

Joint Discussion #2 at the IAU General Assembly in Rio de Janeiro, 2009.

Title: Diffuse Light in Galaxy Clusters

Dates: August 6-7, 2009

Duration: 1.5 days

Location: IAU General Assembly in Rio de Janeiro, Brazil

Coordinating IAU Division: Division VIII – Galaxies and the Universe

Supporting IAU Divisions/Commissions: Divisions: VIII (Galaxies and the Universe), VI (Interstellar Matter). Commissions: C28 (proposing), C47, C34 and WG on Planetary Nebulae.

SOC (All confirmed):

M. Arnaboldi (IT: co-chair) & O.E. Gerhard (D: co-chair)

C. Adami (F),

R. Ciardullo (USA),

K.C. Freeman (AUS),

L. Mayer (CH),

C. Mendes de Oliveira (BR),

S. Okamura (J),

S. White (D),

A. Zabludoff (USA)

The scientific program includes 14 invited talks of 20 min + 5 min questions, 10 contributed talks of 10 min + 5 min questions and 12 posters.

JD#2 - Title of the talks and speakers (19.07.09) – August 6, 2009

09:00 - 10:30 - Distribution of Diffuse Light in Cluster and Groups – Photometry

- a. Clusters at $z=0$
 - i. **09:00 – 09:25** Diffuse light in the Virgo cluster: C. Mihos (Invited talk)
 - ii. **09:25 – 09:50** Diffuse light in the Coma cluster: C. Adami (Invited talk)
 - iii. **09:50 – 10:05** Testing Dark matter with the “star pile” in Abell 545: the faintest cD or the brightest intracluster light ? : R. Salinas
- b. Groups at $z=0$ – compact and fossil groups
 - i. **10:05 – 10:30** Diffuse light and intragroup star-forming regions in compact groups: C. Mendes de Oliveira (Invited talk)

10:30 – 11:00 Coffee break

11:00 - 12:45 - Distribution of Diffuse Light in Cluster and Groups – Photometry (cont.)

- ii. **11:00 – 11:15** Wavelet analysis of diffuse optical intragroup light in compact groups of galaxies : C. Da Rocha
- c. Clusters at $z=0.3$
 - i. **11:15 – 11:40** Intracluster light in moderate redshift clusters: J.J. Feldmeier (Invited talk)
 - ii. **11:40 – 12:05** Statistical properties of the intracluster light at $z\sim 0.25$: S. Zibetti (Invited talk)
 - iii. **12:05 – 12:20** The diffuse medium of an X-ray cluster at $z\sim 0.3$: J. Melnick

Kinematics of Intracluster stars – individual stars and absorption line spectroscopy

- a. **12:20 - 12:45** The kinematics of intracluster stars: A. Zabludoff (Invited talk)

12:45 – 14:00 Lunch break

14:00 – 15:35 Kinematics of Intracluster stars – individual stars and absorption line spectroscopy (cont.)

- b. Intracluster planetary nebulae and globular clusters
 - i. **14:00 – 14:25** Kinematics of diffuse light in the Virgo cluster core from planetary nebulae: M. Arnaboldi (Invited talk)
 - ii. **14:25 – 14:50** Dynamics of cluster cores from planetary nebulae velocities: O. Gerhard (Invited talk)
 - iii. **14:50 – 15:05** The kinematics of intracluster planetary nebulae in Hydra I cluster: G. Ventimiglia
 - iv. **15:05 – 15:20** Planetary nebulae in NGC 1399: the kinematics of a cD halo: E. McNeil

15:25 – 16:00 Coffee break

16:00 – 17:30 Intracluster stellar populations – [Fe/H] and age distribution

- a. **16:00 – 16:25** Planetary nebulae as tracers of stellar populations: R. Ciardullo (Invited talk)
- b. **16:25 – 16:50** The intracluster red giant star population in the Virgo cluster: P. Durrell (Invited talk)
- c. **16:50 – 17:15** Intracluster globular clusters and ultra-compact dwarfs: M. Hilker (Invited talk)
 - i. **17:15 – 17:30** Intergalactic globular clusters: M. West

JD#2 - Title of the talks and speakers (19.07.09) – August 7, 2009

09:00 – 10:30 Intracluster stellar populations – [Fe/H] and age distribution (cont.)

- i. **09:00 – 09:15** Stellar kinematics and line strength indices in early-type galaxy halos: L. Coccato

09:15 – 09:40 Poster presentations I

Cosmological simulations of cluster and group formation/ Origin of diffuse light

- a. **09:40 – 10:05** Cluster and group formation in Λ CDM: S. White (Invited talk)
- b. **10:05 – 10:30** Galaxy evolution in clusters and groups : L. Mayer (Invited talk)

10:30 – 11:00 Coffee break

11:00 – 12:20 Cosmological simulations of cluster and group formation/ Origin of diffuse light (cont.)

- i. **11:00 – 11:15** Galaxy properties in clusters: dependence on the environment: H. Muriel
- c. Building up of cDs and diffuse light
 - ii. **11:15 – 11:40** Simulation of diffuse light in clusters: K. Dolag (Invited talk)
 - iii. **11:40 - 11:55** Extended ionized and molecular gas emission in galaxy clusters: R. Oonk

11:55 – 12:15 Poster presentations II

12:15 – 12:50 Discussion

12:50 – 14:00 Lunch break

List of Poster Papers

1. ABS N. 123: Eduardo Cypriano et al. “Shrinking of cluster ellipticals: a tidal stripping explanation and implications for the intracluster light”
2. ABS N. 210: Marcelo Bryrro Ribeiro “ Differential density statistics of the galaxy distribution and the luminosity function”
3. ABS N.450: Margarita Rosado et al. “ Diffuse light in the Seyfert’s Sextet”
4. ABS N.855: Tibério Borges Vale et al. “ Environmental effects on the structure of galaxy discs”
5. ABS N.992: Cristina Furlanetto et al. “Detection of gravitational arcs in galaxy clusters”
6. ABS N.1877: Walter Augusto Santos et al. “ Photometric redshifts for SDSS galaxies using locally weighted regression”
7. ABS N.1951: Julio Saucedo et al. “ A study of the galaxy population in the region of A1781”
8. ABS N. 1962: Yasuhiro Hashimoto et al. “ Multi-wavelength study of cluster morphology and its implications on the scaling relations , mass estimate, large scale structure, and evolution of galaxies”.
9. ABS N. 2076: Steven Michael Crawford et al. “ The evolution of cluster galaxies and the diffuse intracluster light”
10. ABS N. 2341: Simon Nicholas Kemp et al. “ From cDs to diffuse structures: faint light in galaxies using Schmidt and CCD data”
11. ABS N. 2728: Mangala Sharma et al. “ Tracing galaxy group dynamical histories through diffuse intergalactic light”
12. ABS N. 2947: Sadanori Okamura et al. “ Observation of intracluster diffuse light in the Coma cluster”
13. ABS N. 2990: Roderik Overzier “Examining the Spiderweb: forming a BCG and its intracluster light at $z=2$ ”
14. ABS N. 3002: Nieves Castro-Rodriguez et al. “Intracluster light in the Virgo cluster: large scale distribution”