

Delivering ENDF libraries to end-users: the Nuclear Data pipeline

WANDA Workshop 3–5 March 2020

The Nuclear Data Pipeline

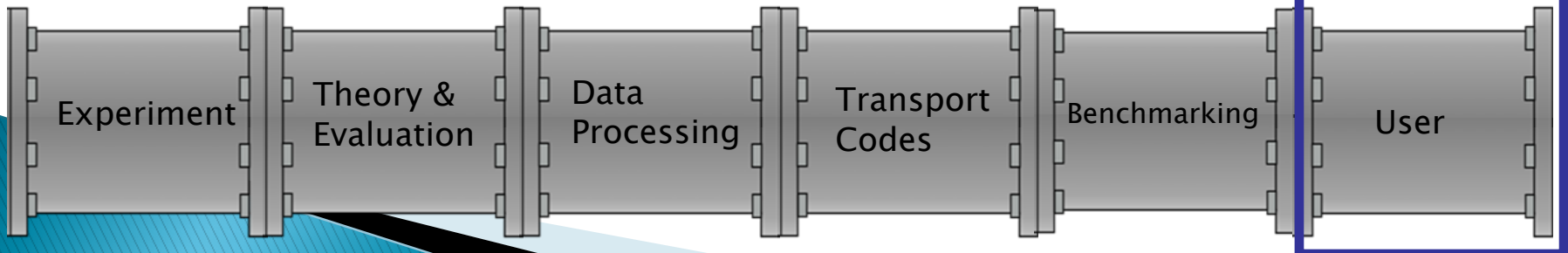
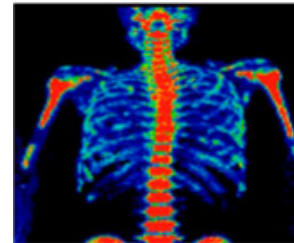
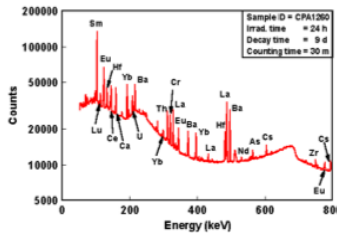
Our goal is to get the highest quality data and uncertainties to users

