

Galactic Center Workshop 2023

24 - 28 April 2023, Granada

Day 1

8:15 Registration opens

9:15 Welcome - Rainer Schödel

9:30 - 10:30 **Opening Talk : Reinhard Genzel**

Session 1: Sagittarius A*

Chair: Kelly Kosmo

10:30 - 11:00 Daryl Haggard: EHT results on Sgr A* (invited)

11:00 - 11:30 Stefan Gillessen: GRAVITY results on Sgr A* (invited)

11:30 - 11:50 Coffee Break

11:50 - 12:10 Gunther Witzel: Metrics for time domain characterization of Sgr A*'s variability

12:10 - 12:30 Joseph Michail: Modeling Submillimeter Polarization Light Curves of Sgr A*

12:30 - 12:50 Antonia Drescher: Flares as dynamical probes for the mass of Sgr A*

12:50 - 13:10 Felix Widmann: Polarized hotspots orbiting Sgr A*

13:10 - 13:30 Felix Mang: Discovering faint stars around SgrA* with GRAVITY and G^AR

Session 2: The inner parsec

Chair: Shogo Nishiyama

15:20 - 16:00 Tuan Do The Central Parsec: A Review (review)

16:00 - 16:20 Devin Chu: Evidence of a decreased binary fraction for massive stars within 20 milliparsecs of the supermassive black hole at the Galactic Center

16:20 - 16:40 Abhimat Gautam: Measurement of a high stellar binary fraction among the young, massive stars in the central half parsec

16:40 - 17:00 Eric Zhang: Constraints on the Possibility of an Intermediate-Mass Black Hole in the Galactic Center

17:00 - 17:20 Coffee Break

Chair: Gunther Witzel

17:20 - 17:50 Diego Calderón: Stellar winds and accretion onto Sgr A* (invited)

17:50 - 18:10 Shogo Nishiyama: Metallicity distribution of late-type stars in the central pc of our Galaxy

18:10 - 18:30 Kelly Kosmo: Is there a dark cusp at the Galactic Center?

18:30 - 18:50 Giovanni Stel: Iron K α echoes from the Circumnuclear Disk orbiting Sgr A*

19:30h Public Talk: “*Galaxias & Agujeros Negros (un viaje de 40 años)*”, Reinhard Genzel, Parque de las Ciencias (in English with Spanish slides and simultaneous translation to Spanish)

Day 2

Session 3: The ISM and magnetic fields at the GC

Chair: Maya Petkova

10:00 - 10:40 Dave Chuss: The Galactic Center Magnetic Field (review)

10:40 - 11:10 Thushara Pillai: The magnetic field in the CMZ and its relation to star formation (invited)

11:10 - 11:30 Mark Morris: Atomic Oxygen Emission from the Central Parsecs of the Galaxy

11:30 - 11:50 Coffee Break

Chair: Robin Tress

11:50 - 12:20 Kumiko Nobukawa - XRISM observations of the GC (invited)

12:20 - 12:40 Natalie Butterfield: General Results from the FIREPLACE Pilot Program

12:40 - 13:00 Juergen Ott: The 'Missing Link': Properties and Processes within the Accretion flow of Gas from the Milky Way disk to the CMZ

13:00 - 13:20 Maya Petkova: The role of the Galactic potential in shaping the structure and kinematics of the CMZ cloud 'the Brick'

13:20 - 13:40 Aaron Bryant: Far-Infrared Imaging Spectroscopy of the Galactic Centre's Circumnuclear Disk

Session 4: Star formation and feedback at the GC - part 1

Chair: Nadeen Sabha

15:30 - 16:10 Mattia Sormani: Star formation and feedback at the GC - Part 1 (review)

16:10 - 16:30 Katharina Immer: Tracing the gas flows in the inner Galaxy with maser astrometric observations

16:30 - 16:50 Diederik Kruijssen: Gas flows from the Milky Way disc to its nucleus: cloud evolution and star formation in the CMZ

16:50 - 17:10 Coffee Break

Chair: Katharina Immer

17:10 - 17:40 Adam Ginsburg: Millimeter surveys of the Central Molecular Zone: ACES, CMZoom, JACKS, TENS (invited)

17:40 - 18:00 Leonardo Chaves: Gas dynamics and star formation in the Central Molecular Zone and its connection with the Galactic Bar

18:00 - 18:20 Matthew Hosek: The Arches and Quintuplet Clusters: Exploring Scenarios for Star Formation Near the Galactic Center

18:20 - 18:40 Paco Najarro: The Arches cluster revisited

18:40 - 19:00 Nadeen Sabha: Star Formation in the Galactic Centre's Circumnuclear Disk

Poster Viewing

20:30 *Icebreaker*: School of Arabic Studies

Day 3

Session 5: Star formation and feedback at the GC - Part 2

Chair: Ash Barnes

10:00 - 10:40 Rebecca Levy: Star formation and feedback at the GC and other galaxy centers - Part 2 (review)

10:40 - 11:10 Peter Predehl: The X-ray bubbles at the Galactic Center and their connection to outflows (invited)

11:10 - 11:30 Gabriele Ponti: The base of the Galactic outflow and its relations with the Galactic corona

11:30 - 11:50 Coffee Break

Chair: Konstantina Anastasopoulou

11:50 - 12:20 Ash Barnes: Stellar feedback in the Central Molecular Zone (invited)

12:20 - 12:40 Dhanesh Krishnarao: New Observations of the Fermi Bubbles: in-situ Conditions and Tracing Nuclear Feedback

12:40 - 13:00 Kartick Sarkar: Are Fermi/eROSITA bubbles from supernovae or the central supermassive black hole?

