RD53A wafer probing

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Instrumentation Weekly Meeting

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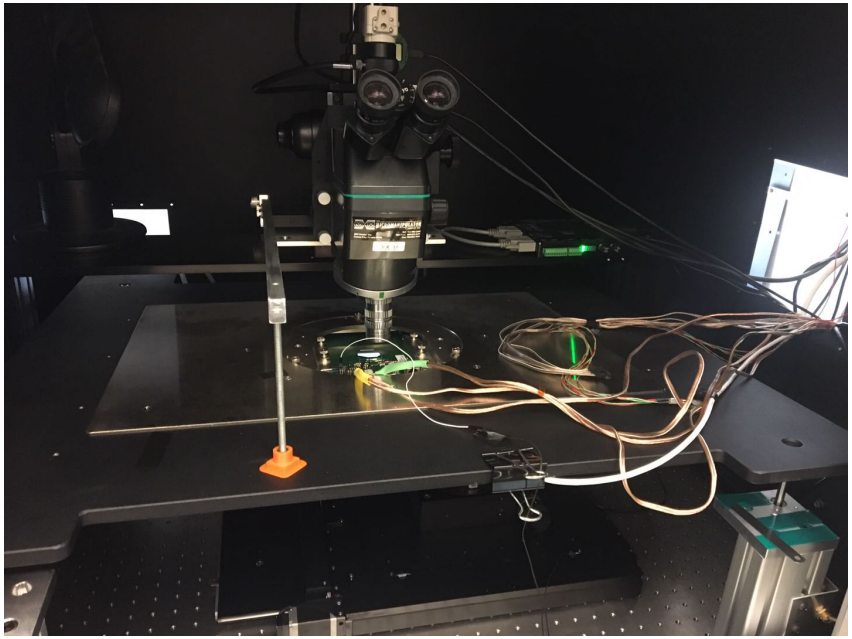
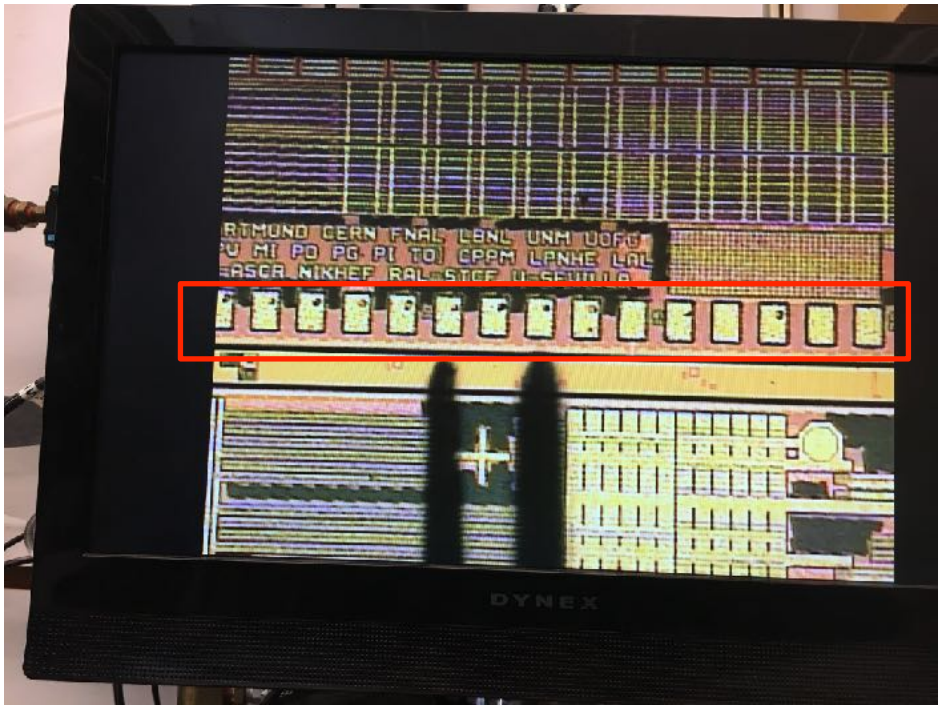
Progress report

