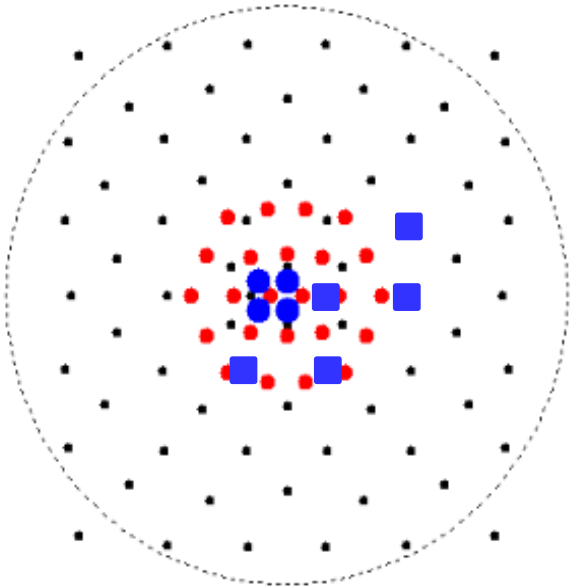


Mini-array

- The swings:
 - ◆ ASTRI groups awarded funding to construct 5...7 SSTs on the CTA southern site.
 - ◆ Support ~ €10M + 24 FTEs.
 - ◆ Giovanni Pareschi proposes to cover “entire” cost for 5 telescopes.
 - ◆ Start construction end of 2014.
- The roundabouts:
 - ◆ Start construction end of 2014.
 - ◆ All technical, organisational and legal issues of establishing CTA now focussed on mini-array.
- Consortium as a whole and UK in particular should take this opportunity to perform earliest possible real test of CTA concept...
- ...and perhaps do some science at the same time.
- UK contribution one or perhaps two cameras.
- Others have declared interest:
 - ◆ DESY.
 - ◆ Amsterdam.
 - ◆ SST-GATE.
 - ◆ 4m DC SST team.
 - ◆ South Africa, Namibia, Argentina, Brazil.

Mini-array

■ Proposed layout:

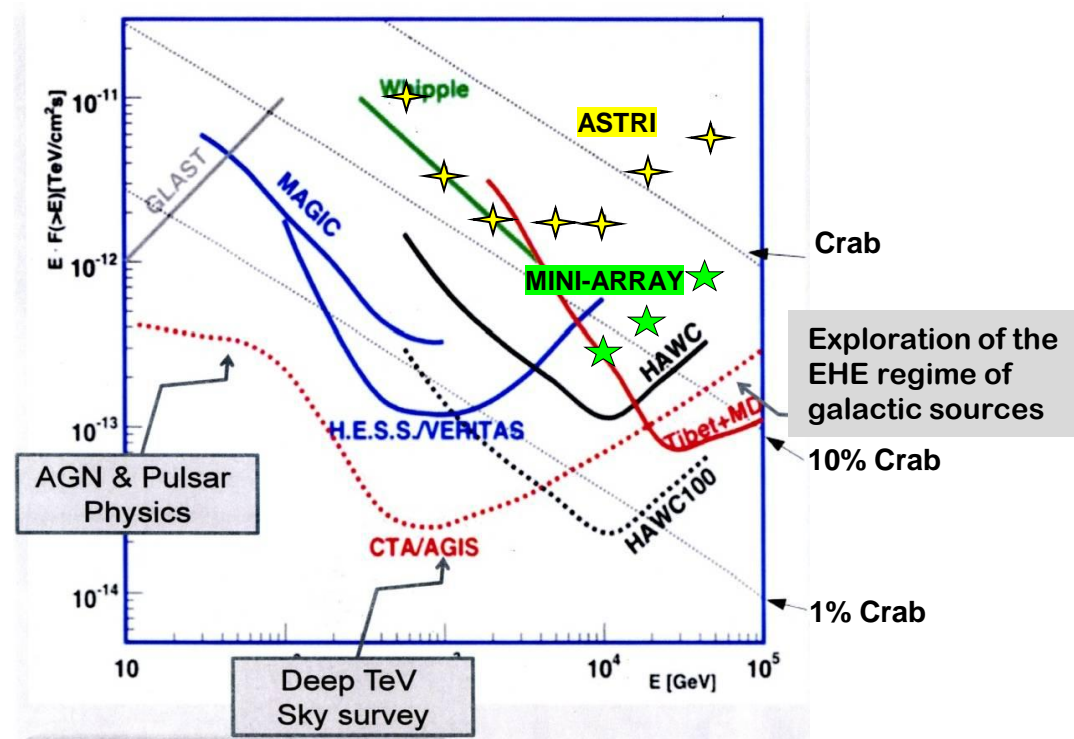


■ Circle $r \sim 1$ km, SST sep. ~ 250 m.

■ Possible sites:

- ◆ San Antonio, 3600 m.
- ◆ HESS, 1850 m.
- ◆ Cerro Armazones, ~ 2700 m.

■ Expected sensitivity:



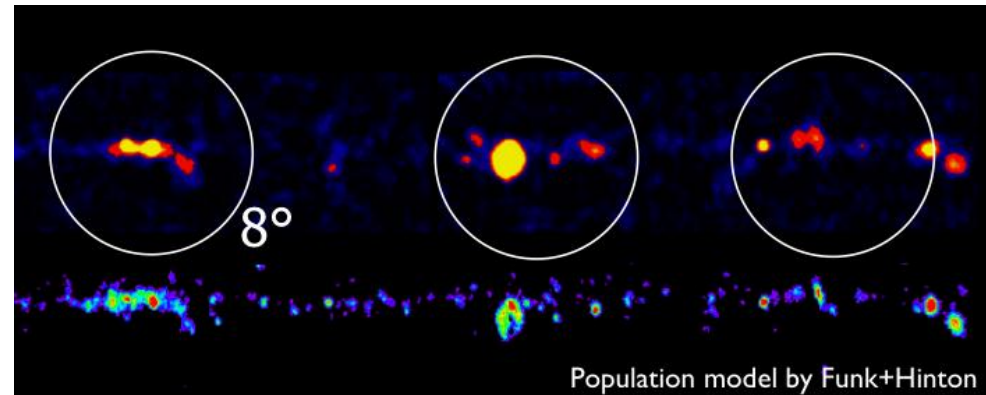
■ Energy res. $\sim 10\%$ at 10 TeV.

■ Angular res. $\sim 0.07^\circ$ at 10 TeV.

Mini-array

- Technical goals:
 - ◆ Develop infrastructure and procedures for installation and commissioning.
 - ◆ Extended test of Dual Mirror telescopes.
 - ◆ Perhaps compare SiPM and MAPM cameras.
 - ◆ Compare Target and EASIROC based cameras.
 - ◆ Test calibration and pointing systems.
 - ◆ Check trigger algorithms.
 - ◆ Test DAQ and control systems.
 - ◆ Check MC calculations.

- Science, examples:
 - Look for bright galactic plane sources.



- Study IES 0229+200.
- If see photons with $E > 25$ TeV, implies these are hadronic in origin due to interaction of γ -rays with EBL.

Mini-array

- What should we do?
- Support mini-array within CTA – start work on Memorandum of Understanding with Giovanni?
- Consider other possible technical contributions?
 - ◆ Optical back-up? (new Liverpool telescope?)
 - ◆ Intensity interferometry?
- Think about science we could do with mini-array.