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## [D04] First Results of ATLASPix 3.1 Telescope

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ATLASPix is a high-voltage CMOS pixel sensor (HV-CMOS) designed as a candidate for the ATLAS Inner Tracker (ITk) upgrade. Using the commercial 180 nm CMOS process, they are more cost effective compared to hybrid pixel detectors. ATLASPix 3.1 has an area of  $2 \times 2.1 \text{ cm}^2$ , consisting of  $150 \times 50 \mu\text{m}^2$  pixels, each with a large n-well as charge collection electrode.

With the ability to be operated in a multi-chip setting for ATLAS ITk, LHCb or other future collider experiments, a 4-layer telescope made of ATLASPix 3.1 was developed, using the GECCO readout system as for the single chip setup. To demonstrate the multi-chip capability and for its characterisation, a beam test was conducted at DESY using 3–6 GeV positron beams with the chips operated in triggerless readout mode with zero-suppression. In this contribution we will present the first results of the ATLASPix 3.1 beam telescope as well as the first quad module tested at the DESY testbeam.

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