Plans with pilot run modules

	W30	W35	W36
IF	3[a]	2a[b]	2a[b]
OF1	0	2a[b]	2a[b]
OF2	2a[b]	2a[b]	2a[b]
OB1	2[c]	2b[e]	4[f]
OB2	2[d]	4[f]	2[c]
IB	2a[b]	4[f]	2a[b]

0: no faults
1: pixel level faults
2a: row level faults
2b: column* level fault
3: high impact faults
4: lethal faults
5: to be clarified

* Column level faults in Al2 can be repaired by rework (grade 2b → 0).

Status after Al, including poly testing

Assignment of the modules:

:- W30-OB1, W30-OB1, W36-OB2 → assembly with prototype ASICs, kapton interconn.
:- W30-OF1, W30-OF2 → assembly with prototype ASICs, PCB interconnn.

:- W30-IB and W35-IF → L1 ladder for test beam and Beast
:- W35-OF1 and W35-OB1 → L2 ladder for Beast test beam and Beast

PXD9-6 – the PXD Pilot Production

:- 3/30 "hot" wafers (W30, W35, W36)

:- still a lot of process control, tests, and measurements "on the fly"

:- started Oct 2014 → 1st wafer finished July 2015

:- lot of lessons phase III learned!! (Phase III in its full beauty was never done before)

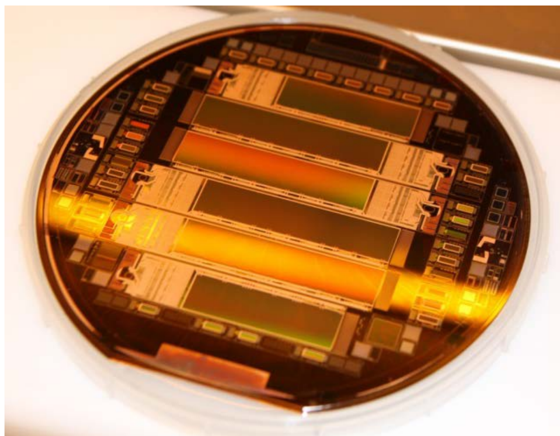
:- status today:

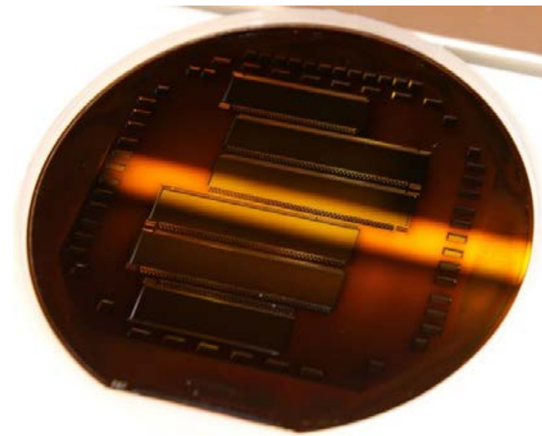
:- W30 finished, cut, modules assembled ....

:- W35 was held back for detailed measurements and Cu on W36 had to be repeated

:- W35 & W36: Cu e-p finished, seed layer removal today ...

