

COLD FRONTS IN X-RAY RELAXED GROUPS

FABIO GASTALDELLO

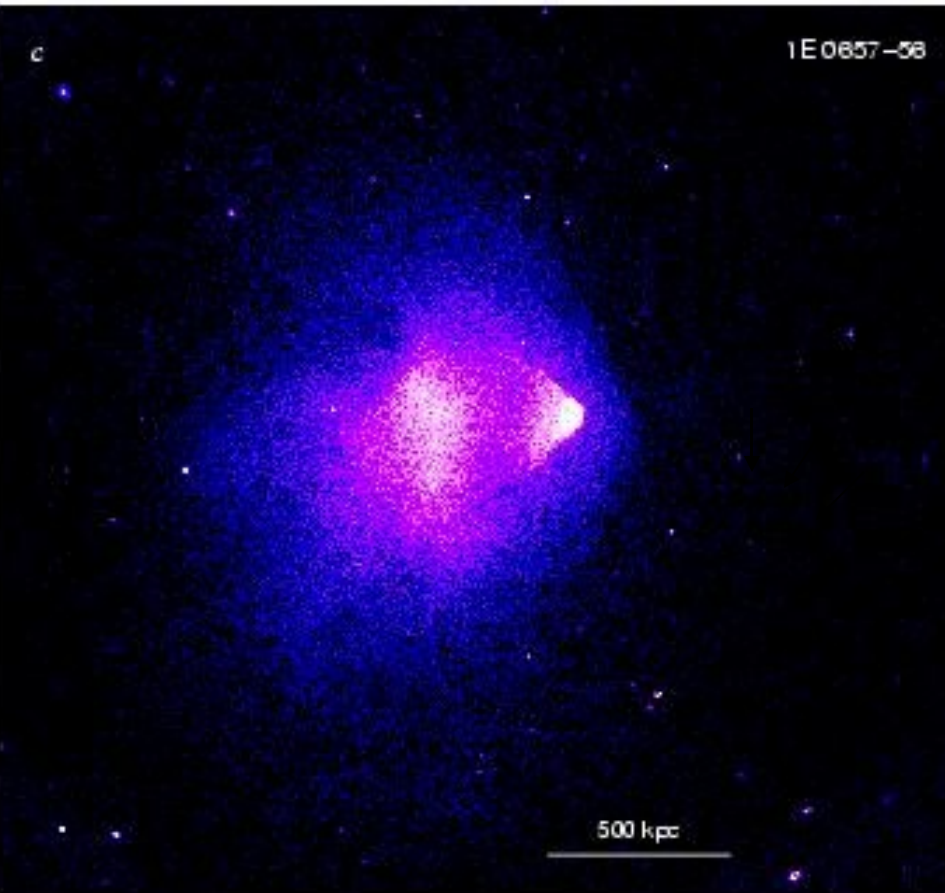
INAF-IASF MILANO

UC IRVINE

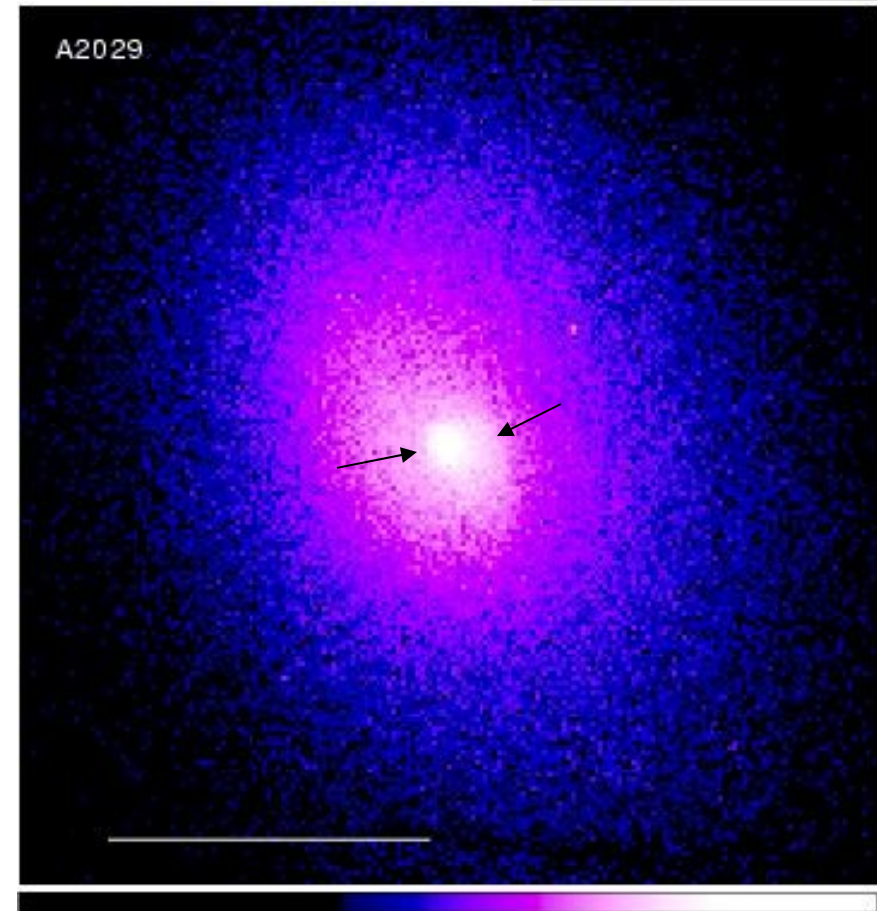
OUTLINE / MOTIVATION

3. COLD FRONTS (see Simona's Astrosiesta talk) AND DYNAMICAL STATE
4. COLD FRONTS IN THE RELAXED GROUP NGC 5044
5. THE CLASS OF COLD FRONTS IN RELAXED GROUPS: ANOTHER EXAMPLE IN IC 1860 ...

