

Dr
Veronica Riquer
HELEN Project Coordination

Dear Dr. Riquer:

I would like to inform you about the research work that I have realized during my stay in the Valencia University from 15-06-2006 until 15-08-2006.

During this period I have focused my research work in studying the leptogenesis in the context of different models in order to generate the baryonic asymmetry of the Universe. I studied mechanisms to generate the lepton asymmetry in early universe in the context of the models at one loop for the right handed neutrino decay or mediated by the Higgs decay when the lepton number is breaking.

I finished the calculation of the extra dimension contribution to the $t \rightarrow ch$ decay.

I began the contribution of the 331 models and extra dimension to the chromomagnetic dipole moment of the top quark.

With the Valencia group I began a collaboration related with 5D operator of the tbW amplitude in the context of the Standard Model. This work was motivated for the possible measurements of this form factor in the Tevatron collider.

I thank Helen Project for the research training fellowship.

Sincerely,

Roberto Martinez
Universidad Nacional