

구두발표초록

초청강연

[초 IT-01] A Road to Understanding Galaxies: 40 years of galaxy studies

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One day, a galaxy study suddenly came to me and became a friend of 40 years. The study of galaxies, which began with surface photometry of nearby galaxies, ended up in galaxy morphology through chemical and dynamical evolution of galaxies. All that deviated from the study of galaxies was the study of the open clusters. So it seems to me that I devoted my entire life to the study of galaxies. The most memorable one is the observation at Sobaeksan Observatory. Even though the heavy snow fell, I climbed Sobaeksan to meet galaxies. Galaxies observed at Kiso Observatory, DAO, and BOAO are now beyond memory, but I still enjoy seeing them. There are many memories, but the biggest pleasure I've had in my galaxy studies is when I've encountered the galactic conformity between host and its satellite galaxies. Eureka! Now the night sky is changing from the object of study to the object of awe. I will share this joy.

[초 IT-02] Next generation spectroscopic facilities: GMACS for the Giant Magellan Telescope and the Maunakea Spectroscopic Explorer

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The next decade will see great advances in ground-based spectroscopic observing capabilities: facilities that are under development today will have larger collecting areas and greater spectroscopic multiplexing capabilities than ever before, and are sure to revolutionize the scientific productivity of our field. In this talk I will review the status of two of these next-generation facilities, the Giant Magellan Telescope's wide-field multiobject optical spectrograph, GMACS, and the Maunakea Spectroscopic Explorer project, a massively multiplexed spectroscopic facility currently under development in Hawaii that features an 11.25m diameter primary mirror which

feeds 4,332 fibers and a suite of low- and high-resolution spectrographs. These two projects are scientifically quite complementary and both present exciting instrument development opportunities over the next few years.

[초 IT-03] Multi-Messenger Astronomy with GECKO, Gravitational-wave EM Counterpart Korean Observatory - Past, Present, and Future

Myungshin Im
Seoul National University

The new era of multi-messenger astronomy (MMA) has arrived in 2017 with the detection of the binary neutron star merger in both gravitational wave (GW) and electromagnetic radiation (EM). Now, the new run of GW detectors are providing numerous GW events and the number GW events are expected to increase dramatically in future as the GW sensitivities improve. When the GW studies are combined with EM counterpart observations, a great synergy is expected in many areas of study such as the physical process following the compact object merger, the environment of such events (and galaxy evolution), and cosmology. Therefore, it has now become crucial to identify and characterize these GW events in optical/IR EM. In the past, we have been performing optical/NIR observation of GW events using a worldwide network of more than 10 telescopes, and are getting more actively involved in MMA of GW sources. In this talk, we will present our network of telescopes, the EM follow-up observation results of GW events including GW170817 and the O3 events in 2019, and the current issues in MMA. We will also give the future prospects of MMA, showing the forecast for the GW events and the outlook of EM MMA observations.

[초 IT-04] Towards a Better Understanding of Structure Formation: Galaxies and Dark Matter

Ho Seong Hwang
Korea Astronomy and Space Science Institute

Understanding the interplay between galaxies and dark matter in the universe is one of key challenges in modern astrophysics. This provides an important test of structure formation scenarios and cosmological models. I discuss three aspects of this test: (1) comparing the matter distribution from galaxy redshift surveys with that from weak-lensing surveys, (2) statistical comparison of large-scale structures between observations and