nuclear obscuration. As we find Eddington-limited accretion and high extinction values among obscured, luminous AGN (quasars) however, it may be that the local X-ray AGN and the distant quasars undergo different feedback mechanisms in clearing their surroundings. In this study, we simply compare the obscuring column density and Eddington ratio values for quasars selected by various methods, including X-ray obscured, optically blue, infrared red/luminous, and submillimeter bright AGN. We find obscured quasars lying on the column density-Eddington ratio diagram previously unoccupied by Ricci et al., suggesting that radiative pressure is insufficient to clear its dusty structure at high luminosity, or that the dust in obscured quasars are more extended than the low luminosity counterparts to become fully transparent. We discuss alternative feedback scenarios that may be more relevant for obscured quasars.

[구 GC-04] Lyα Radiative Transfer: Modeling Spectrum and Surface Brightness Profile of Lyα Emitting Galaxies at z=3-6

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We perform Lyα radiative transfer calculations for reproducing Lyα properties of star-forming galaxies at high redshifts. We model a galaxy as a halo in which the density distributions of Lyα sources and HI plus dust medium are described with exponential functions. We also consider an outflow of the medium that represents a momentum-driven wind in a gravitational potential well. We demonstrate that this outflowing halo model with Lyα scattering can successfully reproduce both the spectrum and the surface brightness profile of eight star-forming galaxies at z=3-6 observed with MUSE. The best-fit model parameters (i.e., the outflowing velocity and optical depth) for these galaxies are in good agreement with other studies. We also demonstrate benefits of using spectrum and surface brightness profile simultaneously to the constraints on model parameters and thus spatial/kinematic distributions of medium. We examine the impacts of individual model parameters and intrinsic spectrum on emerging spectrum and surface brightness profile. Further investigations on the escape fraction, spatially resolved spectra, and the spatial extent of Lyα halos are presented as well.

[구 GC-05] Bar Formation and Evolution in Disk Galaxies with Classical Bulges

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To study the effects of central mass concentration on the formation and evolution of galactic bars, we run fully self-consistent simulations of Milky Way-sized, isolated galaxies with initial classical bulges. We let the mass of a classical bulge mass less than 20% of the total disk mass, and vary the central concentration of a dark matter halo. We find that both classical bulge and halo concentration delay the bar formation and weaken the bar strength. The presence of a bulge increases the initial rotational velocity near the center and hence the bar pattern speed. Bars in galaxies with a more concentrated halo slowdown relatively rapidly as they lose their angular momentum through interaction with the halo. In some of our models, bars do not experience slowdown at the expense of the decrease in their moment of inertia as the bar evolves, with the resulting pattern speed similar to that of the bar in the Milky Way.

[구 GC-06] Galaxies in different dynamical halo state; GAMA observation

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We study the stellar populations of the brightest group galaxies (BGGs) in groups whose halos have different dynamical states, using observational data from the GAMA survey. The two independent indicators to probe the dynamical state of the halo are the magnitude gap between two most luminous galaxies (△M12) and offset between BGG and the luminosity center (Doffset) of the group. Such indicators complement each other in identifying relaxed and unrelaxed galaxy groups in our samples. We find that the BGGs of unrelaxed groups have significantly bluer NUV-r colours than in relaxed groups. This is also true at fixed sersic index. We find the bluer colours cannot be