

# Simulation Facility for Emission Experiments



## SIMFLEX Controlled Release Program

Accelerating solutions for area-based landscape emissions measurement (landfill, coal, agriculture, etc)

### Configuration

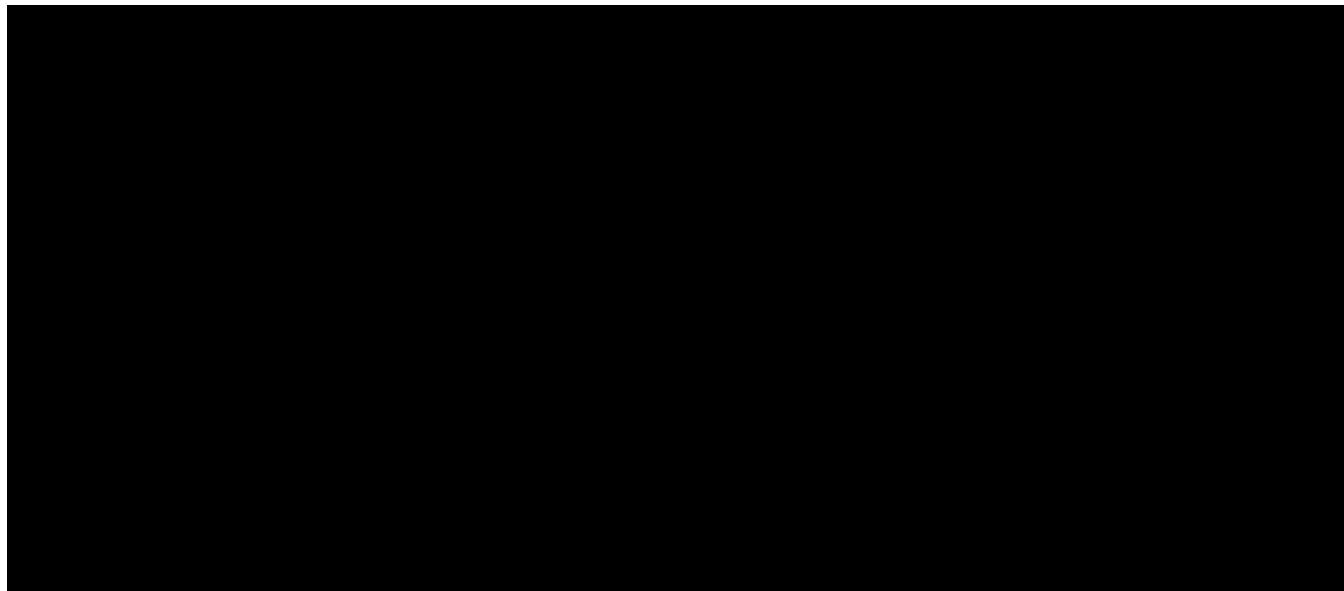
