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The Time Domain Field is one of the future GTO program fields of JWST(JWST/GTO TDS), surveying about 14' diameter field at the North Eliptical Pole(NEP) with NIRCam/NIRISS. As a part of the multi-wavelength study of the field, we have obtained SCUBA-2 850μm mapping which reaches a depth of σ_{rms} = 0.9mJy/beam and detect 93 sources at S/N > 3.5 – which are expected to be highly star-forming (SFR>400$M_{\odot}$/yr) galaxies at $z \gtrsim 1.5$-4 and pinpoint the location at <0." 1 accuracy of 68 sub-mm sources by identifying VLA 3GHz radio counterparts. In this talk, we will introduce the SCUBA-2 JWST/GTO TDS project and the newly discovered sub-mm sources in this field.

[구 GC-20] Intensive Monitoring Survey of Nearby Galaxies (IMSNG) : Constraints on the Progenitor System of a Type Ia Supernova SN 2019ein from Its Early Light Curve

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The progenitor of Type Ia supernovae (SNe Ia) is mainly believed to be a carbon/oxygen white dwarf (WD) with non-degenerate (single degenerate) or another WD companion (double degenerate). However, there is little observational evidence of their progenitor system. Recent studies suggest that shock-breakout cooling emission after the explosion can constrain the size of the progenitor system. To do so, we obtained a optical/Near-IR light curve of SN 2019ein, a normal but slightly sub-luminous type Ia supernova, from the very early phase using our high-cadence observation of Intensive Monitoring Survey of Nearby Galaxies (IMSNG). Assuming the expanding fireball model, the simple power-law fitting of the early part of the light curve gives power indices of 1.91 (B) and 2.09 (R) implying radioactive decay of ^{56}Ni is the dominant energy source. By comparison with the expected light curve of the cooling emission, the early observation provides us an upper limit of the companion size of $R* \leq 1R_{\odot}$. This result suggests that we can exclude a large companion such as red giants, which is consistent with the previous study.

[구 GC-21] Intensive Monitoring Survey of Nearby Galaxies (IMSNG) : On the progenitor system of Type Ia SN 2018kp

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Intensive Monitoring Survey of Nearby Galaxies (IMSNG) has been managed over 6 years. It aimed to constrain the progenitor system and explosion mechanism of SNe by detection of very early signal from shock heated emission. We have conducted monitoring observation of nearby bright galaxies those were carefully selected using global network of 1-m class telescopes. More than 20 SNe have occured in our target fields. As One of result of the survey, we present light curve analysis of type Ia SN 2018kp, which was discovered in NGC 3367.

Based on photometric analysis, we calculated explosion parameters and set constraints of physical conditions of this supernova. We compared the results with theoretical model progenitor systems to find out which scenario is the most fitted to SN 2018kp case. Moreover, we estimate the distance to the galaxy and look into the relation between SNe and galactic physical parameters.

[구 GC-22] Gravitational-wave Electromagnetic Counterpart Korean Observatory (GECKO): Network of Telescopes and Follow-up Observation of GW190425

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Recent observation of the neutron star merger event, GW170817, through both gravitational wave (GW) and electromagnetic wave (EM) observations