Resolving Air Flow over Elevated Terrain

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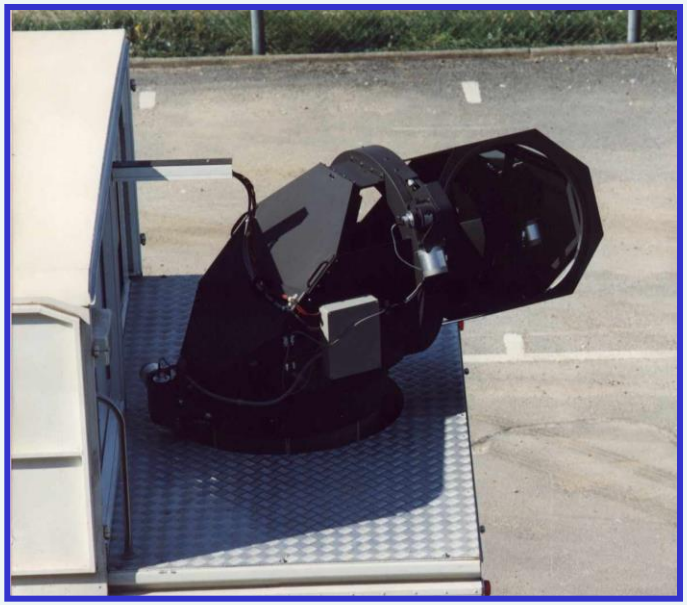
Background

- plume dispersion modelling is a key component of sour flare and tail gas incinerator permitting
- uncertainty in plume height when passing over a hill
- current models may be too conservative

Objective of this Project

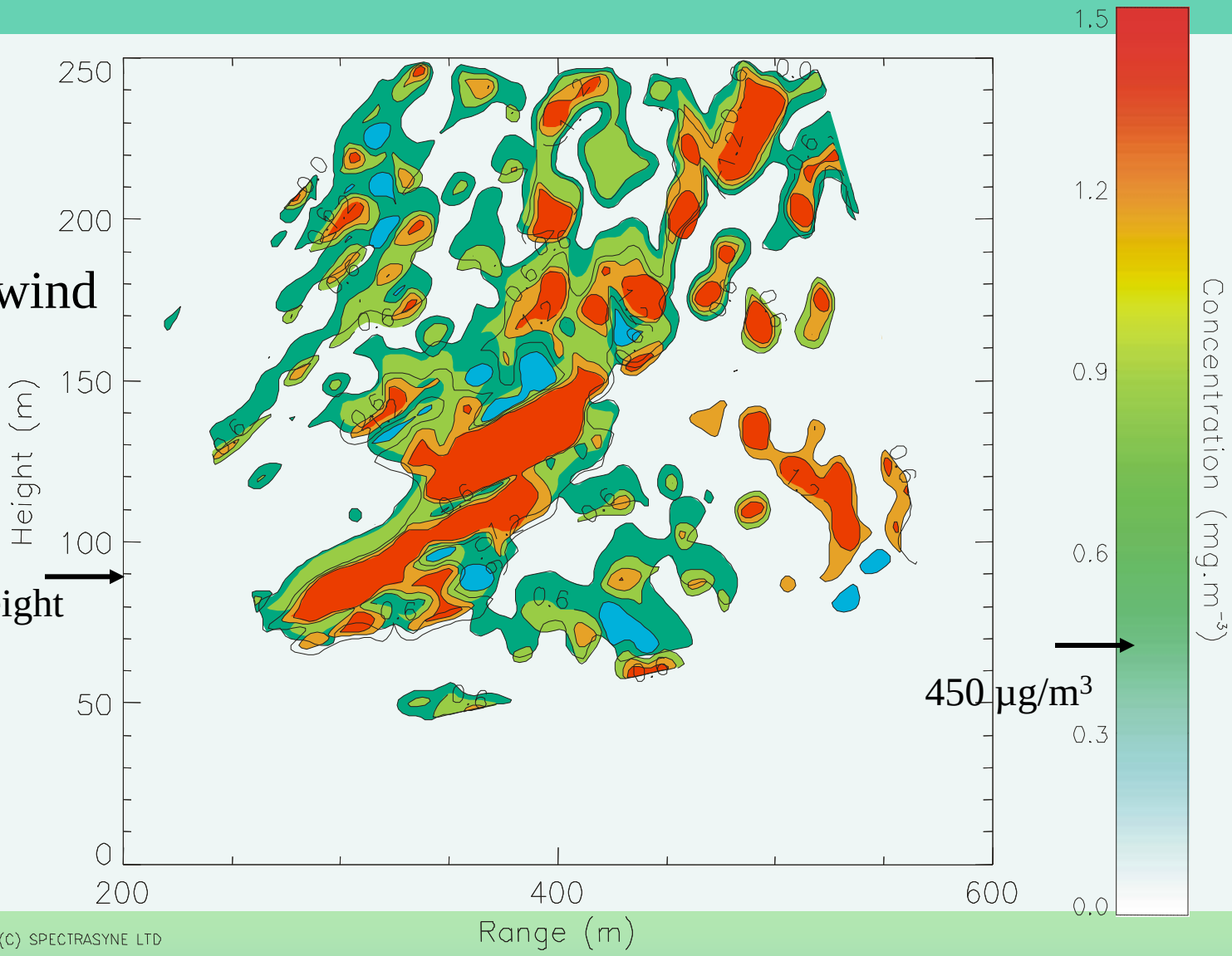
- combine dispersion modelling and DIAL tracking of an SO_2 plume to resolve plume interaction with elevated terrain

Spectrasyne's mobile DIAL



SO_2 Plume from Tail Gas Incinerator

plume
cross section
300 m downwind



stack height

450 µg/m³

DIAL

Planned Activities

- locate an appropriate site
- meteorological station for wind measurement
  - IROC Systems Corp.
- DIAL plume tracking
- dispersion modelling and data analysis
  - RWDI Inc.

Completed to date

- located site with tail gas incinerator
- DIAL tracking of SO_2 plume and collection of wind data completed
- data analysis and reporting ongoing

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  - Air Issues Committee, Petroleum Technology Alliance Canada (PTAC)