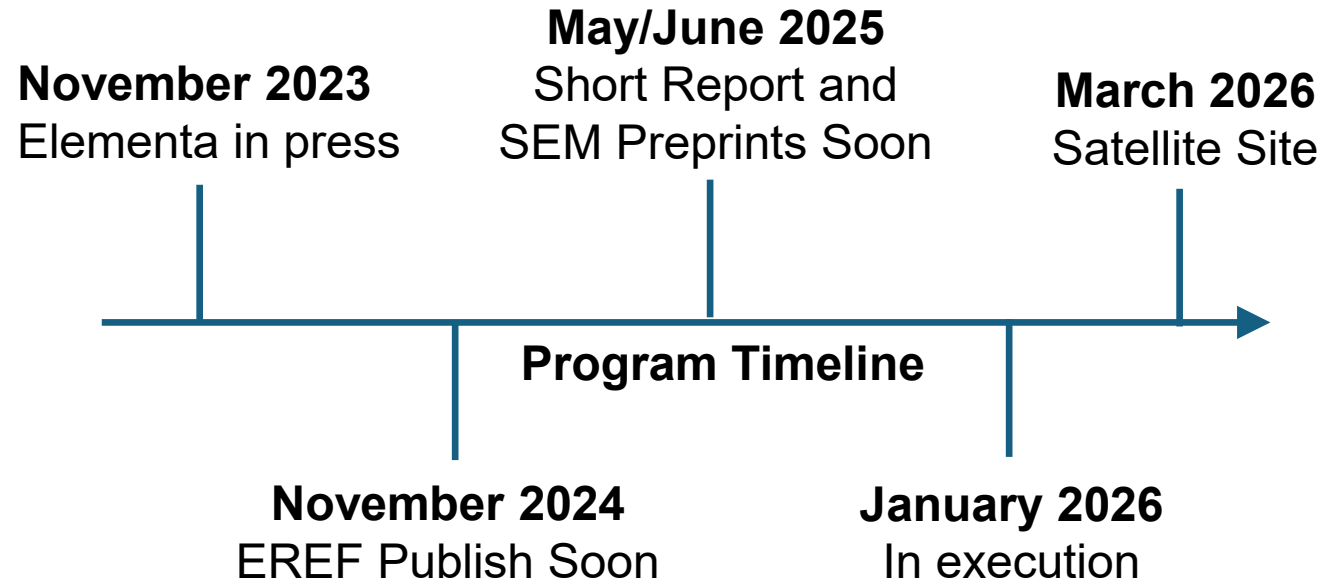
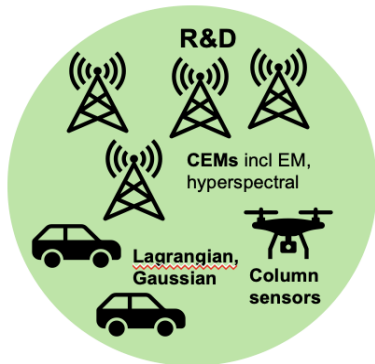
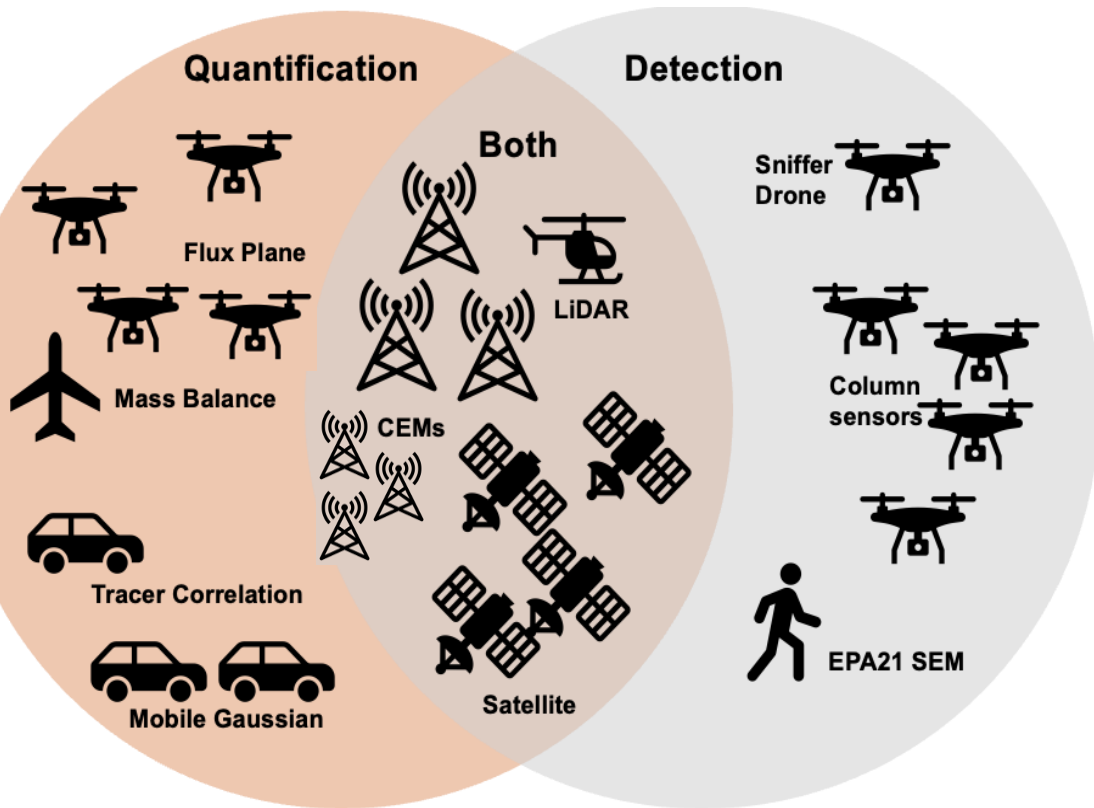
- 11 new release points - 8 point, 3 large area
- >1000 kg/hr total
- Natural gas tanker
- Computer controlled “scenes”

