

# Our Galactic Ecosystem: Opportunities and Diagnostics in the Infrared and Beyond

February 28-March 4, 2022  
UCLA Lake Arrowhead Lodge, CA

Monday, February 28th		Session 1: Solar System Science ( <i>Remijan, Chair</i> )
Time	Speaker (Affiliation)	Presentation Title
4:30–4:40pm	Margaret Meixner (USRA/SOFIA)	Welcome
4:40–5:10pm	Dariusz Lis (JPL)	Solar System Science: Recent Highlights from SOFIA and ALMA
5:10–5:30pm	Zoie Telkamp (University of Virginia)	The SOMA Survey — Probing Massive Star Formation Across Galactic Environments
5:30–5:50pm	Ramsey Karim (UMD)	The Pillars of Creation in CII
5:50–6:10pm	Michael Grudic (Carnegie Observatories)	The Dynamics and Outcome of Star Formation with Jets, Winds, Radiation, and Supernovae in Concert
6:10–6:40pm	Session Discussion	
6:40–8:00pm	Dinner	
8:00pm	Social	
Tuesday, March 1st		Session 2: Massive Star Formation and Feedback ( <i>Goldsmith, Chair</i> )
9:00–9:30am	Nicola Schneider (University of Bordeaux)	Invited Talk
9:30–9:50am	Maitrayee Tiwari (UMD)	Understanding the Effects of Stellar FEEDBACK in RCW 49 using Observations and Models
9:50–10:10am	Lars Bonne (SOFIA/USRA)	The Impact of Stellar Feedback in the Vela C Molecular Cloud
10:10–10:30am	Cornelia Pabst (Leiden)	To Bubble or not to Bubble: Stellar Feedback in Orion and 30 Doradus
10:30–10:50am	Break	
10:50–11:20am	Jonathan Tan (University of Virginia)	Invited Talk
11:20–11:40am	Jaeyeon Kim (Heidelberg University)	From Cloud Assembly to Embedded Stars and HII Regions
11:40am–12:10pm	Session Discussion	
12:10–2:00pm	Lunch and Break	
Tuesday, March 1st		Session 3: The Diffuse and Translucent ISM ( <i>Boogert, Chair</i> )
2:00–2:20pm	Mathew Orr (Rutgers)	Bursting Bubbles: Feedback from Clustered SNe and the Trade-off Between Turbulence and Outflows
2:20–2:40pm	Daniela Calzetti (UMD)	Linking Dust Attenuation to Dust Emission
2:40–3:10pm	David Neufeld (Johns Hopkins University)	Probing Diffuse and Translucent Clouds with Interstellar Hydrides
3:10–3:30pm	Paul Goldsmith (JPL)	FIR Fine Structure Line Observations
3:30–3:50pm	Arshia Jacob (JHU)	HyGAL: Characterizing the Galactic ISM with Observations of Hydrides and other Small Molecules — First Results
3:50–4:30pm	Break	
4:30–4:50pm	Flash	
4:50–5:10pm	Michael Rugel (MPIFR)	JVLA Follow-up Survey of OH and Atomic Hydrogen to the SOFIA HyGAL Program
5:10–5:40pm	Susan Clark (Stanford)	Invited Talk
5:40–6:00pm	Yuguang Chen (UCD)	Accurate Chemical Abundance Measurements from SOFIA and KCWI
6:00–6:30pm	Session Discussion	
6:30–8:00pm	Eric Becklin (UCLA)	Dinner
6:00–11:59pm	Social and Poster Viewing	
Wednesday, March 2nd		Session 4: Disks ( <i>Tan, Chair</i> )
9:00–9:30am	Ted Bergin (Michigan)	The Evolving ALMA Perspective on the Chemistry and Physics of Planet-Forming Disks
9:30–9:50am	Jialu Li (UMD)	5–8 $\mu\text{m}$ High-Resolution $\text{H}_2\text{O}$ Spectroscopy towards Massive Young Stellar Object W3 IRS5
9:50–10:10am	Adwin Boogert (IRTF/IFA)	A High Resolution Infrared Spectroscopic Survey of the Inner Regions of Massive Young Stellar Objects
10:10–10:30am	Valentin Le Gouellec (SOFIA/USRA)	Constraining the Dust Grain Alignment Mechanism(s) Responsible for the (Sub-)millimeter Dust Polarization Observed in Class 0 Protostellar Cores
10:30–10:50am	Break	
10:50–11:20am	Nienke van der Marel (Leiden University)	Invited Talk
11:20–11:40am	Nick Indriolo (STSci)	A Multi-Wavelength Perspective of the Massive Protostar AFGL 2136 IRS 1
11:40am–12:10pm	Session Discussion	
12:10–2:00pm	Lunch and Break	

