

Table of Contents

Preface	xiii
Editors	xiv
 Plenary Session	
The Future of Dwarf Galaxy Research: What Telescopes Will Discover <i>Martha P. Haynes</i>	3
The Future of Dwarf Galaxy Research: What Simulations will Predict? <i>Laura V. Sales</i>	17
 Local Group Dwarf Galaxies	
Local Group Dwarf Galaxies <i>Andrew A. Cole</i>	29
The merger debris of dwarf galaxies in the local stellar halo <i>Cuihua Du, Hefan Li and Heidi Jo Newberg</i>	38
A wide angle chemical survey of the Sagittarius dwarf Spheroidal galaxy <i>L. Sbordone, L. Monaco, S. Duffau, P. Bonifacio and E. Caffau</i>	42
 Poster Contributions	
The hydrodynamic evolution of the gas content in the dSph galaxy Ursa Minor induced by the feedback from types Ia and II supernovae <i>Anderson Caproni, Gustavo A. Lanfranchi, Gabriel H. Campos Baião, Grzegorz Kowal and Diego Falceta-Gonçalves</i>	49
A near-infrared VISTA of the Small Magellanic Cloud <i>Maria-Rosa L. Cioni, Florian Niederhofer, Stefano Rubele and Ning-Chen Sun</i>	53
The massive stellar population of IC 10 <i>Luis J. Corral, Miriam García, Silvana G. Navarro and Artemio Herrero</i>	57
The major merger origin of the Andromeda II kinematics <i>Ivana Ebrova, Ewa L. Lokas, Sylvain Fouquet and Andres del Pino</i>	62
Morphology of stellar populations in the Magellanic Clouds using the VMC survey <i>Dalal El Youssoufi, Maria-Rosa L. Cioni, Cameron P. M. Bell, Stefano Rubele, Florian Niederhofer and Gal Matijevic</i>	66
Detection of AGB stars in the IC 10 dwarf irregular galaxy <i>Mahtab Gholami, Atefeh Javadi, Jacco Th. van Loon, Habib Khosroshahi, Mohammad Taghi Mirtorabi, Elham Saremi and Samaneh Eftekhari</i>	70
FOSSILs in the Galactic Halo <i>Carl J. Grillmair</i>	73
Recovering the Star Formation History of IC1613 Dwarf Galaxy Using Evolved Stars <i>Seyed Azim Hashemi, Atefeh Javadi and Jacco Th. van Loon</i>	77

Isolated dwarf galaxies in the Local Group	81
<i>Clare R. Higgs, Alan W. McConnachie and the Solo Collaboration</i>	
OGLE-ing the Magellanic System:	
Three-Dimensional Structure	86
<i>Anna M. Jacyszyn-Dobrzyniecka and the OGLE Team</i>	
Star formation history and dynamical evolution of the solar neighbourhood	90
<i>Andreas Just, Reza Moetazedian and Evgeny Polyachenko</i>	
Subaru Hyper Suprime-Cam Survey for the Local Group Dwarf Galaxies:	
Ursa Minor	94
<i>Yutaka Komiyama</i>	
Origin of Hot Bubble in NGC 6822 Hubble V Star-Forming Region	96
<i>Hye-In Lee, Heeyoung Oh, Beomdu Lim, Huynh Anh N. Le, Sungho Lee, Gregory Mace, Daniel T. Jaffe, Ken'ichi Tatematsu, Sangwook Park and Soojong Pak</i>	
Bright-red stars in the dwarf irregular galaxy Leo A	99
<i>Alina Leščinskaitė, Rima Stonkutė and Vladas Vansevicius</i>	
Early chemical enrichment of the Milky Way dwarf satellites from high-resolution and NLTE analysis of VMP stars	103
<i>Lyudmila Mashonkina, Pascale Jablonka, Tatyana Sitnova, Yuri Pakhomov, Pierre North, Andrey Tatarnikov, Marina Burlak and Olga Vozyakova</i>	
A numerical study on the distribution of the debris of the Milky Way satellites	105
<i>Matteo Mazzarini and Andreas Just</i>	
The Milky Way's total satellite population and constraining the mass of the warm dark matter particle	109
<i>Oliver Newton, Marius Cautun, Adrian Jenkins, Carlos S. Frenk and John C. Helly</i>	
Dwarf galaxies: evidence of differential tidal effects in the Large Magellanic Cloud	114
<i>Andrés E. Piatti and Dougal Mackey</i>	
Formation History of Binary Clusters in the Large Magellanic Cloud	118
<i>Rhorom Priyatikanto, Mochamad Ikbal Arifyanto, Rendy Darma, Aprilia and Muhammad Irfan Hakim</i>	
The Nature of the Triangulum-Andromeda Stellar Structures	122
<i>J. V. Sales Silva, H. Perottoni, K. Cunha, H. J. Rocha-Pinto, D. Souto and F. Almeida-Fernandes</i>	
The Local Group Dwarf Galaxies. The Star Formation Histories derived using the Long Period Variable Stars	125
<i>Elham Saremi, Atefeh Javadi, Jacco Th. van Loon, Habib Khosroshahi, Sara Rezaei kh, Roya Hamedani Golshan and Seyed A. Hashemi</i>	

