

## Rosati Piero

Position: Full Astronomer at ESO - European Southern Observatory  
(Garching bei München)

Period covered: ESO Staff since 1997



### I. Scientific Work

Observational Cosmology

X-ray and Optical Studies of Distant Galaxy Clusters

Galaxy Formation and Evolution

Cosmic X-ray Background/AGN Evolution

Gravitational Lensing

### II. Conferences and educational activities

#### II a. Conferences and Other External Scientific Works

- April 2010 - "Structure Formation: IXO synergies with the E-ELT and Euclid"

Invited talk presented at the "IXO Science Meeting", Paris

- May 2010 - "The Baryonic and Dark Matter content of Galaxy Clusters Across Cosmic Time"

Invited talk presented at the "Societ`a Astronomica Italiana" meeting, Naples

- June 2010 - "The Dark Matter and Baryonic content of Distant Galaxy Clusters"

Contributed talk presented at "CL J2010+0628: from Massive Galaxy Formation to Dark Energy", at IPMU, Kashiwa, Japan

- July 2010 - "The Baryonic and Dark Matter Content of the Most Distant Galaxy Clusters"

Invited talk presented at Galaxy clusters: observations, physics and cosmology", Garching bei M`unchen

- September 2010 - "Distant Clusters as Probe of Structure Formation and Cos-mology"

Colloquium presented at Milano-Brera Observatory, Italy

#### II b. Work With Students

Supervision of two students at ESO

### III. Service activities

#### III a. Within ICRANet

- Lectures at University of Nice for the International Relativistic Astrophysics Ph. D. (IRAP)

"Structure Formation and Cosmology with Galaxy Clusters", Nice, France (Sep 28-30, 2010)

- Lectures at University of Nice for the IRAP-Erasmus European PhD program "Baryons and Dark

Matter in Galaxy Clusters", Nice, France (Feb 15-17, 2010)

#### III b. Outside ICRANet

- Member of the E-ELT Science Working Group

- Topical Editor of Il Nuovo Cimento B – Area Astrophysics

- Junior PI in Cluster of Excellence "Origin and Structure of the Universe" (Garching)

#### IV. Other

PI of ESO Large Programme: Dark Matter Mass Distributions of Hubble Treasury Clusters and the Foundations of  $\Lambda$ CDM Structure Formation Models

#### 2010 List of Publications

Publications in 2010: refereed and accepted

K.K. Nilsson, O. Moller-Nilsson, P. Rosati, M. Lombardi, M. Kuemmel, H. Kuntschner, J.R. Walsh, R.A.E. Fosbury 2010 Stellar properties of  $z \sim 1$  Lyman-break galaxies from ACS slitless grism spectra, *A&A*, in press (arXiv:1009.1619)

R. Demarco, R. Gobat, P. Rosati, C. Lidman, A. Rettura et al. 2010 Star Formation Histories in a Cluster Environment at  $z \sim 0.84$ , *ApJ*, in press (arXiv:1009.3986)

V. Strazzullo, P. Rosati, M. Pannella, R. Gobat, J.S. Santos, et al. 2010 Cluster galaxies in XMMU J2235-2557: galaxy population properties in most massive environments at  $z=1.4$ , *A&A*, in press (arXiv:1009.1423)

J.D. Silverman, V. Mainieri, M. Salvato, G. Hasinger, J. Bergeron, P. Capak, G. Szokoly, A. Finoguenov, R. Gilli, Rosati et al. 2010 The Extended Chandra Deep Field-South Survey: Optical spectroscopy of faint X-ray sources with the VLT and Keck, *ApJS*, in press (arXiv:1009.1923)

Fassbender R. et al. (19 coauthors including P. Rosati) 2010 A panchromatic view of the galaxy cluster XMMU J1230.3+1339 at  $z = 0.975$  - Observing the assembly of a massive system, *A&A*, in press (arXiv:1009.0264)

Vanzella E. et al. (16 coauthors including P. Rosati) 2010 The Great Observatories Origins Deep Survey: Constraints on the Lyman Continuum Escape Fraction Distribution of Lyman-Break Galaxies at  $3.4 < z < 4.5$ , *ApJ*, in press (arXiv:1009.1140)

B. Sartoris, S. Borgani, C. Fedeli, S. Matarrese, L. Moscardini, P. Rosati, J. Weller 2010 The potential of X-ray cluster surveys to constrain primordial non-Gaussianity, *MNRAS*, 407, 2339