COLD FRONTS IN CLUSTERS



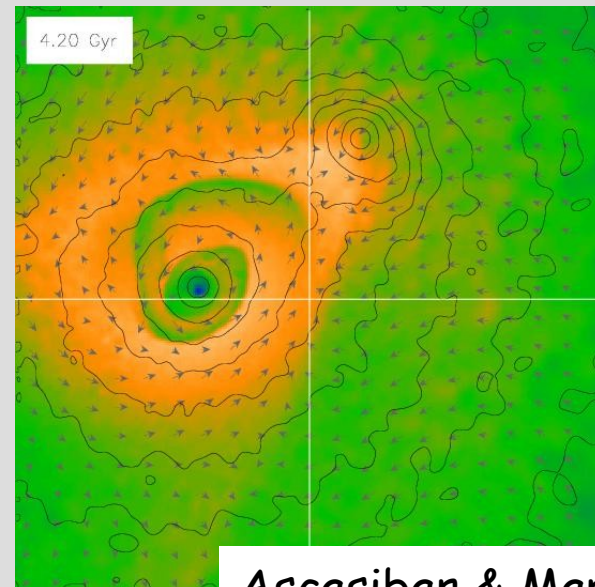
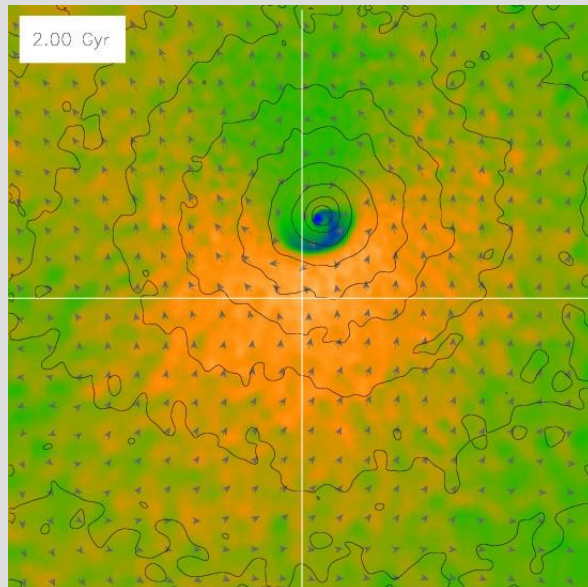
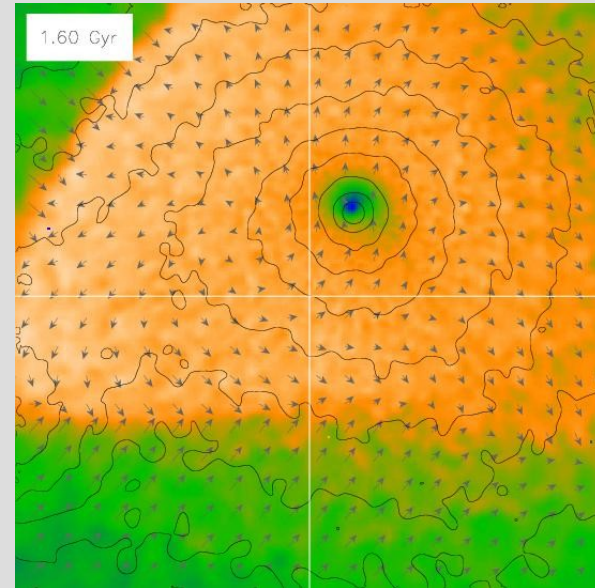
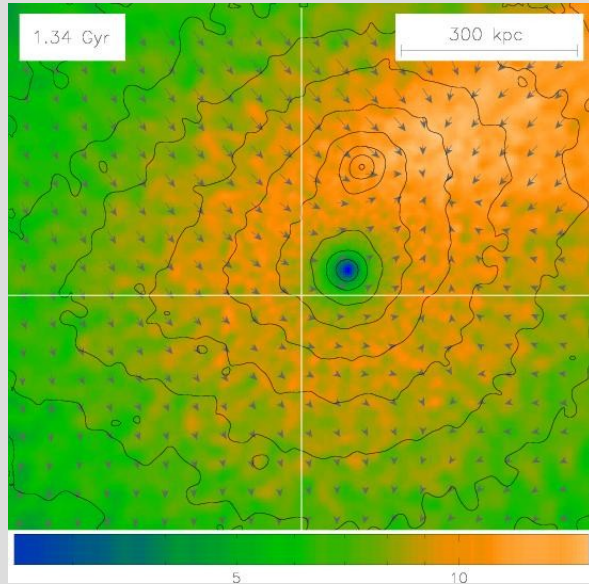
IN MERGING CLUSTERS



