

Hallerstrasse 6 • CH-3012 Bern • Switzerland

"Star Formation"

ISSI Workshop Program, 20-24 May 2019

Monday, 20 May 2019

Time	Торіс	Speaker	
09:00-09:45	Registration ISSI, Hallerstrasse 6, 1 st floor		
Session 1		Chairperson:	
09:45-10:00	Welcome and Introduction to ISSI	Director, Convener	
Session 2		Chairperson:	
10:00-10:35	The Cosmic History of Star Formation	Piero Madau	
10:35-11:10	Forming the First Stars in the Universe	Volker Bromm	
11:10-11:25	Coffee Break		
11:25-12:00	The primordial and low-metallicity star formation: an excursion into the early universe	Takashi Hosokawa	
12:00-12:35	Life and death of supermassive stars	Lionel Haemmerle	
12:35-13:10	Supermassive gas clouds and supermassive stars in high redshift galaxies as precursors of massive BH seeds via direct collapse	Lucio Meyer	
13:10-14:35	Lunch		
Session 3		Chairperson:	
14:35-15:10	Star Formation and Its Environment	Daniela Calzetti	
15:10-15:45	The Formation and Evolution of Filamentary Molecular Clouds: The Origin of the Angular Momenta of Cloud Cores and Protoplanetary Disks	Shu-ichiro Inutsuka	
15:45-16:20	Molecular cloud formation and dispersal by stellar feedback	Stefanie Walch-Gassner	
16:20-16:35	The Thermodynamics of H2 in the Context of the First Stars	Piyush Sharda	
17:00	Welcome Reception - Hallerstrasse 6, 1 st floor		



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Tuesday, 21 May 2019				
Time	Topic	Speaker		
Session 4		Chairperson:		
9:00-9:35	Galactic environment, giant molecular clouds, and young star clusters; the intermediate scale perspective of star formation	Angela Adamo		
9:35-10:10	Star Cluster Formation and Feedback	Mark Krumholz		
10.10-10.45	Globular clusters as the relics of regular star formation in high-redshift galaxies	Diederik Kruijssen		
10:45-11:05	Coffee Break			
11:05-11:40	The role of stellar feedback in the formation of groups and clusters of stars	Martin Krause		
11:40-12:15	Multiple stellar populations in massive star clusters: challenges for star formation in the extremely dense environment	Corinne Charbonnel		
12:15-12:50	A new model for the origin of multiple stellar populations in globular clusters	Mark Gieles		
12:50-14:00	Lunch			
Session 5		Chairperson:		
14:00-14:35	The stellar kinematics and binary fraction of resolved young star clusters	Peter Zeidler		
14:35-15:10	Connecting models of star cluster formation and ISM dynamics to the observational domain	Ralf Klessen		
15:10-15:45	The Impact of Stellar Feedback on Star Formation	Stella Ofner		
15:45-16:05	Coffee Break			
16:05-16:40	On the formation and feedback of high-mass stars	Rolf Kuiper		
16:40-17:15	How Stellar Feedback Limits Accretion onto Massive Stars	Anna Rosen		
17:15-17:30				
17:30-18.20	ISSI Book Plan Discussion			



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Time	Торіс	Speaker
Session 6		Chairperson:
09:00-09:35	Observations of binary and multiple star formation	Hans Zinnecker
09:35-10:10	The evolutionary cycle of molecular clouds, star formation and feedback	Mélanie Chevance
10:10-10:45	Earliest stages of star and disk formation	Asmita Bhandare
10:45-11:00	Coffee Break	
11:00-11:35	Fluid dynamics of interstellar turbulence and star formation	Alexei Kritsuk
11:35-12:10	What regulates star formation, Magnetic Fields or Stellar Feedback?	Fumitaka Nakamura
12:10-12:45	Hierarchical gravitational collapse: the mechanism and implications for collapse timescales, cloud ages, the SFR, and cluster structure	Enrique Vazquez
12:45-13:20	What feeds the nonthermal motions in molecular clouds? The effects of global hierarchical and chaotic collapse, from scaling relations to cluster formation and the IMF.	Javier Ballesteros
13:20-19:00	Free time to visit the attractions of Bern	
	Also: All ISSI facilities are available for group discussions	
19:00	Workshop Dinner at the Restaurant Kornhauskeller, Bern (organized by ISSI)	



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Thursday, 23 May 2019			
Time	Торіс	Speaker	
Session 7		Chairperson:	
09:00-09:35	Fragmentation of molecular clouds, filaments, the core mass function and the origin of the stellar initial mass function: Observations	Philippe André	
09:35-10:10	The Core mass function and the Initial mass function: their origin and their links, ideas and issues	Patrick Hennebelle	
10:10-10:45	One possible mechanisms to infer the IMF characteristic mass	Yueh-Ning Lee	
10:45-11:15	Coffee Break		
11:15-11:50	The Role of Chemistry on Non-ideal MHD Effects and Protostellar Disk Formation	Bo Zhao	
11:50-12:25	Formation and Early Evolution of Proto planetary Disks	Kengo Tomida	
12:25-13:40	Lunch		
Session 8		Chairperson:	
13:40-14:15	Observational constraints on the cosmic-ray ionization rate in the interstellar medium	Nicholas Indriolo	
14:15-14:50	The influence of energetic particles on protoplanetary disks	Donna Rodgers-Lee	
14:50-15:25	Cooler and smoother – the impact of cosmic rays on the phase structure of galactic outflows	Philipp Girichidis	
15:25-16:00	Cosmic Rays and the dynamics of the bi-stable interstellar medium	Alexandre Marcowith	
16:00-16:20	Coffee Break		
16:20-16:55	Cosmic ray transport in molecular clouds and circumstellar disks	Alexei Ivlev	
16:55-17.20	Protostars as cosmic-ray factories	Marco Padovani	
	ISSI Book Plan Discussion		



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Friday, 24 May 2019				
Time	Торіс	Speaker		
Session 9		Chairperson:		
09:00-09:35	Cosmic rays, non-thermal emission and neutrinos from young stellar clusters	Andrei Bykov		
09:35-10:10	What can gravitational waves tell us about star formation (and vice versa)	Pablo Marchant		
10:10-10:40	Coffee Break			
Session 10	SSRv & ISSI Book			
10:40-12:00	Discussion of the book (authors Book plans, actions, schedule)	Conveners		

End of the Workshop