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NUCLEAR CRITICALITY SAFETY PROGRAM (NCSP)
TECHNICAL PROGRAM REVIEW

February 11-12, 2020

Hosted by: Los Alamos National Laboratory
Santa Fe, NM

La Fonda on the Plaza

100 E. San Francisco Street, Santa Fe, NM

AGENDA

8:00 AM - 5:00 PM		**Tuesday, February 11, 2020**		
8:00 AM				
		Welcome from NCSP	1	Angela Chambers
		Welcome from LANL	2	B Bluhm/E Mullen
		Purpose and Overview of the TPR	3	Doug Bowen
		The DOE CSSG: 2019 the Year in Review	4	David Erickson
		NCSP ***TECHNICAL PROGRAM ELEMENTS***		
		ANALYTICAL METHODS *INFORMATION PRESERVATION AND DISSEMINATION* *INTEGRAL EXPERIMENTS* *NUCLEAR DATA* *TRAINING AND EDUCATION* *INTERNATIONAL COLLABORATIONS*		
		ANALYTICAL METHODS		
	LANL AM1 MCNP	Briefing on work performed, funding utilization and benefit to the NCSP.	5	Forrest Brown
	ORNL AM2 SCALE	Briefing on work performed, funding utilization and benefit to the NCSP.	6	Will Wieselquist
	ORNL AM3 AMPX	Briefing on FY2019 and future work in addition to the funding utilization. Highlight benefits to the NCSP.	7	Doro Wiarda
	LANL AM2 NJOY	Summary of FY2019 work performed and funds utilization. Highlight benefits to the NCSP.	8	Jeremy Conlin
	ORNL AM16 Pitzer Method	Summary of literature search and new work proposal for new experiments. Benefit to the NCSP.	9	Chuck Weber
	ORNL AM1 RSICC	Update on code distribution metrics (DOE/University) Sponsor cost distributions.	10	Tim Valentine Doug Bowen
		INFORMATION PRESERVATION AND DISSEMINATION		
	LLNL IPD1, IPD2, IPD4 ICSBEP, NCSP Website, Hot Box	**Briefing of FY2019 work performed and funds utlization.** – What LLNL support went into new benchmarks in FY2019? – Describe new FY2019 NCSP website features and maintenance activities. – Plan to deal with website features that do not currently function as intended (high priority – focus of presentation).	11	David Heinrichs
10:00 AM - 10:15 AM	**BREAK (Refreshments)**			
10:15 AM		**INFORMATION PRESERVATION AND DISSEMINATION** ***(continued)***		
	ORNL IPD5, IPD6	Brief presentation on HPRR CAAS Benchmark and Mihalczo work/proposal.	12	Ellen Saylor
	SRS IPD1	Brief presentation on ARH-600 Reissue	13	David Erickson

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10:15 AM		**INTERNATIONAL COLLABORATIONS**		
	AWE	Summary of progress in FY2019 in collaboration with the NCSP laboratories. Future work planned in FY20.	14	Jon Hart
	IRSN AM13 **LLNL AM5** **LANL AM5** **ORNL AM10** **IRSN Intercomparison Work**	Summary of IRSN-led intercomparison work and the NCS SlideRule Progress in FY2019 in collaboration with the NCSP laboratories. Future work planned in FY20.	15	Isabelle Duhamel
	IRSN	Data Evaluation for 19F and Mo Isotopes	16	Luiz Leal
	OECD/NEA	NEA Activities Supported by the NCSP	17	Michael Fleming
		NUCLEAR DATA		
	BNL ND1	Brief overview of NNDC support to the NCSP and what the funds for ND1 were used for.	18	Dave Brown
	LANL ND1	**A summary of work performed on Nuclear Data tasks for the NCSP.** - Presentation must be aligned with the NCSP 5-year plan, Appendix B (by measurement and evaluation for each applicable isotope).	19	Brian Bluhm Bob Little
	LLNL ND1 ST1/2, ND2, ND3, ND5, ND6	**ND1 subtask 1 & 2, ND3, ND5, and ND6** – Provide a summary of NCSP funded work for ND1 (subtask 1 and 2) and how the NCSP funds were spent. How does this work benefit the NCSP. **ND2** –Provide a summary of work performed on Nuclear Data tasks for the NCSP. –Presentation must be aligned with the NCSP 5-year plan, Appendix B (by measurement and evaluation for each applicable isotope).	20a 20b	David Heinrichs Ayman Hawari
	ORNL ND1, ND3, ND6, ND7, ND10	**ND1 (measurements and evaluations)** -Briefing of work performed on Nuclear Data tasks for the NCSP. (Align presentation with the NCSP 5-year plan, Appendix B (by measurement and evaluation for each applicable isotope). **ND3 (leases)** -Brief overview. **ND6 (SAMMY modernization)** -Highlights from FY2019 summary report. **ND7 (MS thesis work at GA Tech)** -Brief overview. **ND10 (Monte Carlo evaluation of Diff and Int Data)** -1-2 slide summary of the task and progress in FY2019. Discuss future plans/goals.	21	Klaus Guber Marco Pigni

