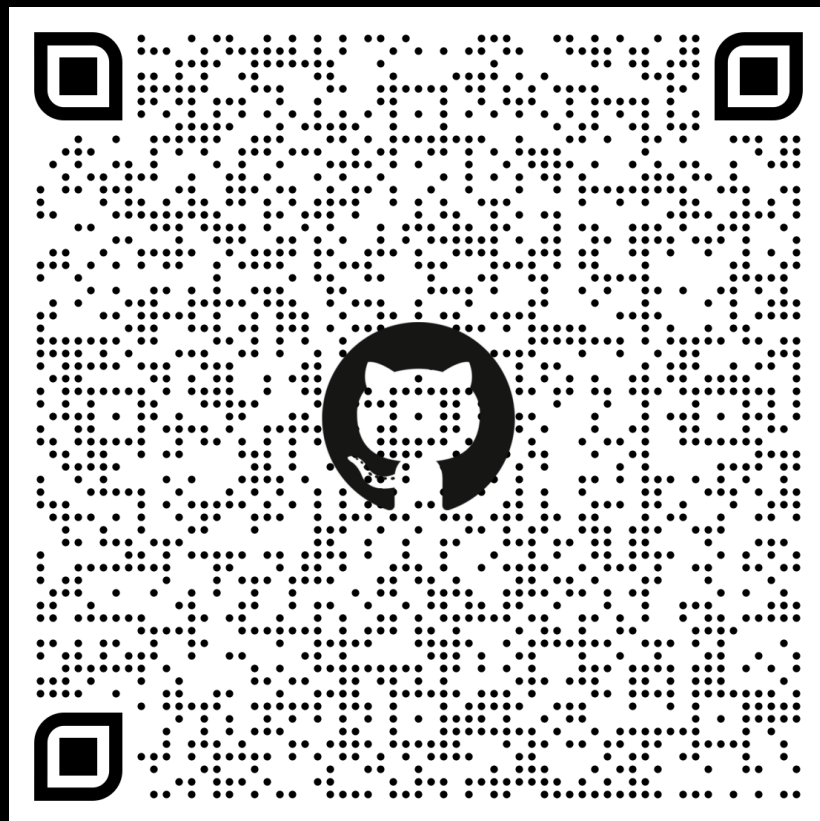
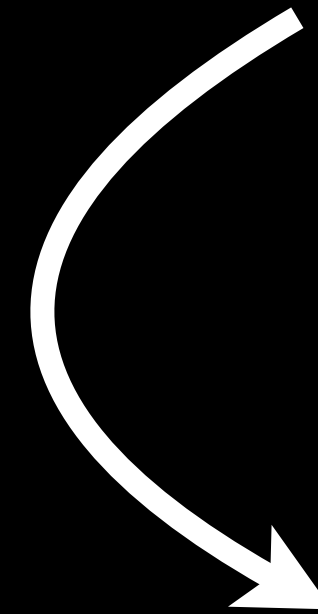


