

SEMINÁŘ OTF ÚJF, ŘEŽ

BIJAN SAGHAI

(CEA-Saclay, France)

**Baryon spectroscopy and
meson production on the nucleon**

Abstrakt

The presently known baryon resonances are mainly established in pion-nucleon channels, where a large number of baryon resonances predicted by the constituent quark model are still absent. These issues are related to the so-called “missing resonances” and have generated intensive efforts in both theory and experiment in order to understand the baryon spectroscopy; a crucial issue in Hadron Physics and closely related to the confinement phenomenon.

In recent years, QCD-based approaches are making progress in line with the advent of copious data from several laboratories on the photo-production of heavier mesons (such as η and K). This opens a new realm in the study of baryon spectrum.

Theoretical approaches based on a chiral constituent quark model and dynamical coupled-channels formalisms will be presented and their results will be compared to recent photo-production data, $\gamma p \rightarrow \eta p$, from ELSA (Bonn), GRAAL (Grenoble), JLab (Virginia), LNS (Sendai), MAMI (Mainz) . . . , as well as older data for the $\pi^- p \rightarrow \eta n$ process. Within those approaches issues related to missing/new baryon resonances will be discussed.

**Seminář se koná v úterý 22. 6. 2010 v 10:30 hod.
v zasedací místnosti ÚJF Řež**

A. Ciepły/otf