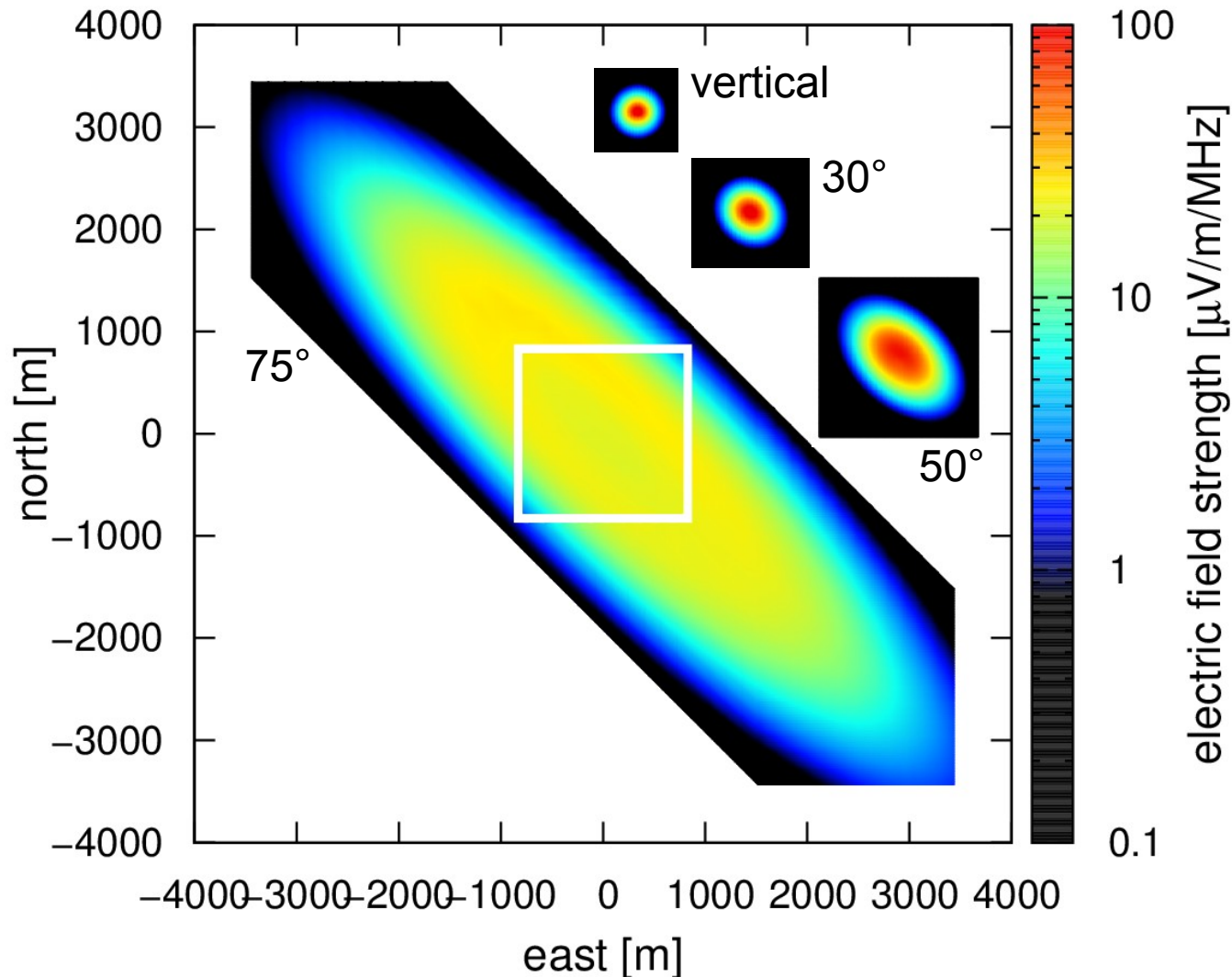
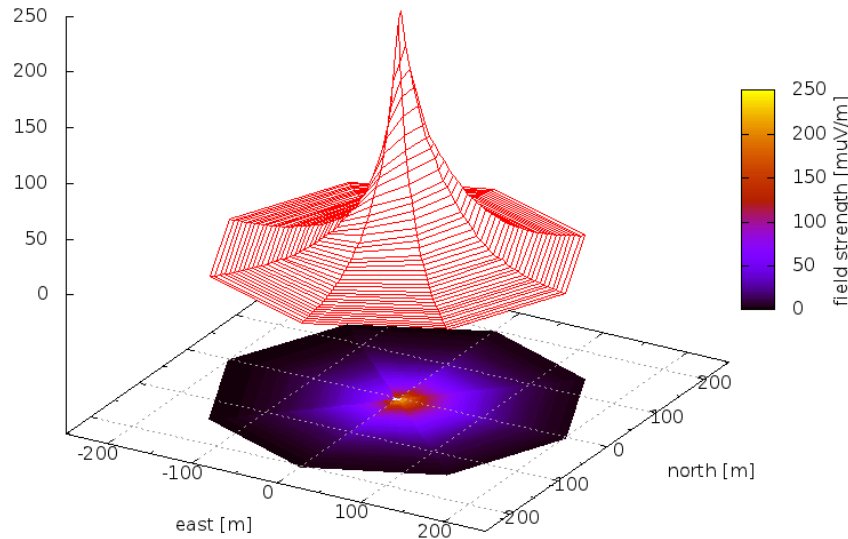


Digitisation: Dynamic Range



- 5×10^{18} eV
- blue color, 2-3 $\mu\text{V}/\text{m}/\text{MHz}$ is approximate detection threshold
- you can scale amplitude linearly with energy

Digitisation: Dynamic Range



- intrinsic dynamic range within one shower can be $>$ factor 10
- we want to cover at least two decades in primary energy, factor 100
- less than 8 effective bits would be a severe limitation
- the Cherenkov ring (50 to 350 MHz) will be challenging
- will quantify effects on X_{max} resolution in simulation study (Anne)

Buffer

- buffer size needs to cover trigger latency: 10 ms
- readout window needs to cover array diameter: 50 microseconds
 - up to full buffer size during thunderstorms?
- buffer all antennas, but read-out fraction can be flexible
- buffers also some antennas outside core
- readout: target of opportunity? trickle down? deadtime?