EagleEye: A new two-sample density comparison method

arXiv: 2503.23927 (Rev. at nat comm.)
github.com/sspring137/EagleEye

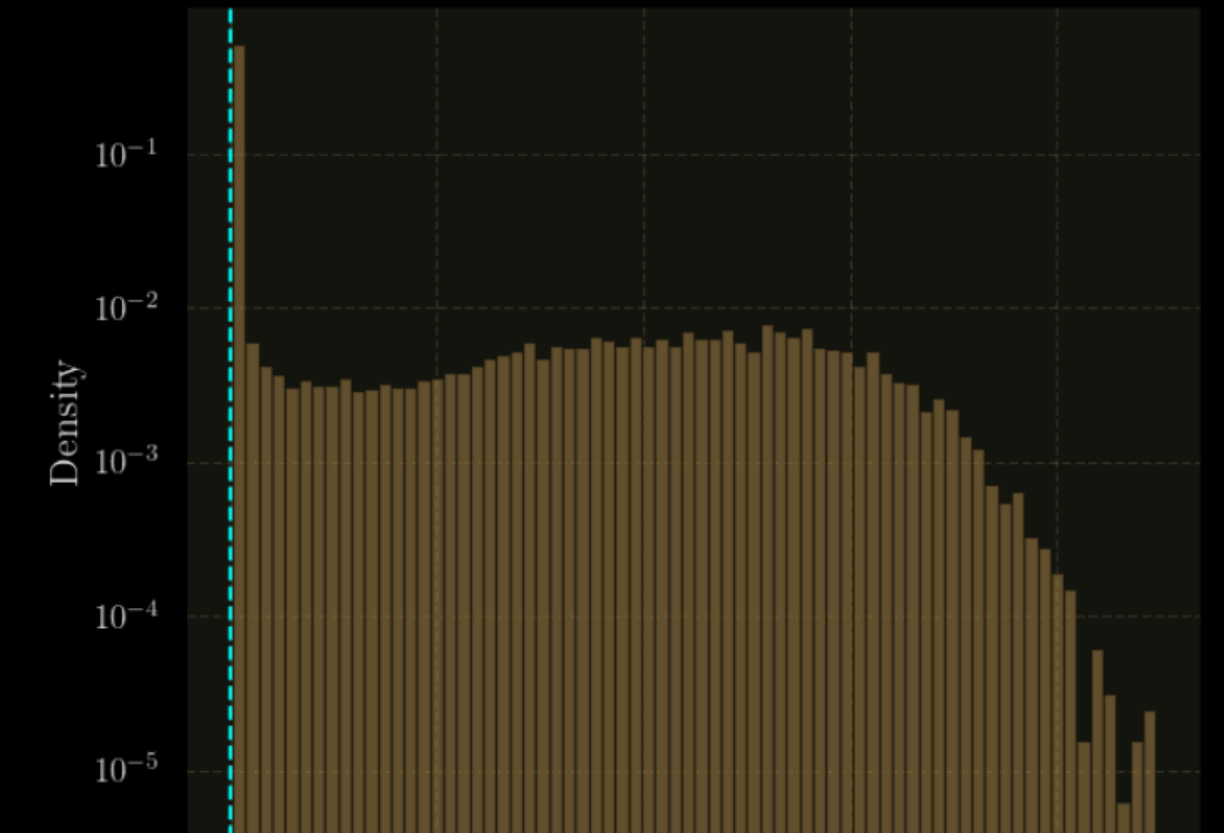
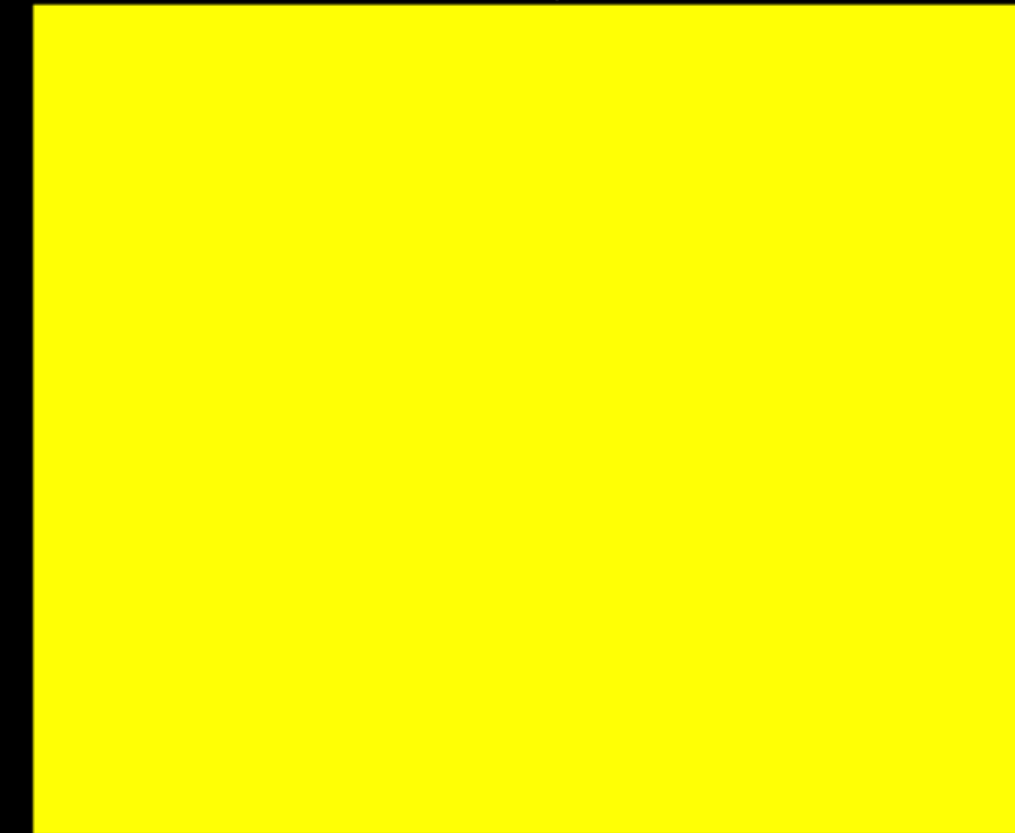


