

Theme Area 2: Treating Intermittent Sources in Forecast Models

- 1) Forest Fires
- 2) Dust Emissions
- 3) Other sources (Volcanoes, Accidental Releases, Homeland Security Scenarios)
- 4) Stratospheric O₃ intrusions

For Dust and Forest Fires:

Both phenomena can:

Impact health

Significantly affect background values of PM_{2.5}

Require implementation by global model or boundary conditions

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Fires and Dust - Common Challenges to Forecast Implementation

Source Identification: Satellites – Continually refining capabilities
- Limitations within satellite retrievals

Processes:

Data limitations – Land use, soil moisture, vegetation type

Parameterization limitations – plume-rise, resuspension

Evaluation: Existing networks – enhancements needed

Upper-air – needs for remote sensing (Lidar)

Intensive field studies or dedicated monitoring opportunities