Neutrinos in Particle Physics, Astrophysics and Cosmology
St. Andrews, 8-23 August 2006

Lecture Courses

Code	Title	#	Lecturers
SM	Standard Model	5	**Chris Sachrajda (Southampton)**
NP	Neutrino Phenomenology	3	**Boris Kayser (Fermilab)**
AN	Accelerator Neutrino Physics	4	**Deborah Harris (Fermilab)**
NA	Neutrino Astrophysics	2	**Georg Raffelt (MPI München)**
SS	Standard Solar Models	2	**Aldo Serenelli (Princeton)**
SN	Solar Neutrinos	2	**Dave Wark (Imperial & RAL)**
SK	Atmospheric Neutrinos	2	**Takaaki Kajita (Tokyo)**
NI	Neutrino Interactions (DIS…)	2	**Kevin McFarland (Rochester)**
RN	Reactor Neutrinos	2	**Ed Blucher (Chicago)**
NB	Neutrinoless Double Beta Decay	2	**Kai Zuber (Sussex)**
NT	Absolute Neutrino Mass Measurements	2	**Beate Bornschein (Karlsruhe)**
NF	Neutrino Factories and superbeams	3	**Yoshitaka Kuno (Osaka)**
NM	Models of Neutrino Masses	3	**Guido Altarelli (CERN)**
LG	Leptogenesis	2	**Wilfried Buchmüller (DESY)**
CN	Cosmological Aspects of Neutrino Physics	3	**Sergio Pastor (Valencia)**
Total		39	

Standard Model: This course should assume basic knowledge of the SM, and aim to bring out the strengths and weaknesses of the model, and indicate where and how the model might break down, or reveal a more fundamental theory.

Neutrino Phenomenology: This course should introduce the standard MNS mixing scheme, and review the present state of knowledge of the mixing parameters.

Accelerator Neutrino Physics: should review the accelerator neutrino mixing programme (past, present, future)

Neutrino Interactions: should review the non-mixing accelerator based neutrino physics (structure functions etc)

Standard Solar Models should review the ingredients of the Standard Solar Model.

Solar Neutrinos and ***Atmospheric Neutrinos:*** (These courses could be combined.) Review the experimental situation for solar and atmospheric neutrino experiments.

Reactor Neutrinos, ***Neutrinoless double beta decay*** and ***Absolute Neutrino Masses***: (These courses could be combined.) Review the status of non-accelerator neutrino experiments.

Neutrino Factories and superbeams Review the status of the various programmes

Models of Neutrino Masses and ***Leptogenesis:*** (These courses could be combined.) Review the theoretical models.

Neutrino Astrophysics and ***Cosmological Aspects of Neutrino Physics:*** (These courses could be combined). Review astrophysical and cosmological aspects of neutrinos.

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TENTATIVE PROGRAMME

Week		Tue	Wed	Thu	Fri	Sat	Sun
1		8	9	10	11	12	13
0900-1030			SM-1	SM-2	SM-3	SM-4	Excursion
1015-1045			coffee			AN-1	
1045-1200			NP-1	NP-2	NP-3		
						SN-2	
1230-1400		Registration	Lunch				
						Free	
1400-1600			Private Study				
1600-1630			Tea				
1630-1745			SS-1	SS-2	SN-1		
1800-1930		Buffet					
2000-2100							

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2	14	15	16	17	18	19	20
0900-1030	SM-5	SK-1	SK-2	NF-1	NF-2	NF-3	Excursion
1015-1045	coffee					NM-2	
1045-1200	AN-2	AN-3	AN-4	NI-1	NI-2		
						NT-1	
1230-1400							
						Free	
1400-1600	Private Study						
1600-1630			Tea				
1630-1745	RN-1	RN-2	NB-1	NB-2	NM-1		
1800-1930	Dinner						
2000-2100							

Week	Mon	Tue	Wed
3	21	22	23
0900-1030	NT-2	NA-1	NA-2
1015-1045	coffee		
1045-1200	CN-1	CN-2	LG-2
			CN-3
1230-1400	lunch		
			Depart
1400-1600	NM-3	LG-1	
1600-1630	tea		
1630-1745			
1800-1930	Dinner		
1900-2200		Conference Dinner	
2000-2100			