



HEIDELBERG
UNIVERSITY
UNIVERSITY OF EXCELLENCE



UNIVERSITÄT HEIDELBERG
ZENTRUM FÜR
ASTRONOMIE

Program

International Conference

The Milky Way and the Local Group – Now and in the Gaia Era

Heidelberg, August 31 to September 4, 2009

Sunday, August 30, 2009

16:00 – 19:00 Reception and Registration

at the conference venue

(Physics Lecture Hall, Im Neuenheimer Feld 308)

5 min from the bus/tram stop “Bunsengymnasium”.

Please use this opportunity to pick up your registration materials.

You may also want to hang up your poster then.

We look forward to welcoming you to Heidelberg and wish you a very pleasant stay.

On the following pages, the color coding marks:

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| Gaia and survey project sessions |
| Milky Way science |
| Local Group science |
| Poster viewing, breaks and social events |
| Change of speaker or time |

Session chairs and assistants for the

question-and-answer period (Q&A)

after each talk are listed in brackets.

Please send pdf versions of your talks to

dietmar (AT) ari.uni-heidelberg.de

Monday, Aug 31, 2009 (Version of September 03, 2009)

Session I (Plenary): Gaia Overview (Chair: *O'Mullane*) (Q&A: *Bastian, Löffler*)

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| 09:00 – 09:10 | Grebel: Opening, general remarks |
| 09:10 – 09:40 | Prusti: Gaia Mission Overview |
| 09:40 – 10:10 | Brown: Gaia Science Overview |
| 10:10 – 10:40 | Klioner: Gaia and Fundamental Physics |

10:40 – 11:10 Coffee Break & Posters

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| Session II: Other Astrometric Missions (Chair: <i>Lindgren</i>) (Q&A: <i>Bastian, Jordan</i>) | | Session III: The Magellanic Clouds (Chair: <i>Gieren</i>) (Q&A: <i>Haschke, Lianou</i>) | |
| 11:10 – 11:40 | Gouda: JASMINE Projects: Series of Infrared Space Astrometry Missions | 11:10 – 11:40 | Cioni: AGB Stars and the Evolution of Galaxies |
| 11:40 – 12:10 | Yamada: Nano-JASMINE, Mission Status and Data Analysis | 11:40 – 12:10 | Gallagher: An ACS View of the Star Formation History of the Small Magellanic Cloud |
| 12:10 – 12:40 | Unwin: The SIM Lite Astrometric Observatory | 12:10 – 12:30 | Besla: Constraints on the Orbit of the Magellanic Clouds |
| 12:40 – 13:10 | Olling: An Era of Precision Astrophysics: Connecting Stars, Galaxies and the Universe | 12:30 – 12:50 | Mastropietro: Modeling a High-Velocity LMC. The Formation of the Magellanic Stream |
| | | 12:50 – 13:10 | Milanova: The Evolution of the Planetary Nebulae Ensembles in Local Group Galaxies |

13:10 – 14:30 Lunch Break

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| Session IV: Stellar Spectroscopy & Photometry with Gaia (Chair: <i>Jordan</i>) (Q&A: <i>Altmann, Hofmann</i>) | | Session V: The Andromeda System (Chair: <i>Rich</i>) (Q&A: <i>Crnojevic, Jin</i>) | |
| 14:30 – 14:50 | Korn: The Gaia Stellar Library | 14:30 – 15:00 | McConnachie: The Pan-Andromeda Archaeological Survey: Galaxy Formation in the Near-Field |
| 14:50 – 15:10 | Heiter: Critical Observational Tests of Stellar Atmosphere Models for Gaia and Beyond | | |
| 15:10 – 15:30 | Geban: Chemically Peculiar A/F Stars in Open Clusters of the Milky Way – Results and Needs | 15:00 – 15:30 | Guhathakurta: Andromeda and Its Dwarf Satellites: Mapping the Progressive Stages of Hierarchical Galaxy Formation |
| 15:30 – 15:50 | Recio-Blanco: Automated Stellar Parametrization With MATISSE | 15:30 – 15:50 | Collins: The Thick Disk in M31 |
| 15:50 – 16:10 | Wyrzykowski: Real-Time Photometric Monitoring With Gaia Science Alerts | 15:50 – 16:10 | Hou: The Milky Way and M31: A Tale of Two Disks |
| 16:10 – 16:30 | V. Simon: Cataclysmic Variables: Statistical Properties of Their Long-term Light Curves, Their Physical Justification, and Importance for Gaia | 16:10 – 16:30 | Magrini: The Abundance Distribution in M33: Hints from Planetary Nebulae and HII Regions |