VMC proper motions of the Magellanic Bridge	130
<i>Thomas Schmidt, Maria-Rosa Cioni, Florian Niederhofer, Jonathan Diaz, Gal Matijevic</i>	
Resonant Trapping of the Moving Groups G18-39 and G21-22 in the Galactic Halo	134
<i>W. J. Schuster, E. Moreno and J. G. Fernández-Trincado</i>	
Star clusters and young populations in the dwarf irregular galaxy Leo A	139
<i>Rima Stonkutė, Marius Čeponis, Alina Leščinskaitė and Vidas Vansevicius</i>	
Evidence for discrete star formation events in the Small Magellanic Cloud based on 6.5m Magellan Telescope observations	143
<i>A. Strantzalis, D. Hatzidimitriou, A. Zezas and V. Antoniou</i>	
An Analysis of M31 and its Satellite Galaxies Using RR Lyrae Variables	147
<i>Nahathai Tanakul and Ata Sarajedini</i>	
Metallicity, Massive Stars and Chemical Evolution	
Massive star evolution: feedbacks in low-Z environment	153
<i>Sylvia Ekström, Georges Meynet, Cyril Georgy, José Groh, Arthur Chopin and Hanfeng Song</i>	
What do planetary nebulae and H II regions reveal about the chemical evolution of nearby dwarf galaxies?	161
<i>Denise R. Gonçalves</i>	
Synergies between Massive Stars and Metal-poor Dwarf Irregular Galaxies	178
<i>Miriam García, Artemio Herrero, Francisco Najarro, Norberto Castro and Inés Camacho</i>	
Molecular Composition of Local Dwarf Galaxies: Astrochemistry in Low-metallicity Environments	182
<i>Yuri Nishimura, Takashi Shimonishi, Yoshimasa Watanabe, Nami Sakai, Yuri Aikawa, Akiko Kawamura, Kotaro Kohno and Satoshi Yamamoto</i>	
Star formation at low rates: impact of lacking massive stars on the evolution of dwarf galaxies	186
<i>P. Steyrleithner, G. Hensler, S. Recchi and S. Ploeckinger</i>	
Multiple Feedback in Low-Metallicity Massive Star Formation	190
<i>Kei E. I. Tanaka, Jonathan C. Tan, Yichen Zhang and Takashi Hosokawa</i>	
Poster Contributions	
Enrichment of Heavy Elements in Chemo-Dynamical Simulations of Dwarf Galaxies	197
<i>Yutaka Hirai, Takayuki R. Saitoh, Shinya Wanajo and Michiko S. Fujii</i>	
The Lifecycle of Dust and Metals in Low-Abundance Galaxies	201
<i>Alec S. Hirschauer, Laurin Gray, William Paranzino, Margaret Meisner, Martha L. Boyer and Olivia C. Jones</i>	

