

HELEN Program : activities report.

Relevant data:

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Sending institution: Brazilian Center for Research in Physics - CBPF

Period in CERN:

as HELEN grantholder : from 03 May 2006 to 31 May 2006

extension: from 01 June 2006 to 02 June 2006.

Activities:

As like initially planned, my activities in CERN was mainly concentrated in studies of phenomenology of CP violation and mixing in charm sector and in testing of Muons chambers, both for LHCb Experiment.

In the phenomenology part, I worked in the development of software tools for data analysis of CP violation and flavour mixing, using the Gaudi Framework and DaVinci applications. In this period, I begin to write some programs in C++ for do pre-selections and Hight Level Trigger studies. This work was developed under the supervision of Guy Wilkinson and his post-doctoral student, Patrick Spradlin.

In the experimental part, I did tests and measures of the homogeneity and the gas gain of the muons chambers, using the test-station developed by CBPF/UFRJ LHCb group. I tested the following chambers:

M4R1_14, M4R1_15, M4R1_16, M4R1_17, M4R1_18, M2R1_18, M2R1_17,
M2R1_16, M2R1_15, M2R1_14, M2R1_08.

For more detailed information about the test's results, please, take a look in the corresponding Muon Chamber Test Report. This part was developed under the supervision of Burkhard Schmidt and Katarina Mair.

I am very grateful to Guy Wilkinson of CP violation group, and to Katharina Mair and Burkhard Schmidt, members of Muon LHCb Group, the supervision, discussions and informations shared with me. I am very grateful to all Helen team by the hospitality and the by give me the opportunity of visit the CERN .

Antonio Augusto Alves Jr.