

# SUPERNOVAE AND INTERSTELLAR DUST

## Online mini-workshop (12 – 14 April 2021)

All times are CEST.

14:00 CEST = 05:00 PDT = 08:00 EDT = 13:00 BST = 20:00 CST = 21:00 KST

### Day 1 - Monday, 12 April 2021

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14:00 – 14:10      Lars Mattsson      Welcome

#### **I. Dust formation in supernova remnants**

*Chair: Rubina Kotak*

14:10 – 14:35	Mike Barlow	The dust mass in Cassiopeia A derived from infrared and optical line flux differences
14:35 – 15:00	Thiem Hoang	Effects of supernova feedback on the surrounding dust
15:00 – 15:25	Arkaprabha Sarangi	The timeline of dust formation in core-collapse supernovae
15:25 – 15:50	Maria Niculescu-Duvaz	Dust masses for a range of supernovae from modelling the red-blue optical line asymmetries

*Break*

*Chair: Florian Kirchschrager*

16:10 – 16:35	Mikako Matsuura	Spitzer and Herschel studies of dust in supernova remnants in the Small Magellanic Cloud
16:35 – 17:00	Roger Wesson	Observational limits on the early-time dust mass in SN 1987A
17:00 – 17:25	Jeonghee Rho	Near-IR observations of CO and dust formation in supernovae
17:25 – 17:50	Jeremy Chastenet	The dust content and polarisation of Cassiopeia A and its surroundings

### Day 2 - Tuesday, 13 April 2021

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#### **II. Dust evolution in the presence of forward and reverse shocks**

*Chair: Lars Mattsson*

14:00 – 14:25	Felix Priestley	Observational constraints on dust destruction in shocks
14:25 – 14:50	Sergio Martínez-González	Destruction of dust grains by supernovae within bubbles
14:50 – 15:15	Franziska Schmidt	Hydrodynamic simulations of dust destruction by supernova remnant shocks
15:15 – 15:40	Jonathan Slavin	The evolution of supernova-formed dust grains including stellar wind and magnetic field effects

*Break*

#### **III. Presolar dust**

*Chair: Anja Andersen*

16:00 – 16:25	Rhonda Stroud	Searching for interstellar signatures in nanodiamonds and organic matter from chondritic meteorites
16:25 – 16:50	Peter Hoppe	Dust from supernovae found in primitive solar system materials
16:50 – 17:15	Larry Nittler	Electron-capture supernova dust in the solar system

### Day 3 - Wednesday, 14 April 2021

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#### **IV. Dust in galaxies**

*Chair: Fred Gent*

14:00 – 14:25	Hiroyuki Hirashita	Effects of supernova feedback and dust processing in circum-galactic dust
14:25 – 14:50	Miiikka Väisälä	What can a supernova driven dynamo tell us about polarization of dust in our galaxy?
14:50 – 15:15	Mika Juvela	Interstellar dust in star-forming regions
15:15 – 15:40	Ilse De Looze	The competition between supernova dust production, interstellar growth and supernova shock dust destruction processes in nearby galaxies

15:40      **All participants**

**Virtual group photo**

*Break*

16:00 – 16:25	Ambra Nanni	Investigating metal and dust in low-metallicity local and high-redshift galaxies
16:25 – 16:50	Luca Graziani	The impact of various stellar populations on the assembly of dusty galaxies at $z > 4$
16:50 – 17:15	Ezra Brooker	Dependence of dust formation on the supernova explosion

17:15 – ...      **All participants**  
Darach Watson

**Discussion round**

Summary of the workshop