Chemical evolution model to derive metallicity distributions for each stellar population	204
<i>Hidetomo Homma</i>	
Hot star wind mass-loss rate predictions at low metallicity	208
<i>Jiří Krtička and Jiří Kubát</i>	
Modeling low mass stellar populations	211
<i>Gustavo Bruzual, Gladis C. Magris and Fabiola Hernández-Pérez</i>	
Red Supergiants as Chemical Abundance Probes: The Local Group dwarf NGC6822	213
<i>Lee R. Patrick, Chris J. Evans, Ben Davies, Rolf-Peter Kudritzki, Maria Bergemann and Annette N. M. Ferguson</i>	
Abundance determinations in the dIrr galaxy Leo A	217
<i>Francisco Ruiz-Escobedo, Miriam Peña, Liliana Hernández-Martínez and Jorge García-Rojas</i>	
What are the implications of stellar chemical abundances in dwarf galaxies?	220
<i>Takuma Suda, Wako Aoki, Yutaka Katsuta, Shimako Yamada, Tadamumi Matsuno, Saku Iwata, Yuki Takei and Masayuki Y. Fujimoto</i>	
Stellar chemo-kinematics of isolated dwarf spheroidal galaxies	222
<i>S. Taibi, G. Battaglia, M. Rejkuba, N. Kacharov and M. Zoccali</i>	
Dwarf galaxies as hosts of stellar explosions: gas kinematics and abundances in 3D	224
<i>C. C. Thöne, L. Izzo, H. Flores, S. Vergani and L. Christensen</i>	
Galactic Ambient of Host Galaxies of GRBs	228
<i>Santiago Bernal, Nicolás Vásquez, Fiona Hoyle and Jaime Calderón</i>	
Interstellar Medium and Star Formation	
The Interstellar Medium and Star Formation in Dwarf Galaxies	233
<i>Alberto D. Bolatto</i>	
Dwarf Galaxies: Their Low Metallicity Interstellar Medium	240
<i>Suzanne C. Madden and Diane Cormier</i>	
Stellar feedback in dwarf irregular galaxies with radio continuum observations . . .	255
<i>Volker Heesen, Aritra Basu, Elias Brinks, George Heald, Andrew Fletcher, Cathy Horellou, Matthias Hoeft and Krzysztof Chyży</i>	
Star Formation and Molecular Gas in Extremely Metal-poor Galaxies: Insights from the Thermal Balance in the Neutral Gas	259
<i>Vianney Lebouteiller</i>	
Poster Contributions	
Outlying H α blobs in SDSS IV MaNGA	265
<i>Omkar Bait, Yogesh Wadadekar and Sudhanshu Barway</i>	
A new method to derive star formation histories in dwarf galaxies	267
<i>Marius Čeponis, Rima Stonkutė and Vladas Vanevičius</i>	

Comparing the star formation history of three nearby disk galaxies	271
<i>Ruixiang Chang, Xiaoyu Kang and Fenghui Zhang</i>	
HI gas component in dwarf and disk galaxies in the view of semi-analytic models	274
<i>Jian Fu</i>	
Numerical computation of gravitational field of infinitely-thin axisymmetric disc with arbitrary surface mass density profile and its application to preliminary study of rotation curve of M33	276
<i>Toshio Fukushima</i>	
The HI Neighborhoods Around STARBIRDS	280
<i>Megan C. Johnson, Kristen B. W. McQuinn, John Cannon, Charlotte Martinkus, Evan Skillman, Jeremy Bailin, H. Alyson Ford, Lucas Hunt, Tobias Westmeier, O. Ivy Wong and Peter Kamphuis</i>	
Atlas of H α images for five hundred nearest dwarf galaxies	283
<i>Serafim S. Kaisin and Igor D. Karachentsev</i>	
Neutral Hydrogen in Nearby Dwarf Galaxies	288
<i>Bärbel S. Koribalski</i>	
Star formation in dwarf galaxies in the ELAIS N1 field	292
<i>Tímea O. Kovács, Denis Burgarella and L. Viktor Tóth</i>	
A 3D hydrodynamic simulation of a black hole outflow in a dwarf spheroidal galaxy	296
<i>Gustavo A. Lanfranchi, Anderson Caproni and Roberto Hazenfratz</i>	
Galactic Winds in Low-Mass Galaxies	301
<i>Kristen B. W. McQuinn, Liese van Zee and Evan D. Skillman</i>	
Multiple Absorption Systems in the Lines of Sight to Quadruply Lensed Quasar H1413+1143 As a Probe of the Circumgalactic medium around Dwarf Galaxy . . .	305
<i>Katsuya Okoshi, Yosuke Minowa, Nobunari Kashikawa, Suzuka Koyamada and Toru Misawa</i>	
Neutral Gas Phase Metallicities Associated with Dwarf Galaxies	309
<i>Sandhya M. Rao, David A. Turnshek and Eric M. Monier</i>	
CO/CI observations of N83C in the early stage of star formation in SMC with ALMA	313
<i>Sarolta Zahorecz, Toshikazu Onishi, Kazuyuki Muraoka, Aya Homma, Ryohei Harada, Shota Takada, Hiroyuki Maezawa, Kazuki Tokuda, Kazuya Saigo, Akiko Kawamura, Norikazu Mizuno, Tetsuhiro Minamidani, Margaret Meixner, Remy Indebetouw, Marta Sewilo, Yasuo Fukui and Alberto Bolatto</i>	
The Dwarf Galaxy-Environment Connection	
Evolution of star-forming dwarf galaxies in different environments	319
<i>Marco Grossi</i>	
Cosmic Web Research: Where are the Missing Dwarf Galaxies and the Inter-Galactic Clouds	331
<i>Claude Carignan</i>	

