GOES-R High Impact Weather Research Theme:
Fires Component

- Improved NWS IMET and WFO situational awareness during wildfire events
  - Development of techniques that can identify clusters of fire pixels in time and space.
- Support NWS smoke forecasting and data assimilation
  - Include GOES-R Fire Radiative Power (FRP) and assimilation of GOES-R Aerosol Optical Depth (AOD) retrievals into the High Resolution Rapid Refresh (HRRR) model that includes smoke (HRRR-smoke)
- Support NWS fire behavior forecasting
  - Implement capabilities to predict fire behavior (WRF-fire) into HRRR-Smoke, and then incorporate the probabilistic lightning ignition source into WRF-Fire to account for interactions between the atmosphere and fire and predict fire growth and movement.

Comparisons with Idaho AIRNow aerosol measurements during August 17-31, 2015 Pacific North West wildfire outbreak show that HRRR-Smoke does a good job of predicting the frequency of “unhealthy” and “unhealthy for sensitive groups” air quality.