16:30 – 17:00 Coffee Break & Posters

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| Session VI: Modeling Milky Way Halos (Chair: <i>Helmi</i>) (Q&A: <i>Frank, Haschke</i>) | | Session VII: The Andromeda Stream (Chair: <i>R. de Jong</i>) (Q&A: <i>Duffau, Martell</i>) | |
| 17:00 – 17:30 | Navarro: Dark and Stellar Halos | 17:00 – 17:30 | Ferguson: Stellar Substructure and Star Clusters in the Halo of M31 |
| 17:30 – 17:50 | Cooper: Aquarius: High Resolution Simulations of Milky Way Stellar Haloes | 17:30 – 17:50 | Fardal: Dynamical Models of Andromeda's Giant Southern Stream |
| 17:50 – 18:20 | Scannapieco: Formation of Milky Way-Type Galaxies in Cosmological Hydrodynamical Simulations | 17:50 – 18:10 | Mori: The Once and Future Andromeda Stream |
| 18:20 – 18:40 | Zolotov: The Dual Origin of Stellar Halos | 18:10 – 18:30 | Gilbert: Stellar Halo Formation in a Hierarchical Universe: Lessons from our Sister Galaxy Andromeda |

18:40 End of Day 1

18:30 End of Day 1

Tuesday, Sep 01, 2009

| Session VIII (Plenary): Using and Operating Gaia (Chair: <i>Drimmel</i>) (Q&A: <i>Bernstein, Lenhardt</i>) | | | |
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| 09:00 – 09:30 | Shaya: Probing Dark Matter Properties by Dynamics of the Galaxy and the Local Group | | |
| 09:30 – 10:00 | O'Mullane: Operating Gaia | | |
| 10:00 – 10:25 | Jordan: First Look – Assuring the Quality of the Gaia Data | | |
| 10:25 – 10:50 | Hambly: CCDs in Space: the Gaia Radiation Damage Challenge | | |
| 10:50 – 11:20 Coffee Break & Posters | | | |
| Session IX: Gaia Techniques (Chair: <i>Bastian</i>) (Q&A: <i>Bernstein, Lenhardt</i>) | | Session X: Structure of the Galactic Halo (Chair: <i>Johnson</i>) (Q&A: <i>Lianou, Pang</i>) | |
| 11:20 – 11:40 | Prod'homme: Radiation Damage Effects on Gaia CCDs, Modelling to Mitigate the Threat | 11:20 – 11:50 | Helmi: Structure, kinematics and history of the Galactic halo |
| 11:40 – 12:10 | Lindegren: Calculating the Gaia Astrometric Catalogue: Principles, Expected Results and Operational Aspects | 11:50 – 12:10 | Carollo: The Dichotomy of the Galactic Halo |
| 12:10 – 12:30 | Bombrun: A Conjugate Gradient Scheme to Compute the Global Astrometric Solution for Gaia | 12:10 – 12:30 | Cacciari: Monitoring the Structure of the Galactic Halo in the Anti-center Direction with BHB and RR Lyrae Stars |
| 12:30 – 12:50 | Risquez: Gaia Attitude Model | 12:30 – 12:50 | Altmann: Chemo-Kinematic Tracing of Old Populations Using HBA Stars |
| 12:50 – 13:10 | Hudec: Astrophysics with Low Dispersion Spectra: The Prospects for ESA's Gaia | 12:50 – 13:10 | de Propriis: Mapping the Galactic Halo with Blue Horizontal Branch Stars |
| 13:10 – 14:30 Lunch Break | | | |
| Session XI: Combining Astrometric Surveys (Chair: <i>Just</i>) (Q&A: <i>Aguduri, Bombrun</i>) | | Session XII: The Halo's Chemical Composition (Chair: <i>Christlieb</i>) (Q&A: <i>Haschke, Martell</i>) | |
