

MORPHOLOGY OF E+A GALAXIES IN CL0016+16 ($Z=0.54$)

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We present new results on the morphology of member galaxies in the distant cluster CL0016+16 from HST images (WFC1). Based on narrow multiband ground-based photometry and spectra obtained with the Keck 10 m telescope we identify 7 new cluster members which appear to have strong Balmer absorption features but no detectable emission lines, doubling the number of such galaxies previously observed with HST in this cluster. These candidate E+A galaxies have been identified in other distant clusters, but the morphology of this population has appeared bulge-like in AC114 (Couch et al., 1994, ApJ 430, 107) and disk-like or irregular and interacting in CL0939+47 and CL0016+16 (Wirth et al., 1994 ApJ 435, L105). By means of the image concentration index as a quantitative measure of morphology we show that our enlarged sample of E+A objects in CL0016+16 now contains some galaxies resembling bulge systems as well as the previously-identified disk-like objects. The observed heterogeneity suggests that both galaxy mergers (rapidly resulting in an $r^{1/4}$ profile) and ram-pressure stripping of isolated late-type systems may originate E+A objects.

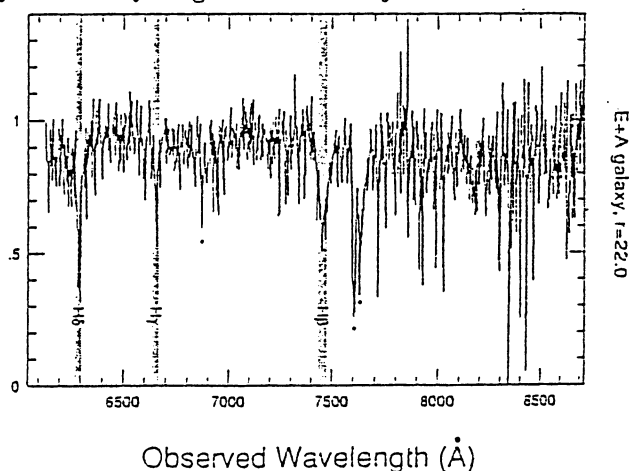


Figure 1: Keck spectrum of a moderately-bright new identified E+A galaxy showing the strong Balmer lines which define this class of objects.