:- ATG – Passivation – cut litho – cutting: ~3 more weeks

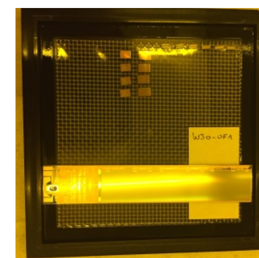


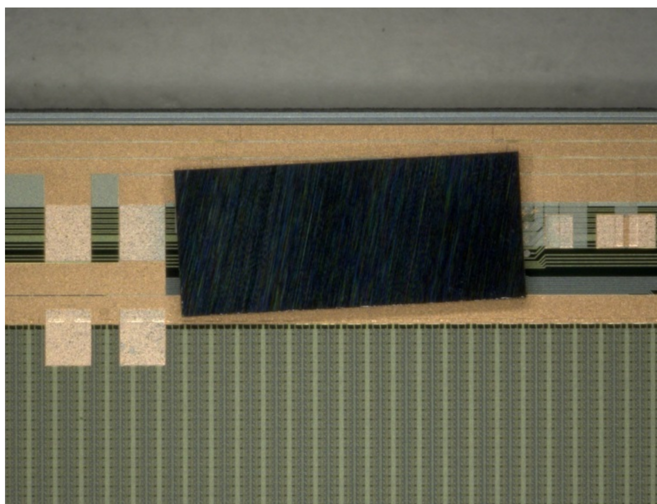


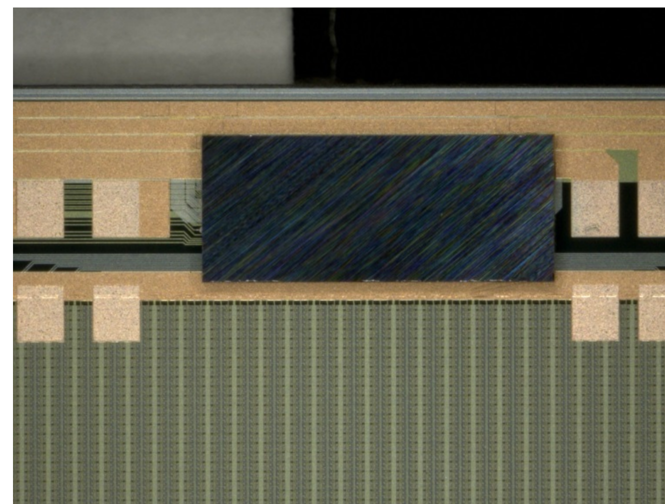
Flip-Chip

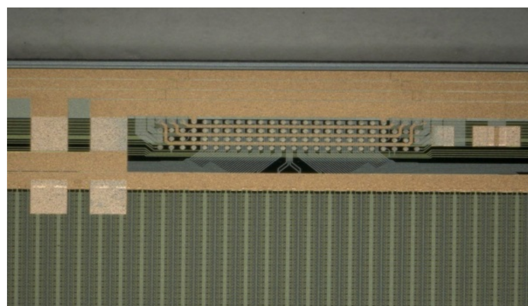
:- 4 modules from W30 sent to IZM

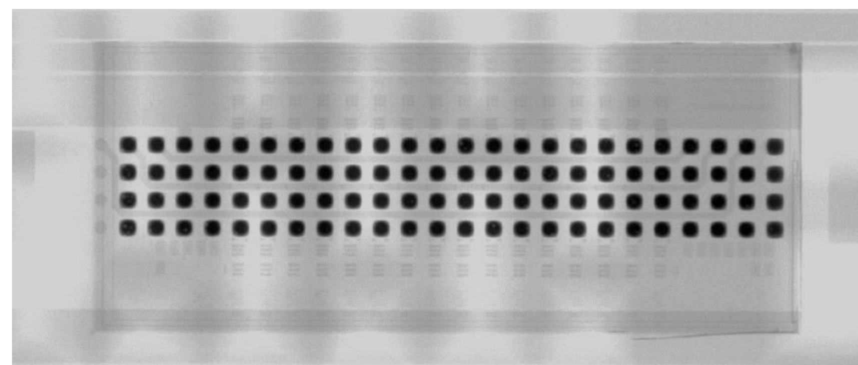
- :- took about three weeks (holiday season)
- :- OF1, OB1, OB2 → no issues
- :- OF2: placement was done manual FC machine, reflow in the same oven
- :- errors during placement, last two SWB misplaced
- :- rework at IZM possible