| 14:30 – 14:50 | Vicente: CdC-SF Catalogue: Proper Motions Based on Photographic Plates "Carte du Ciel" | 14:30 – 15:00 | Beers: Chemistry of the Galactic Halos |
| 14:50 – 15:10 | Röser: Combining USNO-B1.0 with 2MASS - a Playground for Gaia | 15:00 – 15:30 | Frebel: Galactic Archaeology with the Milky Way Stellar Halo |
| 15:10 – 15:30 | Spagna: A New Kinematic Survey (from SDSS-DR7 and GSC-II) to Study the Stellar Populations in the Milky Way | 15:30 – 15:50 | Ishigaki: Chemical Abundances of the Milky Way Outer Halo Stars |
| 15:30 – 15:50 | Holl: Spatial Correlations in the Gaia Catalogue | 15:50 – 16:10 | Trenti: Extremely-Metal Poor Stars in the Milky Way: A Second Generation Formed After Reionization |
| 15:50 – 16:10 | Eyer: A Comparison of the Gaia and LSST Surveys | | |
| 16:10 – 16:30 | Czekaj: Preliminary Comparison of Tycho-2 Proper Motions With A Galaxy Model | 16:10 – 16:30 | Scholz: The Coolest Halo Subdwarfs - the Oldest Brown Dwarfs? |
| 16:30 – 17:00 Coffee Break & Posters | | | |
| Session XIII: Globular Clusters (Chair: <i>Cohen</i>) (Q&A: <i>Crnojevic, Pang</i>) | | Session XIV: Streams in the Galactic Halo (Chair: <i>Martínez-Delgado</i>) (Q&A: <i>Duffau, Jin</i>) | |
| 17:00 – 17:20 | Marin-Franch: The Ages of Milky Way Globular Clusters and the Formation of the Halo | 17:00 – 17:30 | Newberg: Tidal Streams in the Galactic Spheroid |
| 17:20 – 17:50 | D'Antona: Abundance Anomalies and Multiple Stellar Populations in Globular Clusters | 17:30 – 17:50 | Schlaufman: The Stellar Accretion History of the Milky Way Through Cold Halo Substructure |
| 17:50 – 18:10 | Da Costa: M22: A [Fe/H] Abundance Range Revealed | 17:50 – 18:10 | Fliri: SDSS Analysis of Galactic Stellar Streams |
| 18:10 – 18:30 | Martell: CN-Strong Stars in the Galactic Halo | 18:10 – 18:30 | Xue: Mapping the Milky Way's Dark Matter and Stellar Halo |
| 18:30 End of Day 2 | | | |

Wednesday, Sep 02, 2009

Session XV (Plenary and Parallel): Hipparcos and Current Surveys: Results and Prospects

(Chair: Röser) (Q&A: Bombrun, Jordan)

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| 09:00 – 09:30 | Nordström: The Geneva-Copenhagen Survey and the Impact of Hipparcos on Understanding the Milky Way |
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| 09:30 – 10:00 | Rockosi: The Milky Way in the Sloan Digital Sky Survey and SEGUE |
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| 10:00 – 10:30 | Steinmetz: Exploring the Local Milky Way with RAVE |
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| 10:30 – 11:00 | Brunthaler: Mapping the Milky Way and the Local Group with VLBI Astrometry |
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| Session XVI: Milky Way Evolution Models <i>(Chair: Chiosi) (Q&A: Gao, Golubov)</i> | |
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| 10:30 – 11:00 | Robin: Structure and Evolution of the Milky Way from the Besançon Model |
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11:00 – 11:30 Coffee Break & Posters

(Chair: Brown) (Q&A: Aguduri, Biermann)