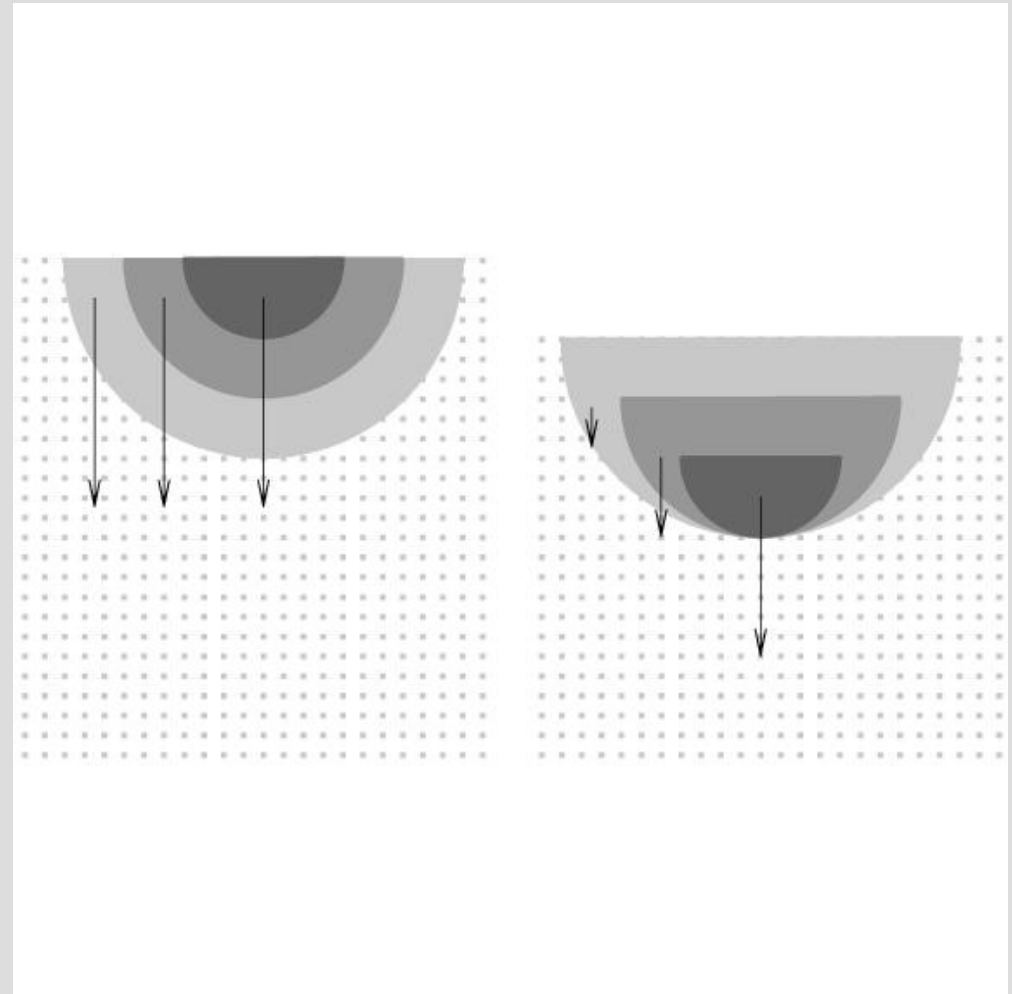
IN RELAXED CLUSTERS

Markevitch & Vikhlinin 07

COLD FRONTS IN CLUSTERS

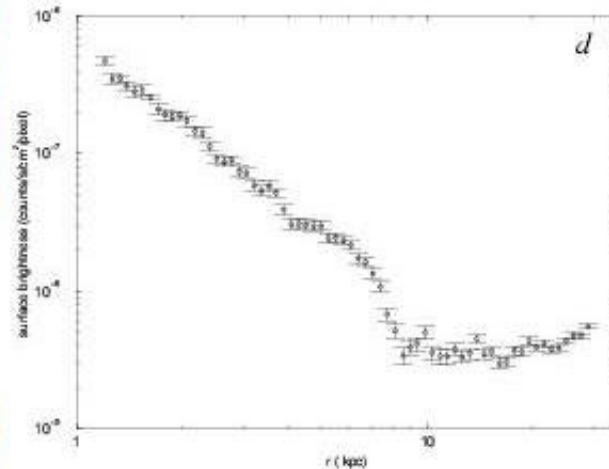
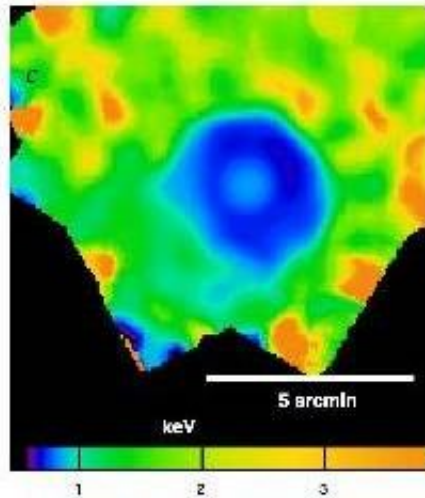
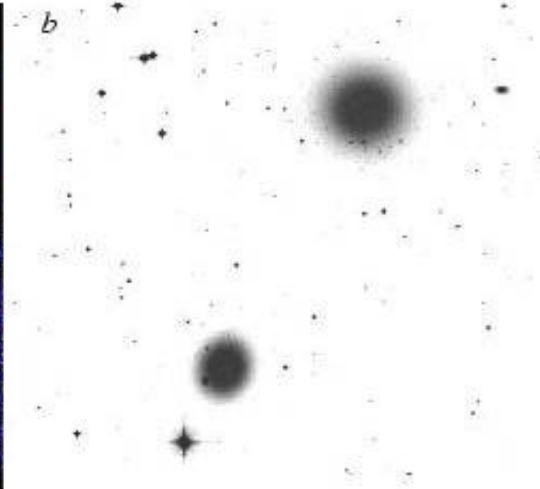
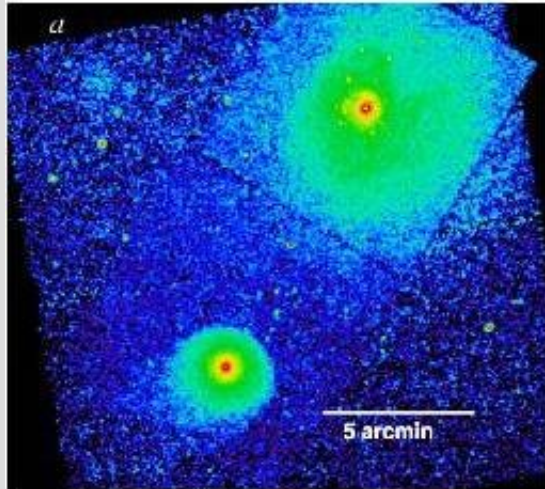