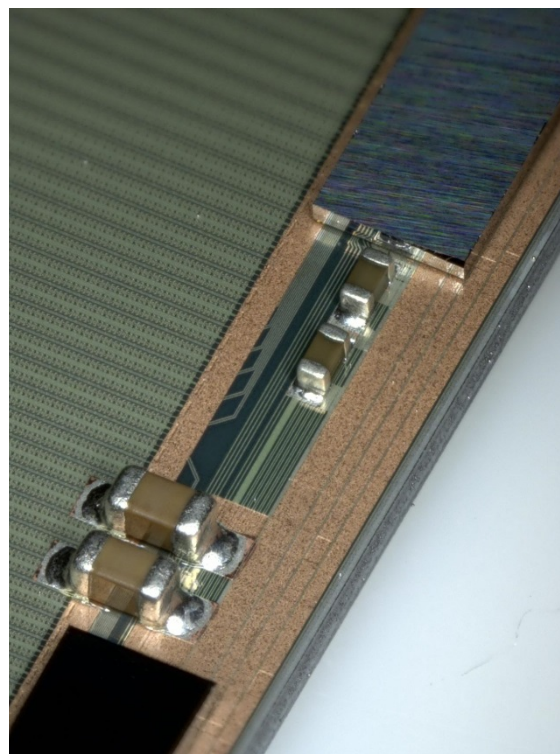


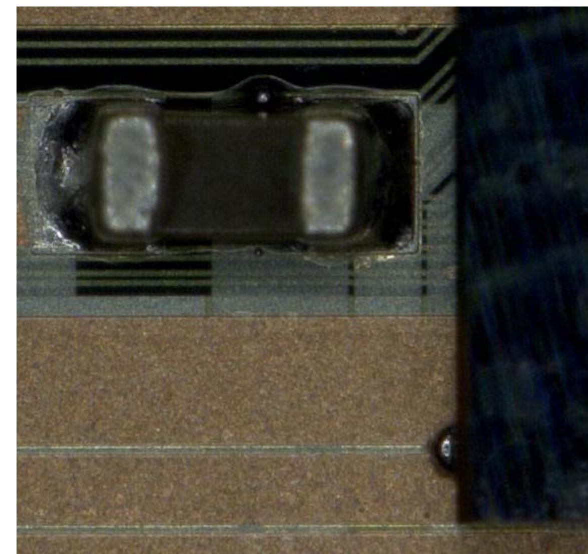
SMD

:- OF1, OB1, OB2 finished

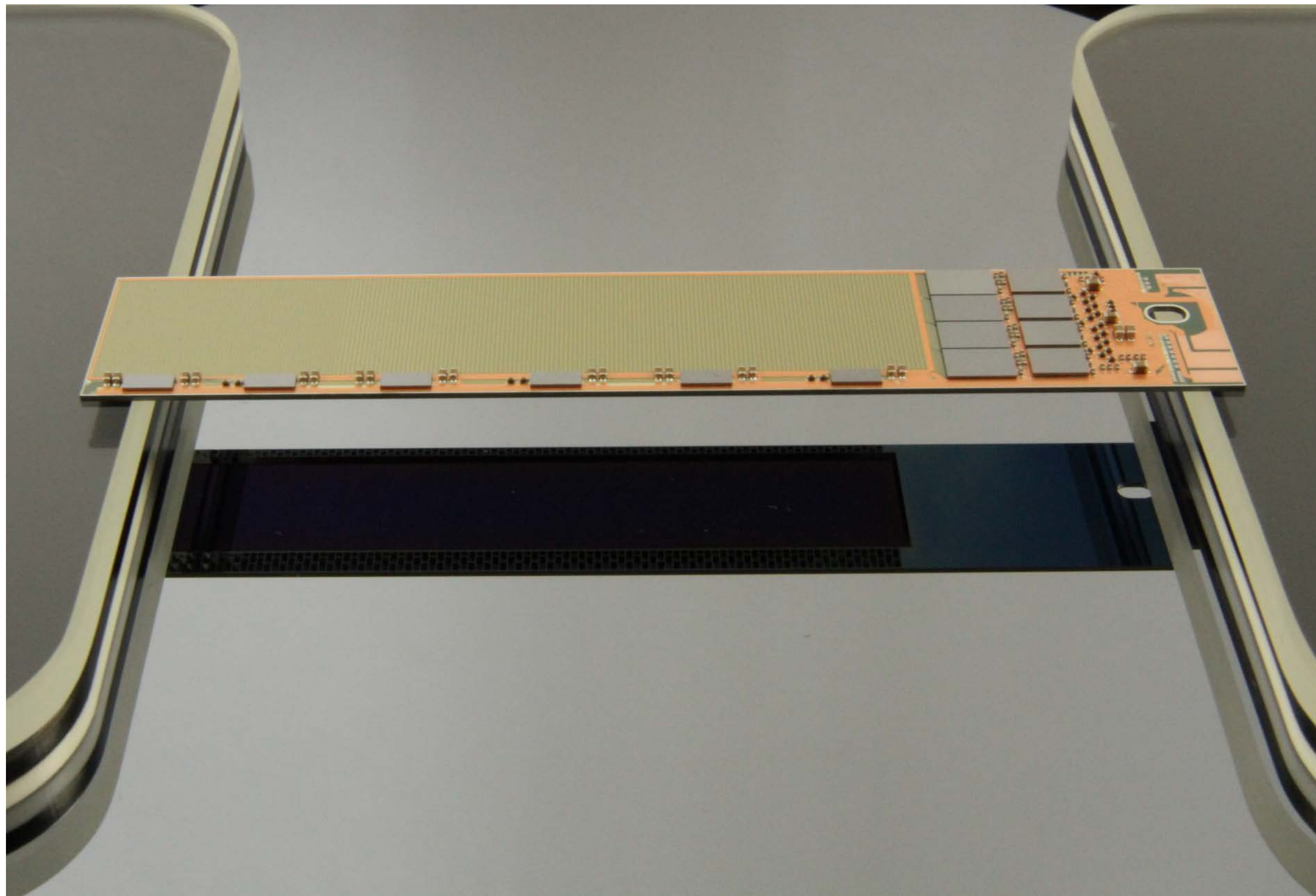
:- no SMD on OF2

:- small issue on OF1: "side balls" because of slightly too much solder paste





SMD



Next steps

:- Kapton attachment

:- first dummy-dummy done

:- needs some improvement of the jigging (kapton bending tool)

:- repeat tests

:- assembly of OB process dummy (partial ASICs, full SMD)

:- … the real thing … OB1 And OB2

:- testing:

:- new design by Christian Koffmane under way (submitted??)

:- breakout board pre-test?

:- cooling plate for base jig???

:- 1st sanity check of ASICs

:- deep breath → power-on matrix → “first light” → switch off → open bottle

Very little time left: pretty important to have Cd spectrum for BPAC!!