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## Testing varying speed of light cosmologies in future experiments.

*Tuesday 8 December 2015 18:35 (10 minutes)*

In this talk I will briefly present the advantages and drawbacks of varying speed of light  $c$  cosmologies and relate them to the of varying fine structure constant  $\alpha$  theories. Then, I will discuss some new tests (redshift drift and angular diameter distance maximum against Hubble function) which may allow measuring timely and possibly even spatial change of the speed of light. The criteria to detect 1% variability of  $c$  by mock data for future missions such as Euclid and SKA (Square Kilometer Array) will be given.

Literature:

1. A. Balcerzak, M.P. Dąbrowski, Redshift drift in varying speed of light cosmology, Physics Letters B728, 15-18 (2014).
2. V. Salzano, M.P. Dąbrowski, R. Lazkoz, Measuring the speed of light with Baryon Acoustic Oscillations, Physical Review Letters 114, 101304 (2015).
3. M.P. Dąbrowski, A. Balcerzak, V. Salzano –in progress.

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