Anomaly score Υ^+/Υ^-
isolates local over *and*
under densities!



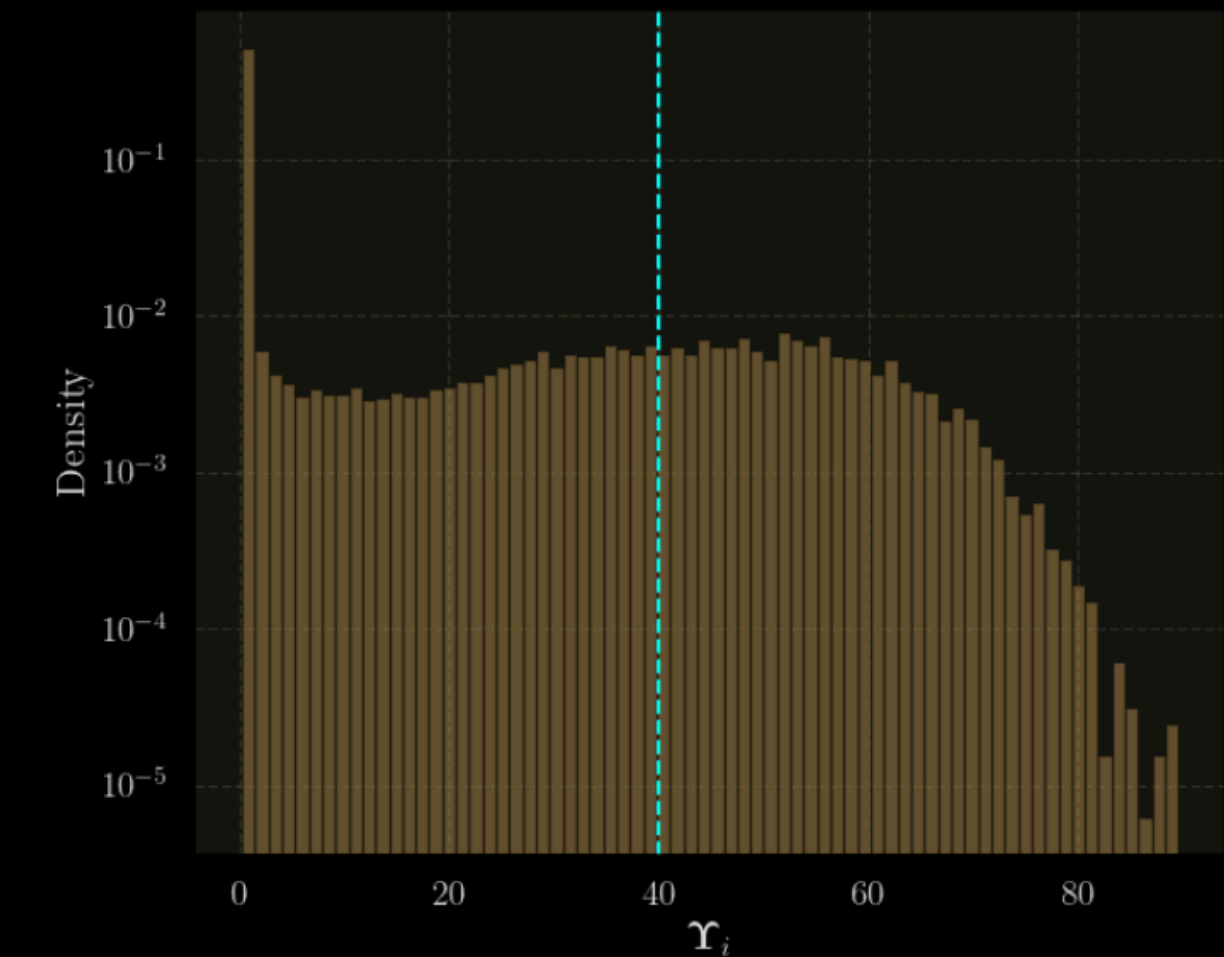
