

“Clusters of Galaxies: Physics and Cosmology”

ISSI Workshop Program, 20-24 November 2017

Conveners: Andrei Bykov, Marcus Brüggen, Jelle Kaastra, Maxim Markevitch, Maurizio Falanga, Frits Paerels and Rudolf von Steiger

Notice: All presentations are 35' slots including 5' for questions

Monday, 20 November 2017		
Time	Topic	Speaker
09:00-9:45	Registration in ISSI, Hallerstrasse 6, 1 st floor	
Session 1: Introduction		
09:45-10:00	Welcome and Introducing ISSI	Conveners
Session 2: Clusters and Cosmology		
10:00-10:35	Cluster evolution and physics with the SZ effect	Monique Arnaud
10:35-11:10	Cosmological constraints from galaxy clusters	Thomas Reiprich
11:10-11:25	<i>Coffee Break</i>	
11:25-12:00	X-ray, SZ- signal and dark matter in galaxy clusters	Stefano Etori
12:00-12:35	The SZ Effect at High Resolution	Tony Mroczkowski
12:35-13:10	Cluster weak-lensing studies	Nobuhiro Okabe
13:10-14:35	<i>Lunch</i>	
Session 3		
14:35-15:10	Cluster Cosmology from a Simulator's Perspective	Daisuke Nagai
15:10-15:45	Constraining ICM properties through joint X-ray and SZ measurements	Dominique Eckert
15:45-16:20	Probing the Plasma Physics and Kinematics of the Intracluster Medium with X-ray Observations and Simulations	John ZuHone
16:20-16:55	X-ray studies of clusters of galaxies to probe into the Type Ia supernova metal enrichment	Hiroya Yamaguchi
17:00	<i>Welcome Reception</i>	

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Tuesday, 21 November 2017		
Time	Topic	Speaker
Session 4		
09:00-9:35	Systematic X-ray modeling uncertainties and the physics of clusters	Jelle Kaastra
09:35-10:10	X-raying the virialization of the nearest, brightest clusters of galaxies	Aurora Simionescu
10:10-11:45	Dark matter distribution and its evolution	Gabriel Pratt
10:45-11:05	<i>Coffee break</i>	
11:05-11:40	Unravelling the physics of the intracluster medium using cold fronts	Stephen Walker
11:40-12:15	X-ray view of radio relics and hot filaments between two clusters with Suzaku	Hiroki Akamatsu
12:15-13:40	<i>Lunch</i>	
Session 5		
13:40-14:15	The Role of Halo Mass on Thermal Instability and Feedback in Galaxies and Clusters	Brian McNamara
14:15-14:50	When Physics Collide: AGN Feedback in Merging Cluster Environment	Michael Wise
14:50-15:25	Heating vs. cooling in the X-ray emitting atmospheres of giant elliptical galaxies	Norbert Werner
15:25-15:50	<i>Coffee break</i>	
15:50-16:25	Elemental abundances and chemical enrichment in the intracluster medium	Francois Mernier
16:25-17:00	Chemical enrichment of the ICM in galaxy clusters from numerical simulations	Veronica Biffi
17:00-17:35	Probing efficiency of transport processes in the ICM with element sedimentation model	Pavel Medvedev
17:35 – 18:30	Book Introduction	Conveners

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Wednesday, 22 November 2017		
Time	Topic	Speaker
09:00-09:35	Extragalactic magnetic fields from observational point of view	Luigina Feretti
09:35-10:10	The mysteries of diffuse radio sources in clusters	Marcus Brüggen
10:10-10:45	Observations of particle acceleration at galaxy cluster shocks	Reinout van Weeren
10:45-11:00	<i>Coffee break</i>	
11:00-11:35	NuSTAR Observations of Galaxy Clusters: Heating and Acceleration of ICM Electrons during Major Mergers	Daniel Wik
11:35-12:10	Nonthermal emission from merger-driven shocks in galaxy clusters	Hyesung Kang
12:10-12:45	GReET: gently re-energized tails	Francesco de Gasperin
12:45-19:00	Free time to visit the attractions of Bern Also: All ISSI facilities are available for group discussions	
19:00	<i>Workshop Dinner at the Restaurant Altes Tramdepot, Bärengraben</i>	

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Thursday, 23 November 2017		
Time	Topic	Speaker
Session 7		
09:00-09:35	Gamma-rays and neutrinos from clusters: an overview	Fabio Zandanel
09:35-10:10	Giant cosmic tsunamis: reconciling observations and models of cluster radio relic	Andra Stroe
10:10-10:45	Models for the Sausage Relic	Julius Donnert
10:45-11:15	<i>Coffee break</i>	
11:15-11:50	Deciphering merger traces in the ICM - merger history and ICM plasma physics	Elke Roediger
11:50-12:25	AGN Feedback in clusters	Eugene Churazov
12:25-13:40	<i>Lunch</i>	
Session 8		
13:40-14:15	Simulated magnetic field amplification in the turbulent intracluster medium	Franco Vazza
14:15-14:50	Particle acceleration by multiple shocks and non-thermal components in clusters	Andrei Bykov
14:50-15:25	Charge exchange in galaxy clusters	Liyi Gu
16:00-16:20	<i>Coffee break</i>	
16:20-16:55	The Fate of Gas-rich Satellites in Clusters	Evan Scannapieco
16:55-18:30	Discussion and the Book Content	Conveners & All Participants

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Friday, 24 November 2017		
Time	Topic	Speaker
Session 9		
09:00-09:35	Thermodynamic properties of the Intracluster Medium out to R_{200} in the X-COP clusters	Vittorio Ghirardini
09:35-10:10	Clusters WS Summary	Frits Paerels
10:10-10:40	<i>Coffee break</i>	
Session 10 ISSI Book		
10:40-12:00	Discussion of the book (Authors, Book Plans, Actions, Schedule)	Conveners