- Problematic capacitor on needle card affecting chip resetting replaced by Timon
- Needle card then installed back to station
  - Needle tips aligned to x-direction
  - Tilting in X-Y plane corrected by putting a 250 μm thick metal strip under right corner of the station

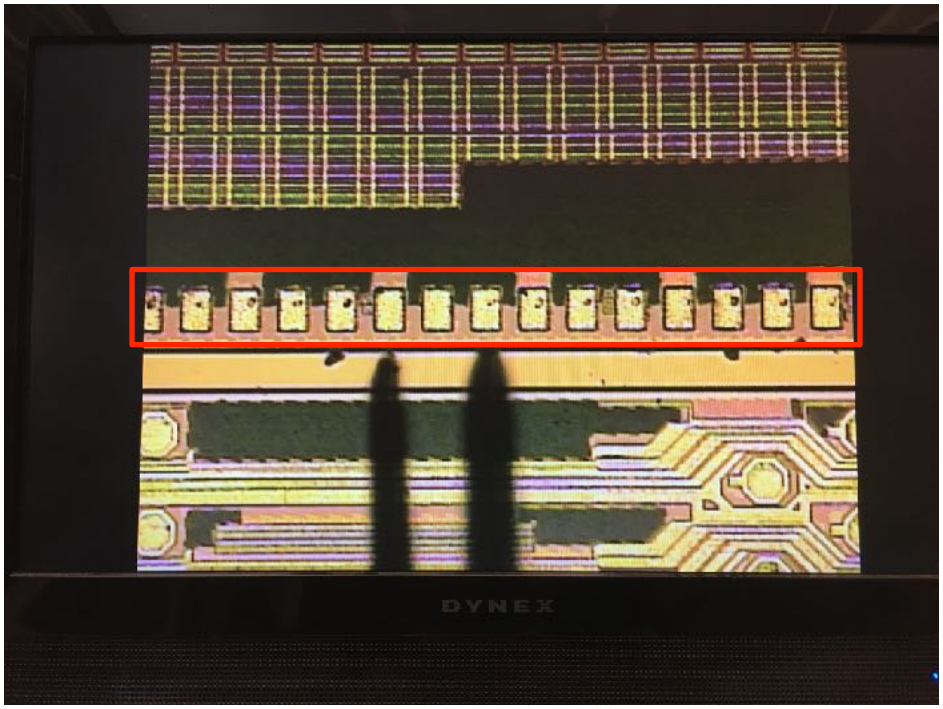


- **Dummy wafer** loaded on station to study
  - Whether needles are at the same X-Y plane and can make good contact with the pads
  - Whether the touch down procedure is working