Andre Scaffidi

$$\Upsilon_i > \Upsilon_+^* = 0.0$$



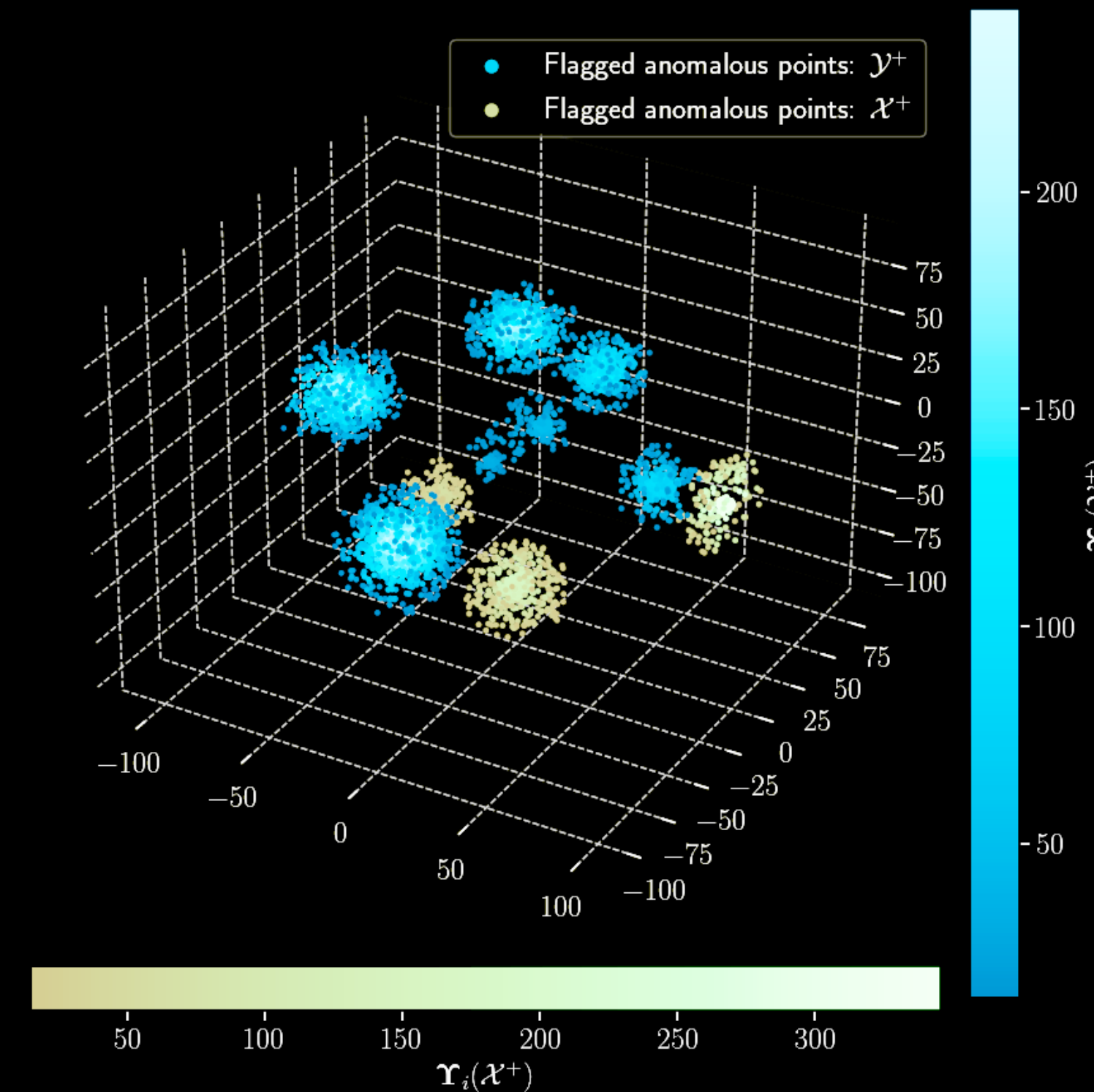
