Reporte de Actividades

Juan Carlos Cabanillas N.

10-Jun-2017

Reunión con la Coordinadora de Posgrado

- Entrega de reportes de actividades realizadas
  - 2 proceedings (congreso nacional e internaciones)
  - Artículo de física JCR (LHC Forward Physics)
- Revisión con el comité de posgrado
- Ultimo avance tercera semana de agosto

Reunión con el Dr. René Rodríguez

- Revisión de las propuestas de artículo:

a) "*Analysis of Requirements for the Design of a Detector Control System in the ALICE Experiment*"

b) "Application of a Software Engineering Methodology in the Control System Design of a Single Detector in the ALICE Experiment"

- Propuestas de revistas de ciencias de la computación:

Reunión con el Dr. René Rodríguez

- Propuestas de revistas de ciencias de la computación:

a) *International Journal of Computer Science and Information Security*

b) *International Journal of Advanced Computer Science and Applications*

c) *International Journal of Innovative Computing, Information and Control*

- Revisar bibliografía adicional (normativos del proceso RUP)
- Definir qué parte del proceso RUP se reporta en cada artículo.
- Mapa de ruta para construir el modelado de software completo.

Revisión de bibliografía recomendada

- Jacobson I et al. El Proceso Unificado de Desarrollo de Software. Addison Wesley.

- Kendall and Kendall. Análisis y Diseño de Sistemas. 8va. Edición. Pearson.

Proceeding RADPyC 2017

Performance Analysis of the AD Detector Control System in the ALICE Experiment

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Abstract. The AD (ALICE Diffractive) detector in the ALICE Experiment for Run 2 of the LHC is the trigger detector for diffractive physics events in p-p collisions. It can also be used as a centrality trigger in Pb-Pb and p-Pb collisions. This detector consists of two subdetectors: ADA and ADC, installed on the A and C sides of the ALICE experimental site, respectively. Each subdetector consists of 8 scintillator pads assembled in two 2x2 arrays of pads. The control system in the ALICE experiment must ensure safe and sustained monitoring and operation of detector, both at data taking time and during LHC shutdowns. This is done by means of: a) configuration of detector parameters relevant for the modes of operation, b) monitoring and control of the detector subsystems status during runs, and c) monitoring and control of safety parameters. This work is a first approach to quantitatively evaluate the achievement of these tasks. This analysis is a way to know the impact and relevance of the detector control system (DCS) for the performance of the AD detector and, in general, of the ALICE experiment.

1. Introduction

The ALICE (*A Large Ion Collider*) experiment is dedicated to study of the called strong interaction of matter, particularly the study of heavy ion to very high energy collisions in the Large Hadron Collider (LHC) belonging to the European Organization for Nuclear Research (CERN) [1-2].
Diffractive production research at CERN-LHC is of great interest, both for theoretical and practical reasons [3-4]. Diffractive events identification is not experimentally simple. At low energies, it is often possible to identify and measure non-diffracted proton, but in the LHC, this becomes a major

- Elaboración del proceeding *in extenso* de la RADPyC 2017
- Enviado a revisión a los directores

TODO

- Terminar de revisar la bibliografía recomendada.
- Atender la recomendaciones y hacer los cambios en el documento.
- Terminar la versión final del artículo (formato).
- Someter el artículo a ALICE.
- Someter el artículo a la revista seleccionada.