

Setup for first measurements

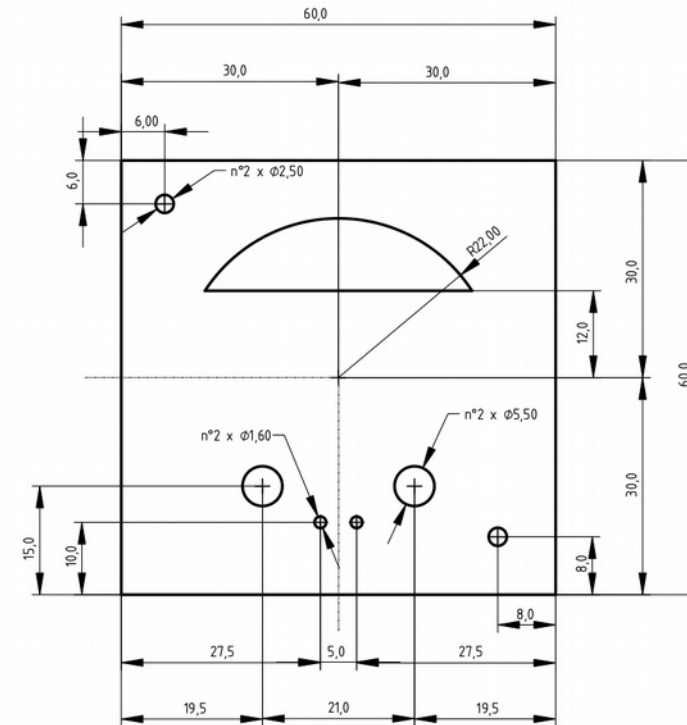
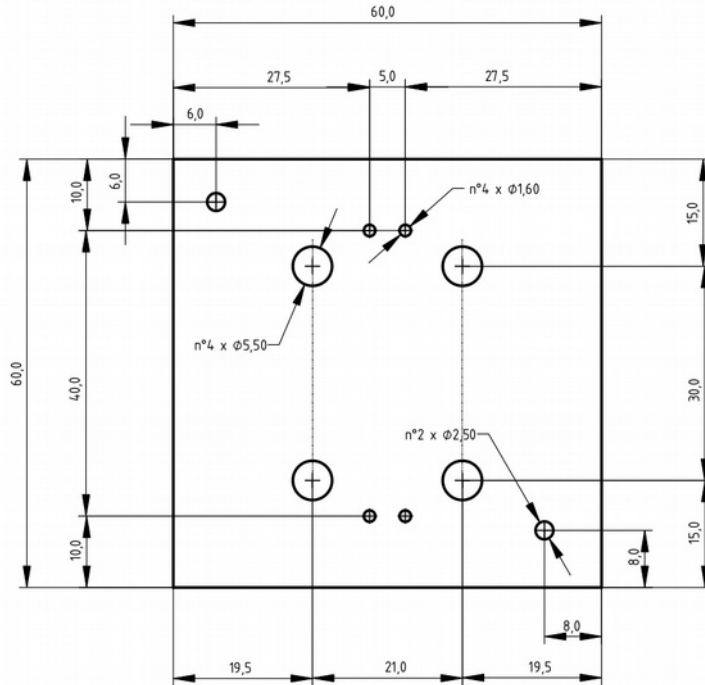
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work performed mainly by D. Pantano

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First metalization on sapphire wafers

mask design:



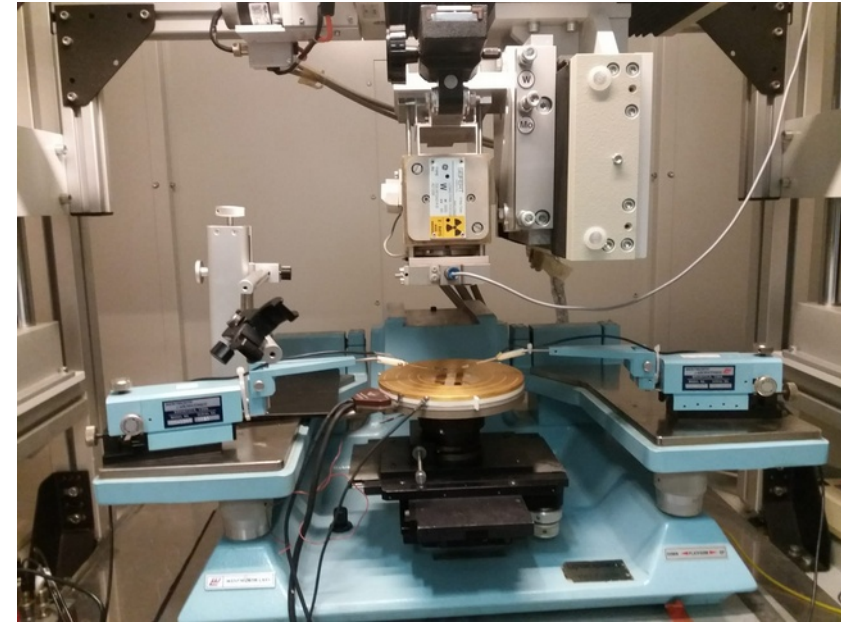
Wafer with pads

- Ag (silver) metallization
 - ~100 nm
- adhesion to sapphire not so good
 - bonding possible, but high risk of removing the metal layer
 - next iteration will be try to improve the process

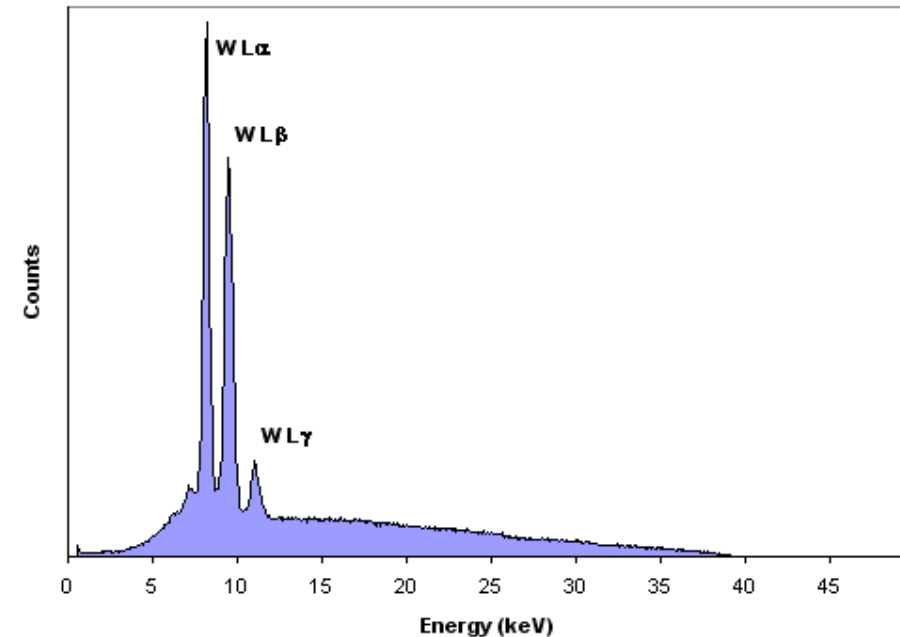


X-ray test station

- SEIFERT X-ray tube type DX-W12X04-S (Long Fine Focus W)
 - Tungsten anode (3 main lines)
 - 150 μm Al filter to remove soft component
 - 40 kV, current up to 50 mA (adjustable in 5 mA steps)



Mini-X Output X-Ray Spectrum: W Target @ 40 kV



Just starting to have fun...

- first measurements will be comparison with currents seen with Silicon with similar electrode area
- seen currents of the order of ~ 50 nA @ 100 V
 - with same X-ray source setup, the current in Silicon is 10 μ A
- we plan to make also measurements with α source