Needle marks on dummy wafer pads



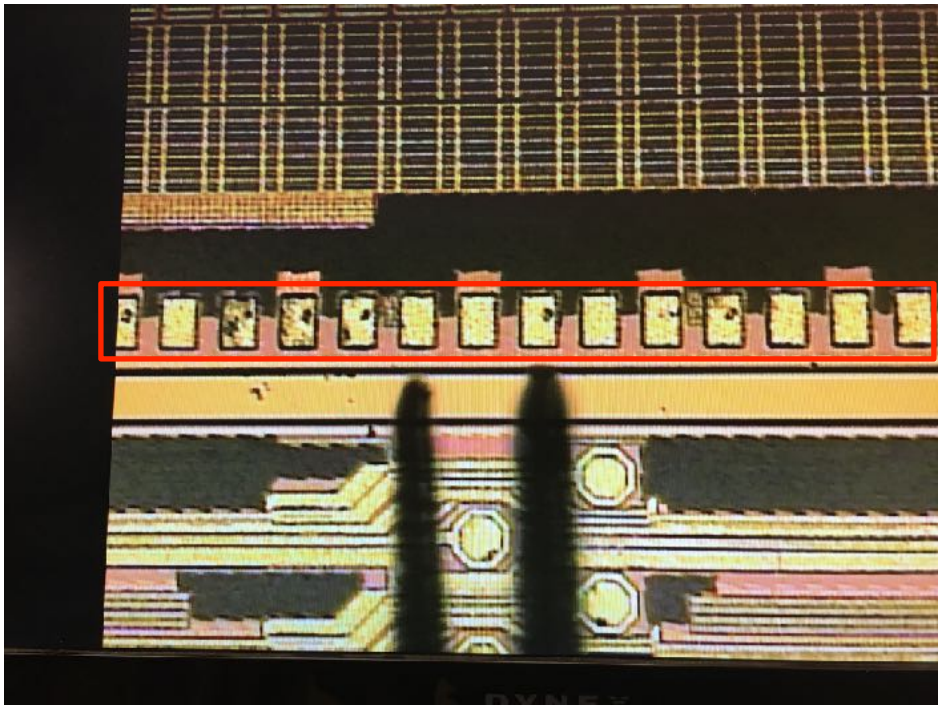
Left



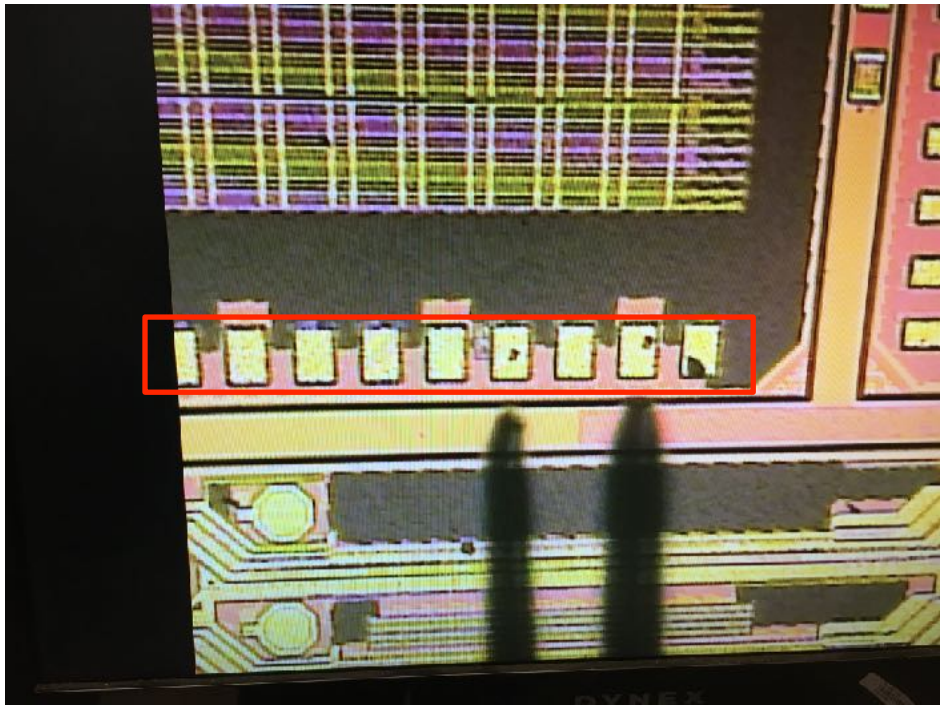
Left-middle

- Carefully lowering the needle card by small amount each time
- The mark looks uniform on each pad (needles slightly misaligned from the pads)

Needle marks on dummy wafer pads (cont'd)

