

K09b **Integral field spectroscopy of supernova environments: mass and metallicity of SN 1948B progenitor**

Hanindyo Kuncarayakti (IoA, U.Tokyo), Mamoru Doi (IoA, U.Tokyo), Greg Aldering (LBNL), Nobuo Arimoto (NAOJ), Keiichi Maeda (IPMU, U. Tokyo), Rui Pereira (CNRS/IN2P3, IPNL)

We have obtained obtained integral field spectroscopy of ~ 20 core-collapse supernova sites using the SuperNova Integral Field Spectrograph (SNIFS) mounted at the University of Hawaii 2.2m telescope at Mauna Kea. The use of integral field spectroscopy enabled us to obtain both spatial and spectral information of the explosion sites. We found that a small HII region and a star cluster are present at the explosion site of the type-IIP SN 1948B in NGC 6946. We used strong line method to determine near-solar metallicity for both the cluster and HII region. By comparing the observed SED of the cluster with simple stellar population models we derived the cluster age of 13.4 Myr. Provided that SN 1948B progenitor had been a member of this cluster, the age estimate implies that it was most likely a $16.5 M_{\odot}$ star, whose lifetime corresponds to the 13.4 Myr cluster age. This is consistent with the currently accepted type-IIP SN progenitor mass range of $8.5 - 16.5 M_{\odot}$. Further work with our other SN environment samples is currently in progress.