

## **Charge Collection Efficiency of proton-irradiated small-cell 3D strip sensors up to $1.7E16$ neq/cm<sup>2</sup> equivalence fluence**

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A study of Silicon strip 3D sensors of sizes 50  $\mu\text{m}$  x 50  $\mu\text{m}$  and 25  $\mu\text{m}$  x 100  $\mu\text{m}$ , fabricated at CNM using double-sided technology is shown. Sensors are wire-bonded to ALIBAVA read-out system. Results about charge collection of non irradiated sensors are presented, and also irradiated up to fluences of  $1.7E16$ . The response of the sensors in both a test beam of 120 GeV protons and pions, and radioactive source  $90\text{Sr}$  measurements is analyzed.

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