

42nd RD50 Workshop on Radiation Hard Semiconductor Devices for Very High Luminosity Colliders (Montenegro)

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First measurements of irradiated CNM LGADs with carbon enriched gain layer

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The latest CNM LGAD run (R15973) was dedicated to improvement of radiations hardness by introduction of carbon in gain layer. Several different carbon doses were used. The initial gain layer doping was chosen to have operational voltage at -30C around 110-130V, thus offering good temporal resolution and good radiation hardness. The first tests after neutron irradiations up to the equivalent fluences of $2.5 \times 10^{15} \text{ cm}^{-2}$ have shown improved radiation tolerance with respect to previous runs. The preliminary results of CV/IV analysis, charge collection and timing resolution will be shown.

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