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**Presentation Requested:** poster

**Category:** Assembly of Galaxies / Mass & Structure Evolution

**Question:** Other

### **Radial Color and Mass Profile Trends of Dwarf Irregular Galaxies**

Radial stellar surface brightness (SB) profiles of spiral galaxies can be classified into three types: (I) single exponential, or the light falls off with one exponential out to a break radius and then falls off (II) more steeply (“truncated”), or (III) less steeply (“anti-truncated”). Why there are three different radial profile types is still a mystery, including why light falls off as an exponential at all. Profile breaks are also found in dwarf disks, but some dwarf Type IIs are flat or increasing (FI) out to a break before falling off. Additionally, Bakos, Trujillo, and Pohlen (2008) showed that for spirals, each profile type has a characteristic color trend with respect to the break location which can be combined with color mass-to-light ratio (M/L) relationships to examine radial mass profiles as well. I will show radial color and mass profile trends for the three main SB types from a large multi-wavelength photometric study of dwarf irregular galaxies (the 141 dwarf parent sample of the LITTLE THINGS galaxies). I will present the similarities and differences between spirals and dwarfs and also between different colors.