Contribution ID: **6** Type: **not specified**

Effective field theory for the weak ΛN–>NN interaction

Friday, 20 September 2013 11:30 (30 minutes)

An effective field theory for the weak ΛN–>NN interaction has
been developed up to next-to-next-to leading order.
The relation between the low energy constants appearing in the
leading order effective field theory description and the parameters
of the one-meson-exchange model previously developed are obtained.
We extract the relative importance of the different exchange mechanisms
included in the meson picture by means of a comparison to the
corresponding operational structures appearing in the effective approach.
The ability of this procedure to obtain the weak baryon-baryon-meson
couplings for a possible scalar exchange is also discussed.
The calculation of the two-pion exchange diagrams and the contact
operational structures contributing to next-to-leading and next-to-next-to-leading
orders will also be presented.

Primary author: Mr PÉREZ-OBIOL, Axel (Universitat de Barcelona)

Co-authors: Dr PARREÑO, Assumpta (Universitat de Barcelona); Dr JULIÁ-DÍAZ, Bruno (Universitat de Barcelona); Dr R. ENTEM, David (Universidad de Salamanca)

Presenter: Mr PÉREZ-OBIOL, Axel (Universitat de Barcelona)

Session Classification: Talks and Discussions