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 O$_3$ intrusions

For Dust and Forest Fires:

Both phenomena can:
Impact health
Significantly affect background values of PM2.5
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