Mass Distribution in Stellar Structures of Local Dwarfs	340
<i>Karín Menéndez-Delmestre, Yasmin Coelho, Marco Grossi and Kartik Sheth</i>	
Uncovering dwarf elliptical evolution through spatially resolved spectroscopy . . .	345
<i>Samantha J. Penny and the MaNGA collaboration</i>	
Dark Memories of the Past: Discovery of Ultra-Diffuse Objects around NGC 1068	349
<i>Ichi Tanaka, Masafumi Yagi and Yoshiaki Taniguchi</i>	
A New Reservoir of Dwarf Galaxy Candidates in the Centaurus A Group	353
<i>Matthew A. Taylor, Paul Eigenthaler, Thomas H. Puzia, Roberto P. Muñoz, Karen X. Ribbeck, Hong-Xin Zhang, Yasna Ordenes-Briceño and Mia Sauda Bovill</i>	
Poster Contributions	
Exploring 3D data of Dwarf Galaxies	359
<i>Katarzyna Bensch, Christina Thöne, Antonio de Ugarte Postigo, Luca Izzo and David Alexander Kann</i>	
Faint Dwarf galaxies in nearby WINGS clusters: photometric characterization . . .	363
<i>Daniela Bettoni and Alessandro Omizzolo</i>	
Diffuse post-starburst galaxies: a smoking gun of formation of ultra-diffuse galaxies via ram pressure stripping	365
<i>Igor V. Chilingarian, Kirill A. Grishin, Anton V. Afanasiev, Daniel Fabricant and Ivan Yu. Katkov</i>	
Influence of the Void Environment on Chemical Abundances in Dwarf Galaxies and Implications for Connecting Star Formation and Halo Mass	369
<i>Kelly A. Douglass, Michael S. Vogeley and Renyue Cen</i>	
Dwarf Galaxies and Cluster Environments	373
<i>Yasuhiro Hashimoto, J. Patrick Henry and Hans Böhringer</i>	
Catalog & atlas of the LV galaxies	377
<i>Elena I. Kaisina, Igor D. Karachentsev, Dmitry I. Makarov and Serafim S. Kaisin</i>	
Dwarf Galaxies in the Local Volume	381
<i>Igor D. Karachentsev and E. I. Kaisina</i>	
The properties of bright globular clusters, ultra-compact dwarfs and dwarf nuclei in the Virgo core: hints on origin of ultra-compact dwarf galaxies (UCDs)	384
<i>Chengze Liu, Eric W. Peng, Patrick Côté, Hong-Xin Zhang, Laura Ferrarese, Andrés Jordán, J. Christopher Mihos, Roberto P. Muñoz, Thomas H. Puzia, Ariane Lançon, Stephen Gwyn, Jean-Charles Cuillandre, John P. Blakeslee, Alessandro Boselli, Patrick R. Durrell, Pierre-Alain Duc, Puragra Guhathakurta, Lauren A. MacArthur, Simona Mei, Rubén Sánchez-Janssen and Haiquang Xu</i>	