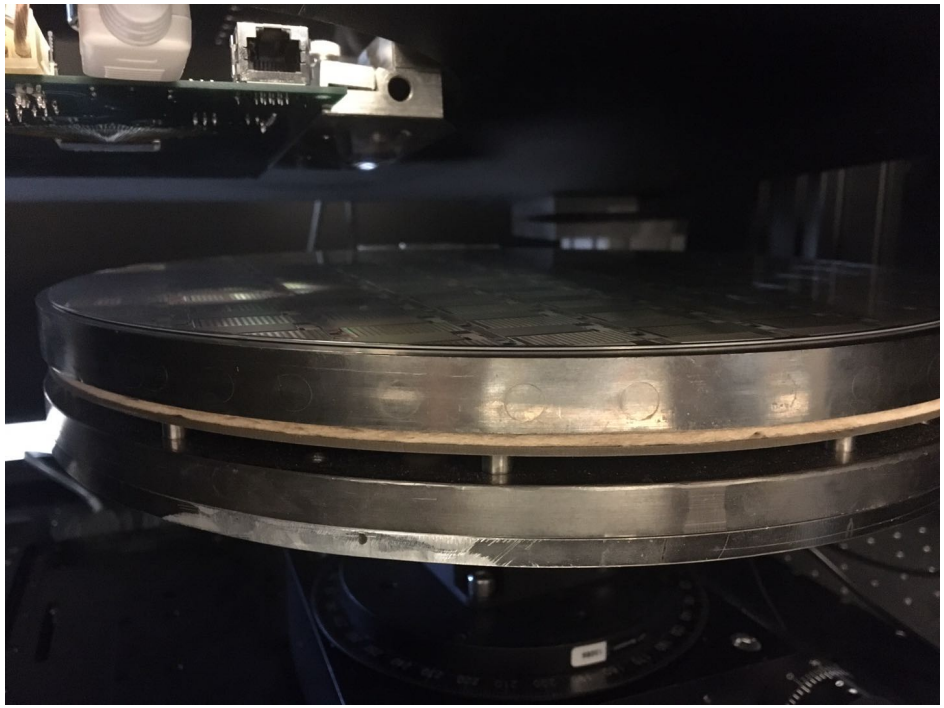
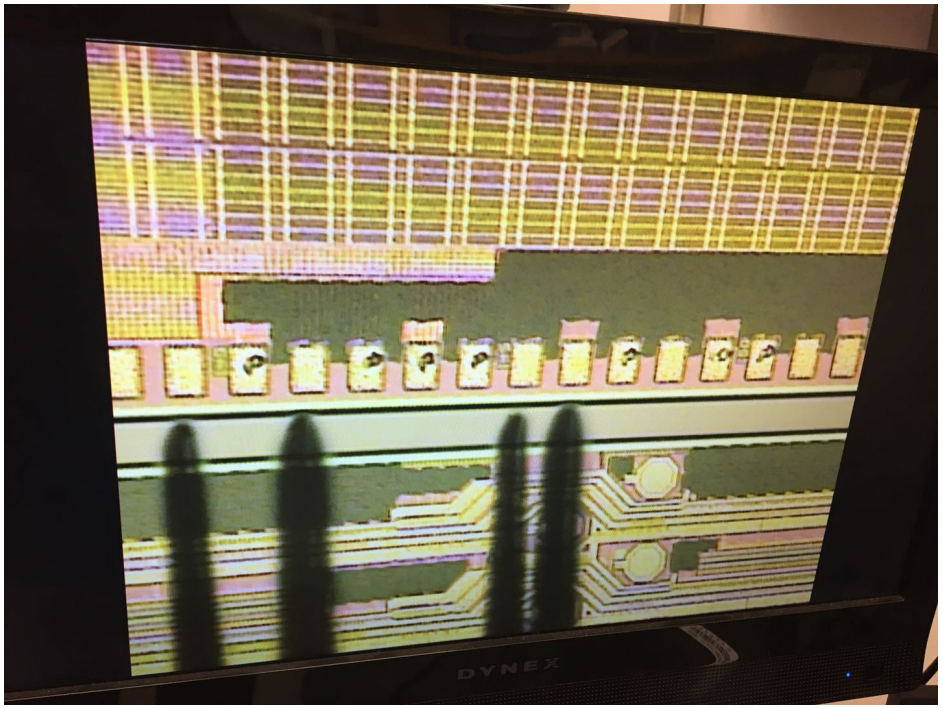


Right-middle



Right

- When clear marks were made, there is still no current observed on the meter, thus the automatic touch down is not verified yet
  - Is the dummy wafer suppose to reproduce the current from a real chip?

Mounting real wafer

- The real wafer is mounted this morning
- Automatic touch down works
- Clear marks made. Good current from the chip obtained
- However, the digital test is still not working—waiting for Timon, Aleksandra et. al. for more discussions next week