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FAST VARIABILITY OF THE OPTICAL POLARIZATION IN BLAZARS: FIRST RESULTS FROM BELOGRADCHIK OBSERVATORY

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Blazars are relativistic jet dominated active galactic nuclei, whose emission in the optical region is mostly synchrotron in nature and is consequently polarized. We monitored several objects on short or intra-night time scales in order to study the changes in their linear polarization parameters in different optical colors. Among the objects we studied were BL Lacertae, S4 0954+65, S5 0716+714, Mkn 501, 3C 66A, PKS 1420-01, PG 1553+115, 4C 29.45, 4C 38.41, OW154.9, B2 1420+32, OJ 287, PKS 0735+178, 3C 279, Mkn 421, 4C 01.02, J1430+2303, B2 1308+32, 4C 27.50, etc. Our first results suggest the presence of rapid changes in both – polarization degree and the electric vector orientation in practically all objects we studied. This and similar polarization studies can facilitate the detailed modeling of the relativistic jet emission mechanisms.