

UHECR dipole and quadrupole from **joint** Auger and TA data

Combining Auger and TA data achieves **full sky coverage** and thus allows for an **assumption-free** determination of the dipole and quadrupole of UHECR flux.

Analysis steps:

- Step 1** Cross-calibration of energy scales using the common declination band. For the first time, **constant energy rescaling is NOT assumed**.
- Step 2** Calculation of dipole and quadrupole **in 3 energy bins from joint data**.

Results: The dipole and quadrupole components of UHECR flux are determined **in 3 energy bins at highest energies with no assumptions on higher multipoles**.

- ▶ results are compatible with Auger-only results within uncertainties
- ▶ uncertainties are reduced, particularly on z-components