Abstract Submitted
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Scalar potential model (SPM) of redshift and discrete redshift JOHN HODGE, Blue Ridge Community College — On the galactic scale the universe is inhomogeneous and redshift z is occasionally less than zero. Several differences among galaxy types suggest that spiral galaxies are Sources and that early type galaxies are Sinks of a scalar potential field (SPF). The morphology-radius and intragalactic medium cluster observations support a cell structure of galaxies. The SPF causes the mass expected by Newtonian mechanics to measure less in Source galaxies and more in Sink galaxies. The cell structure allows the universe to be bounded and flat without collapsing. An equation is derived relating z of particle photons and the distance D to galaxies. The calculated z has a correlation coefficient of 0.88 with the measured z for a sample of 32 spiral galaxies with a Cepheid based D. The equation is consistent with z ¡0 observations of close galaxies. At low cosmological distances, the equation reduces to zKD, where K is a constant, positive value. The model qualitatively suggests the discrete variations in z, which was reported by W. G. Tifft, 1997, ApJ 485, 465 and others, are consistent with the SPM. Full text: http://web.infoave.net/ scjh.

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