night the intra-night variability is also characterized.

References

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INTRA-NIGHT MONITORING OF THE BLAZAR 0716+714: RESULTS FROM THE 2011 CAMPAIGN

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The BL Lac object 0716+714 is among the brightest and most highly variable blazars. Its duty cycle (i.e., the fraction of time when an object displays intra-night variability, Romero *et al.* 1999) is close to 90% (e.g., Agarwal *et al.* 2016).

We started a monitoring programme of 0716+714 variability on intra-night time scales. Here we report the results for the 2011 observing campaign – a total of 6 successful observing runs. The observed light variations of the blazar could be described as smooth trends with some fluctuations superimposed most probably related to a change in the orientation of the emitting blobs and turbulences in the jet. Flaring activity was detected in a single night – for that night we approximated the light curve with a double-exponential function and estimated the flare parameters. Generally, the light variations are best pronounced in the *B* band and less – in the *I* band.

References

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Romero, G. E., Cellone, S. A., Combi, J. A.: 1999, *A&A*, **135**, 477