13:00 - 13:20 Enrico Di Teodoro - Unveiling the cold outflow from the nucleus of the Milky Way

13:20 - 13:40 John Bally: "The CMZ Asymmetries: Feeding or Feedback?"

Poster Viewing

Free afternoon/Excursions

20:30h Conference Dinner: La Chumbera

Day 4

Session 6: High energy processes, Dark Matter

Chair: Anna Ciurlo

10:00 - 10:40 Jim Hinton (review)

10:40 - 11:10 Ruizhi Yang: LHAASO and its implications for the future of high energy GC observations (invited)

11:10 - 11:30 Sruthiranjani Ravikularaman: Checkmate: Can cosmic rays explain the high ionisation rate in the Galactic Centre?

11:30 - 11:50 Coffee Break

Chair: Elena Rossi

11:50 - 12:20 Konstantina Anastasopoulou: The Galactic Centre X-ray excess (invited)

12:20 - 12:40 Joanna Berteaud: Investigating the gamma-ray Galactic Center Excess with X-ray and radio data

12:40 - 13:00 Francesco Conte: Gamma-gamma absorption in the Galactic Center

Session 7: Extreme/singular Objects

13:00 - 13:20 Cuc Dinh: High Resolution Color Temperature Map of the Central Half-Parsec of the

Galaxy

13:20 - 13:40 Shifra Mandel: The X-ray Binary Population in the Galactic Center

Chair: Michal Zajaček

15:30 - 16:10 Anna Ciurlo: Properties and origin the G objects (review)

16:10 - 16:30 James Owen: The G-clouds as planet forming circumstellar discs?

16:30 - 16:50 Randy Campbell: The Swansong of the Galactic Center Source X7

16:50 - 17:10 Coffee Break

Chair: Anja Feldmeier-Krause

17:10 - 17:30 Michal Zajaček: Dust-enshrouded star near supermassive black hole: Application to Galactic center G-objects and other low-luminosity galactic nuclei

17:30 - 18:00 Elena Rossi: Hypervelocity stars and their implications for the Galactic Centre (invited)

18:00 - 18:20 Maria Melamed: Multi-Wavelength Observations of the Galactic Center Object G1

18:20 - 18:40 Pablo Torne: Where are the neutron stars in the Galactic Center?

18:40 - 19:00 Andrew Miller: Gravitational-wave constraints on the pulsar explanation of the Galactic-Center GeV excess

Poster Viewing

Day 5

Session 8: Structure and formation history of the GC

Chair: Camila de Sá Freitas

10:00 - 10:40 Anja Feldmeier-Krause: Structure and formation history of the Galactic Center (review)

10:40 - 11:10 Francisco Nogueras-Lara: The Nuclear Stellar Disc: Properties, formation history and recent star formation (invited)

11:10 - 11:30 Jennifer Friske: Chemical Evolution in the Nuclear Disk

11:30 - 11:50 Sanghyuk Moon: Effects of magnetic fields on star formation and gas flows in galactic centers

11:50 - 12:10 Coffee Break

Chair: Francisco Nogueras-Lara

12:10 - 12:40 Daisuke Kawata: The formation epoch of the Galactic bar revealed with the Nuclear Stellar Disk and JASMINE (invited)

12:40 - 13:00 Zhuo Chen: A new window on star formation history at the Galactic Center

13:00 - 13:20 Mike Rich: New Results on the Galactic bulge and implications for the Galactic Center

Session 9: The GC in the context of nearby nuclei and galaxy evolution

Chair: Mélanie Chevance

15:30 - 15:50 Niels Nieuwmunster: Detailed alpha abundance trends in the inner regions of the Galaxy

15:50 - 16:30 Nadine Neumayer (Review)

16:30 - 16:50_Francesca Pinna: Unveiling the connection between the formation of nuclear star

clusters and the evolution of their host galaxies

16:50 - 17:10 Coffee Break

Chair: Zhuo Chen

17:10 - 17:30 Rei Enokiya: Geometric structure and star formation in the CMZ of NGC253

17:30 - 18:00 Dimitri Gadotti: Insights into galactic nuclei from the TIMER survey (invited)

18:00 - 18:20 Camila de Sá Freitas: Milky Way in context: the cosmic epoch of bar formation and the nuclear disc evolution of nearby galaxies

18:20 - 18:40 Mélanie Chevance: Uncovering the Lifecycle of Galactic Nuclei by Mapping Extragalactic 'Central Molecular Zones'

18:40 Good-bye - Rainer Schödel