COLD FRONTS IN CLUSTERS



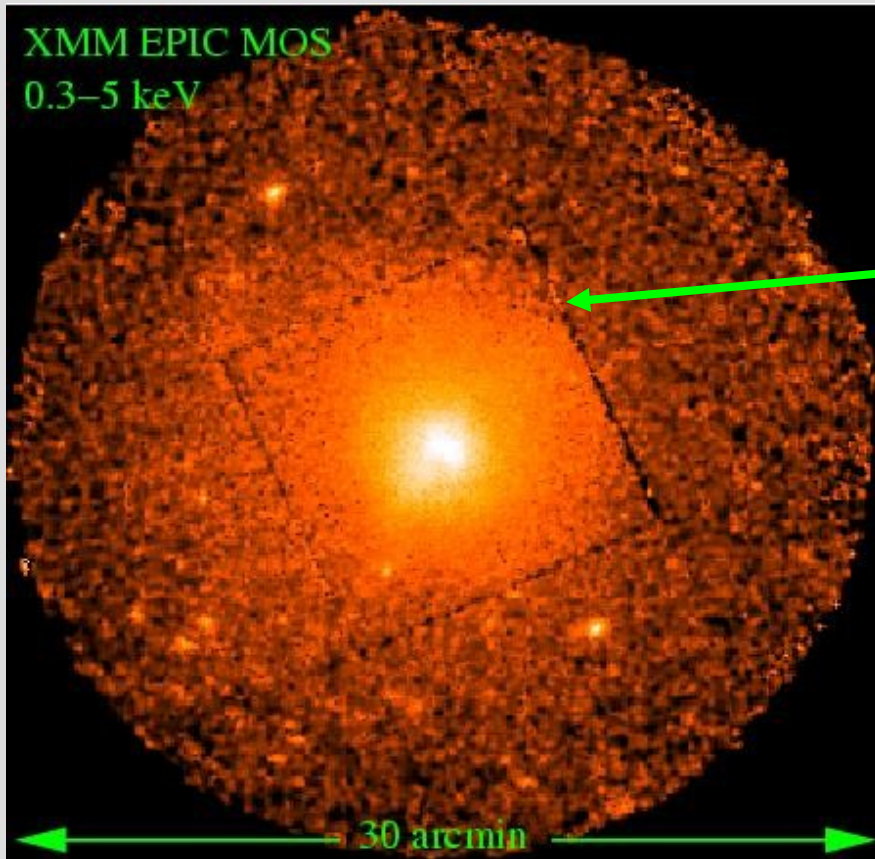
Markevitch & Vikhlinin 07

HOW ABOUT GROUPS ?



EXAMPLES IN MERGING SYSTEMS, e.g. NGC 1404 IN FORNAX (Machacek+05)

COLD FRONTS IN NGC 5044

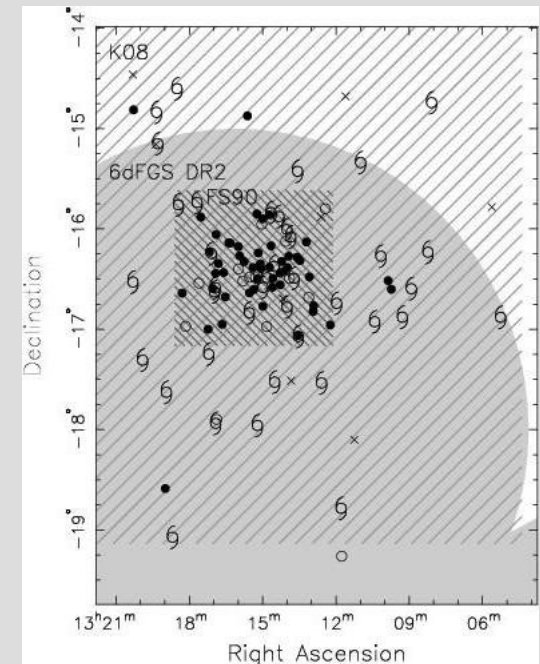
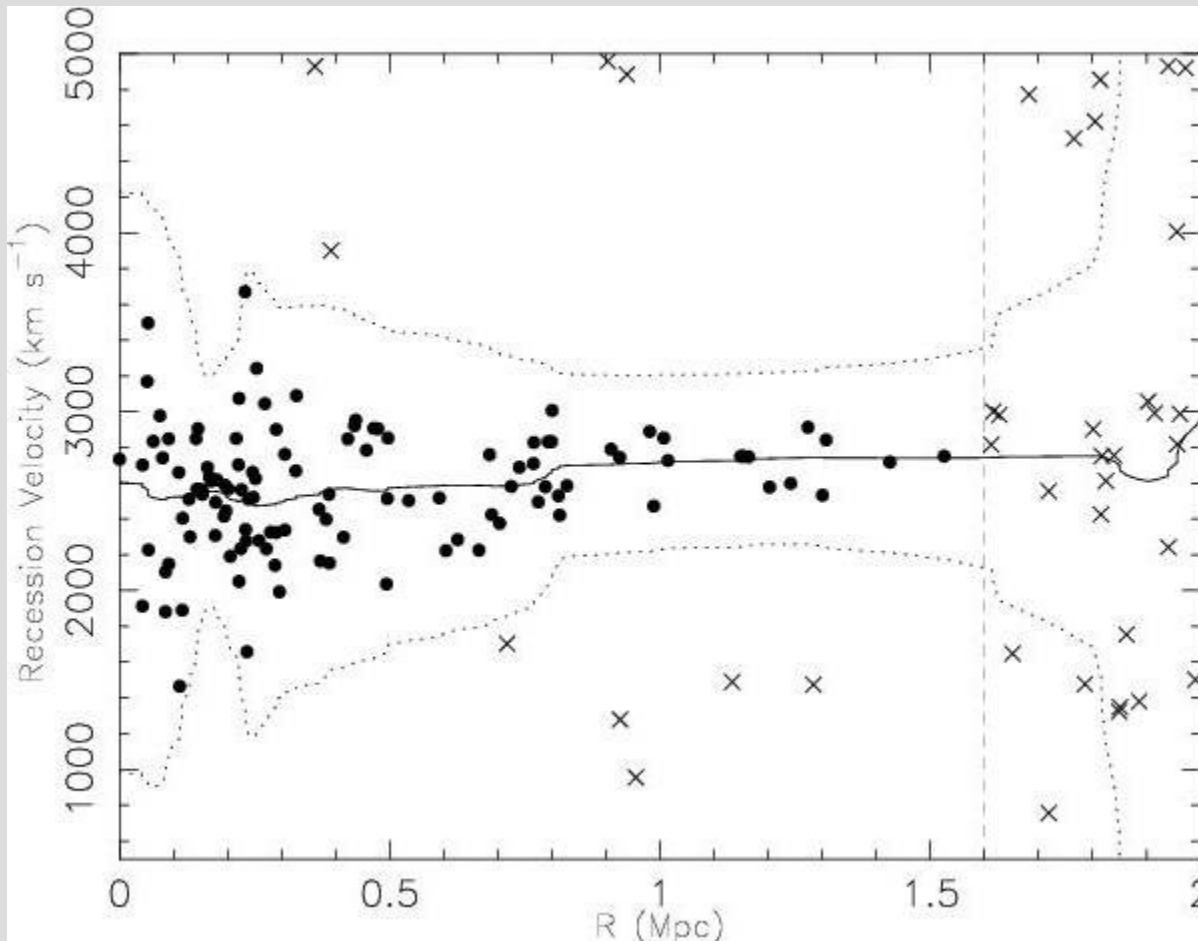