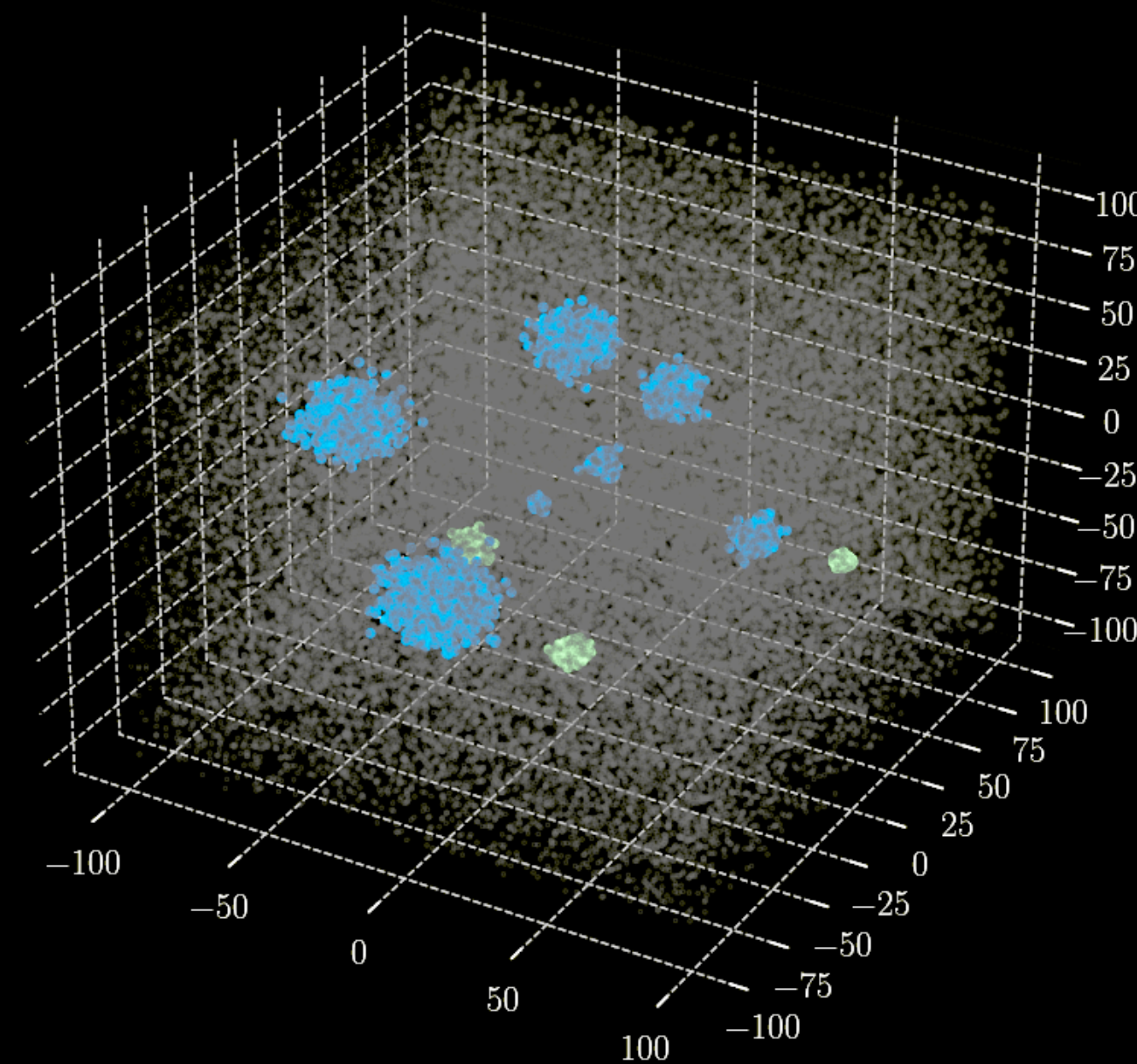
$$\Upsilon_i > \Upsilon_+^* = 40.0$$

