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**The Surface Brightness Fluctuation Distance to the Coma Cluster** CRYSTAL-LYNN BARTIER, JOSEPH JENSEN, Utah Valley University —
With measuring accurate distances to nearby galaxies using surface brightness fluctuations (SBF), we can further our knowledge of the size, expansion rate, and age of the Universe. The Coma cluster is an important cluster for which there are several existing distance measurements, including a recent one using Cepheid variable stars in the spiral galaxy NGC 4921. Despite the fact that SBF analysis is not typically reliable for spiral galaxies, we were able to do SBF analysis on NGC 4921 using images gathered from the Space Telescope archive. Optical images in the I and r filters were cleaned and combined to make two separate images of NGC 4921. We also measured the SBF distance to the central giant elliptical galaxy NGC 4874 using Space Telescope infrared images. The result of this work was a SBF distance measurement that will help us calculate the distance to the Coma cluster and understand the properties of the stars in these galaxies. We then compare the Cepheid and SBF distances to the Coma cluster to yield a new measurement of the relative distance between the Virgo and Coma clusters.

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