

Dissecting Galaxies Near & Far: High Resolution Views of Star Formation and the ISM

**An ESO-ALMA workshop to explore new perspectives on Star
Formation and the ISM in the era of ALMA**

23-27 March 2015

Santiago, Chile



<http://www.eso.org/sci/meetings/2015/Galaxies2015.html>

Scientific Program

Invited: 25 min + 5 min Q&A
Contributed: 15 min + 5 min Q&A

Day 1: Monday 23 March 2015	
08:00 - 08:50	Coffee & pastries, poster set-up, registration (open throughout morning)
<i>Welcome & Announcements</i>	
08:50 - 09:00	Opening Remarks Catherine Vlahakis (<i>JAO/ESO</i>)
09:00 - 09:10	Welcome Address Pierre Cox, <i>ALMA Director</i>
<i>High-z I (chair: Nick Scoville)</i>	
09:10 - 09:40	Galaxies at high redshift: a submm continuum perspective (I) Rob Ivison (<i>ESO</i>)
09:40 - 10:00	Probing normal starburst at high-z: ALMA observations of lensed SMGs (C) Kirsten Knudsen (<i>Chalmers University of Technology</i>)
10:00 - 10:20	AGN - field galaxies association at high redshifts (C) Andrzej Soltan (<i>Nicolaus Copernicus Astronomical Center</i>)
10:20 - 10:40	Measuring sizes of distant faint galaxies (C) Lukas Lindroos (<i>Chalmers University of Technology</i>)
Coffee Break & Poster Session	
<i>High-z II (chair: Kirsten Knudsen)</i>	
11:10 - 11:40	Early Galaxy Formation and Evolution Through the Eyes of New Facilities (I) Brant Robertson (<i>University of Arizona</i>)
11:40 - 12:00	Interpreting star formation in galaxies across cosmic time with binary population synthesis models (C) Elizabeth Stanway (<i>University of Warwick</i>)
12:00 - 12:20	A Census of the Cosmic Infrared Background (C) Marco Viero (<i>KIPAC/Stanford</i>)
12:20 - 12:40	The ISM in $z \sim 2.5$ starbursting galaxies: dust, synchrotron emission and cold molecular (C) Alasdair Thompson (<i>Durham University</i>)
12:40 - 13:00	The birth of a giant star forming clump in a disk galaxy at redshift $z = 2$ (C) Anita Zanella (<i>CEA Saclay</i>)
Lunch (in the ESO gardens)	
<i>High-z III (chair: Karin Menendez-Delmestre)</i>	
14:40 - 15:00	Poster talks (first group)
15:00 - 15:30	Galaxies at high-redshift: Insights from molecular line emission (I) Jacqueline Hodge (<i>NRAO</i>)
15:30 - 15:50	Resolved CO observations of lensed dusty star-forming galaxies out to $z < 6$ (C) Manuel Aravena (<i>Universidad Diego Portales</i>)
15:50 - 16:10	Dissecting Molecular Gas and Star Formation in the Strongly Lensed $z \sim 2$ Galaxy SDSS J0901+1814 (C) Chelsea Sharon (<i>Cornell University</i>)

Coffee Break & Poster Session	
17:00 - 17:20	Anatomy of an X-ray detected cluster at $z = 2$: low metallicities and enhanced specific star formation rates in star-forming galaxies (C) Francesco Valentino (<i>CEA Saclay</i>)
17:20 - 17:40	Stirring Up the Gas: Star Formation and Powering High Pressures in galaxies 10 Billion Years Ago (C) Loic Le Tiran (<i>IAG-USP</i>)

Day 2: Tuesday 24 March 2015	
<i>ISM, Star Formation & Environment (chair: Adam Leroy)</i>	
09:00 - 09:30	Submillimetre Galaxies - the Bane of Galaxy Formation Theorists (I) Desika Narayanan (<i>Haverford College</i>)
09:30 - 09:50	Effects of the stochastic growth of angular momentum on the star formation rate (C) Nelson Padilla (<i>Pontificia Universidad Católica</i>)
09:50 - 10:10	A Bayesian Approach towards Measuring the Physical Conditions of Ionized Star Forming Regions (C) Guillermo Blanc (<i>Universidad de Chile</i>)
10:10 - 10:30	"Dark" Gas and "Late-Teen" Galaxies (C) Di Li (<i>National Astronomical Observatories of China</i>)
10:30 - 10:50	Poster talks (second group)
Coffee Break & Poster Session	
<i>Starbursts & Mergers (chair: Susanne Aalto)</i>	
11:30 - 11:50	Characterization of molecular emission lines detected in three local star-forming galaxies using far-IR Herschel/HIFI and sub-mm APEX data (C) Enrica Bellocchi (<i>CAB/CSIC</i>)
11:50 - 12:10	Dust and High Excitation Lines in Arp 220 at 0.25-0.5" res. (C) Nick Scoville (<i>Caltech</i>)
12:10 - 12:30	Dissecting a rare triple galaxy merger: radio and mm-observations toward the Bird (C) Cristina Romero-Canizales (<i>Pontificia Universidad Católica</i>)
Excursion & Lunch (buses depart at 12:40)	

