



## Pixel:

- new CDS buffer finished
- calibration circuits almost finished
- integration of calibration circuits into Pixel needed

## Full chip:

- layout of pad structure done

# Status AGIPD1.0



Applications Places System 6:38 PM

Virtuoso® Layout Editing: AGIPD10\_drafts\_klyuev agipd10\_top\_w\_corners\_custom\_top\_v2 layout Version:6-CheckedOut

X: 17916.2 Y: 13172.5 (F) Select: 1 DRD: OFF dX: dY: Dist: Cmd: 2

Tools Design Window Create Edit Verify Connectivity Options Routing Assura Migrate Design Manager Calibre Help

The main workspace displays a PCB layout editor. A large orange grid is visible, with a component instance highlighted in blue at the bottom. The component is a rectangular pad with several pins extending downwards. The grid is composed of small squares, and the component is centered horizontally within the grid.

**Edit Instance Properties**

OK Cancel Apply Next Previous Help

Attribute Connectivity Parameter Property ROD DFM Common

w	13.08m
l	14.21m
tlev1	3
tlev2	2
lm	3
squarecorner	<input type="checkbox"/>

mouse L: mouseSingleSelectPt M: leHiMousePopUp() R: leHiEditProp()

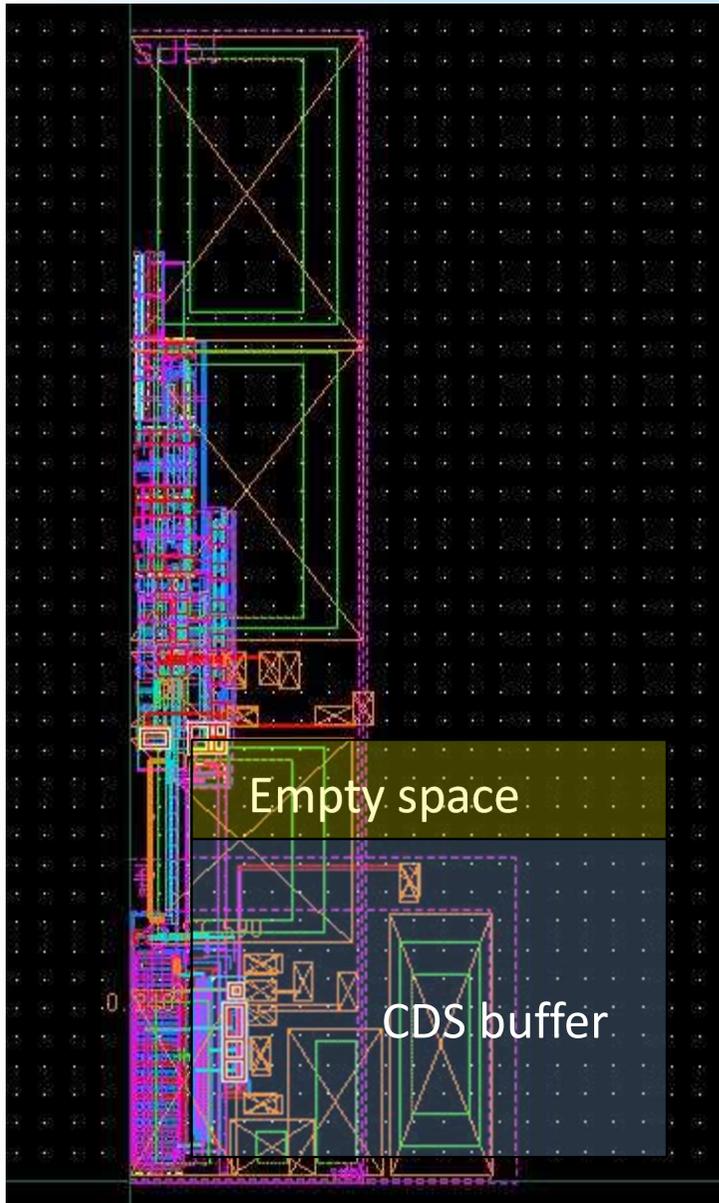
Terminal icfb Cadence Library Manager LSW agipd10\_top\_w\_corners\_custom\_top... Edit Instance Properties

# Status AGIPD1.0



A screenshot of the Virtuoso Layout Editor software. The window title is "Virtuoso® Layout Editing: AGIPD10\_drafts\_kiyuev agipd\_sensor\_full\_size\_w\_asic\_stripes\_top layout Version:4-CheckedOut". The interface includes a menu bar with options like "Tools", "Design", "Window", "Create", "Edit", "Verify", "Connectivity", "Options", "Routing", "Assura", "Migrate", "Design Manager", and "Calibre". A toolbar on the left contains various icons for design operations. The main workspace displays a complex ASIC layout with numerous colored lines (red, green, blue, yellow) representing different layers and components. A status bar at the bottom shows mouse coordinates and actions: "mouse L: mouseSingleSelectPt", "M: leHiMousePopUp()", and "R: hiZoomIn()". The taskbar at the very bottom shows several open applications: "Terminal", "icfb", "Cadence Library Manager", "LSW", and "agipd\_sensor\_full\_size\_w\_asic\_stripes\_top".

# Layout of the New Amplifier



- New CDS opamp
  - 300 mV higher output dynamic range
  - 50% less power consumption
  - Smaller area
- Charge injection of the preamplifier reset switch is significantly reduced.
- A dynamic range of 1 – 10K photons is proved by the simulations



## Next steps:

- finish pixel, integrate calibration circuit
- Ulrich finish interface
- integrate interface in layout and connect it to pixel matrix
  
- run all test DRC, LVS



Alessandro: calibration circuit

Ulrich: short update on interface

Dominic: latest test results