FIRST BRIEF MENTION OF A
POSSIBLE COLD FRONT IN THE
RELAXED GROUP NGC 5044
(BUOTE+02)

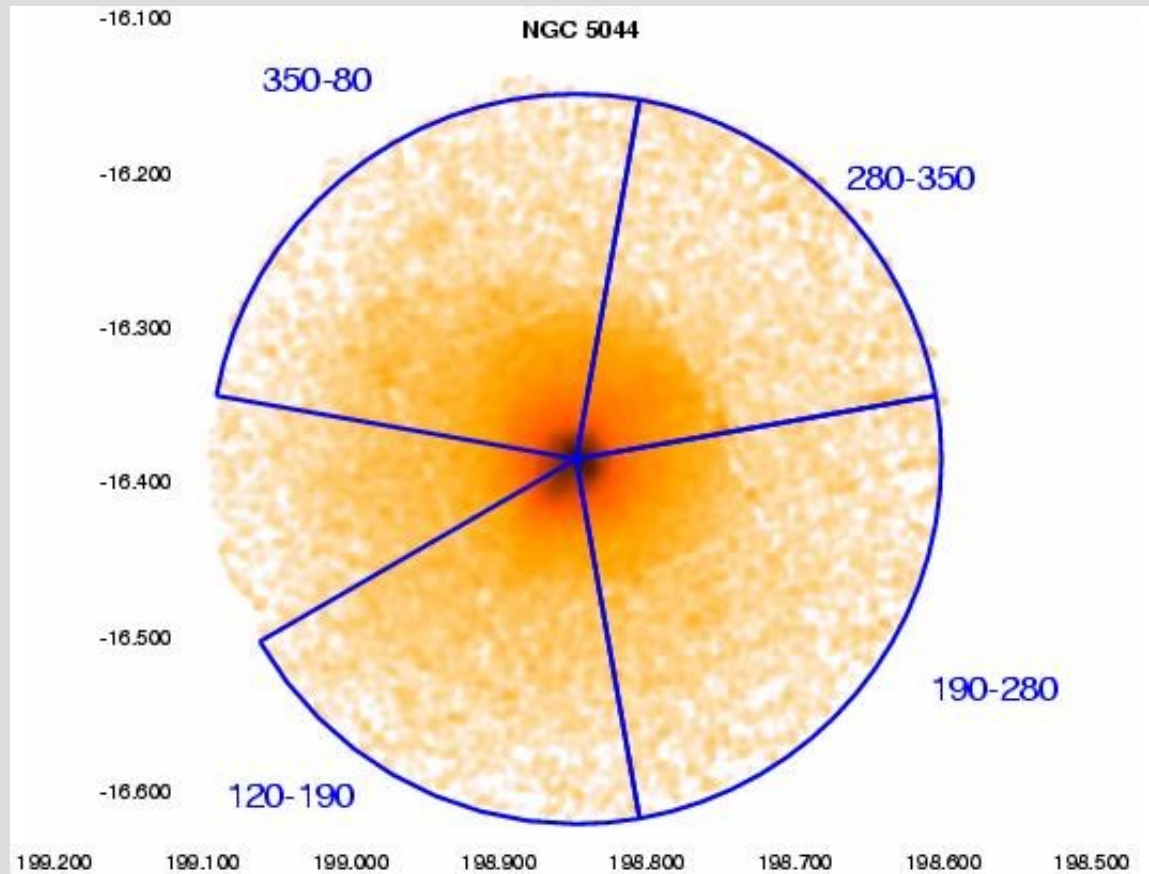
COLD FRONTS IN NGC 5044

MENDEL+08 STUDY
OF 111 MEMBERS:

