Ringberg Workshop on

The Lowest-Mass Galaxies and Constraints on Dark Matter

Ringberg Castle, July 30 to August 3, 2001

Scientific Organizing Committee

Eva K. Grebel (MPIA), Robert Braun (NFRA), John S. Gallagher (University of Wisconsin), Hans-Walter Rix (MPIA)

Invited Speakers

Andrea Ferrara (Arcetri Obs.), Maria Gómez-Flechoso (Geneva Obs.), Deidre Hunter (Lowell Obs.), Rodrigo Ibata (Strasbourg Obs.), Pavel Kroupa (U. of Kiel), Steve Majewski (U. of Virginia), Lynn Matthews (NRAO), Ben Moore (U. of Durham), Carlton Pryor (Rutgers U.), Paul Shapiro (U. of Texas), Matt Shetrone (U. of Texas), Bart Wakker (U. of Wisconsin), Lisa Young (New Mexico Tech.)

Preliminary Program

Sunday, July 29, 2001

Please note that the Castle will not open before 16:00.
Parking at the Castle is free of charge. For a description of how to get to Ringberg please see `http://www.rzg.mpg.de/ringberg-castle/anfahrt.html`.

Arrival between 16:00 and 22:00.

18:30 Cold buffet, informal get-together.

Monday, July 30, 2001

8:00	BREAKFAST
SESSION I:	COSMOLOGY AND MISSING SATELLITES
Chair:	Brent Tully
9:00 – 9:05	Introductory remarks
9:05 – 9:45	Paul **Shapiro**, University of Texas, Austin **The Equilibrium Structure of Cosmological Halos: From Dwarf Galaxies to X-ray Clusters**
9:55 – 10:15	Ilian **Iliev**, Osservatorio Astrofisico di Arcetri **Reionization and the Feedback of Radiation on Early Galaxy Formation: Photoevaporation of Cosmological Minihalos**
10:25 – 10:50	BREAK
10:50 – 11:30 TBC	Ben **Moore**, University of Durham **CDM and Missing Satellites**
11:40 – 12:00	Paco **Prada**, Calar Alto Observatory, Almería **Dwarf Satellites: A Probe of the Galaxy Formation Paradigm on Small Scales**
12:10 – 12:30	Maya **Vitvitska**, New Mexico State University, Las Cruces **Origin of angular momentum of dark matter halos**
12:40 – 14:20	LUNCH
SESSION II:	THE OBSERVED GALAXY CENSUS
Chair:	Paul Shapiro
14:20 – 14:50	Jessica **Rosenberg**, CASA, University of Colorado, Boulder **The Low-Mass End of the H I Mass Function**
15:00 – 15:30	Eric **Wilcots**, University of Wisconsin, Madison **H I Searches for Low Mass Companions**
15:40 – 16:10	BREAK
16:10 – 16:50	Jay **Gallagher**, University of Wisconsin, Madison **Dark Matter and Spheroidal Dwarfs in Clusters of Galaxies**
17:00 – 17:30	Eelco **van Kampen**, Institute for Astronomy, University of Edinburgh **Dynamical friction and the survival of galaxy satellites**
17:40 – 18:10	Brent **Tully**, Institute for Astronomy, University of Hawaii, Honolulu **Squelched Galaxies and Dark Halos**
18:20	END
18:30	DINNER

Tuesday, July 31, 2001

8:00	BREAKFAST
SESSION III:	COMPACT HIGH VELOCITY CLOUDS
Chair:	Lisa Young
9:00 – 9:40	Bart **Wakker**, University of Wisconsin, Madison **The HVCs: Local Group objects or not?**
9:50 – 10:30	Robert **Braun**, Netherlands Foundation for Research in Astronomy **Compact High Velocity Clouds: Lowest Mass Constituents of Galaxy Groups?**
10:40 – 11:10	BREAK
11:10 – 11:30	Vincenzo **Antonuccio-Delogu**, Osservatorio Astrofisico di Catania **Heating of the Local Intergalactic Medium by CHVCs**
11:40 – 12:00	Christian **Bruens**, Radioastronomisches Institut, Universität Bonn **Deep H I observations of compact high-velocity clouds**
12:10 – 12:30	Eva **Grebel**, MPIA, Heidelberg **Searches for optical counterparts of CHVCs**
12:30 – 14:20	LUNCH
14:20 – 15:00	**DEBATE: The distribution of CHVCs** Participants: Robert Braun, Bart Wakker, Eric Wilcots, audience
SESSION IV:	DARK MATTER IN SPIRALS AND DISKS
Chair:	Francisco Prada
15:00 – 15:20	Hans-Walter **Rix**, MPIA, Heidelberg **The Nuclei of Low Mass Spirals**
15:30 – 16:00	BREAK
16:00 – 16:30	Lynn **Matthews**, National Radio Astronomy Observatory, Charlottesville **Constraints on Disk Evolution and Dark Matter from Observations of 'Superthin' Spirals**
16:40 – 17:00	Wilfred **Walsh**, Harvard Smithsonian Center for Astrophysics, Cambridge **H I rotation curves from southern galaxies**
17:10 – 17:40	Roeland **van der Marel**, Space Telescope Science Institute, Baltimore **The 3D structure of the LMC from near-IR surveys**
18:30	DINNER