security

science

isotopes

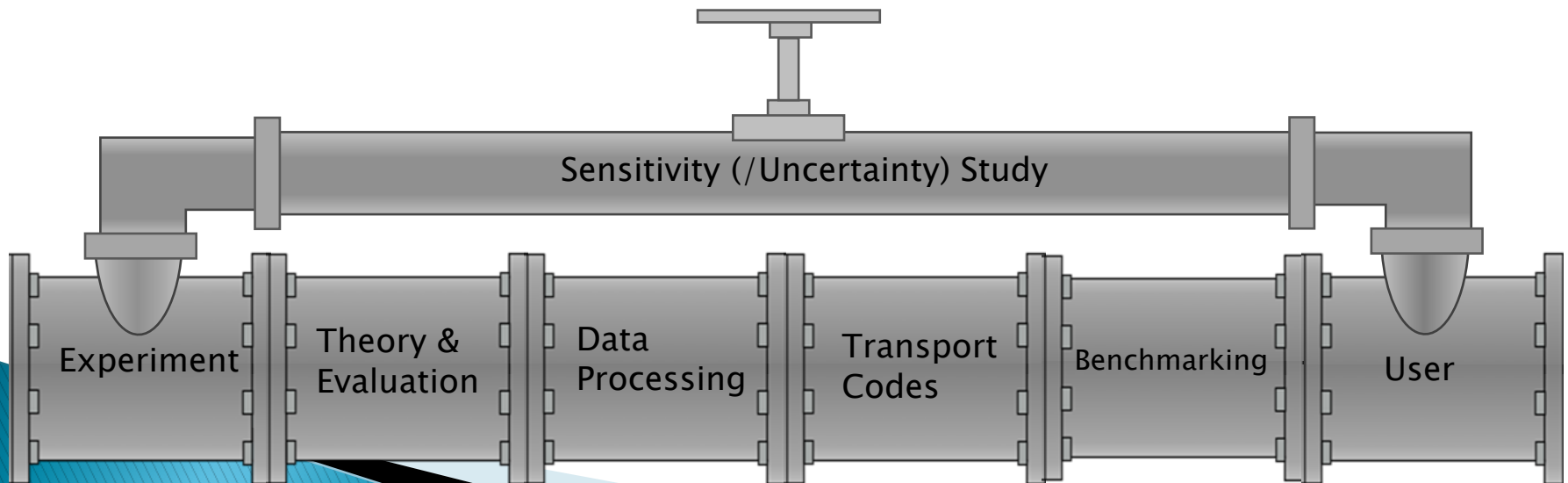
energy



The Nuclear Data Pipeline

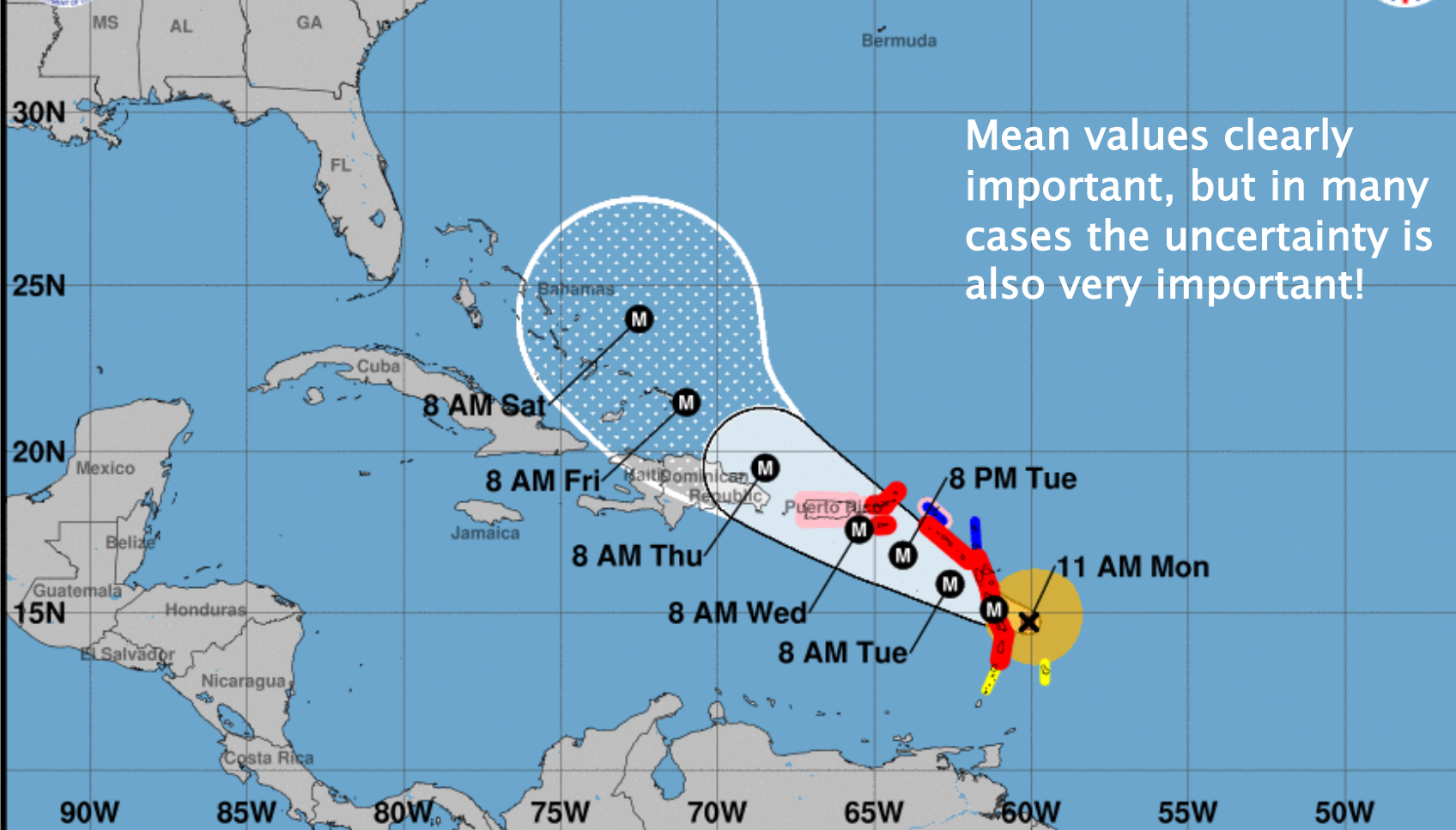
Our users use sensitivity studies to set priorities