PECULIAR VELOCITY
OF 150 km/s WRT
THE MEAN VELOCITY

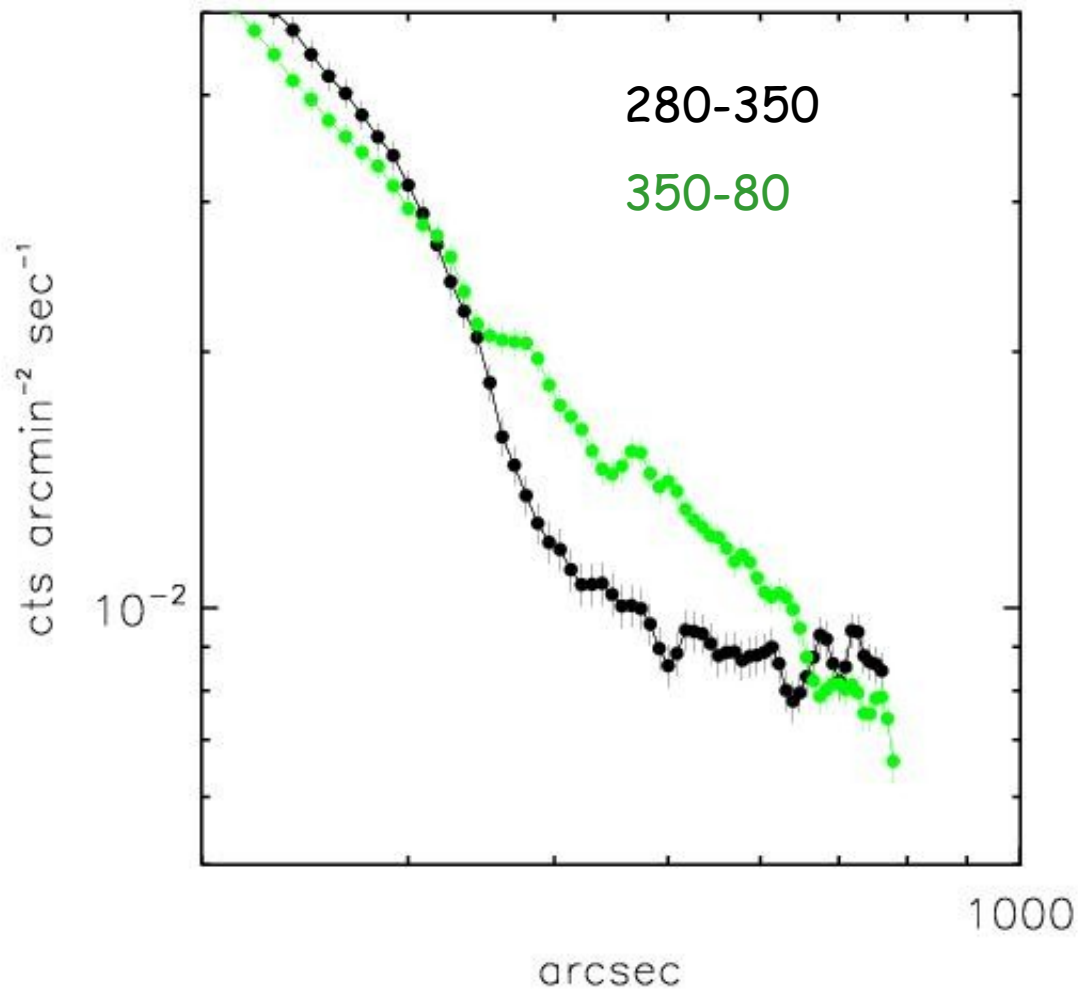


COLD FRONTS IN NGC 5044



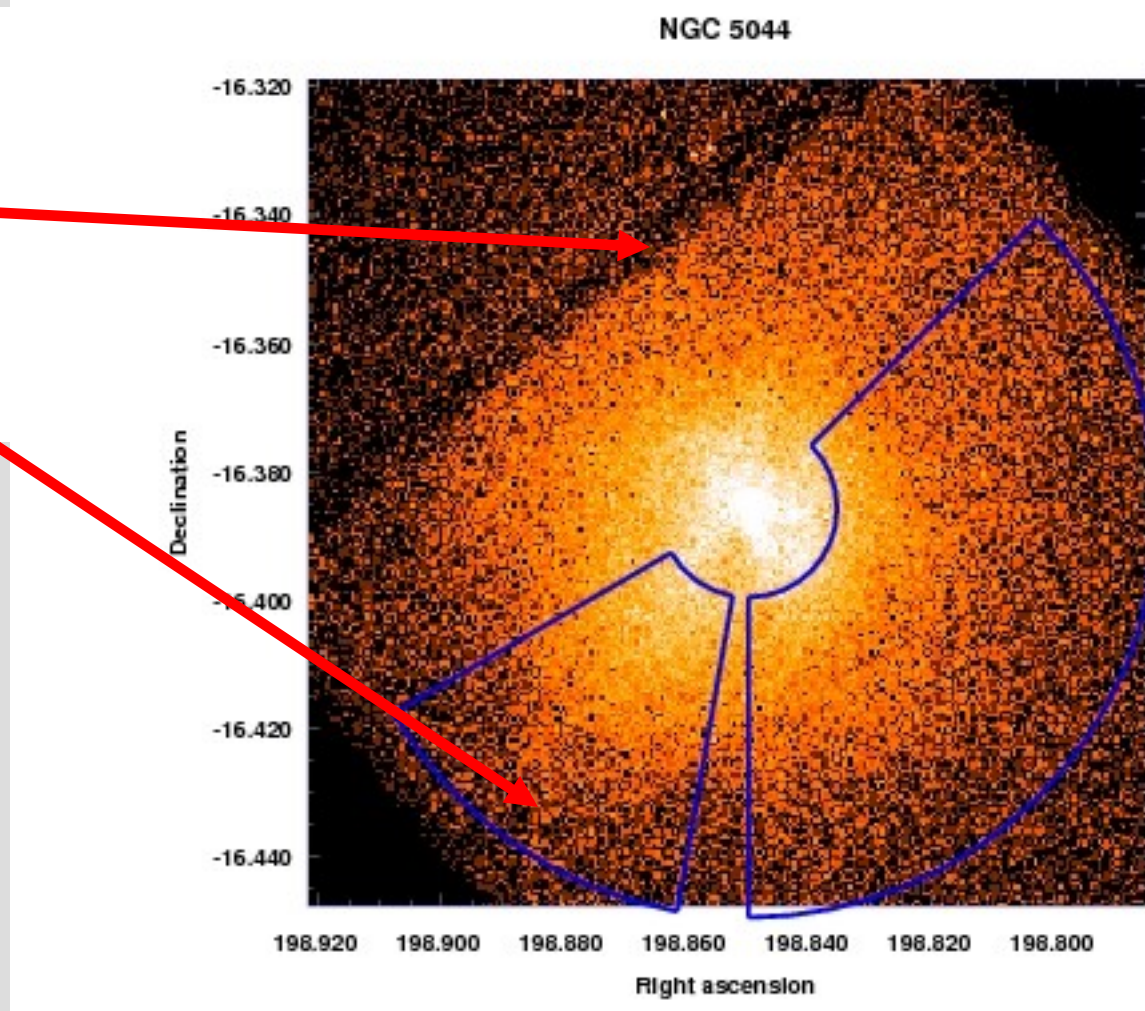
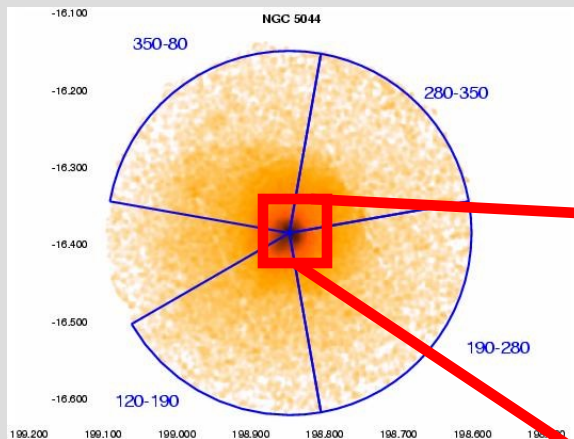
GASTALDELLO+08:
arXiv0807.3526

COLD FRONTS IN NGC 5044



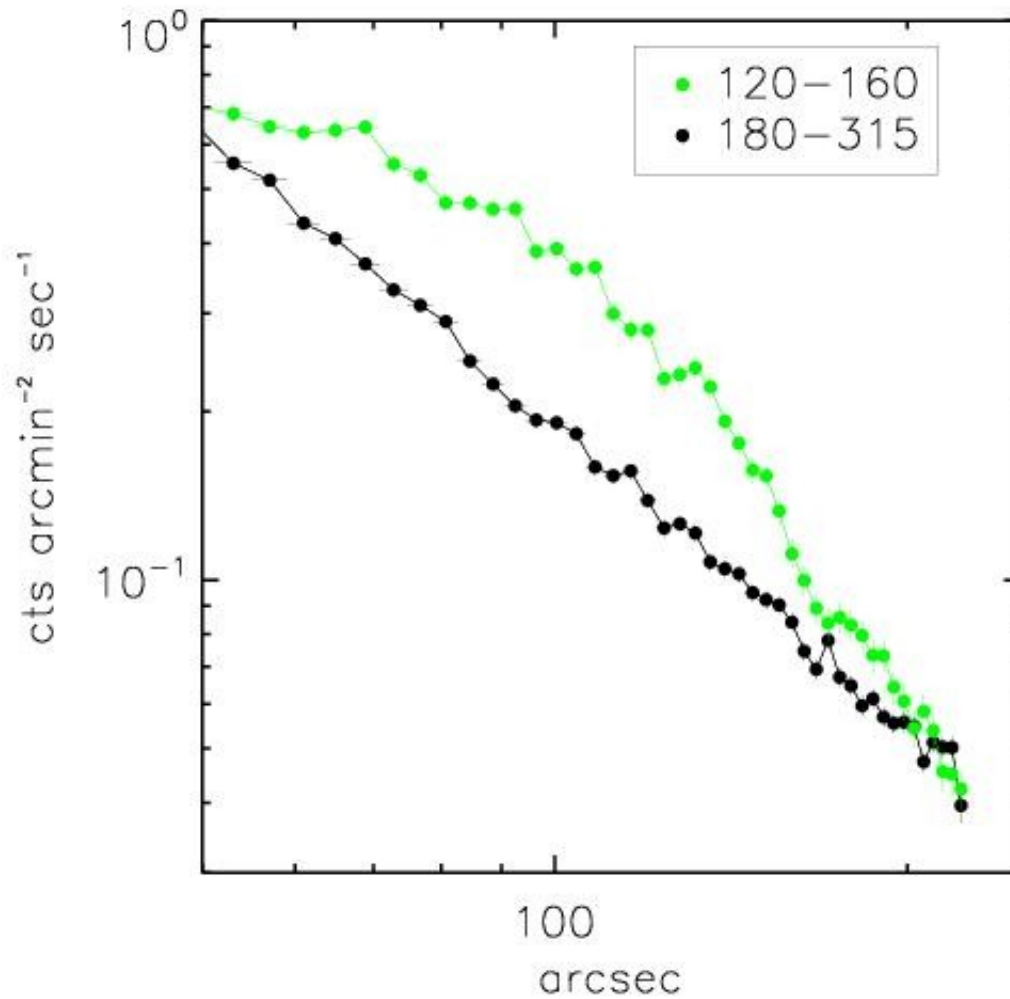
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COLD FRONTS IN NGC 5044