The spatial segregation impact on the star formation histories of nearby dwarf spheroidal galaxies	389
<i>Lidia Makarova and Dmitry Makarov</i>	
DDO68-V1: an extremely metal-poor LBV in a void galaxy	392
<i>Yulia Perepelitsyna and Simon Pustilnik</i>	
Nearby void dwarf galaxies: recent results, the ongoing project and prospects	396
<i>Simon A. Pustilnik, Dmitri I. Makarov and Arina L. Tepliakova</i>	
Very gas-rich extremely metal-poor blue void dwarfs	400
<i>Simon A. Pustilnik, Yulia A. Perepelitsyna, Alexei Y. Kniazev, Evgeniya S. Egorova and Jayaram N. Chengalur</i>	
HST STIS Observations of the Central Radio/X-Ray Source in the Compact Starburst Galaxy Henize 2-10	404
<i>Eric Rohr, Mark Whittle, Amy Reines and Kelsey Johnson</i>	
Full-spectral fitting techniques to characterise the stellar content of ultra diffuse galaxies	408
<i>Tomás Ruiz-Lara, M. A. Beasley, C. Gallart, J. Falcón-Barroso, G. Battaglia, E. Bernard, C. Brook, A. Di Cintio, E. Florido, I. Martín-Navarro, M. Monelli, I. Pérez, F. Pinna, J. Román, P. Sánchez-Blázquez, I. Trujillo and A. Vazdekis</i>	
Star formation and environment: a step in understanding the formation and evolution of local dwarf galaxies	413
<i>Elena Sacchi, Michele Cignoni, Alessandra Aloisi and Monica Tosi</i>	
Dwarf Galaxies in the Core of Coma Cluster	417
<i>S. N. Hasan, Priya Shah and P. Nagamani</i>	
Population gradients in dwarf spheroidal galaxies KKS 3 and ESO 269-66	420
<i>M. E. Sharina, L. N. Makarova and D. I. Makarov</i>	
The hosts of blue compact dwarf galaxies in MaNGA	422
<i>Jun Yin, Mengting Ju, Lei Hao, Shiyin Shen and Shuai Feng</i>	

Low-Mass Galaxies at High Redshift

Dwarf Galaxies: From the Epoch of Peak Star Formation to the Epoch of Reionization	429
<i>Hakim Atek</i>	
Dwarf galaxies at low and high redshift	437
<i>Xu Kong, Jianhui Lian, Yulong Gao, Zuyi Chen, Guangwen Chen, Zesen Lin and Haiyang Liu</i>	

Poster Contributions

Census of Ly α , [OIII]5007, H α , and [CIII]158 μ m Line Emission with \sim 1000 Low-mass Lyman Alpha Emitters at $z = 4.9 - 7.0$ Revealed with Subaru/Hyper-Suprime Cam Survey	449
<i>Yuichi Harikane et al.</i>	

Dwarfs as Cosmological Probes

Dwarf Galaxies as Cosmological Probes	455
<i>Julio F. Navarro</i>	
The dwarf galaxy population as revealed by ALFALFA	464
<i>Elizabeth A. K. Adams, Catherine Ball, John M. Cannon, Martha P. Haynes, Alec Hirschauer, Riccardo Giovanelli, William Janesh, Steven Janowiecki, Luke Leisman, Kristen B. W. McQuinn, Katherine L. Rhode and John J. Salzer</i>	
Simulations at the Dwarf Scale: From Violent Dwarfs at Cosmic Dawn and Cosmic Noon to Quiet Discs today	468
<i>Daniel Ceverino</i>	
A whirling plane of satellite galaxies around Centaurus A challenges CDM cosmology	473
<i>Oliver Müller</i>	
Understanding planes of satellites	477
<i>I. Santos-Santos, H. Artal, R. Domínguez-Tenreiro, P. B. Tissera, S. E. Pedrosa, M. A. Gómez-Flechoso, C. B. Brook, L. Bignone and A. Serna</i>	

Poster Contributions

Ultra-Compact High Velocity Clouds as Minihalos and Dwarf Galaxies	483
<i>Yakov Faerman, Amiel Sternberg and Christopher F. McKee</i>	
Dwarfs in the entourage of the Local Volume groups: flow tracers and cosmological probes	488
<i>Olga Kashibadze, Igor Karachentsev and Valentina Karachentseva</i>	
Evolution of dwarf galaxies in a semi-analytic galaxy formation model	491
<i>Masahiro Nagashima, Motohiro Enoki, Tomoaki Ishiyama, Masakazu A. R. Kobayashi, Ryu Makiya, Kazuyuki Ogura, Takashi Okamoto, Katsuya Okoshi, Taira Oogi and Hikari Shirakata</i>	
The evolution of the luminosity function faint end of cluster galaxies in the Cluster-EAGLE simulation	495
<i>Andrea Negri, Claudio Dalla Vecchia, Alfonso Aguerri, Yannick Bahé, David Barnes and Scott Kay</i>	
Structure of dark matter haloes of Milky Way satellite galaxies in SIDM universes	498
<i>Takashi Okamoto</i>	
Author Index	503