(Chair: Chiosi) (Q&A: Gao, Golubov)

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| 11:30 – 12:00 | Benjamin: Galactic Cartography with Spitzer/GLIMPSE: Bars, Spirals, and Rings |
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| 11:30 – 12:00 | Girardi: Modelling the Milky Way With TRILEGAL |
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Session XVII: The Next Generation of Ground-based Spectroscopic Surveys

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| 12:00 – 12:20 | Spitoni: Effects of Galactic Fountains and Metal Cooling in the Chemical Evolution of the Milky Way |
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| 12:00 – 12:30 | X. Liu: LEGUE – The LAMOST Experiment for Galactic Understanding and Evolution |
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| 12:20 – 12:40 | Bien: Purely Gravitational Models of Disk/Bulge/Halo Galaxies, With Special Emphasis on the Milky Way |
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| 12:30 – 12:50 | Chen: Galactic Disk Survey Using LAMOST |
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Session XVIII: Constraints on Orbits and on the Shape of the Galactic Halo

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| 12:50 – 13:20 | Battaglia: Intermediate Resolution Spectroscopy of Resolved Stellar Populations for Galaxies in the Local Group and Beyond Using the European Extremely Large Telescope |
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| 12:40 – 13:00 | Jin: Fitting Orbits to Streams in the Galactic Halo |
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| 13:00 – 13:20 | Koposov: How Round? Constraining the Milky Way's Dark Matter Halo With a 6-Dimensional Map of the GD-1 Stellar Stream |
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13:20 – 14:40 Lunch Break

(Chair: Schilbach) (Q&A: Altmann, Biermann)

(Chair: Bienaimé) (Q&A: Franco, Ludwig)

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| 14:40 – 15:00 | Zucker: HERMES: Sifting Through the Milky Way's History |
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| 14:40 – 15:00 | Willett: Simultaneous Orbit Fitting of Two Stellar Streams: Constraining the Galactic Dark Matter Halo |
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Session XIX: The Next Generation of Ground-based Photometric and Astrometric Surveys

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| 15:00 – 15:20 | Lux: How Well Does Backwards Orbit Integration Trace the Orbits of Satellites? |
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| 15:00 – 15:30 | Keller: SkyMapper's Southern Sky Survey: a Sky Survey Optimized for Stellar Astrophysics |
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Session XX: More on Dynamical Modeling

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| 15:30 – 16:00 | Rix: PanSTARRS Maps the Milky Way |
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| 15:20 – 15:40 | Gomez: On the Identification of Substructure in Phase-Space Using Orbital Frequencies |
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| 16:00 – 16:20 | Hempel: The VISTA Variable Survey in the Via Lactea |
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| 15:40 – 16:00 | van de Ven: Dynamical Modeling Using Schwarzschild's Orbit-Superposition Method |
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| 16:00 – 16:20 | Dehnen: Dynamical Modelling via Made-to-Measure |
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16:20 – 16:50 Coffee Break & Posters

