

Large Scale Environments of Nearby AGN

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In collaboration with
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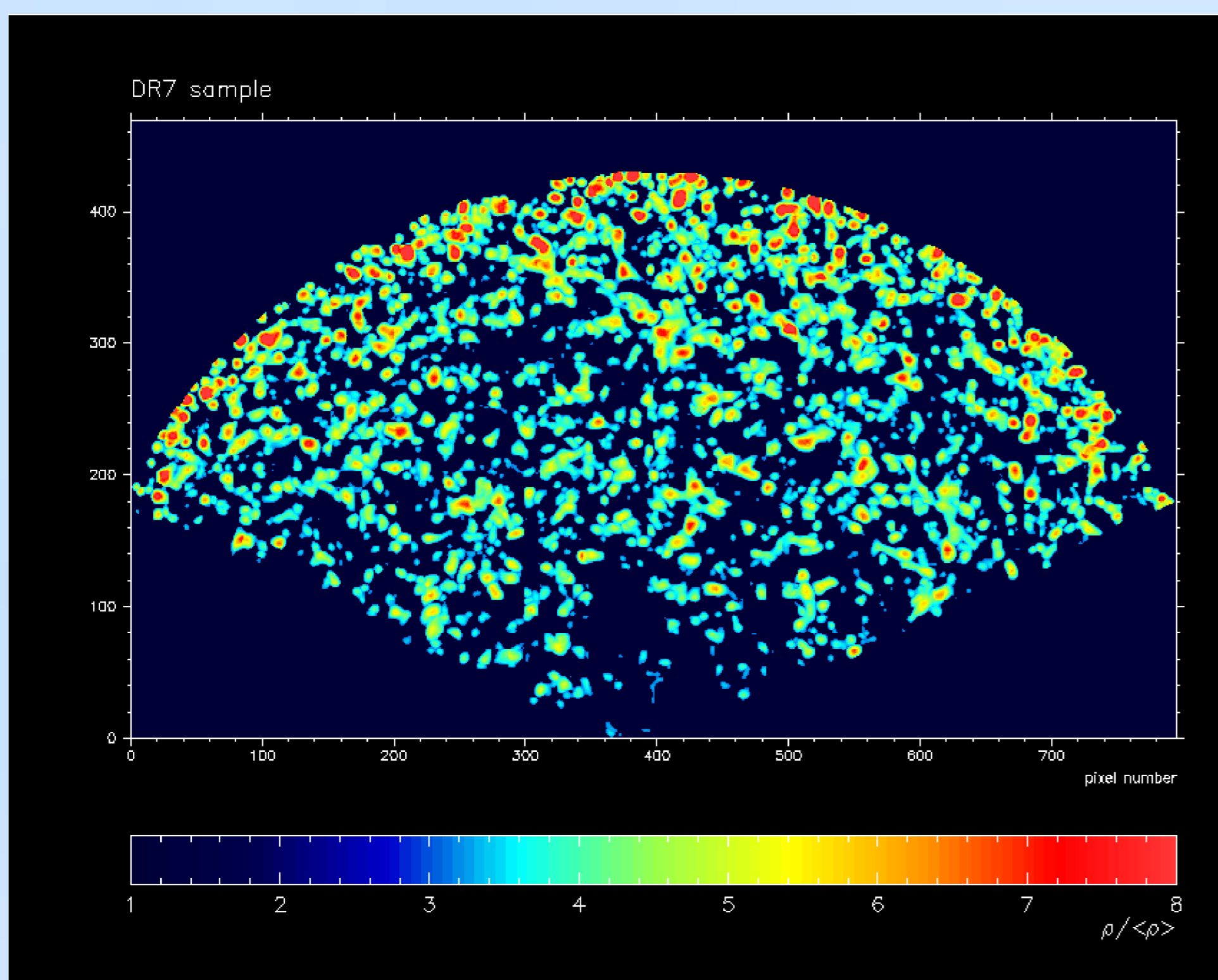


Fig. 1. Luminosity-density field based on luminous red galaxies in the SDSS DR7. Red spots are the densest supercluster cores, dark blue areas represent voids.

