



News from GSI ASIC-Design

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May, 31st 2022

APFEL Flex Assembly

Assembly of APFEL rigid-flex-PCBs for EMC backward endcap
Two versions with different flex part length

- Short (85 mm)
 - 192 pieces assembled
 - 9 defective
 - Yield: 95,4 %
- Long (185 mm)
 - 187 pieces assembled
 - 38 defective
 - Yield: 79.7 %

AMS Mask Storage

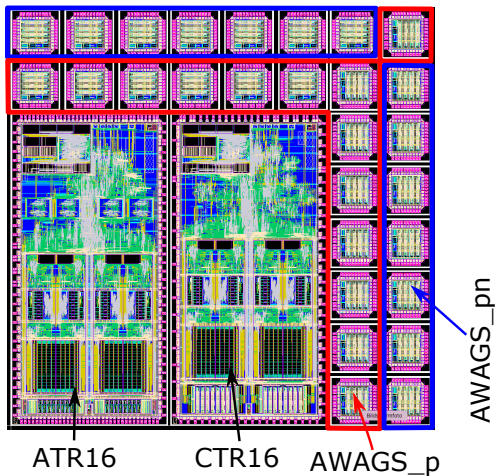
- APFEL ASICs produced on Engineering Run by AMS in 2015
- Masks stored at AMS
- For further mask storage AMS claims €6000 per year
 - ⇒ We now have to decide whether we need further chips or not
- Similar for other foundries (e.g. UMC)

ATR16 Prototype

- ATR16 prototype production foreseen for MPW run in May 2021
 - ASIC design was ready
 - financed by Gießen BMBF fund
- MPW run was canceled by UMC
 - Next run in August 2021
 - Turn around time currently \approx 6 months
 - Funding stopped in 2021
- Idea raised up: Starting engineering run with other GSI designs
 - CTR16 (transient recorder for GEM readout)
 - AWAGS (front end ASIC for FAIR beam diagnostics)

ATR16 Prototype

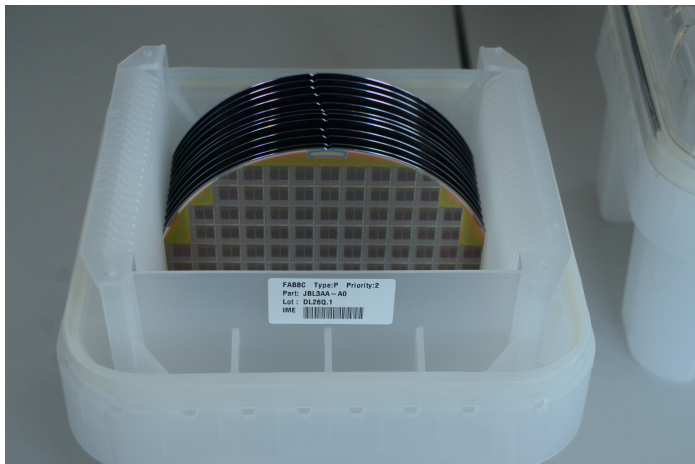
UMC Engineering Run



ATR16 Prototype

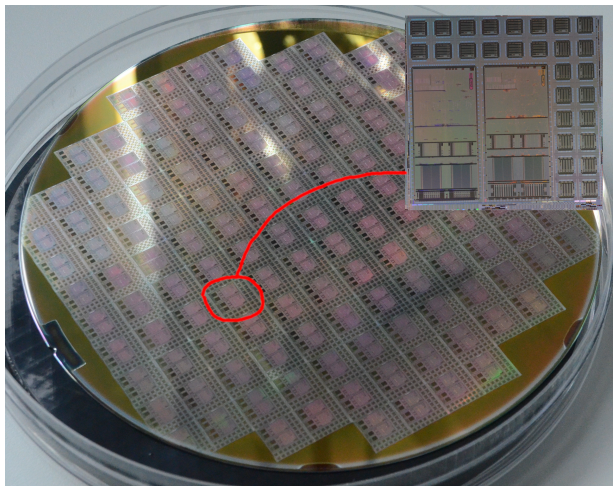
Production

Delivery of 12 wafers in December 2021



ATR16 Prototype

Production



125	ATR16
125	CTR16
1750	AWAGS_p
1750	AWAGS_pn

ATR16 Prototype

Current Status

- 6 Wafers are currently @ MAF for dicing and packaging
 - 3 Wafers for dicing ATR16 & CTR16
 - 375 chips / 6000 channels
 - 3 Wafers for dicing AWAGS
- Delivery announced for next week (June 7th to June 10th)
- PCB for chip tests are in preparation

ATR16 Prototype

Thank you for your attention!

