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CUPiD's New Targets: Automated Regridding and High Resolution Notebooks

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NCAR

CESM - Community Earth System Model

- Fully coupled global earth system model
- used to perform science to best understand earth system variability and global change

CUPiD - CESM Unified Postprocessing and Diagnostics

- simplifies user experience of running diagnostics
- supports timeseries generation, data standardization, diagnostics, and metrics from all CESM components
- can be run independently or as a part of the CESM workflow

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Project Goals

- High resolution diagnostics notebook
- Automated regridding in the CESM workflow

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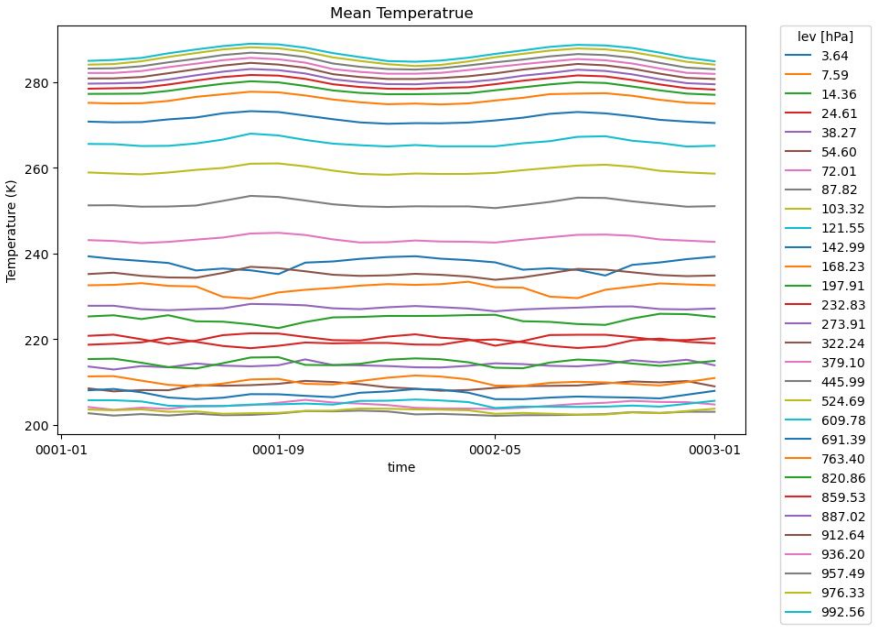
High Resolution Notebook

- Explore creating a notebook
- Learned the structure and configuration
- Identified variables necessary to generate diagnostic outputs
- Used existing high-resolution case



- Future Goal: High resolution tropical cyclone diagnostics

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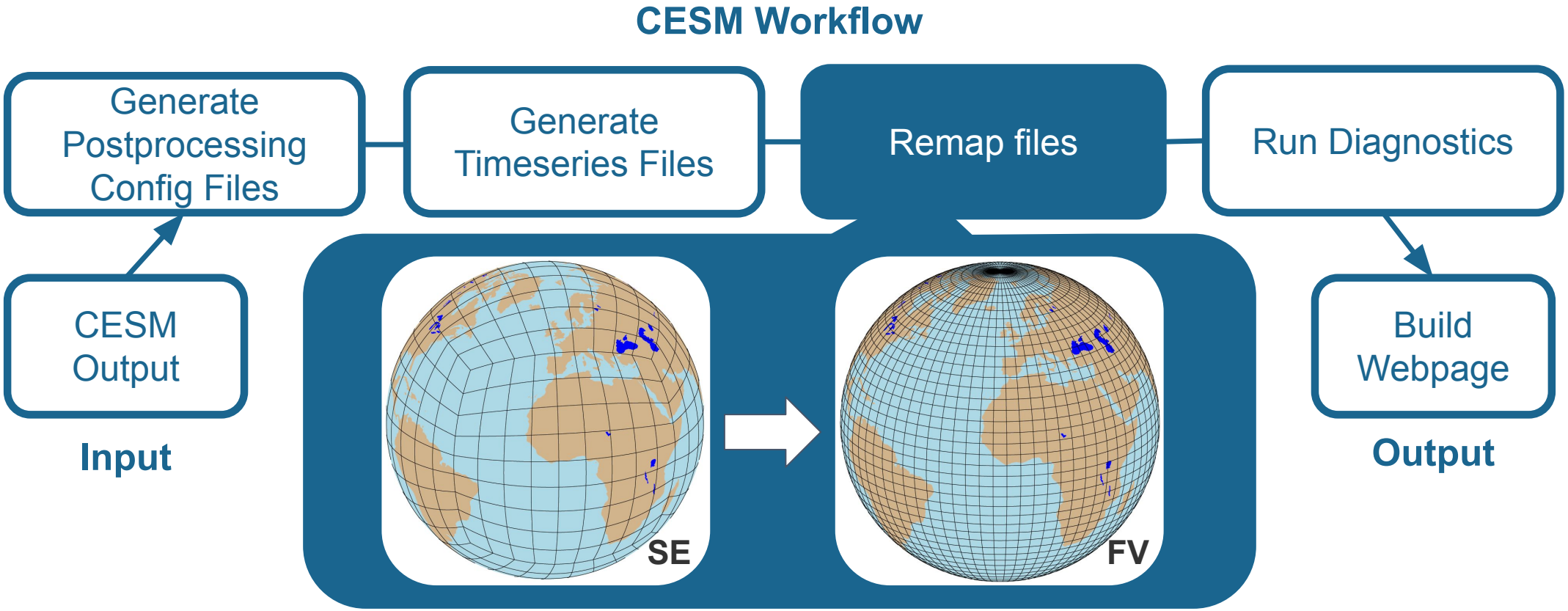
Regridding in CESM Workflow



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Conclusions and Future Work

Why this work is important:

- Implementing built in regridding streamlines the processes often necessary for future diagnostics
- Improves the CESM workflow's flexibility and usability
- Creates a foundation for future work

Future work:

- Expand regridding capabilities to support multiple target grids
- Incorporate user-defined regridding options for greater flexibility in diagnostics

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Questions?