



## Lithium Research Topical Science Group XP Priorities and Run Time Assignment

College W&M
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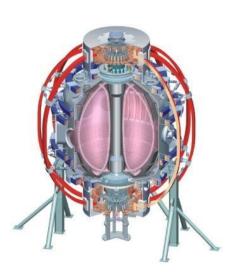
C Skinner (Leader)

MA Jaworski (Deputy)

D Stotler (Theory)

R Kaita (Former Deputy)

NSTX 2011 Research Forum Summary Session LSB-318 – 9:00-11:40am, March 18, 2011





Culham Sci Ctr U St. Andrews York U Chubu U Fukui U Hiroshima U Hyogo U Kyoto U Kyushu U Kyushu Tokai U **NIFS** Niigata U **U Tokyo JAEA** Hebrew U loffe Inst **RRC Kurchatov Inst** TRINITI **KBSI** KAIST **POSTECH ASIPP** ENEA, Frascati CEA, Cadarache IPP, Jülich IPP, Garching ASCR, Czech Rep

**U Quebec** 

## Initial time request vs. allocated time

- Initial request was over-subscribed, but not as bad as other groups
- Final allocations shown in table below

	Request	Minimum	Guidance	Allocated FY11 & 12	
No. XPs and XMPs:	17			6 & 9	
MAPP XPs of total:	8			7	
Total run days requested:	20	14.25	10.5	10.5	
FY 11 request:	11.5	9.5	4	4	
FY 12 request:	8.5	4.75 6.5		6.5	
Non-LRTSG run time (Mo-tile)	3.5		2		
Non-LRTSG run time (Li-introduction and/or boron)	3.5		2	1	



## **Resulting XP list, FY 11**

- Priorities informing FY11 run time:
  - Machine startup
  - Molybdenum tile upgrade
  - non-MAPP milestone measurements (e.g. recycling)

XP Author	XP Title		LRTSG Time Minimum	Non-LRTSG Time Request	Milestone	FY 11 Priority 1 Time Assigned	FY 11 Priority 2 Time Assigned	FY 12 Priority 1 Time Assigned	FY 12 Priority 2 Time Assigned	Other?
R. Maingi	Controlled lithium introduction and discharge development	2	1	. 2	Li-startup	1	0	0	0	First XP of run
H. Kugel	Comparison of diverted plasmas on incident lithiated molybdenum	2	1	. 2	Moly-tile characterization	1	0	0	0	Second XP of run?
MA Jaworski	Lithium de-conditioning XMP	1	1	1	Li-startup/XMP	0	0	0	0	XMP, run after H. Kugel?
V. Soukhanovskii	Recycling, pumping and impurity studies with lithium- coated	. 2	2	0	NSTX-U, lithium	1	0	0	0	
D. Mansfield	Startup upgrade using lithium powder before, during and after breakdown	0.5	0.5	0	DSOL-21	0	0.5	0	0	
D. Mansfield	Midplane injection of Li granules	1	1	. 0	DSOL-21	0	0.5	0	0	
TK Gray	Evaluation of heat flux handling and erosion of molybdenum tiles for NSTX- U	. 1	0.5	0.5	Moly-tile characterization	0	0	0	0	Piggyback with H. Kugel
								Total		
	FY 11 Sums	9.5	7	5.5	Achieved	3	1	4		
					Guidance	3	1	4		



## **Resulting XP list, FY 12**

- Priorities informing FY12 run time:
  - MAPP commissioning and related XPs
  - Lithium tests with new low-density scenarios and
  - Thesis data

F. Scotti	Carbon sources and scalings with lithium	1	1	0	NSTX-U, lithium, grad thesis	0	0	1	0	Should run as soon as possible to obtain thesis data
C. Taylor	Influence of outer strike point location on lithium	1	0.5	0	R12-1	0	0	1	0	Post-MAPP-Total
C. Skinner	XP on the relation between surface conditions and	1	0.5	0	R12-1	0	0	1	0	Post-MAPP-Total
D. Stotler	Diffusive evaporation of Li in He	0.5	0.5	o	R12-1	0	0	0.5	0	Post-MAPP-Total
D. Mansfield	Midplane injection of Li powder	1	0.5	0	DSOL-21	0	0	0	0.5	
MA Jaworski	Plasma electron spectroscopy for deuterium, lithium and impurity monitoring	1.5	0.75	0	R12-1	0	0	0.75	0	Post-MAPP-Lite
MA Jaworski	SOL and PFC modification during in-situ lithiumization via	1	0.5	0	R12-1	0	0	0	0	Piggyback with D. Stotler and D. Mansfield
MA Jaworski	Comparison of local plasma parameters between Li and de-conditioned	0.5	0.5	0	R12-1	0	0	0	0.5	Post-MAPP-Total
MA Jaworski	Comparison of local plasma parameters with boronized machine	0.5	0.5	0.5	Boron op.	0	0	0	0.25	Post-MAPP-Total
J. Menard and L. Zakharov	Impact of increased Li thickness on particle pumping and plasma performance	2.5	1	1	R12-1, R12-3, Moly-tile characterization	0	0	1	0	Split over run campaign, if initial tests indicate good results, perform as final XP of FY12
Total										
	FY 12 Sums	9.5	5.25	1.5			Achieved	5.25	1.25	6.5
							Guidance	5	1.5	6.5

