

# PXD9 Status and Plans

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for the MPG Halbleiterlabor

- PXD9 production status

all wafers on hold - waiting for metallization

EMCM4 almost finished - nice results

talk by Paola (next time and/or earlier via SeeVogh)

- Pilot production

# PXD9 Pilot production (i)

Proposal: Going ahead with

2(or3) PXD9 wafer + 4(or3) PXD9-3 dummies  
(matrix not functional)

Time line:

Metal1/Metal2 ready by end of January  
intermediate test

Thinning and Cu metallization by March

Final static measurements by end of April

- Selection wafers with of cat. 2 chips based on yield statistics

	0	1	2	3	4	5	sum
Chip1	10	9	2	2	1	6	30
Chip2	16	7	1	0	0	6	30
Chip3	16	4	3	2	0	5	30
Chip4	11	4	5	3	1	6	30
Chip5	12	4	4	2	2	6	30
Chip6	15	4	2	2	1	6	30

**0 – no severe defects**

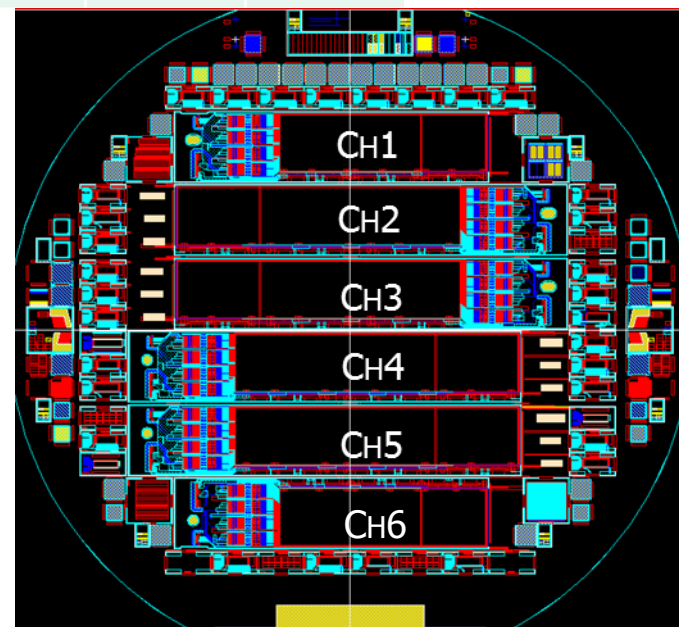
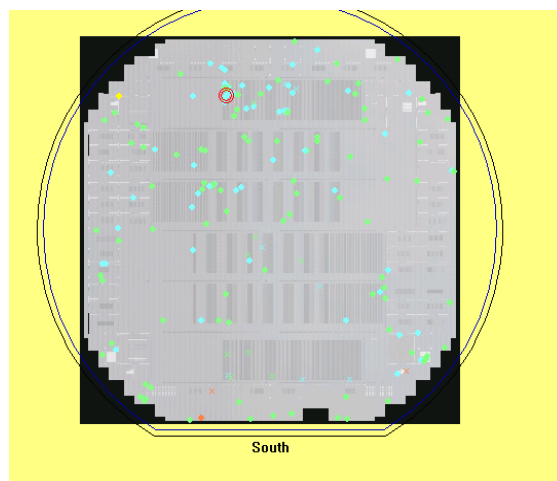
**1 – single pixel**

**2 –single rows and columns**

**3 – whole modul affected?**

**4 – whole module killed**

**5 –to be clarified**



# ● PXD9 Pilot production (ii)

## Pros

- PXD9 dummies are representative 'EMCMs' (EMCM5 would need a redesign)
- available together with new ASICS and new Kapton
- realistic qualifying of all chips and components
- realistic exercising of the remaining production steps (first on dummies)  
(wafer thinning, Cu metallization, intermediate and test procedures)
- Smooth production transition from 'EMCM-likes' dummies to PXD9 modules
- Test of Gated mode operation needs real modules (on EMCM limited relevance)

Modules needed:

- > Fall 15 Testbeam
- > Beast Phase II

relaxed timing for preparation and tests if we start now  
(Start 1/2015 anyway necessary)

## ● PXD9 Pilot production (iii)

### Cons

- Risk to loose of 2 or 3 (2nd grade) PXD9 wafers  
     if we finally find still a severe bug on EMCM modules
- No time to wait with the remaining wafer on the results of fully equipped and tested modules

But we could wait with the first batch for the intermediate tests of metal1/metal2

And we could stop before Copper in order to be able to react in the third metal layer on unforeseen results (e.g. Gated Mode)