

T01a **Large scale structures and galaxy evolution in a  $z=0.9$  supercluster traced by unique pair narrow-band imaging**

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Galaxies in growing large scale structures are not only regulated by internal processes, but are also affected by external processes. Our goal is to understand the physics behind such environmental dependence. However, how we correct for dust extinction is important to obtain the critical physical quantity. Balmer decrement technique is known to be the best indicator of dust extinction. In this work, we take a unique approach with two narrow-band filters (on SWIMS and HSC) which can capture  $H\alpha$  and  $H\beta$  lines and thus Balmer decrement only with imaging. Our science target is CL1604 supercluster at  $z=0.9$ . We have completed  $H\alpha$  imaging for one pointing and detected 28 emitter candidates in a galaxy group in CL1604, we are comparing those emitters with those in a rich cluster in this supercluster (our previous work, Asano et al. 2020) to investigate the environmental effects. We will also describe the whole concept of this program and its future prospects.