

MOA-II 2011 Season

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Abstract: We summarize the MOA-II observation in 2011 season. The second phase of Microlensing Observations in Astrophysics (MOA-II) carries out survey observations toward the Galactic Bulge (GB) to find exoplanets and toward the large and small Magellan clouds (LMC and SMC) for searching MACHOs via the gravitational microlensing using a 1.8m telescope in New Zealand. We observe our target fields very frequently (every 15 ~ 90 min) and analyze data in realtime to issue alerts. This high cadence is specifically designed to find the short timescale signature of bound and unbound planets. Our realtime anomaly alert system searches for planetary signatures in ongoing microlensing events in which new data points are available on the light curves within 5 min after exposure. In 2011, we detected 485 microlensing events toward the GB. In collaboration with other group, we found 5 planetary events. We issued 4 alerts toward the LMC, although only one of them turned out to be the real microlensing event.