Comparison of pixel detectfors AC and DC coupled to FE-I4 readout

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After high hadron radiation fluences, the traditional DC coupling of pixel sensors to readout electronics can lead to noise and signal distortion problems, due to the significant current flowing from the sensor through the electronics. AC coupling can offer a more favorable way for feeding the signal to the pre-amplifier, provided that the coupling strength yields a good signal to noise ratio. This presentation shows that indeed the AC coupling is a possible solution for pixel sensors.

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