Wang, Y. et al. (16 coauthors including P. Rosati) 2010 Designing a space-based galaxy redshift survey to probe dark energy, *MNRAS*, in press (arXiv:1006.3517)

Schwobe, A.D. et al. (25 coauthors including P. Rosati) 2010 XMMU J100750.5+125818: a strong lensing cluster at  $z = 1.082$ , *A&A*, 513, 20

Vanzella, E. et al. (11 coauthors including P. Rosati) 2010 The unusual N IV]-emitter galaxy GDS J033218.92 275302.7: star formation or AGN-driven winds from a massive galaxy at  $z = 5.6$ , *A&A*, 513, 20

I. Balestra, V. Mainieri, P. Popesso, M. Dickinson, M. Nonino, P. Rosati, M. Dickinson, B. Vandame et al. 2010 The Great Observatories Origins Deep Survey - VLT/ISAAC Near-Infrared Imaging of the GOODS-South Field, *A&A*, 511, 50

J. Retzlaff, P. Rosati, M. Dickinson, B. Vandame et al. 2010 The Great Observatories Origins Deep Survey - VLT/ISAAC Near-Infrared Imaging of the GOODS-South Field, *A&A*, 511, 50

M. Chiaberge, A. Capetti, F.D. Macchetto, P. Rosati, P. Tozzi, G.R. Tremblay 2010 Three Candidate Clusters of Galaxies at Redshift 1.8: The "Missing Link" Between Protoclusters and Local Clusters, *ApJ*, 710, L107

M. Puech, P. Rosati, S. Toft, A. Cimatti, B. Neichel, & T. Fusco 2010 Simulating the physics and mass assembly of distant galaxies out to  $z=6$  with the E-ELT, MNRAS, 402, 903

J.E. Geach, A. Cimatti, W. Percival, Y. Wang, L. Guzzo, G. Zamorani, P. Rosati et al. 2010 Empirical H $\alpha$  emitter count predictions for dark energy surveys, MNRAS, 402, 1330

Castellano, M. et al. (24 coauthors including P. Rosati) 2010 Evidence of a fast evolution of the UV luminosity function beyond redshift 6 from a deep HAWK-I survey of the GOODS-S field, A&A, 511, 20

A.Rettura, P.Rosati, M.Nonino, R.A.E.Fosbury, R.Gobat, N.Menci, V.Strazzullo, R.Demarco, H.C.Ford, S.Mei 2010 Formation epochs, star formation histories and morphologies of massive early-type galaxies, in cluster and field environments at  $z=1.2$ : insights from the rest-frame UV, ApJ, 709, 512

#### *Other Publications in 2010*

P. Rosati, S. Borgani, R. Gilli, M. Paolillo, P. Tozzi et al. 2010 "Wide Field X-ray Telescope: Mission Overview", in Memorie della S.A.It, proceedings of the International Conference "WFXT", (Bologna, Nov 2009)

S. Borgani, P. Rosati, B. Sartoris, P. Tozzi, R. Giacconi and the WFXT Team 2010 "Astrophysics and cosmology with galaxy clusters: the WFXT perspective", in Memorie della S.A.It, proceedings of the International Conference "WFXT", (Bologna, Nov 2009)

R. Gilli, P. Tozzi, P. Rosati, M. Paolillo, S. Borgani et al. 2010 "Demography of obscured and unobscured AGN: prospects for a Wide Field X-ray Telescope", in Memorie della S.A.It, proceedings of the International Conference "WFXT", (Bologna, Nov 2009)

J.S. Santos, P. Tozzi and P. Rosati 2010 "Are there cool-core clusters at high-redshift? Chandra results and prospects with WFXT", in Memorie della S.A.It, proceedings of the International Conference "WFXT", (Bologna, Nov 2009)

P. Rosati and the ESO GOODS Team 2010 "ESO-GOODS: Closing the Book, Opening New Chapters", The ESO Messenger, 140, p.50

S. Murray, R. Giacconi, A. Ptak, P. Rosati, M. Weisskopf et al. 2010 "The Wide Field X-ray Telescope Mission: A Digital Sky Survey in X-rays", AIP Conf. Proc., 1248, 549, proceedings of the International Conference "X-ray Astronomy 2009" (Bologna, 7-11 Sept 2009)