When possible, these studies are informed with underlying uncertainties





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Maria

Monday September 18, 2017

11 AM AST Advisory 9

NWS National Hurricane Center

Current information: x

Center location 14.7 N 60.1 W

Maximum sustained wind 120 mph

Movement WNW at 10 mph

Forecast positions:

● Tropical Cyclone ○ Post/Potential TC

Sustained winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

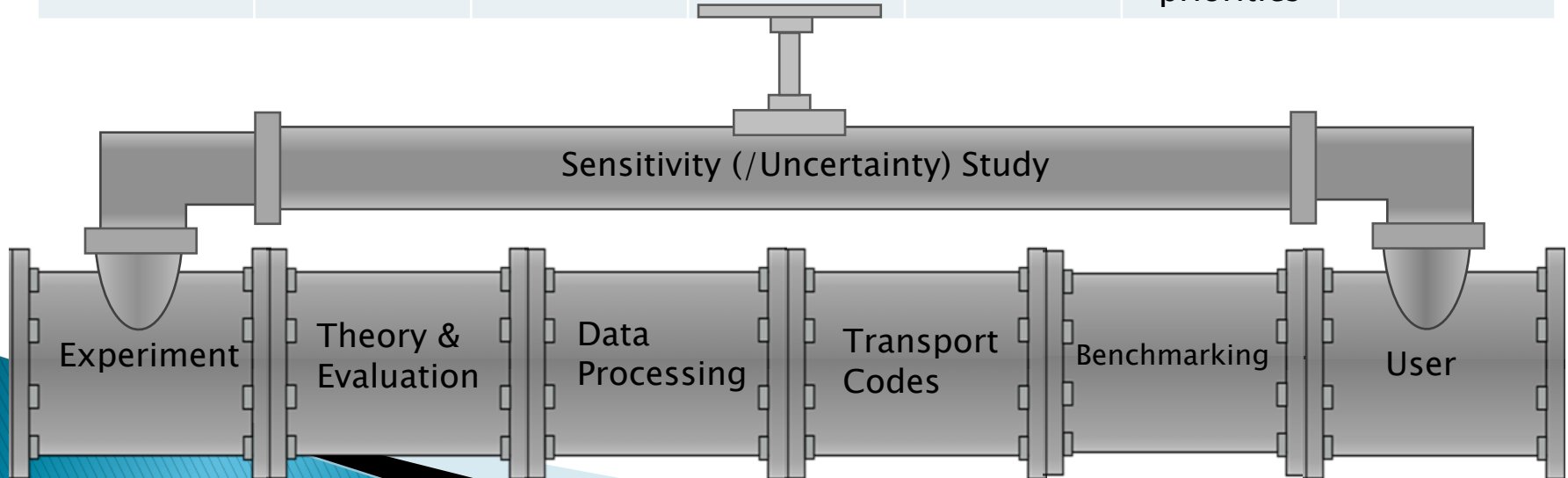
Hurricane Trop Stm

Current wind extent:

Hurricane Trop Stm

Today's presenters

						
Prof. Yaron Danon (RPI)	Patrick Talou (LANL)	Jeremy Conlin (LANL)	Teresa Bailey (LLNL)	Michael Zerkle (NNL)	Robert Casperson (LLNL)	David Brown (BNL)
Experiment	Theory & Evaluation	Data Processing	Transport Codes	Bench-marking	Users & setting priorities	



Take away messages

- ▶ All segments of the pipeline are essential.
 - ▶ Communication & cooperation between all segments of the pipeline is essential.
 - ▶ Funders need to understand how data they pay for gets into libraries. Sprinkling money on LANCSE doesn't get the requested data into MCNP.
 - ▶ Uncertainties/Covariances are EVERYONE'S job, not just the evaluator
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