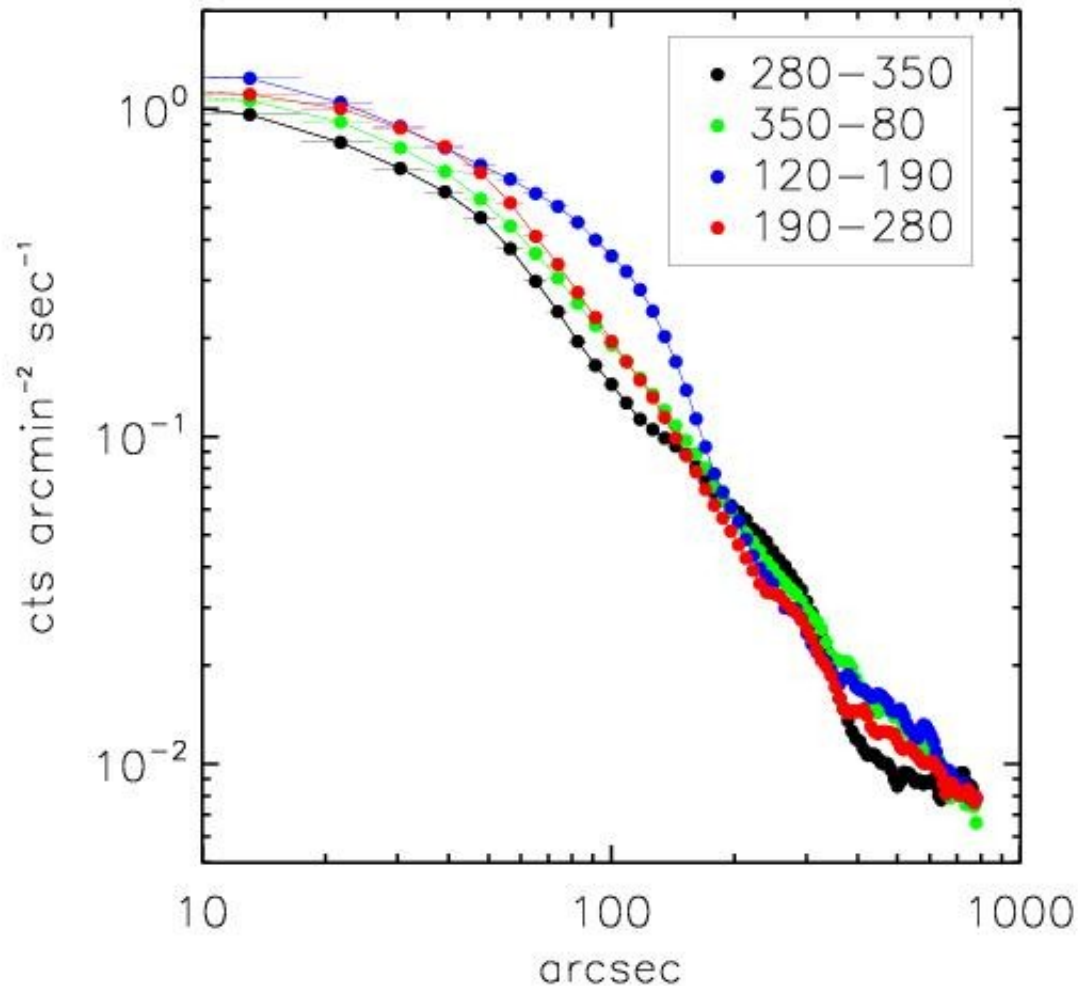
GASTALDELLO+08

COLD FRONTS IN NGC 5044



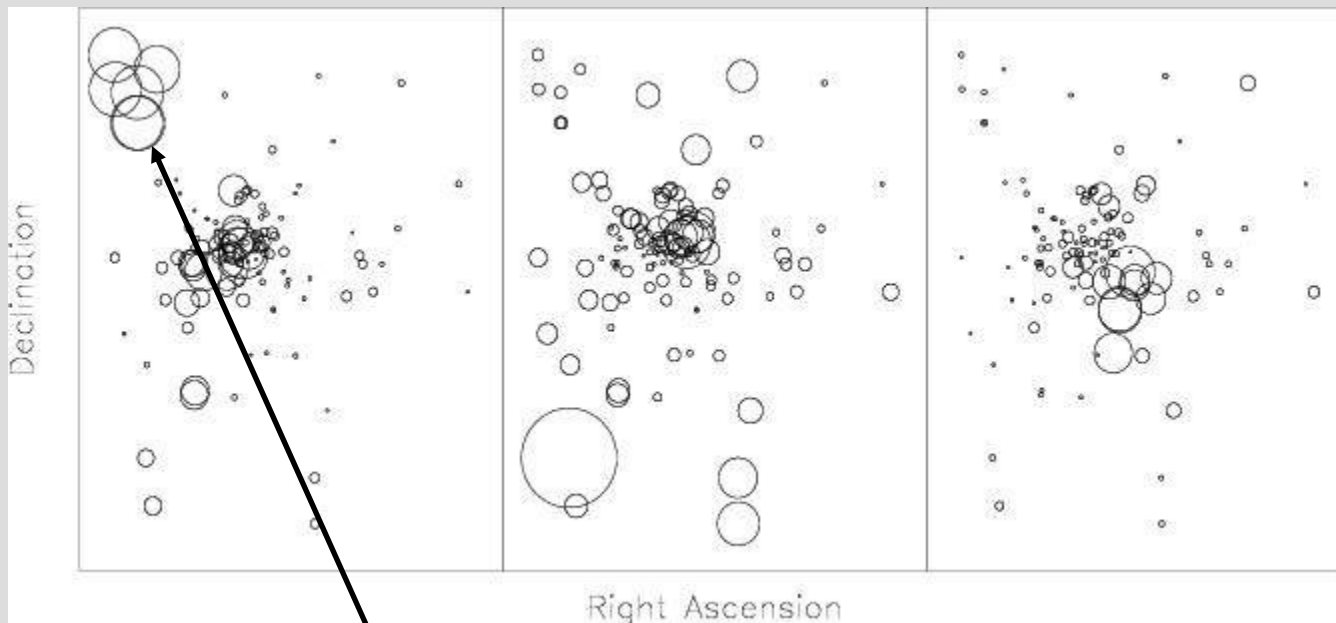
GASTALDELLO+08

COLD FRONTS IN NGC 5044



GASTALDELLO+08

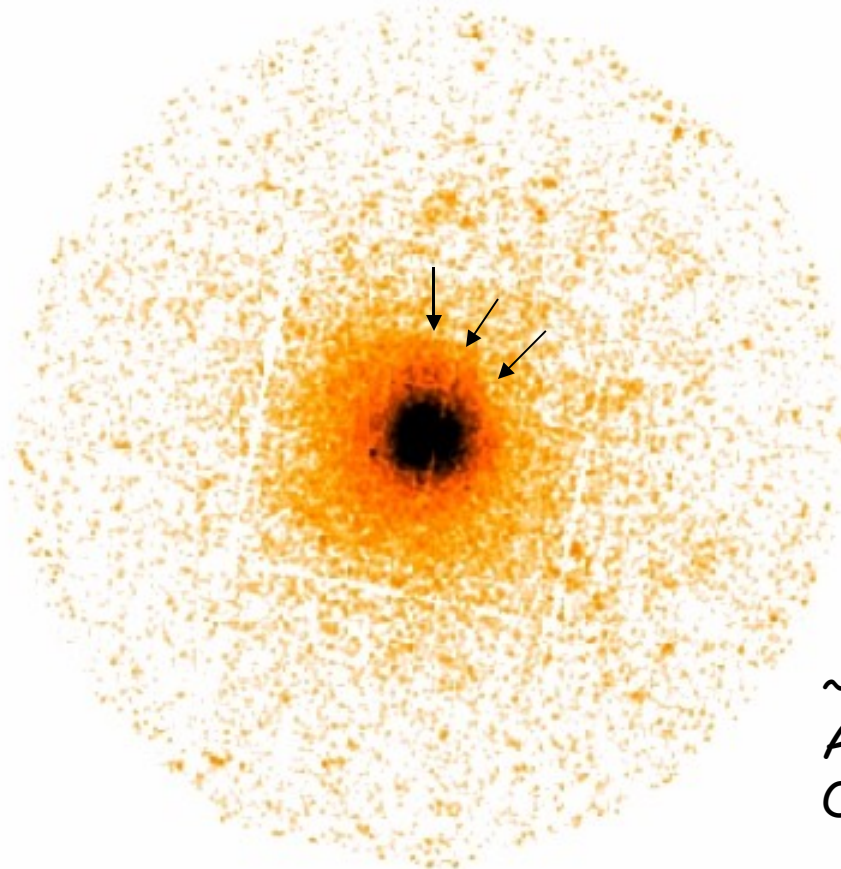
COLD FRONTS IN NGC 5044



DETECTION OF A SUBSTRUCTURE (99.9 %) AT 1.4 Mpc
MENDEL+08

IC 1860

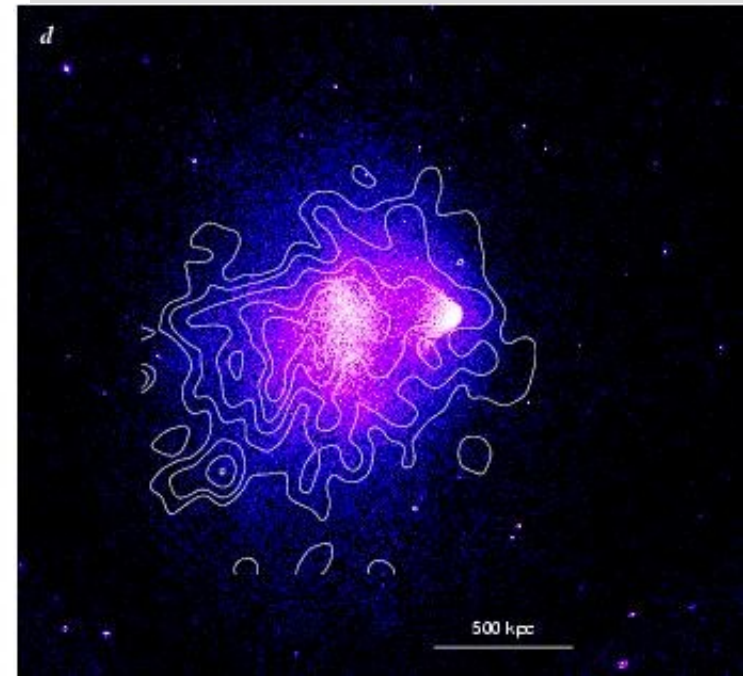
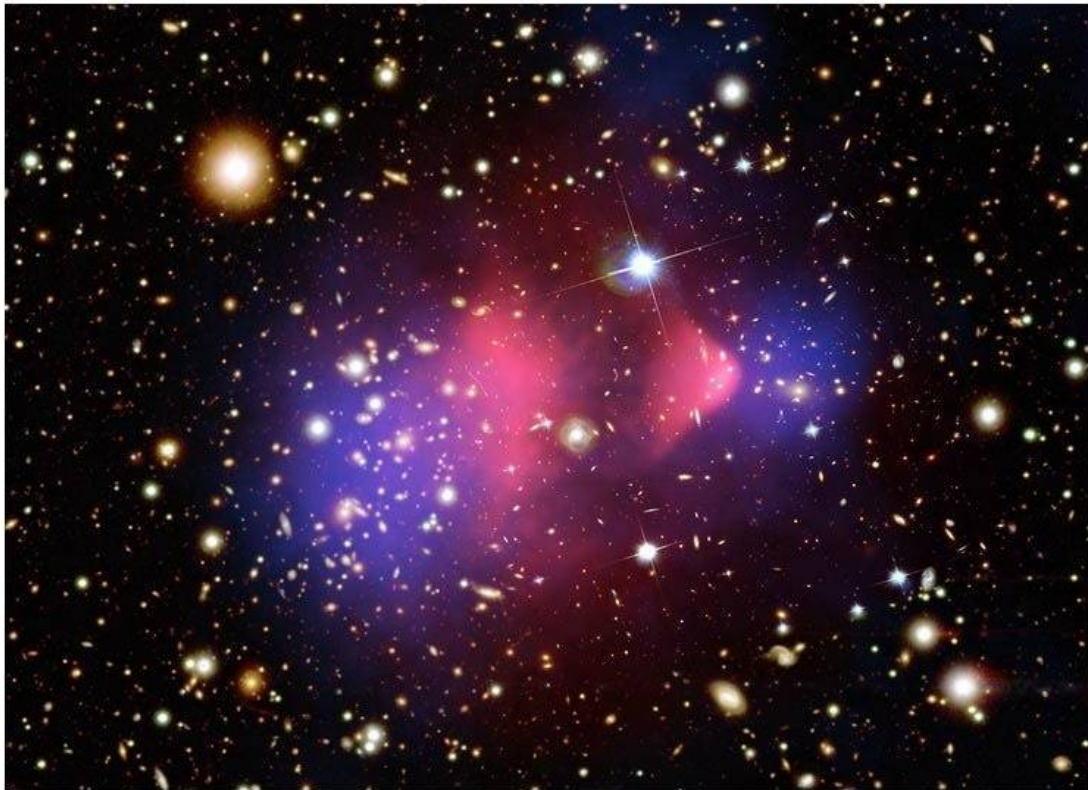
ONE SOURCE MIGHT JUST BE ODD, TWO ARE A CLASS



~ 70 MEMBERS FROM 2DF,
AGAIN PECULIAR VELOCITY
OF THE cD w/ 140 km/s

OK, BUT WHY DO WE CARE ?

