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Variable G Correction for Dark Energy Model in Higher Dimensional Cosmology

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(Submitted on 4 Apr 2012)

In this work, we have considered $N (=4+d)$-dimensional Einstein field equations in which 4-dimensional space-time which is described by a FRW metric and that of the extra d-dimensions by an Euclidean metric. We have calculated the corrections to statefinder parameters due to variable gravitational constant G in higher dimensional Cosmology. We have considered two special cases whether dark energy and dark matter interact or not. In a universe where gravitational constant is dynamic, the variable G-correction to statefinder parameters is inevitable. The statefinder parameters are also obtained for generalized Chaplygin gas in the effect of the variation of G correction.

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