K14b Optical and near-infrared observations of Type Ia SN 2018gv from early phase

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It is widely known that Type Ia supernovae (SNe Ia) are used to measure the distances of their host galaxies. However, there are some remained problems to understand the nature of SNe Ia. For example, the explosion model and progenitor system are still unclear. Recently, diversities of the color evolution in early phase of SNe Ia were reported (Jiang et al. 2018; Stritzinger et al. 2018). Their diversities may be related to the explosion scenario. Near-infrared properties of SNe Ia were still ambiguous. In this poster, we present multi-band (BVRIJHKs-bands) properties of the Type Ia SN2018gv from its early phase. We observed this SN from January 19, 2018 to May 11, 2018 through the 1.5-m Kanata telescope. The light curve shapes of this object are similar to those of a normal SN Ia. The B-band maximum date is February 1, 2018, and the B-band maximum magnitude is $\sim$13.0 mag. The decline rate of the B-band maximum, Δm15(B) $\sim$1.0, supports that this SN is classified as normal SN Ia. We find that the color evolutions of V-JHKs are consistent with those expected by the template light curves. We will discuss near-infrared properties of SN 2018gv by using our data.