## R22b Redshifts of Galaxies around ARP 220 and Serendipitous Discovery of Three Star-Forming Dwarf Galaxies at Redshift $z \sim 0.5$

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We present redshift measurements of four faint galaxies around the archetypal ultraluminous infrared galaxy Arp 220. These galaxies have significantly higher redshifts ($z \sim 0.036 - 0.091$) than that of Arp 220 ($z \simeq 0.018$). Therefore, we conclude that they are background objects not physically related to Arp 220. Three of these faint galaxies located to the south of Arp 220 are a group of galaxies (or the brightest members in a cluster of galaxies) at $z \simeq 0.09$, as suggested by Heckman et al. [1996, ApJ, 457, 616] on the basis of their associated soft X-ray emission.

We also report the serendipitous discovery of three additional galaxies at redshift $z \sim 0.5$, found along one of the slit positions. All three galaxies exhibit an [O II]$\lambda$3727 emission line. The spectrum of the brightest galaxy ($m_R \simeq 24.4$) shows other strong emission lines: Mg II $\lambda$2798, H$\beta$, [O III]$\lambda$4959, and [O III]$\lambda$5007. The emission-line properties of these galaxies as well as their intrinsically low luminosities ($M_R \geq -18.4$) indicate that they are star-forming dwarf galaxies.