

## Characterization of the 180nm HV-CMOS ATLASPix large-fill factor Monolithic prototype

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The ATLASPix is a monolithic pixel sensor designed in ams aH18 HV-CMOS technology to demonstrate the achievable performances and demonstrate the radiation hardness of the technology. The prototypes were produced in an engineering run on three substrate resistivities spanning from 20 to 200  $\Omega \cdot cm$ . We present here the characterization in laboratory and test beam of the produced samples. Unirradiated, proton, and neutron irradiated samples were tested for efficiency, spatial and temporal resolution. The functionality of the different design blocks for tolerance to TID was also evaluated.

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