**This is an
anomaly!**



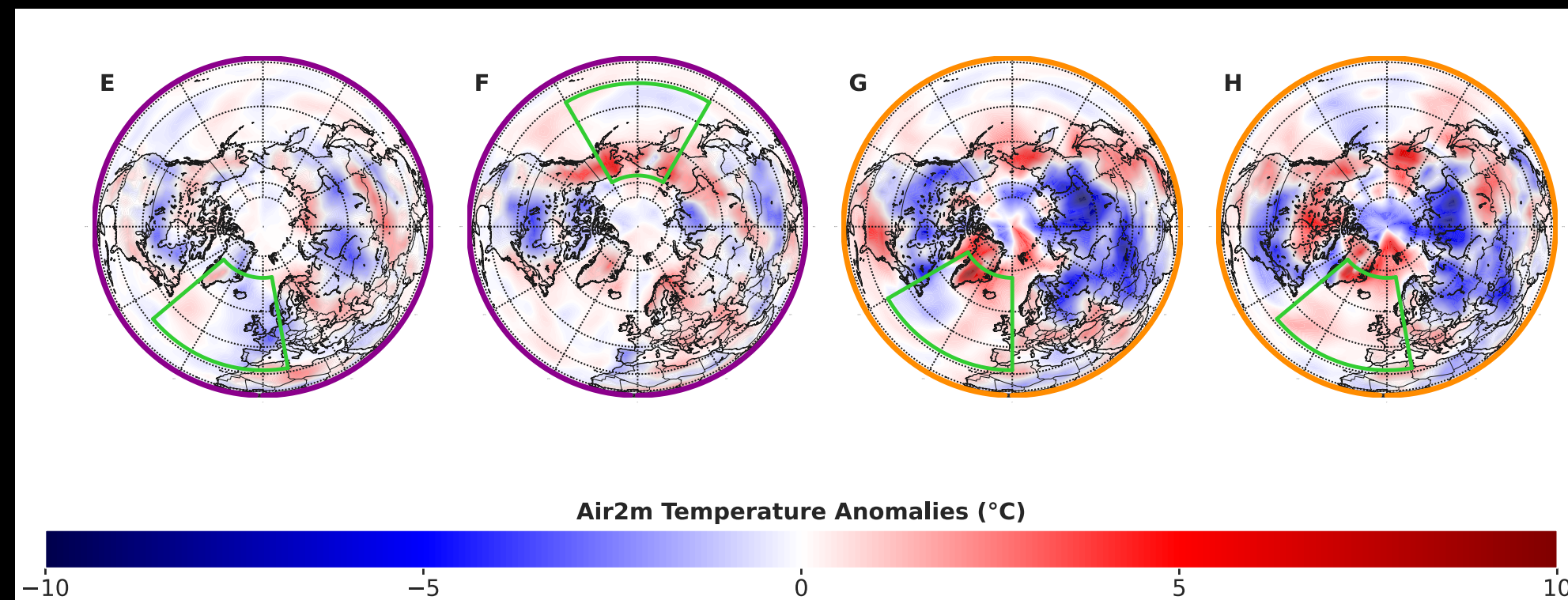
Density comparison of N-D point clouds

- Characterise and quantify local density differences
- **Simple, statistically principled and deterministic** (no NN's)
- Trivially parallelizable
- No assumptions on two pdfs
- Built in 'density equalisation' \Rightarrow Capability to extract mass contributing to over/under dense regions
- Out of the wash \rightarrow Global measure of discrepancy

