

UHECR mass composition from arrival directions with the Telescope Array SD

- New method of UHECR composition study based on their arrival directions and energies measurement
- Key assumptions:
 - Sources are numerous and located in LSS
 - EGMF is not extreme: $B < 1 \text{ nG}$, $\lambda > 200 \text{ kpc}$
- TA SD data favors proton fraction increasing and iron fraction decreasing with energy from 10 EeV up to $E = 100 \text{ EeV}$
- At $E > 100 \text{ EeV}$ data favors pure iron or even more deflected particles
- Results almost independent of GMF properties