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Effects of Primordial magnetic fields during Big bang nucleosynthesis stage ATUL KEDIA, NISHANTH SASANKAN, GRANT MATHEWS, Univ of Notre Dame — We investigate the effect of primordial magnetic fields on light element abundances during the big bang nucleosynthesis stage of the universe. The motivation for this work is to understand the origin of the cosmic lithium problem. Primordial magnetic fields have yet to be accounted for in the Standard Big Bang Nucleosynthesis model although magnetic fields strength during the BBN temperatures have been previously found to be of the order 10^{11} Gauss. We also study Non-extensive statistics for particle energy distribution which have been previously found to result in correct abundances of light elements.

Atul Kedia
Univ of Notre Dame

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