Wednesday, March 2nd		Session 5: Role of B-field in Star Formation ( <i>Andersson, Chair</i> )
Time	Speaker (Affiliation)	Presentation Title
2:00–2:30pm	Thushara Pillai (Boston Univeristy)	The Role of B-Fields in Star Formation
2:30–2:50pm	Shuo Kong (U Arizona)	Dense Gas Formation via Collision-induced Magnetic Reconnection
2:50–3:10pm	Alejandro Borlaff (NASA Ames)	The Multiphase Spiral Magnetic Field of M51
3:10–3:30pm	Enrique Lopez Rodriguez (KIPAC/Stanford)	Extragalactic Magnetism with SOFIA: First Results of the Legacy Program
3:30–3:50pm	Ngoc Tram Le (MPIfR)	SOFIA Observations of 30 Doradus: Magnetic Fields and Large Scale Gas Kinematic
3:50–4:30pm	Break	
4:30–4:50pm	Flash	
4:50–5:10pm	Dariusz Lis (JPL)	Magnetic Field Geometry and Gas Kinematics in NGC2024
5:10–5:30pm	Dennis Lee (NWU)	SOFIA/HAWC+ Polarimetry in L1688: Relative Orientation of Magnetic Field and Elongated Cloud Structure
5:30–5:50pm	Dylan Paré (U Iowa)	Exploring the Galactic Center Magnetic Field at High Spatial Resolutions at Both Radio and Infrared Wavelengths
5:50–6:30pm	Session Discussion	
6:30–8:00pm	Dinner	
6:00–11:59pm	Social and Poster Viewing	
Thursday, March 3rd		Session 6: Return of Materials to ISM (Evolved Stars) ( <i>Neufeld, Chair</i> )
9:00–9:30am	Raghvendra Sahai (JPL)	The Extraordinary Deaths of Ordinary Stars: Binary-Driven Mass-Loss
9:30–9:50am	Jeremy Chastenet (Gent University)	Dust Properties in the Crab Nebula: Constraints from Infrared Emission Polarisation
9:50–10:10am	Mark Siebert (UVA)	Searching for Diamotic Hydrides in the Winds of Evolved Stars
10:10–10:30am	B-G Andersson (SOFIA/USRA)	Polarization in the Envelopes of IRC+10216 and IK Tau — From Optical to Sub-mm
10:30–10:50am	Break	
10:50–11:20am	Leen Decin (KU Leuven)	Invited Talk
11:20–11:40am	Yu Gao (XMU)	Mapping of the Dense Molecular Gas in HCN(4-3) and HCO <sup>+</sup> (4-3) in Nearby Galaxies
11:40am–12:10pm	Session Discussion	
12:10–2:00pm	Lunch and Break	
Thursday, March 3rd		Session 7: The Nearby Ecosystems ( <i>Calzetti, Chair</i> )
2:00–2:30pm	Suzanne Madden (SNRC)	Invited Talk
2:30–2:50pm	Jessica Sutter (USRA/SOFIA)	Environmental Dependence of [CII] Emission in Ringed Galaxy NGC 7331
2:50–3:10pm	Vicente Villanueva (UMD)	The Effect of the Virgo Environment on the Molecular Gas and Star Formation Efficiency in VERTICO Galaxies
3:10–3:30pm	Laura Lenkic (USRA/SOFIA)	CO Excitation and Turbulence in High-z Main Sequence Analogues
3:30–3:50pm	Fiorella Polles (USRA/SOFIA)	The Electron Density Distribution in the Low-Metallicity Environment of IC10
3:50–4:30pm	Break	
4:30–4:50pm	Molly Finn (UVA)	Physical Conditions in the LMC's Quiescent Molecular Ridge
4:50–5:20pm	Adam Leroy (OSU)	Invited Talk
5:20–5:40pm	Elizabeth Tarantino (UMD)	Modeling Ionized Gas at Low Metallicities: The Wolf-Rayet Emission Nebula N76
5:40–6:00pm	Jens Kauffmann (MIT)	LEGO: Galaxy Ecosystems from Wide-Field Line Mapping at Millimeter Waves
6:00–6:30pm	Session Discussion	
6:30–8:00pm	Troy Asher (NASA)	Dinner
6:00–11:59pm	Social and Poster Viewing	
Friday, March 4th		Session 8: Future Opportunities ( <i>Lis, Chair</i> )
9:00–9:15am	Margaret Meixner (SOFIA/USRA)	SOFIA Roadmap
9:15–9:30am	Anthony Remijan (NRAO)	ALMA 2030
9:30–9:50am	Jonas Zmuidzinas (Caltech)	Technology
9:50–10:05am	Thomas Hams (NASA)	Balloons
10:05–10:20am	Bernhard Schulz (DSI, Univ. Stuttgart)	German/European Instrument Effort
10:20–10:50am	Session Discussion	
10:50–11:20am	Break	
11:20–11:50am	Summary	
11:50am–12:15pm	Discussion	