

**NASA SPACE RADIATION SUMMER SCHOOL 2007
BROOKHAVEN NATIONAL LABORATORY, UPTON, NEW YORK
PROGRAM SCHEDULE**

PRE-WEEK		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time/Date	MAY/JUNE	27	28	29	30	31 MAY	1 JUNE	2
8:30			Memorial Day Holiday		Student arrival at BNL all day Security/Housing	NASA Summer School Welcome – Dr. Derek Lowenstein Medical Dept. Small Conf. Room. Bldg. 490	Radiobiology Users Training & Exam – Snyder Seminar Rm, Bldg. 911	FREE Except Backup for Training
9:15						User's Center Briefing 1 st Floor Conf. Rm RSB2, Bldg. 400		
9:30						BNL Photo ID	(8:30-10:30am)	
10:30						Orientation, Computer Accounts Forms, Check Cashing, Meal Tickets	Issue Film Badge & Iris Scan	
11:30						Training Audit	(10:30am-12:00pm)	
12:00						LUNCH	LUNCH	
13:00						Orientation & Lab Tour (1:00-2:15pm) Elaine Lowenstein	Medical Dept Orientation - Laura Thompson	
14:30						RAD WORKER Part II Classroom training - Medical Dept. Small Conf. Room	BLAF - Animal Facility Tour – MaryAnn Kershaw (start tour in in Medical Dept. Small Conf. Room)	
16:00						(2:30-5:00pm)		
16:30							Informal	

								Reception (Picnic Pavilion)	
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WEEK 1		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time/Date	JUNE	3	4	5	6	7	8	9
8:30		FREE	Medical Dept. EB/PG/CZ/BS Welcome & Program Goals	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	FREE
9:00			F. Sulzman NASA's Mission & Bioastronautics Road Map	L. Braby Energy Deposition	D. Lowenstein Accelerators at BNL	P. Hahnfeldt Rad Risk of Solid Cancers	A. Rusek NSRL High-LET Physics Lab	
10:00			T. Borak Basic Particle Physics	L. Braby Doses, Fluence Dose Rates	C. Zeitlin Accelerator-Based Space Physics	P. Hahnfeldt Cancer Risk Modeling	Ion Chambers & Phosphor Imager Scatterers & Collimators	
10:50			BREAK	BREAK	BREAK	BREAK		
11:00			T. Borak Particle Interactions & Track Structure	L. Braby Chalk Board Practical	A. Kronenberg Mutagenesis	C. Zeitlin Particle Physics Refresher	Beam Optics & Uniformity Bragg Curve	
12:00			LUNCH	LUNCH	LUNCH	LUNCH	Measurement	
13:00			R. Setlow Radiobiology Concepts	B. Sutherland DNA Damage & Repair	A. Kronenberg Genomic Instability	Tour of NSRL	Sample Irradiations	
14:30			BREAK	BREAK	BREAK	BREAK	BREAK	
14:50			E. Hall Cellular Radiobiology	B. Sutherland Clustered Damage	Tour of AGS with Kevin Brown - Bldg. 911-B	G. Nelson & EB Low-LET Physics Lab	Intro to Beam Time Proposal Request Form	
16:00			E. Hall High-LET Cell Biology	A. Kronenberg Apoptosis	A. Rusek High-LET Expt Plan for Friday 8 June	Low-LET Lab X-ray/ γ -ray/H Dosimetry Faculty Panel		
17:00			Faculty Panel	Faculty Panel	Faculty Panel	END	END	
17:30			Welcome Reception – Medical Lrg. Conf Rm	END	END			

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WEEK 2		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time/Date	JUNE	10	11	12	13	14	15	16
8:30		FREE	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	FREE
9:00			C. Zeitlin Radiation Transport & Shielding	NSRL Cell Lab 1 P. Guida Neuron Irradiations Early Neuron Time Points	J. Shay Telomeres Radiation & Ageing	E. Benton CR-39/TLD Detectors	M. Barcellos-Hoff Microenvironment	
10:00			C. Zeitlin/G. Nelson Planning Particle Physics Expts.	NSRL Animal Lab and Irradiations Physics Make-Up	D. Chen ATM, ATR & DSB Repair	B. Sutherland Proton+HZE Effects Faculty Panel	M. Barcellos-Hoff Radiation-induced Cytokines	
10:50			BREAK		BREAK	BREAK	BREAK	
11:00			P. Guida Flow Cytometry	Physics Make-Up	24 Hr. Neuron & Animal Data Points	48 Hr Neuron & Animal Data Points	72 Hr Neuron & Animal Data Points	
12:00			LUNCH	LUNCH	LUNCH	BBQ @ Pavillion	LUNCH	
13:00			Exp. Animal Randomization & Weighing	L. Townsend Radiation Transport Modeling	A. Kennedy Biological Countermeasures	J. Williams Late Tissue Effects		
14:30			BREAK	END	BREAK	BREAK	END	
14:50			P. O'Neill Radiation Chemistry		G. Nelson Microgravity Effects in Space	E. Blakely Cataractogenesis		
16:00			P. O'Neill Microbeams & Bystander Effects		G. Nelson/B. Sutherland Planning Particle Biology Expts.	E. Blakely Prodromal & Cardiovascular Effects	BBQ Dinner (Apt. Picnic Area)	
17:00			Faculty Panel		Faculty Panel	Faculty Panel	19:30 Concert	
17:30			END		END	END	Brookhaven Center	

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WEEK 3		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time/Date	JUNE	17	18	19	20	21	22	23
8:30		FREE	M. Durante Chromosome Aberrations	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	Medical Dept. Daily Briefing	FREE
9:00			-continue	D. Mewaldt GCR	L. Heilbronn Neutron Physics	Particle Physics Summary (LH)	Student Team Physics PPT Presentations	
10:00			NSRLCell Lab2 M. Durante	-continue SPE	(production, dosimetry, Mars)	Particle Biology Summary (EB/GN)	Student Team Cell PPT Presentations	
10:50				BREAK	BREAK	BREAK	BREAK	
11:00			Lymphocyte Irradiations at NSRL	Beam Time Proposal (BTP) Workshop B. Sutherland	F. Cucinotta NASA's Space Radiation Health Program	G. Nelson Space Flight History	Student Team Animal PPT Presentations	
12:00			LUNCH	LUNCH&DNA Video	LUNCH	LUNCH	LUNCH	
13:00			M. Weil Rad-Induced Blood Cancers	A. Rusek Data Analysis Particle Physics Lab	M. Durante Chromo. Harvest & Processing at Medical	G. Nelson Space Flight Measurements	Review of Beam Time Proposals	
14:30			BREAK	BREAK	BREAK	BREAK	BREAK	
14:50			C. Limoli Rad Effects on Neurons	P. Guida Cell & Animal Data Analysis & Discussion	M. Durante Chromosome Scoring at Medical	Prepare Final Powerpoint Presentations	Review of Beam Time Proposals	
16:00			B. Rabin Rad Effects on Behavior	K. Held-Low Dose & Low Dose- Rate Effects	M. Durante Chromosome Analysis	Prepare final Presentations Submit BTPs	Review of Beam Time Proposals	
17:00			Faculty Panel	Faculty Panel	END	Faculty Panel	Closing Ceremony – Medical Lrg. Conf Rm	

17:30			END	END	Andrew's by the Pond J. Clark, Medicine in the Space Environment	END		
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