

ISSI WORKSHOP ON THE SOLAR ACTIVITY CYCLE: PHYSICAL CAUSES AND CONSEQUENCES

PROGRAMME

MONDAY 11.11.2013		
08:30-09:00	Registration in ISSI, Hallerstrasse 6, 1 st floor	
09:00	Welcome	
09:15 - 09:30	Introduction to the Workshop: ISSI workshop series on what drives the solar activity cycle	André Balogh
PART 1: ACTIVITY INDICES AND PROXIES		
	Chairman	
09:30 - 10:15	The Schwabe and Hale solar activity cycles	Sami Solanki
10:15 - 11:00	Revisiting the Sunspot Number: re-calibrations and future extensions	Frédéric Clette
11:00-11:30	<i>Coffee break</i>	
11:30 - 12:00	Long-term variations in the characteristics of sunspots	Andrey Tlatov
12:00 - 12:30	Solar irradiance and the solar activity cycle	Natalie Krivova
12:30 - 13:00	Microwave total flux as a solar activity index	Kiyoto Shibasaki
13:00-14:00	<i>Lunch</i>	
	Chairman	
14:00 - 14:30	Cyclic and long-term variation of chromospheric plages	Ilaria Ermolli
14:30 - 15:00	Flare statistics	Ed Cliver
15:00 - 15:30	The solar cycle in the corona	Lidia van Driel Gesztelyi
15:30-16:00	<i>Coffee break</i>	
16:00 - 16:30	The solar cycle in the heliosphere	Ilya Usoskin
16:30 - 17:00	What Geomagnetism can Tell Us about the Solar Cycle?	Leif Svalgaard
17:00	<i>Welcome reception</i>	

TUESDAY 12.11.2013

	Chairman	
09:15 - 10:00	A synthesis of solar cycles 22-24	Hugh Hudson
10:00 - 11:00	Discussion: a hierarchy of solar activity indices?	Led by: (Chairman TBD)

11:00-11:30 Coffee break

PART 2: INFERENCES FROM INDICES

11:30 - 12:00	Nonlinearities: The Waldmeier effect and inflows into the activity belt	Robert Cameron
12:00 - 12:30	Extending the solar butterfly diagram into the past and implications for the solar cycle	Rainer Arlt
12:30 - 13:00	North-South Asymmetries: the Solar Dynamo and Hemispheric Coupling	Aimee Norton

13:00-14:30 Lunch

	Chairman	
14:30 - 15:00	Gnevyshev gap	Galina Bazilevskaya
15:00 - 15:30	Solar cycle precursors in models and in observations	Kristóf Petrovay

15:30 - 16:00 Coffee break

PART 3: INTERIOR DRIVERS

16:00 - 16:30	A helioseismologist's guide to the solar cycle	Ann-Marie Broomhall
16:30 - 17:00	Helioseismology - Flow fields in the convection zone	Michael Thompson

PART 4: MAGNETIC FEEDBACK - MAGNETIC FLUX DYNAMICS

	Chairman	
09:30 - 10:00	Magnetic field dynamics in the convection zone	Manfred Schüssler
10:00 – 10:30	Magnetic flux emergence and solar dynamic events	Vasilis Archontis
10:30 - 11:00	Flux emergence 2 - observations	Brigitte Schmieder
<i>11:00-11:30 Coffee break</i>		
11:30 - 12:00	Meridional flows and flux transport	David Hathaway
12:00 - 12:30	The roles of the meridional flow in the solar flux transport dynamo	Jie Jiang
12:30 - 13:00	Modelling of solar torsional oscillations and how well they compare with observations	Piyali Chatterjee
<i>13:00 Lunch</i>		
14:00	Free time to visit the attractions of Bern Also: All ISSI facilities are available for small group discussions (The presentation foreseen of Wolf's original instrument has had to be abandoned, due to the non-availability of Mr Friedli.)	
<i>19:00 Workshop dinner: Kornhauskeller restaurant, Bern</i>		

THURSDAY 14.11.2013

	Chairman	
09:30 - 10:00	Joy's law	Alexei Pevtsov
10:00 - 10:30	Observations of Magnetic Helicity in Solar Active Regions	Alexander Nindos
10:30 - 11:00	Helicity - theory	Mitch Berger

11:00-11:30 Coffee break

11:30 – 12:00	Polar magnetic fields during solar cycles 21-24	Gordon Petrie
12:00 – 12:30	Solar dipole and multipoles	Yi-Ming Wang

12:30-14:00 Lunch

PART 5: SOLAR CYCLES, STELLAR CYCLES

	Chairman	
14:00- 14:30	Surface flows from tracking starspots - observing the stellar dynamo	Zsolt Kővari
14:30 – 15:00	Sounding stellar cycles: inferences from asteroseismology	Bill Chaplin
15:00 - 15:30	Young Scientists' presentations	

15:30-16:00 Coffee break

16:00 - 16:30	Forecasting Models: Understanding Photospheric Field Motion	Kenneth Schatten (by Skype)
17:30 - 18:00	General outline of ISSI book, organisation, followed by splinter groups for book chapters ISSI facilities, rooms available	André Balogh

FRIDAY 15.11.2013

PART 6: PHYSICAL FOUNDATIONS OF THE SOLAR ACTIVITY CYCLE

	Chairman	
09:30 - 10:00	Physical origin(s) for the cyclic behaviour of the solar dynamo	Paul Charbonneau
10:00 - 10:30	Grand minima of solar activity and modelling them with the flux transport dynamo	Arnab Choudhuri
10:30-11:00	<i>Coffee break</i>	
11:00 – 11:30	Linking Convective Dynamos and Flux Emergence	Mark Miesch
11:30 - 12:00	Oscillator models of the solar cycle	Ilidio Lopes
12:00 - 12:30	Solar cycle variability stochastic or chaotic?	Nigel Weiss
12:30 – 13:00	Reports from splinter groups, authors Book plans, actions, schedule	Led by Convenors
13:00	<i>Close of Workshop</i>	