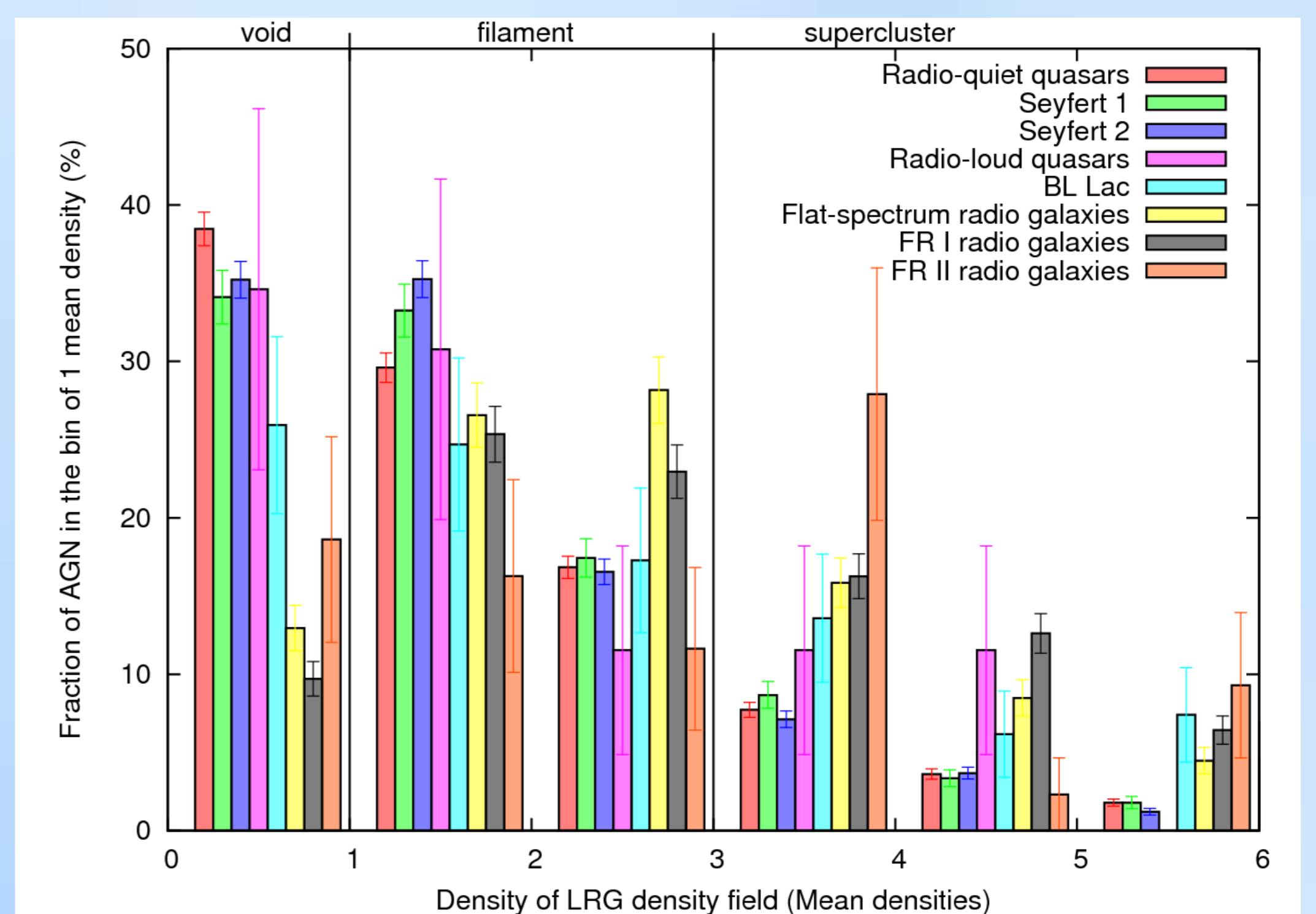


Fig. 2. Distribution of different types of AGN in different environments.

- Properties of galaxies depend on their environment, even on supercluster scale (Tempel et al. 2011, A&A, 529, 53).
- Active nuclei affect the evolution of galaxies → How are AGN distributed in different environments?
- We used a luminosity-density field (Fig. 1) constructed of luminous red galaxies to study the large scale environments of AGN.
- Our results: Quasars and Seyfert galaxies are mostly in void regions, radio galaxies more often in superclusters. The distributions of all different types are shown in Fig.2.
- The environments of radio galaxies depend on redshift: higher densities around $z \sim 0.4$ radio galaxies than those at $z \sim 0$. No redshift dependence in the environments of other types of AGN.
- First results on SDSS DR5 quasars were published in Lietzen et al. 2009, A&A, 501, 145 – a new paper will come out soon.