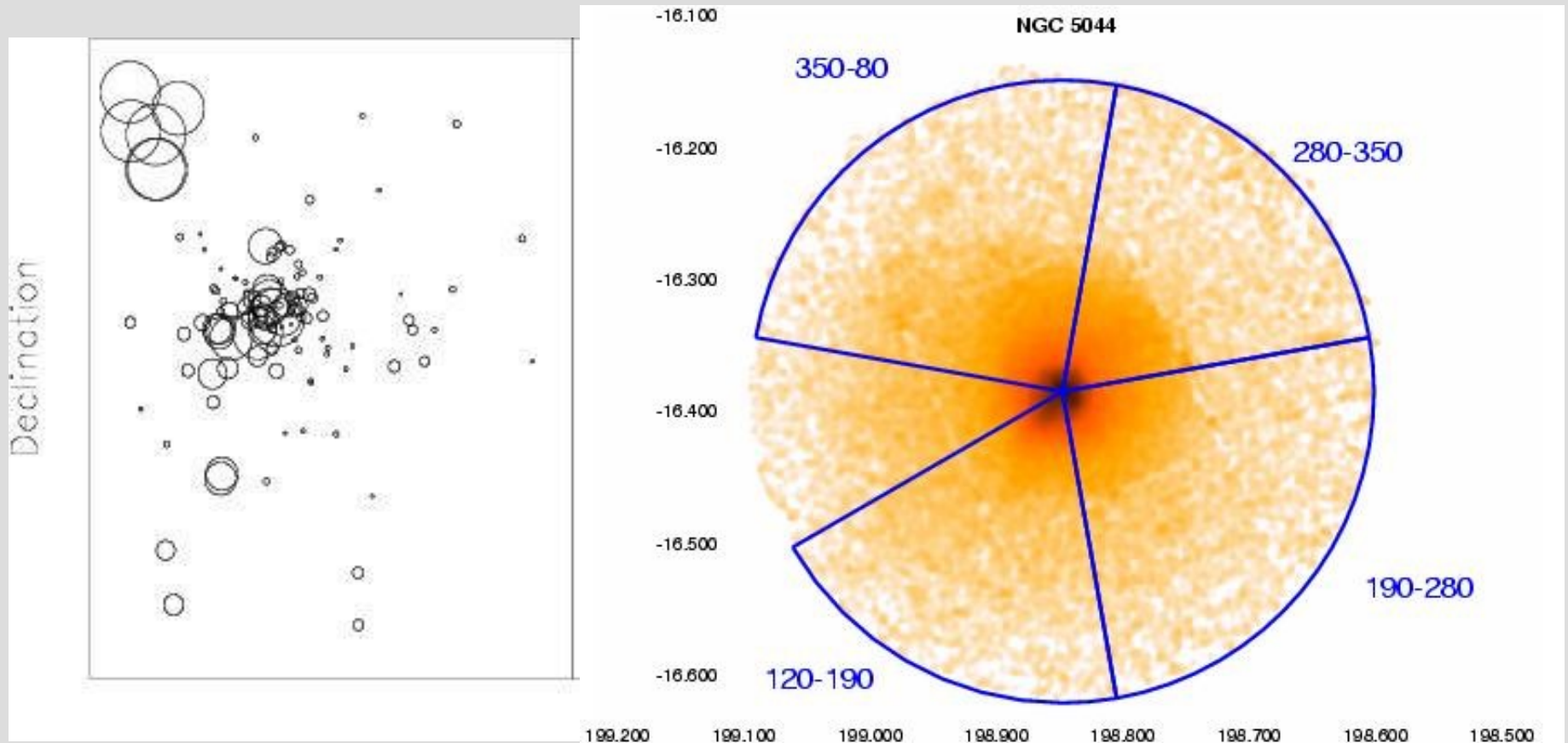
STEPS TOWARDS A PRECISE CHARACTERIZATION OF THE DYNAMICAL STATE OF A CLUSTER/GROUP THANKS TO MULTI-LAMBDA OBSERVATIONS



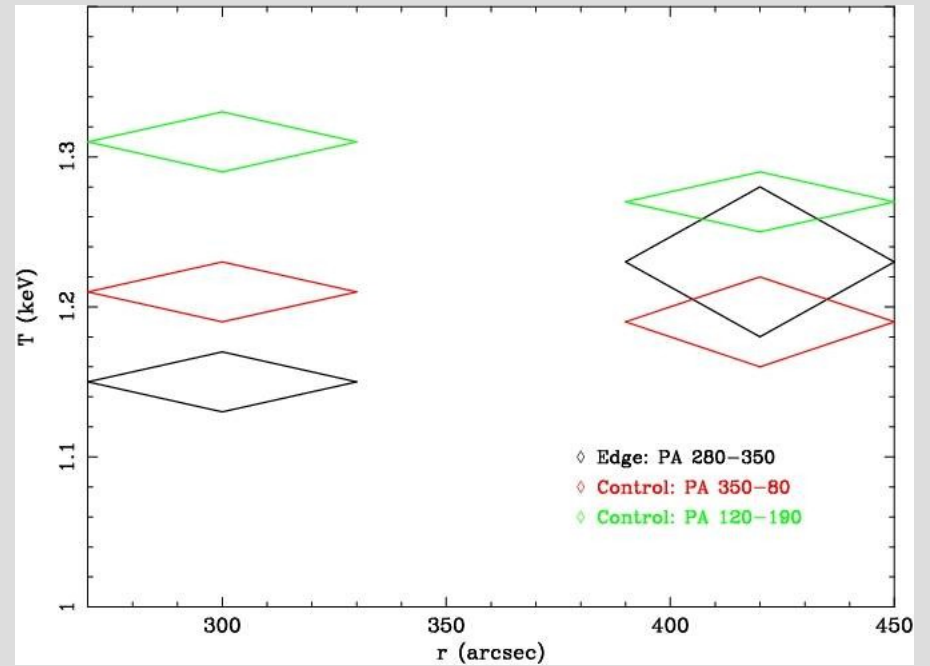
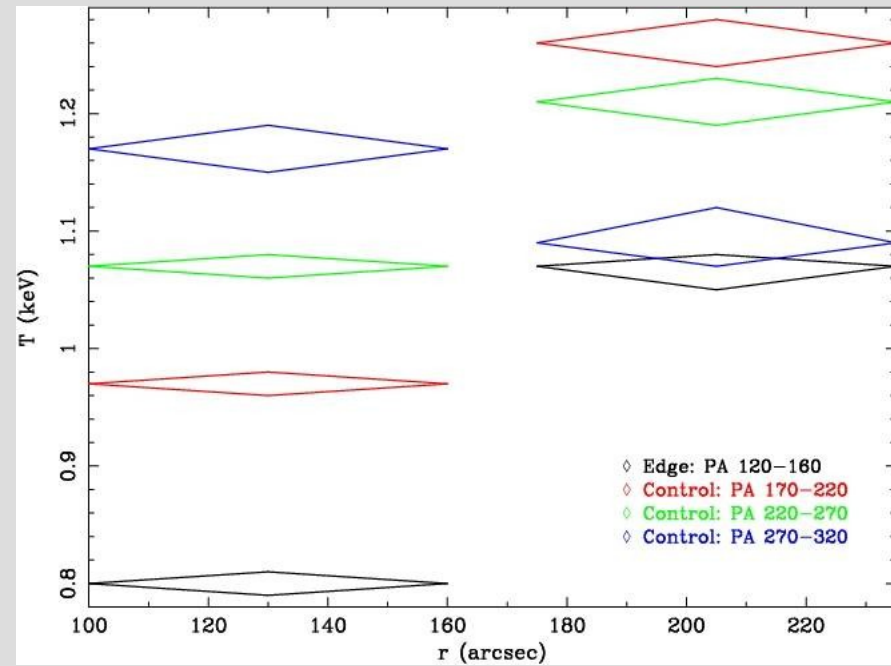
Markevitch & Vikhlinin 07

OK, BUT WHY DO WE CARE ?

STEPS TOWARDS A PRECISE CHARACTERIZATION OF THE DYNAMICAL STATE OF A CLUSTER/GROUP THANKS TO MULTI-LAMBDA OBSERVATIONS



COLD FRONTS IN NGC 5044



ENTROPY PROFILES

Entropy profiles for groups $M_{\text{vir}} < 10^{14}$ solar masses