11:45 AM - 1:00 PM **LUNCH (On own)**

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1:00 PM		**NUCLEAR DATA** ***(continued)***		
	RPI ND1, ND2	**ND1 (Resonance Region ND Measurements)** -Several slides that provide a summary of work performed on Nuclear Data tasks for the NCSP. -Presentation must be aligned with the NCSP 5-year plan, Appendix B (by measurement and evaluation for each applicable isotope).	22	Yaron Danon
	RPI ND3	Briefing about the RPI/LINAC upgrades/refurbishment.	23	Yaron Danon Mike Zerkle
	Y-12 ND1	ND1 (Fabrication of a New Uranium Target for IRMM/GELINA).	24	Kevin Reynolds
	5-Year Plan – App. C Foreign Travel	**Summary of all FY2019 Foreign Travel by site.** -How did the trip benefit NCSP? -Foreign travel trip report submitted? Yes or No	25a 25b 25c 25d 25e	David Heinrichs Doug Bowen Brian Bluhm Yaron Danon Gary Harms
		OTHER LAB PRESENTATIONS	26	Mike Rising
	LANL	MCNP Modernization Status		
	ORNL	ORNL Evaluation of New Work	27	Vlad Sobes
	LANL	Nuclear Data Machine Learning Project	28	Denise Neudecker
3:00 PM - 3:15 PM	**BREAK (Refreshments)**			
3:15 PM		**OTHER LAB PRESENTATIONS** ***(continued)***		
	LANL	R-Matrix Code Capabilities Staus	29	Mark Paris
	LANL	Euclid/Archimedes Advancing Nuclear Data	30	Brian Bluhm
	LANL	Yttrium Hydride Critical Experiments for Nuclear Energy Applications	31	Brian Bluhm
5:00 PM	**ADJOURN**			
6:00 PM - 9:00 PM		**Dinner at La Fonda** ***no host***		

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8:30 AM - 4:00 PM		**Wednesday, February 12, 2020**		
8:30 AM		**INTEGRAL EXPERIMENTS**		
	LANL IE3 **LLNL IE1** **ORNL IE1** **SNL IE1 subtask 2** **Y12 IE1**	**Summary of FY2019 experiments (both NCSP and non-NCSP funded).** -Up to 3 slides per experiment, max. -(CED-1/2 – 1 slide overview). -(CED-3 – more details (2+ slides) for both NCSP and non-NCSP funded experiments).	32a 32b 32c 32d 32e	Joetta Goda Catherine Percher Justin Clarity/ Riley Cumberland Gary Harms/ Nicolas Leclair Kevin Reynolds
10:00 AM - 10:15 AM	**BREAK (Refreshments)**			
10:15 AM		**INTEGRAL EXPERIMENTS** ***(continued)***		
	LANL IE1	Who are the NEN staff NCSP supports financially and what, specifically, do they do to support the program?	33	Alex Lynn
	LANL IE3 **SNL IE1 subtask 2**	**Brief presentation for LANL/Sandia to provide a status report experiments.** -Purpose: what happened in the experimental facilities in FY2019? -Provide a listing of the experiments along with the status of each (very brief) and what milestones were completed in FY2019 for each. -Who the customer was: NCSP or work for others organization (NA-20, NA-80, etc.). -Time (number of days/weeks) in DAF schedule. -How many benchmarks were submitted out of the work done at SNL/NCERC (NCERC to include LANL/LLNL experiments)?	34a 34b	Brian Bluhm - 10:44 Gary Harms - 11:14
	MSTS IE1	**Brief presentation about the status of the FY2019 - projects.**	35	Sylvia Wright-Reader
12:00 PM - 1:15 PM	**LUNCH (On own)**			
1:15 PM		**TRAINING AND EDUCATION**		
	TE Summary	**Summary of NCSP Training and Education Courses in FY2019.** -Course registration details. -Where are students coming from. -Pictures of students from the courses. -Discuss both Sandia/NCERC courses.	36	Doug Bowen
	MCNP Courses and 2-week hands-on courses **LANL AM1** **LANL TE3** **LANL TE4**	**Summary of MCNP courses where NCSP funding was used.** -Number of students and courses taught in FY2019 compared to what is considered to be “full-capacity”. **Hands-on courses.** -Discussion about facility issue and course impact in FY2019. -Discuss the benefits of using the high bay for 2-week	37	Brian Bluhm Bob Little
	SCALE Courses ORNL AM2	**Summary of the SCALE courses where NCSP funding was used.** -Number of students and courses taught in FY2019 compared to what is considered to be “full-capacity”. -Discussion about SCALE User Workshop (1-2 slides).	38	Will Wieselquist

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		TRAINING AND EDUCATION continued		
	CSO Course **LANL TE7** **ORNL TE9** **SNL TE2**	**Summary of the details of the CSSG tasking and CSSG tasking report.** -Why was the tasking developed in the first place? -Who responded to the CSSG inquiry? -What information did they share? **Summary of the course development activities.** -Who participated? -New course agenda, tabletop exercise, and pilot plans.	39	Mikey Brady-Raap Fitz Trumble Doug Bowen
	LANL TE Activities **LANL TE6**	Brief summary of each task summarizing work performed for each task and where NCSP funds were spent.	40	Brian Bluhm
	LLNL TE Activities LLNL TE8	**New Reflector Materials for TACS.** -Brief summary of work performed to support hands-on courses.	41	David Heinrichs
		OTHER LAB PRESENTATIONS		
	LLNL	IER-184: TEX-Plutonium Benchmark Results	42	Catherine Percher
	LLNL	Importance of LLNL's Advanced Fission Physics Modeling (FREYA) in ISSA, a Time-Dependent Benchmark	43	David Heinrichs Tony Nelson
	LLNL	SOCRATES	44	David Heinrichs
	SNL	Sandia 7UPCX Fuel Pitch Variation Experiments that Decrease the Fuel-to-Water Ratio and Approach Optimum Modernization (IER-230)	45	Gary Harms
	SNL	Partically-Reflected 7UPCX Experiments at 0.855cm Pitch (IER-209)	46	Gary Harms
3:00 PM - 3:15 PM	**BREAK (Refreshments)**			
3:20 PM - 3:50 PM	**GROUP PHOTO**			
4:00 PM	**ADJOURN**			