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A Study of u-Magnitude Dependence in the Spatial Orientation of Spin Vectors of SDSS Galaxies AMIT POUDEL, Florida Atlantic University, BINIL ARYAL, Tribhuwan University, Kathmadu, Nepal — We present a study of spatial orientation of 44 749 u-magnitude SDSS (Sloan Digital Sky Survey) galaxies that have redshift 0.10 to 0.11. The u-magnitudes are observed through 355.1 nm CCD (charge coupled device) filter attached to SDSS telescope located at New Mexico, USA. These are the database of mostly Lymen emission lines emitted from distant galaxies. The two-dimensional observed data are converted into three dimensional rotation axes of the galaxy using the method developed by Flin & Godlowski (1986). Our aim is to study the non-random effect and to check u-magnitude dependance in the spatial orientation of galaxies in the large scale structure. The expected isotropy distribution curves are obtained by removing the selection effects and performing a random simulation method as proposed by Aryal & Saurar (2000). In general, our result supports Hierarchy model as proposed by Peebles (1969). A local anisotropy is observed in few samples suggesting a gravitational tidal interaction between neighbor galaxies, an early-merging process in which the angular momentum vector distort the initial alignment of nearby galaxy.

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