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Optical and radio polarisation properties of gamma-ray emitting NLSy1s

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Since the first detection of gamma-ray emission from NLSy1 by Fermi, we have been systematically been studying their jet emission with emphasis on the radio bands. In Foschini et al 2012 and in Angelakis et al 2015 we presented the first analysis that showed the presence of mildly relativistic jets not different from what we see in typical blazars. In the latter we conduct a thorough analysis of the variability and we present estimates of the jet power in support of this claim. Subsequently, we focused on the polarised emission. We have been conducting a long term multi-frequency radio and R-band optical polarisation monitoring that has revealed very interesting behaviour from this class of sources.

Here we will review the findings of the polarisation monitoring with emphasis on the optical band that has shown a very interesting behaviour. On the basis of this analysis we will hypothesise on the physical processes at the source and the temporal behaviour of their magnetic fields.

Motivation

Grant

Primary author: ANGELAKIS, Emmanouil (Max-Planck-Institut für Radioastronomie)

Co-authors: Dr KIEHLMANN, Sebatsian (Caltech); Dr KARAMANAVIS, Vasilis (Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR), Max-Planck-Institut für Radioastronomie); Dr MYSERLIS, Ioannis (Max Planck Inst. for Radio Astronomy); Dr KOMOSSA, Stefanie (MMPIfR); Dr BLINOV, Dmitry (University of Crete); Dr EGGEN, Joseph R. (Perkins Observatory); Dr ITOH, Ryosuke (Tokyo Institute of Technology)

Presenter: ANGELAKIS, Emmanouil (Max-Planck-Institut für Radioastronomie)