

Luminosity measurement of ATLAS with Carbonated LGAD

Tuesday, 16 July 2024 17:45 (15 minutes)

ATLAS would have to decrease the uncertainty of the luminosity measurement of the HL-LHC from 2% to 1% to make sure the main physics goal of HL-LHC is achieved. However, the harsh radiation environment of HL-LHC throws serious challenges to the luminosity measurement. New luminosity detector should be explored. Due to the fast timing resolution and high resistance of LGAD, ATLAS plans to apply the LGAD in the luminosity measurement. According to the recent data, the LGAD shows very good linearity which is at least 10 times better in the luminosity measurement. This study is going to show the recent study of the LGAD applied in the luminosity study of the ATLAS.

Primary author: Dr 樊, 云云 (中国科学院高能物理研究所)

Presenter: Dr 樊, 云云 (中国科学院高能物理研究所)

Session Classification: 第一分会场 (RAS4)

Track Classification: 其它探测器