Day 3: Wednesday 25 March 2015	
<i>Star Formation (chair: Guillermo Blanc)</i>	
09:00 - 09:30	Star Formation in the Large Magellanic Cloud: Tracing an Evolution of Giant Molecular Clouds (I) Toshikazu Onishi (<i>Osaka Prefecture University</i>)
09:30 - 09:50	The Clustering of Young Stellar Clusters in Nearby Galaxies (C) Kathryn Grasha (<i>University of Massachusetts</i>)
09:50 - 10:10	Small and time-variable structures in the interstellar medium of the Milky Way (C) Jonathan Smoker (<i>ESO</i>)
10:10 - 10:30	Massive star formation properties in the Galactic disk (C) Sarolta Zahorecz (<i>ESO</i>)

10:30 - 10:50	ALMA studies of the Magellanic Bridge (C) Monica Rubio (<i>Universidad de Chile</i>)
Coffee Break & Poster Session	
Star Formation - Molecular Gas Connection (chair: Françoise Combes)	
11:30 - 12:00	Physical Conditions in the ISM and the Star Formation-H₂ Connection (I) Adam Leroy (<i>NRAO</i>)
12:00 - 12:30	More than just CO: The Molecular Gas - SF Connection in the ALMA Era (I) Karin Sandstrom (<i>University of Arizona</i>)
12:30 - 12:50	The Schmidt Law Decoded and Explained (C) Barry Madore (<i>Carnegie Observatories</i>)
12:50 - 13:10	A 100pc view of the interplay between the ISM and stars in dense star-forming galaxies (C) Thiago Goncalves (<i>Valongo Observatory</i>)
Lunch (in the ESO gardens)	
Galactic Nuclei I (chair: Martin Bureau)	
14:50 - 15:20	Gas flows in galactic nuclei (I) Françoise Combes (<i>Observatoire de Paris</i>)
15:20 - 15:40	An AGN-blown Nuclear Bubble Triggers Star Formation in a Nearby Face-on Analogue to Our Own Milky Way (C) Emily Freeland (<i>Stockholm University</i>)
15:40 - 16:10	Galactic inflows / outflows: Observational constraints (I) Santiago Garcia-Burillo (<i>OAN-IGN</i>)
Coffee Break & Poster Session	
Galactic Nuclei II (chair: Elisabeth Mills)	
16:40 - 17:00	Molecular gas in the center of the Galaxy (C) Anna Ciurlo (<i>Observatoire de Paris</i>)
17:00 - 17:30	Physical conditions and chemistry in starbursts and obscured nuclei (I) Susanne Aalto (<i>Chalmers University of Technology</i>)
17:30 - 17:50	Dissecting Luminous Infrared Galaxies through Multi-wavelength integral field spectroscopy (C) Luis Colina (<i>CAB/CSIC</i>)
18:45	Conference Dinner (in the ESO gardens)

Day 4: Thursday 26 March 2015	
Nearby Galaxies I (chair: Thiago Goncalves)	
09:20 - 09:50	Beyond the classic archetype: the relation between spiral structure and star formation in galaxies (I) Sharon Meidt (<i>MPIA</i>)
09:50 - 10:10	Andromeda in all colours: Dust scaling relations at sub-kpc resolution (C) Sebastien Viaene (<i>Universiteit Gent</i>)
10:10 - 10:30	A multi-wavelength view of the ISM in Nearby Galaxies (C) Ioannis Bagetakos (<i>ASTRON</i>)