Wednesday, August 1, 2001

8:00	BREAKFAST
SESSION V:	SIMULATIONS AND OBSERVATIONS OF TIDAL TAILS
Chair:	Matthew Shetrone
9:00 – 9:40	Steven **Majewski**, University of Virginia, Charlottesville **The Extended Distributions of Galactic Dwarf Spheroidals and Implications for Dark Matter**
9:50 – 10:20	Maria **Gómez-Flechoso**, Observatoire de Génève **Tidal tails of the dwarf satellite galaxies and the halo of the Milky Way**
10:30 – 11:00	BREAK
11:00 – 11:40	Rodrigo **Ibata**, Observatoire de Strasbourg **Survival masses of the progenitors of the Sgr and And streams**
11:50 – 12:20	Puragra **Guhathakurta**, University of California, Santa Cruz **Keck Spectroscopy of Red Giant Stars in M31's dSph Satellites**
12:30	LUNCH
	FREE AFTERNOON; Optional hikes and tours

Posters

- Marco **Azzaro**, Isaac Newton Group of Telescopes, S. Cruz de La Palma
  Morphological analysis of Satellites Galaxies ING, IAC in External Systems
- Ewa **Lokas**, Nicolaus Copernicus Astronomical Center, Warsaw
  Velocity dispersions of dwarf spheroidal galaxies: dark matter versus MOND
- James **Ostheimer**, University of Virginia, Charlottesville
  Exploring the Dwarf Galaxies of M31
- Michael **Siegel**, University of Virginia, Charlottesville
  A Search for Giant Stars in Compact High Velocity Clouds

Thursday, August 2, 2001

8:00	BREAKFAST
SESSION VI:	MORPHOLOGY OF THE LOWEST-MASS GALAXIES
Chair:	Steve Majewski
9:00 – 9:30	David **Martínez Delgado**, Instituto de Astrofísica de Canarias, La Laguna **Tidal Tails in Milky Way dSphs: new results and perspectives**
9:40 – 10:10	Michael **Odenkirchen**, MPIA, Heidelberg **New insights on the Draco dSph galaxy from the SDSS**
10:20 – 10:50	BREAK
10:50 – 11:10	Christopher **Palma**, University of Virginia, Charlottesville **The Extended Spatial Distribution of the Ursa Minor dSph**
11:20 – 11:40	Jakob **Walcher**, MPIA, Heidelberg **Where are the tidal tails of Carina?**
11:50 – 12:10	Octavio **Valenzuela**, New Mexico State University, Las Cruces **The Structure of Dwarf Spheroidals**
12:30 – 14:20	LUNCH
14:20 – 14:40	Eva **Grebel**, MPIA, Heidelberg **Constraints from horizontal branch width**
SESSION VII:	CONSTRAINTS FROM KINEMATICS OF LOW-MASS GALAXIES
Chair:	Roeland van der Marel
14:50 – 15:20	Deidre **Hunter**, Lowell Observatory, Flagstaff **Identifying Old Tidal Dwarf Irregulars**
15:30 – 16:00	BREAK
SESSION VIII:	DARK MATTER IN THE LOWEST-MASS GALAXIES: PRO AND CON
16:00 – 16:30	Pavel **Kroupa**, Universität Kiel **Are there dwarf galaxies without dark matter?**
16:40 – 17:10	Carlton **Pryor**, Rutgers, State University of New Jersey, Piscataway **The Case for Dark Matter in Dwarf Spheroidal Galaxies**
17:20 – 17:50	**DEBATE: Dark matter in the lowest-mass galaxies?** Participants: Kroupa, Pryor, audience
18:30	DINNER

Friday, August 3, 2001

8:00	BREAKFAST
SESSION IX:	EVOLUTIONARY CONSTRAINTS
Chair:	Deidre Hunter
9:00 – 9:40	Andrea **Ferrara**, Osservatorio Astrofisico Arcetri, Firenze **The First Galaxies and their Cosmic Effects**
9:50 – 10:20	Peter **Berczik**, Main Astronomical Observatory, Kiev **Multiphase Chemodynamical Modeling of Dwarf Galaxy Evolution**
10:30 – 11:00	BREAK
11:00 – 11:30	Patricia **Knezek**, WIYN/NOAO, Tucson **Transition type dwarfs**
11:40 – 12:20	Lisa **Young**, New Mexico Tech, Socorro **The H I content of Dwarf Spheroidal Galaxies**
12:30 – 14:20	LUNCH
Chair:	Andrea Ferrara
14:30 – 14:50	Daniel **Harbeck**, MPIA, Heidelberg **Population Gradients in Local Group Dwarf Spheroidals**
15:00 – 15:20	Marla **Geha**, University of California, Santa Cruz **Dynamics of Dwarf Elliptical Galaxies**
15:30 – 16:00	BREAK
16:00 – 16:30	Matthew **Shetrone**, University of Texas/ McDonald Observatory, Fort Davis **Constraints on Galaxy Formation from Abundance Ratios in Nearby Galaxies**
SESSION X:	SUMMARY
16:40 – 17:10	Jay **Gallagher**, University of Wisconsin, Madison **Conference Summary**
17:20	End
18:30	DINNER

Saturday, August 4, 2001

8:00 BREAKFAST

Please vacate your rooms by 9:00 a.m.

Important Addresses

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When calling from outside Germany, dial + 49 8022 etc., i.e., omit the leading zero in the area code. When calling from within Germany, include the leading zero in the area code, e.g., dial 08022 etc.

Meeting URL:	`http://www.mpia-hd.mpg.de/~guest2/`
Ringberg URL:	`http://www.rzg.mpg.de/ringberg-castle/`
SOC chair:	Eva Grebel, `grebel@mpia.de`, phone: +49 (0) 6221 528 225
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List of participants

1. Vincenzo **Antonuccio-Delogu**, Osservatorio Astrofisico di Catania
2. Marco **Azzaro**, Isaac Newton Group of Telescopes, S. Cruz de La Palma
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42. Lisa **Young**, New Mexico Tech, Socorro