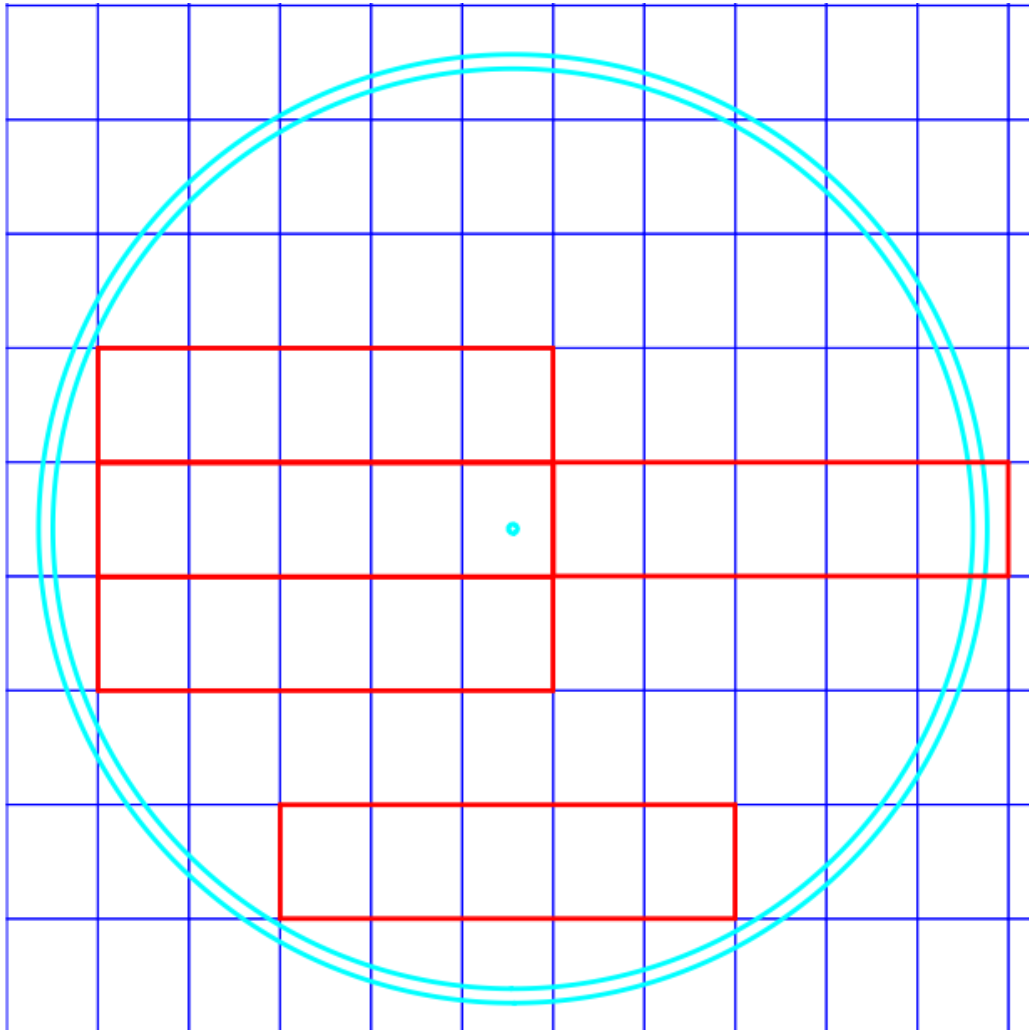
Comments on HV-CMOS strip modules

- Reticule size in AMS H35 process:
  - X<22mm
  - Y<26mm
  - Chip must be inside circle with diameter d<31.112mm
    - if we get marginal, better clarify with foundry: there are test structures inside dicing streets that need to go somehwere...
  - dicing streets are ~80µm wide, out of which ~30µm are physically cut away
    - need to establish how far towards the dicing street we can collect charge

- Classical strip barrel module to replace: 97.54mm x 97.54mm (right?)
  - options: ~19.4mm or ~24.3mm wide sensors
  - 24.3mm seems marginal, would yield a length of 19.42mm
  - 19.4mm width yields 24.3mm length
  - all cases probably minus ~400µm test structures, tbc

Comments on HV-CMOS strip modules

- Strong request for “large objects” for construction
  - stitching a yield and/or cost nightmare (and impossible for AMS)
  - one might try to dice several reticules together, but will significantly lower the yield as well (and area usage on the wafer, 10cm wide objects are simply **impossible** for efficient usage)
    - example: 1.9cm wide reticules
- → use single reticules
  - use hybrid/PCB to keep in place



Comments on HV-CMOS strip modules

- Basic idea:
  - test HV-CMOS sensors on wafer level (like ABCN testing), thin and dice
  - connect 2x5 single dies with a flex/hybrid to form a ~4x10cm large (active area) object – wirebond pads at the outer edges!
  - glue ACDC readout chips on top of hybrid or sensors
  - glue object to stave
- Petal modules
  - nightmare
  - let's try barrel first