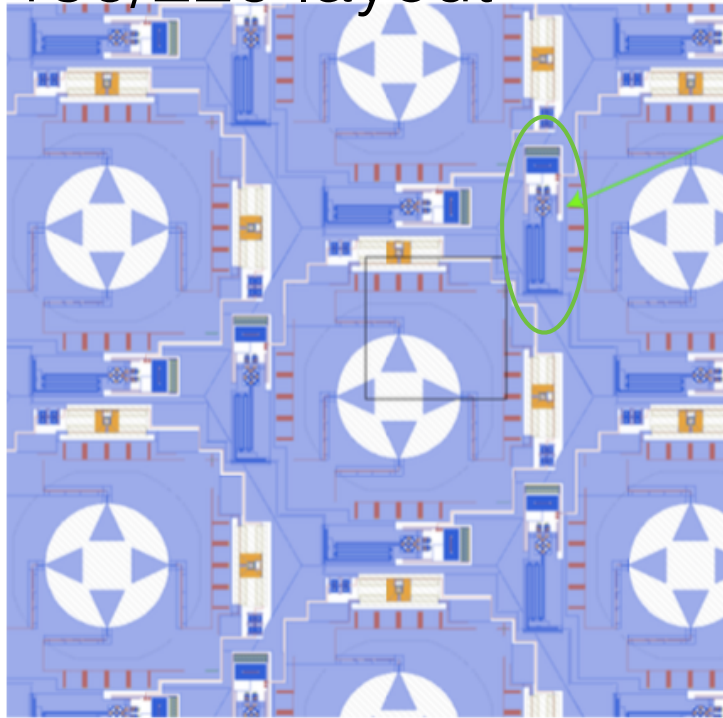


On Wafer μ MUX

Michigan + NIST: **NASA funded, starting in May**

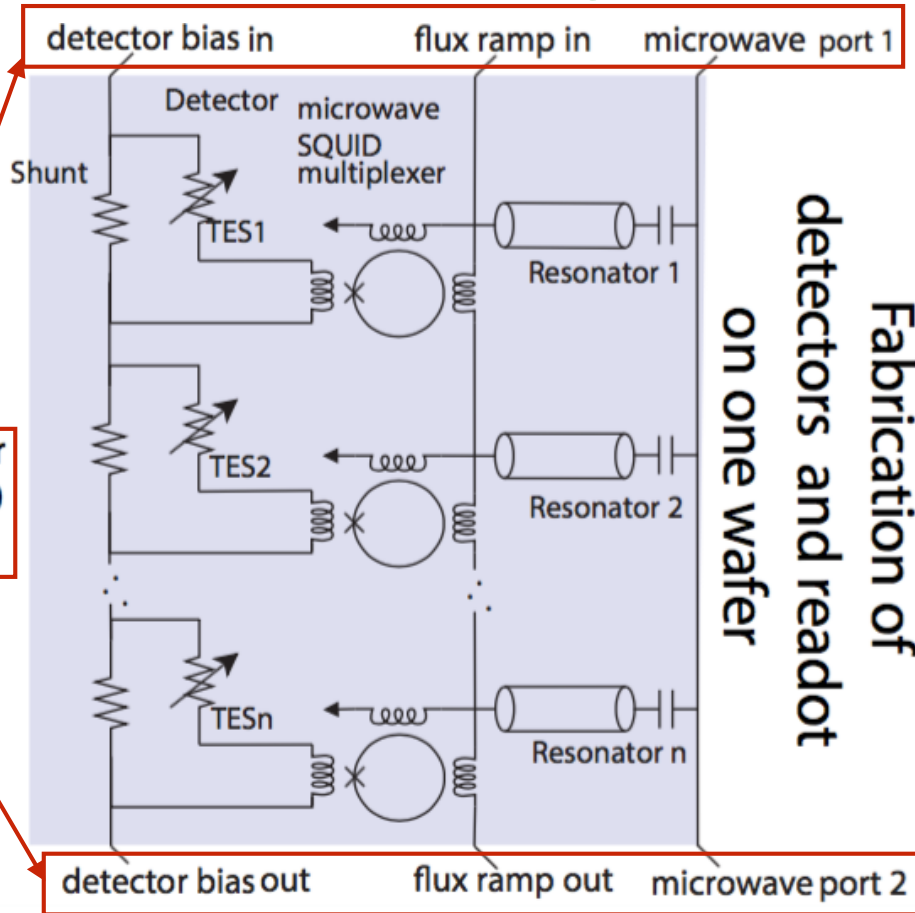
Integrated Readout

150/220 layout



resonator and μ SQUID

6 connections per (potentially) 2000 bolometers



- 40% more lithography than detector fab
- 40% less processing than separate detector + interface + μ MUX fab
- 6 connections / MUX unit

Development plan

- test removing the nitride and fabricating μ MUX components on the cleaned silicon
- minimize component size to maximize packing
- test heat-sinking

On Wafer μ MUX

Michigan + NIST: NASA funded, starting in May

- External Requirement Drivers
 - optics—> pixel size
 - cold plate temperature—> heat-sinking requirements / TC
- External implications
 - cold wiring
 - readout electronics
 - integration approach
- Variables
 - component design
 - number of bolometers / MUX unit