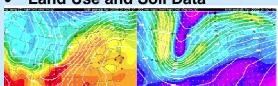
METEO INPUT DATA

Large scale weather data from NOAA Rapid Update Cycle runs:

- 12km-resolution initial conditions
- 12km-resolution boundary conditions

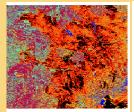
Static data:

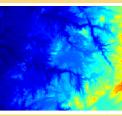
- High-resolution topography
- Land Use and Soil Data



STATIC FIRE DATA

- High resolution fuel data:
- 30m-resolution fuel description
- 30m-resolution elevation data





DYNAMIC FIRE DATA

- Satellite & aircraft fire detection
- NDWI-derived fuel moisture, NDVIcorrected fuel data
- MISR plume heights and fire intensity
- Incident fire perimeters
- Ground sensors

WRF SFIRE

WRF framework (atmosphere)

- ☐ ARW atmospheric core
- □ WPS preprocessing system

FIRE-AFFECTED WINDS

FIRE-GENERATED HEAT AND MOISTURE

Fire Model:

- ☐ Rothermel fire spread model
- ☐ Fire front tracking based on the level set method

DATA ASSIMILATION

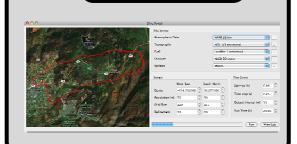
- Position correction
- Ensemble Kalman filters
- Wavelet and spectral filters
- Perimeter adjustment

METEO OUTPUT

High-resolution forecast:

- wind speed and direction
- air temperature
- air humidity
- precipitation
- cloudiness etc...

WEB PORTAL



FIRE OUTPUT

High-resolution fire forecast:

- fire area
- fire risk
- fire heat flux
- fire intensity
- · fire rate of spread
- plume height