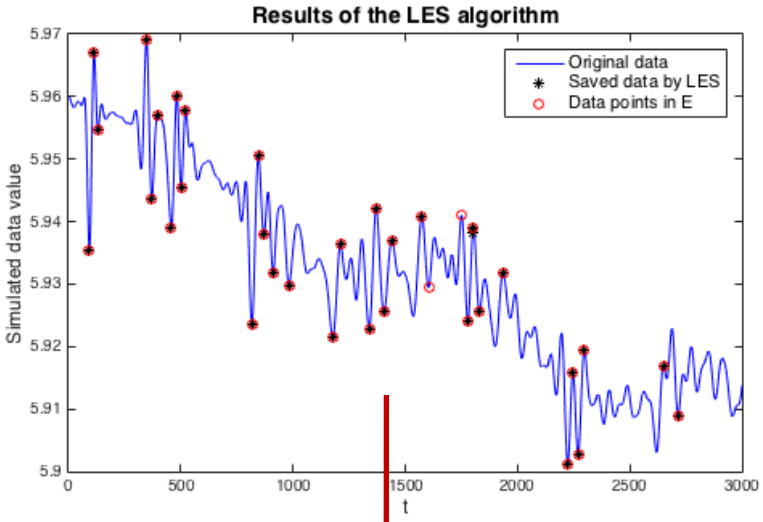
FASTMath provides in-situ analysis of streaming climate data

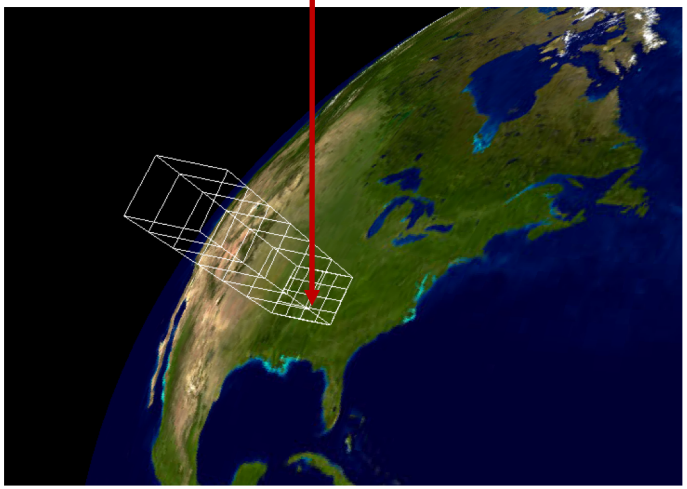
Scientific Achievement

Developing effective online data monitoring and archiving strategy over temporal and spatial domains while respecting practical storage and memory capacity constraints.

Significance and Impact

Streaming methods improves the quality and quantity of information available to scientists for analysis with minimal storage cost.





Research Details

- Typically averaged values or restricted temporal snap-shots of data can be saved in climate simulation.
- Intelligently select and record the most informative extreme values in the raw data generated from real-time simulations in the context of better monitoring climate changes.

X. Xian, R. Archibald, B. Mayer, K. Liu & J. Li, "An effective online data monitoring and saving strategy for large-scale climate simulations", Quality Technology & Quantitative Management, 10.1080/16843703.2017.1414112, 2018

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FASTMATH

Work was performed at ORNL

For more information contact Rick Archibald:
archibaldrk@ornl.gov