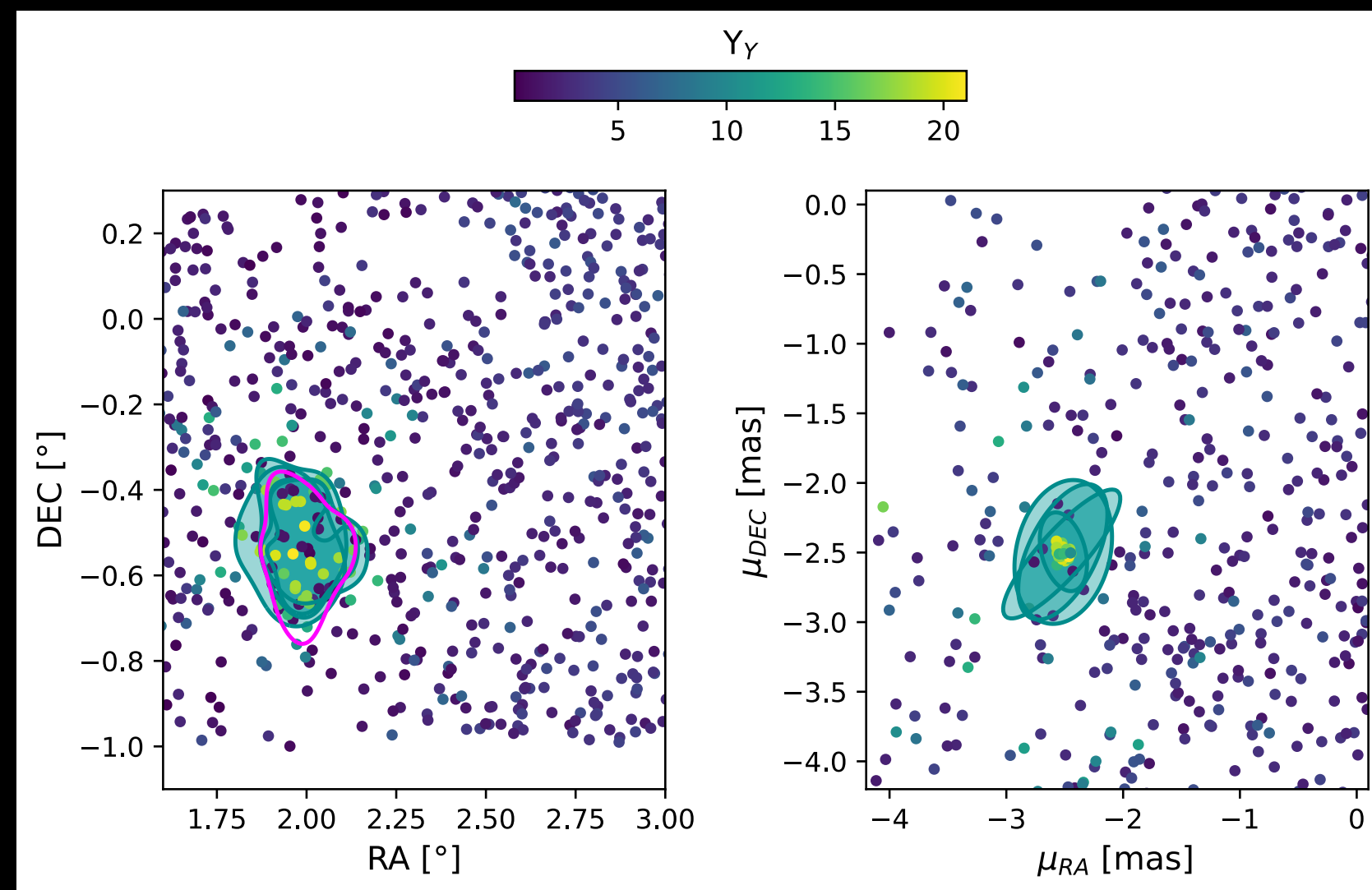


⇒Poster...Wednesday session!

