

Pixel Power Meeting

Mupix Pixel Sensors need significant LV power provided at **1.8V, 1.0V**

The difficulty (“problem” or “challenge”) is the following:

- 1) There is essentially no space or rather technical solution to provide enough power channels to the frontend → Frank’s and Richard’s talks
- 2) There are voltage drop over HDI. Only limited tuning range, both on DC-DC regulator and on Mupix sensor. But mitigation possible → AS
- 3) Noise and voltage instabilities affect PLL, LVDS and driver and SNR
- 4) Noise on sensor input should be filtered out! But there is no space for external de-coupling capacitors near sensor and internal capacities are limited
- 5) In chip voltage regulators would mitigate voltage drops and filter noise. However, they dissipate significant power!
- 6) Voltage regulators for in total ~1W would be required. Not tested yet.
Alternatives? → Heiko’s talk

One idea in Zurich was experimentally verify the need for filtering
→ Thomas, David, Luigi &Co

We should not close the meeting w/o having a baseline for pixel tracker and Mupix10