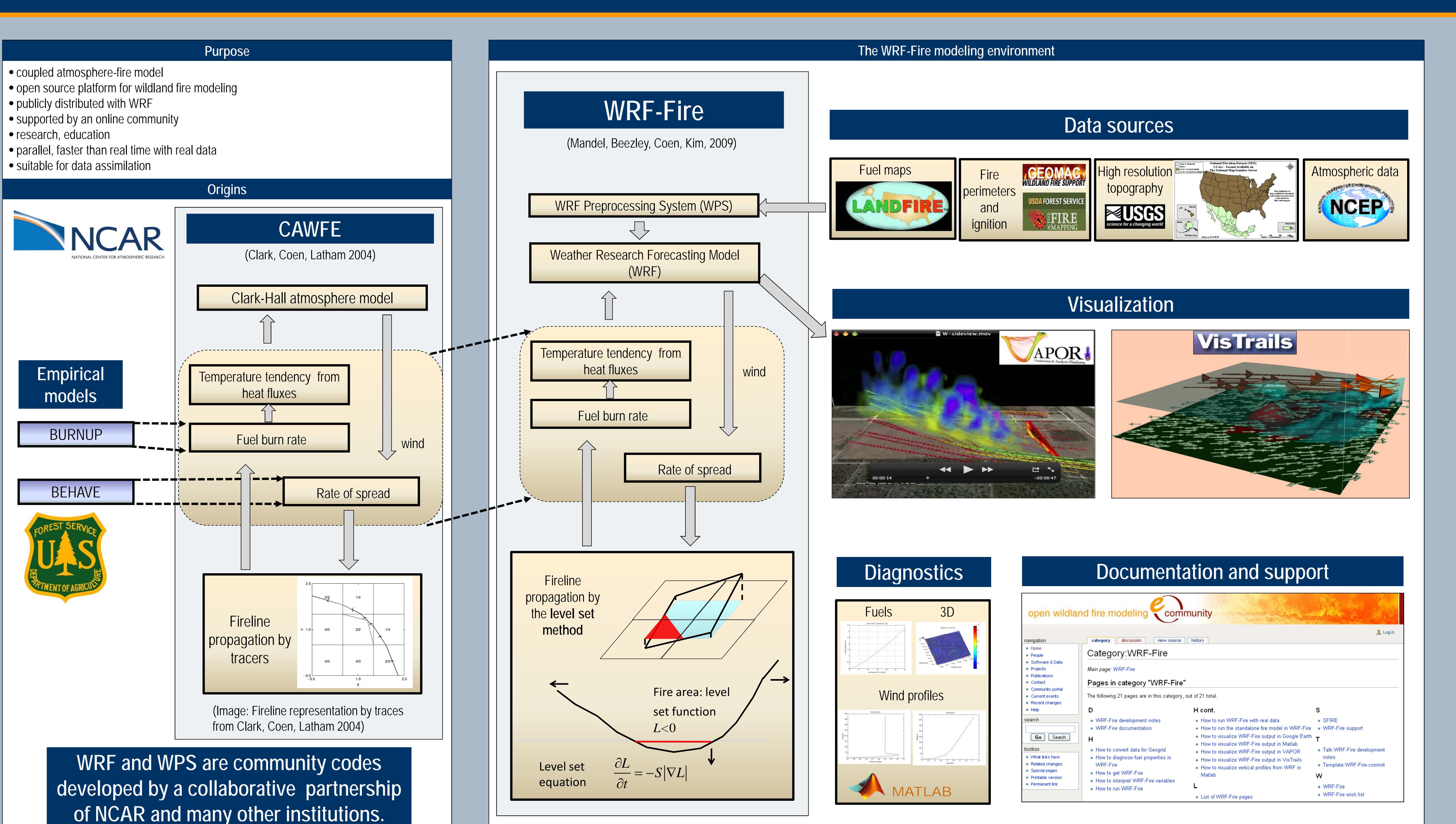
Wildland fire simulation by WRF-Fire

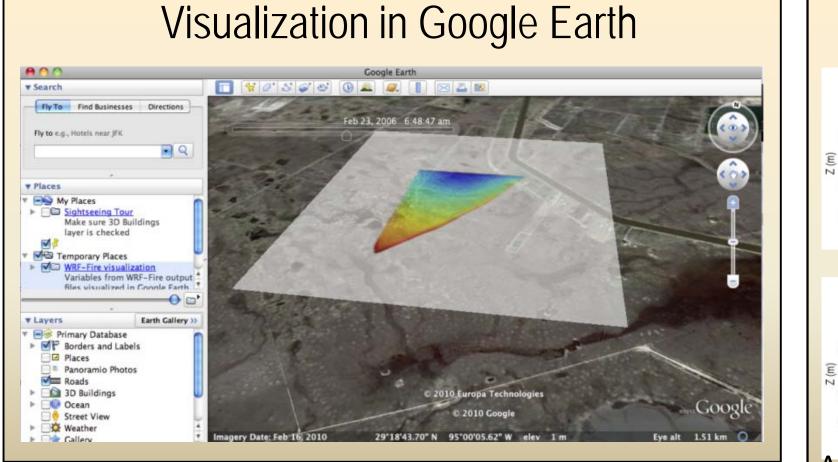
Jan Mandel, Jonathan D. Beezley, Adam K. Kochanski, Volodymyr Y. Kondratenko, Bedrich Sousedik, Erik Anderson, and Joel Daniels
University of Colorado Denver and University of Utah



Submesh ignition and atmosphere spin-up

- Ignition times given at grid nodes, replayed up to a given time for gradual initial fuel burn and heat release.
- Point and drip-torch line ignition starting from zero ignition size with prescribed rate of spread, stops at a given distance.
- In both cases, fire propagation by the model catches on and takes over.

Future



Data assimilation

Forecast

Data

Data

Data

Data

Data

Data

Data

Data

Data

Analysis - standard FnKF

Data

- Crown fire support
- Compatibility with Forest Service and NIST software (BEHAVE, FDS)
- Simulation from a known perimeter
- Assimilation of sensor and image data

| Section | Sect

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