17:30 Social Events I: Guided Tour of the Heidelberg Castle

19:30 Social Events II: Conference Dinner

End of Day 3

Thursday, Sep 03, 2009

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| Session XXI: The Thin and Thick Disk: Abundances and Gradients <i>(Chair: Tsujimoto) (Q&A: Martell, Pang)</i> | | Session XXII: Star Formation Histories of Local Group Dwarf Galaxies <i>(Chair: Da Costa) (Q&A: Lianou)</i> | |
| 09:00 – 09:30 | Feltzing: The Galactic Thick and Thin Disk | 09:00 – 09:30 | Gallart: High-Precision Star Formation Histories of Local Group Galaxies |
| 09:30 – 10:00 | Morrison: Age/Abundance Gradients in the Milky Way's Thick Disk | 09:30 – 09:50 | Monelli: The ACS LCID Project: Star Formation Histories of Isolated Galaxies in the Local Group |
| 10:00 – 10:30 | Fuhrmann: Galaxy Formation - the Fossil Record of Nearby Stars | 09:50 – 10:10 | Hidalgo: Star Formation History Gradients in Dwarf Galaxies of the Local Group |
| | | 10:10 – 10:30 | Clementini: Stellar Archaeology in the Milky Way and Andromeda Halos |
| 10:30 – 10:50 | Venn: Stellar Populations in WLM and the Formation of Dwarf Galaxies With Disks | 10:30 – 10:50 | Pasetto: Isolated and Interacting Dwarf Galaxies: Dark Matter and Star Formation Processes |
| 10:50 – 11:20 Coffee Break & Posters | | | |
| <i>(Chair: Humphreys) (Q&A: Franco, Golubov)</i> | | <i>(Chair: Gibson) (Q&A: Jin)</i> | |
| 11:20 – 11:40 | Maciel: Abundance Gradients in the Milky Way: the Problem of Distances | 11:20 – 11:40 | Jablonka: The Formation and Evolution of the Dwarf Spheroidal Galaxies |
| 11:40 – 12:00 | Lemasle: New Determination of the Galactic Abundance Gradient Using Cepheid Variable Stars | Session XXIV: Faint Dwarf Spheroidals | |
| 12:00 – 12:20 | Boeche: Chemical Gradients in the Milky Way from the RAVE Chemical Abundances Catalogue | 11:40 – 12:00 | Martin: Faint Dwarf Galaxies in the Local Group |
| 12:20 – 12:40 | C. Liu: Mapping Variations in the Stellar Metallicity Distributions Across the Milky Way | 12:00 – 12:20 | Okamoto: The Stellar Populations and Spatial Distributions of Ultra-faint DSphs |
| Session XXIII: Open Clusters as Tracers of the Galactic Disk | | 12:20 – 12:40 | Salvadori: The Faintest Milky Way Satellites: What Are They? |
| 12:40 – 13:00 | Schilbach: Integrated Photometric Parameters and Luminosity Functions of Galactic Open Clusters | 12:40 – 13:00 | Peñarrubia: The Tidal Origin of the Ultra-faint Dwarf Galaxy Population |
| 13:00 – 13:20 | Pfalzner: Universality of Young Cluster Sequences in the Milky Way - and How Is It Elsewhere? | 13:00 – 13:20 | Macciò: The Luminosity Function of Milky Way Satellites in a LCDM Universe |
| 13:20 – 14:30 Lunch Break | | | |
| <i>(Chair: Davies) (Q&A: Ludwig, Pang)</i> | | Session XXVI: Dwarf Spheroidal Chemistry <i>(Chair: Aparicio) (Q&A: Crnojevic, Martell)</i> | |
| 14:30 – 15:00 | Bragaglia: Open Clusters as Tracers of the Galactic Disk | 14:30 – 15:00 | Koch: All Quiet in the Outer Halo – Chemical Abundances in DSphs and Outer Halo Globular Clusters |
| 15:00 – 15:30 | Carraro: Stellar Populations in the Third Quadrant of the Milky Way | 15:00 – 15:30 | Hill: Chemical Abundances and the Enrichment History of Local Group Dwarf Galaxies |
| Session XXV: Kinematics of the Solar Neighborhood | | 15:30 – 15:50 | Cohen: The Chemical Evolution of the Draco and the UMi dSph Galaxies |
| 15:30 – 15:50 | Fuchs/Rix: The Kinematics of Late-Type Stars in the Solar Cylinder Studied with SDSS Data | | |
| 15:50 – 16:10 | Anguiano: RAVE: The Age-Metallicity-Velocity Relation in the Nearby Disk | 15:50 – 16:10 | Starkenburger: The Search for Extremely Low-Metallicity Stars in Dwarf Galaxies |

