

## **PSI-ROC4SENS: a pixel-ROC for sensor studies [Thu/Fr 10:00-12:00]**

*Friday 4 December 2015 11:50 (20 minutes)*

The PSI chip design team has submitted the ROC4SENS, an analogue pixel chip in  $0.25\ \mu\text{m}$  technology which is dedicated for sensor studies. It has a size of  $7.8 \times 9.8\ \text{mm}^2$  covered by  $155 \times 160$  pixels with a pitch of  $50 \times 50\ \mu\text{m}^2$ .

The pixel cell does not contain a discriminator and therefore does not apply a threshold on the signal. However this means the data will not be zero suppressed and a sequential read out of all (connected) pixels is necessary.

The ROC was submitted parasitically to the P-ROC 600 for the inner pixel layer of the CMS phase1 upgrade. A small number of samples for a test of its functionality will be available in January 2016.

The talk will describe the design of the ROC4SENS and its mode of operation.

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**Session Classification:** 3D and Pixel detectors