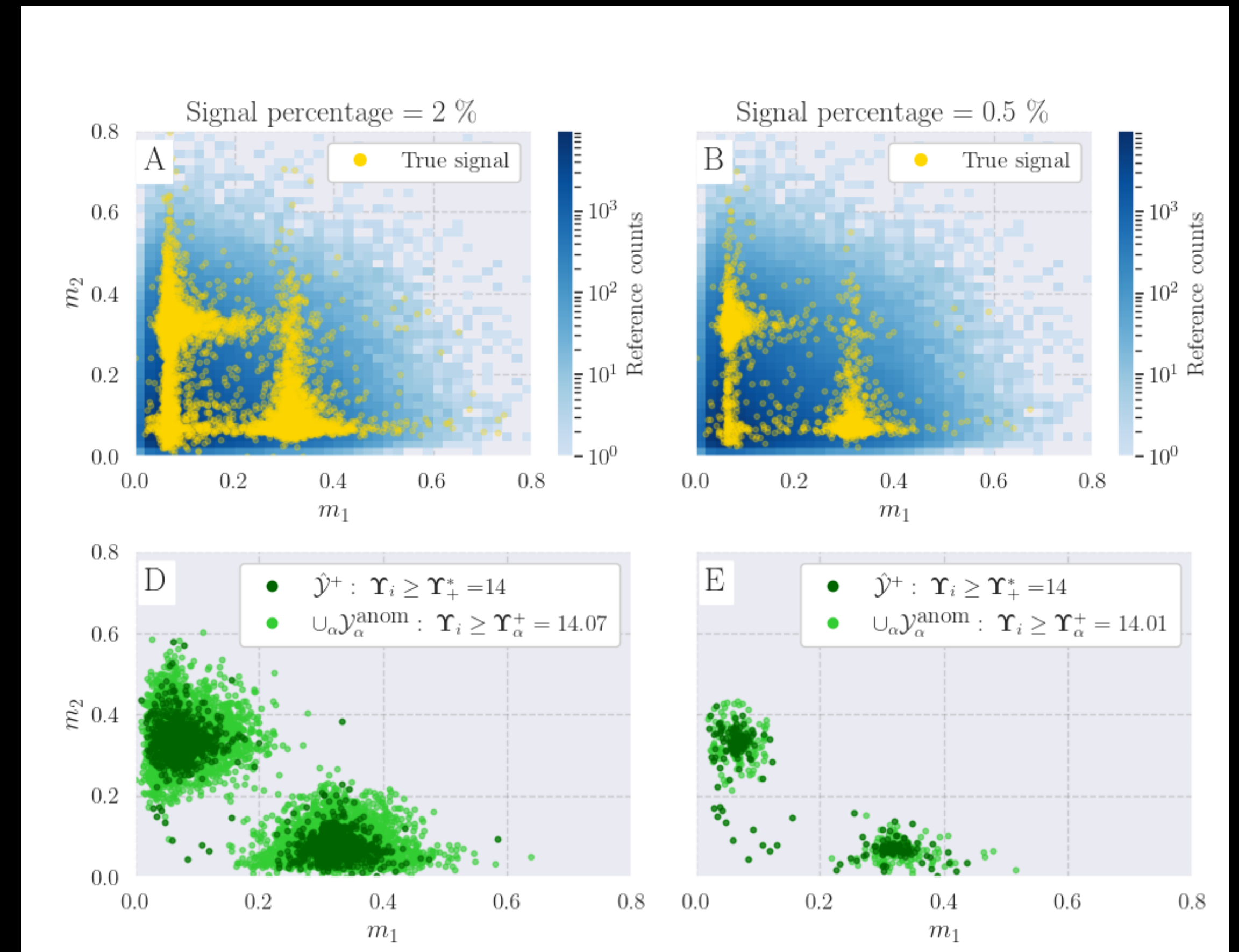
- Global temperature and pressure at 2m



- Faint dwarf searches



- Two sample Anomaly detection



...and a few other applications for LHC data