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| | | | Using the NIR Ca II Triplet |
| 16:10 – 16:30 | Larsen: Mapping the Asymmetric Thick Disk – the Hercules Thick Disk Cloud | 16:10 – 16:30 | Cescutti: Chemical Evolution Models in the Local Group |
| 16:30 – 17:00 Coffee Break & Posters | | | |
| Session XXVII: Models of the Galactic Disk (Chair: <i>Newberg</i>) (Q&A: <i>Gao & Golubov</i>) | | Session XXVIII: Milky Way Satellite Cosmology (Chair: <i>Springel</i>) (Q&A: <i>Frank, Ludwig</i>) | |
| 17:00 – 17:20 | Just: The Local Milky Way Disk Model in Comparison with SDSS and RAVE Data | 17:00 – 17:30 | Frenk: Simulations of the Milky Way Satellites |
| 17:20 – 17:40 | Moster: Can Gas Prevent the Destruction of Thin Stellar Disks by Minor Mergers? | 17:30 – 17:50 | Carlberg: The Problem of Dark Substructures |
| 17:40 – 18:00 | Schönrich: Explaining the Thin and the Thick Disc in One Model | 17:50 – 18:10 | D'Onghia: Resonant Stripping and the Origin of Dwarf Spheroidal Galaxies |
| 18:00 – 18:20 | Read: Heated Versus Accreted Thick Disks in LCDM | 18:10 – 18:30 | Y. Li: Milky Way Satellites in a Cosmological Context |
| 18:20 End of Day 4 | | 18:30 End of Day 4 | |

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| Friday, Sep 04, 2009 | | | |
| Session XXIX: Overdensities and Substructure (Chair: <i>Peñarrubia</i>) (Q&A: <i>Gao & Haschke</i>) | | Session XXX: How Massive Are Dwarf Spheroidals? (Chair: <i>Sparke</i>) (Q&A: <i>Crnojevic, Frank</i>) | |
| 09:00 – 09:30 | Juric: The Milky Way Tomography with SDSS: Decoding The Rosetta Stone of Galaxy Formation | 09:00 – 09:30 | Gilmore: Constraints on Dark Matter in Dwarf Spheroidal Galaxies |
| 09:30 – 09:50 | Minchev: Solar Neighborhood Velocity Streams Induced by Recent Bar Growth | 09:30 – 09:50 | J. Simon: The Masses of the Least Luminous Galaxies |
| 09:50 – 10:10 | Duffau: The Virgo Stellar Stream | 09:50 – 10:10 | Adén: The Ultra-faint Hercules Dwarf Spheroidal Galaxy – Mass, Rotation and Tidal Stripping |
| 10:10 – 10:30 | Antoja: Connecting Moving Groups to the Non-Axisymmetric Milky Way Structure | 10:10 – 10:40 | Lokas: Mass Modelling of Dwarf Spheroidal Galaxies |
| 10:30 – 10:50 | Bovy: The Velocity Distribution of Nearby Stars from Hipparcos Data: The Significance of the Moving Groups | Session XXXI: The Galactic Bulge | |
| 10:50 – 11:20 Coffee Break & Posters (Chair: <i>Steinmetz</i>) (Q&A: <i>Jin, Ludwig</i>) | | 11:00 – 11:30 Coffee Break & Posters (Chair: <i>Gallagher</i>) (Q&A: <i>Franco, Lianou</i>) | |
| 11:20 – 11:40 | Williams: Stellar Streams in RAVE | 11:30 – 12:00 | Origlia: The Chemistry of the Galactic Bulge from Infrared Spectroscopy |
| 11:40 – 12:00 | Klement: Stellar Halo Streams in the Solar Neighborhood | 12:00 – 12:20 | Groenewegen: The Galactic Bulge AGB Population |
| 12:00 – 12:20 | Garbari: Limits on the Local Density of Dark Matter | 12:20 – 12:40 | Matsunaga: The Distance to the Galactic Center Based on a Near-Infrared Survey of Miras |
| 12:20 – 12:40 | Niederste-Ostholt: Re-assembling the Sagittarius Dwarf Galaxy | | |
| Session XXXII (Plenary): Discussion: What do we need to do to prepare ourselves for the Gaia data? | | | |
| 12:40 – 13:15 | Walton: Discussion – What do we need to do to prepare ourselves for the Gaia data? (Q&A: <i>Altmann, Löffler</i>) | | |
| 13:15 – 14:40 Lunch Break | | | |
| End of Day 5 | | | |