Contribution ID: **36** Type: **not specified**

Magnetic fields effects on particle interactions strength in the early universe

Thursday 2 May 2024 11:30 (1 hour)

Motivated by our work on inflationary scenarios in presence of magnetic fields, we have focused on one of the puzzling features with which we have faced: the effect of magnetic fields on the particles'interaction processes, which may be a relevant issue during inflation or in the subsequent stages of the Universe evolution. The importance of magnetic fields'contribution comes from the fact that they are widespread in the Universe , at all scales.

There is a vast literature on this topic, but the problem is that the results, in different situations, do not match.

A vast assortment of physical situations and of analytical and numerical approaches can be found in the literature, making the comparison between them not straightforward. Our aim is to focus attention on differences and similarities between the different situations and approaches, looking for a systematization scheme that could be predictive, once the role played by each physical ingredient could be understood.

The literature in this subject is so vast that the present work is far from being exhaustive. We mainly focus here on some seminal papers and on recent literature, both from our working group and from other research teams.

Primary author: PICCINELLI, Gabriella (UNAM)

Presenter: PICCINELLI, Gabriella (UNAM)