10:30 - 10:50	The unusual morphology and kinematics of the gas in the bulge region of M31 (C) Michael Opitsch (<i>Max Planck Institute for Extraterrestrial Physics</i>)
Coffee Break & Poster Session	
<i>Nearby Galaxies II (chair: Santiago Garcia-Burillo)</i>	
11:20 - 11:40	A Local Reference For Bar Morphology Studies In The Distant Universe (C) Karin Menendez-Delmestre (<i>Valongo Observatory</i>)
11:40 - 12:00	Local Analogues to high-redshift ($z \sim 5$) Lyman Break Galaxies - what we can learn from their spectral energy distributions (C) Stephanie Greis (<i>Warwick University</i>)
12:00 - 12:30	Molecular Gas in Early-type Galaxies and the Quest for Supermassive Black Hole Masses (I) Martin Bureau (<i>University of Oxford</i>)
12:30 - 12:50	The Connection between Molecular Gas and Star Formation in Extended Ultraviolet (XUV) Disk Galaxies (C) Linda Watson (<i>ESO</i>)
Lunch (in the ESO gardens)	
<i>Galaxy Groups & Clusters (chair: Juan Cortes)</i>	
14:30 - 14:50	Molecular Cloud Decoupling and Magnetic Binding during Strong Ram Pressure Stripping of the Coma Spiral NGC 4921 (C) Jeff Kenney (<i>Yale University</i>)
14:50 - 15:10	Dissecting ram-pressure stripping through integral-field spectroscopy of cluster spirals (C) Christopher Haines (<i>Universidad de Chile</i>)
15:10 - 15:30	Galaxy properties in the infall region of groups of galaxies (C) Hernan Muriel (<i>OAC-IATE</i>)
15:30 - 15:50	Seyfert's Sextet: Timing the Disruption of Galaxies and the Formation of the Intragroup Medium (C) Omar Lopez-Cruz (<i>INAOE</i>)
15:50 - 16:10	Intracluster light at $z \sim 0.5$: the MUSE and CFHT view (C) Emanuela Pompei (<i>ESO</i>)
Coffee Break	
16:40 - 16:50	Poster Prize Award & Concluding Remarks
16:50 - 17:15	Conference Summary Pierre Cox, <i>ALMA Director</i>

Day 5: Friday 27 March 2015	
<i>ALMA Proposal Workshop (chair: Catherine Vlahakis)</i>	
09:30 - 10:00	ALMA Cycle 3 Capabilities & Beyond Daniel Espada (<i>JAO</i>)
10:00 - 12:30	Proposal Discussion Groups (by topic), including coffee break
Lunch (in the ESO gardens)	
13:45	Departure for ALMA Visit

List of Poster Presentations

1	Aguirre, Paula	<i>ALMA Band 7 Continuum Mapping of LASCAR Submillimeter Galaxies</i>
2	Chan, Siukuen Josephine	<i>A Statistical comparison of the near-IR emission with the Hα emission from the HII regions of NGC 4321 and of NGC 4736</i>
3	García-Appadoo, Diego	<i>Study of high redshift galaxies</i>
4	Hanami, Hitoshi	<i>Unveiling Star Formation and AGNs in LBGs, BBGs, and (U) LIRGs with Synergy of optical and radio imagings</i>
5	Heiderman, Amanda	<i>Dense Gas and Star formation in Interacting Galaxies from the VIXENS survey and Comparison to Galactic Dense Cores</i>
6	Jiang, Xue-Jian	<i>Gas Fraction in Nearby Star-Forming Galaxies</i>
7	Lo, Nadia	<i>Tracing H$_2$ density with CI and CO isotopologues</i>
8	Mills, Elisabeth	<i>New ALMA observations of the Galactic Center Circumnuclear Disk</i>
9	Molina, Juan	<i>SINFONI-HiZELS: Tracing the formation and evolution of star-forming galaxies across cosmic time</i>
10	Nakanishi, Kouichiro	<i>Ionized gas observation toward a nearby starburst galaxy NGC 253</i>
11	Oteo, Iván	<i>High-resolution imaging of a uniquely bright sample of SMGs</i>
12	San Martin, Astrid	<i>Integral Field Spectroscopy Observation of z~1.5 AGN</i>
13	Sawada, Tsuyoshi	<i>ALMA Reveals Internal Structure of Molecular Clouds in the LMC at Various Evolutionary Stages</i>
14	Schulze, Steve	<i>The SUSHIES project Unravelling the Host Galaxies of Super-luminous Supernovae</i>
15	Silva, Andrea	<i>ALMA detected overdensity of sub-mm sources around WISE-selected z~2 dusty quasars</i>
16	Smoker, Jonathan	<i>A survey of near-infrared DIBs and search for their small and time-variable structure with CRIRES</i>
17	Tissera, Patricia	<i>The formation of stellar haloes in hierarchical clustering</i>
18	Troncoso, Paulina	<i>TBC</i>
19	Wang, Zhong	<i>Exploring the Environmental Effects on Star Formation in Galaxy Clusters Beyond Virgo</i>
20	Zhu, Lei	<i>IRAS 16272-4837: The birth of a massive protostar</i>