### High Integrity Site

- Hybrid cap (textile + clay), collection system
- No background emissions inside search area
- Several sources outside, totalling 12-24 kg/hr



# Over 40 Participants and 8 Countries



# Modern Leak Detection Alternatives

## TDLAS Tube Type



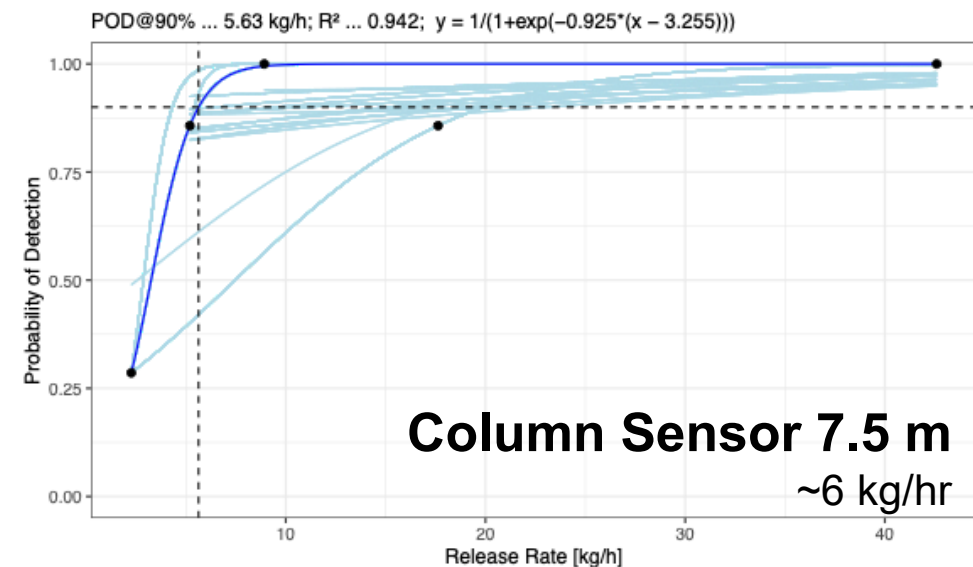
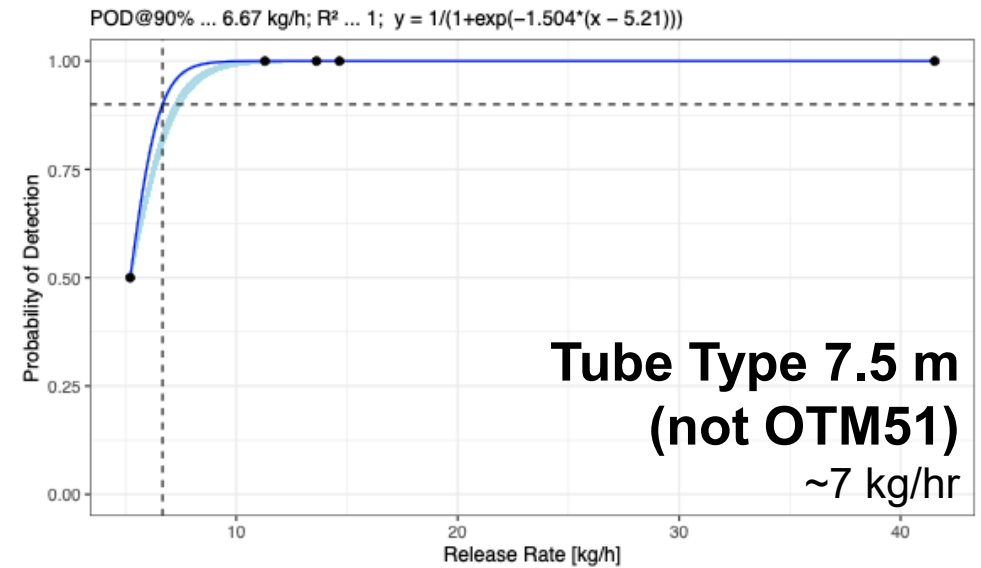
## TDLAS Column Sensors



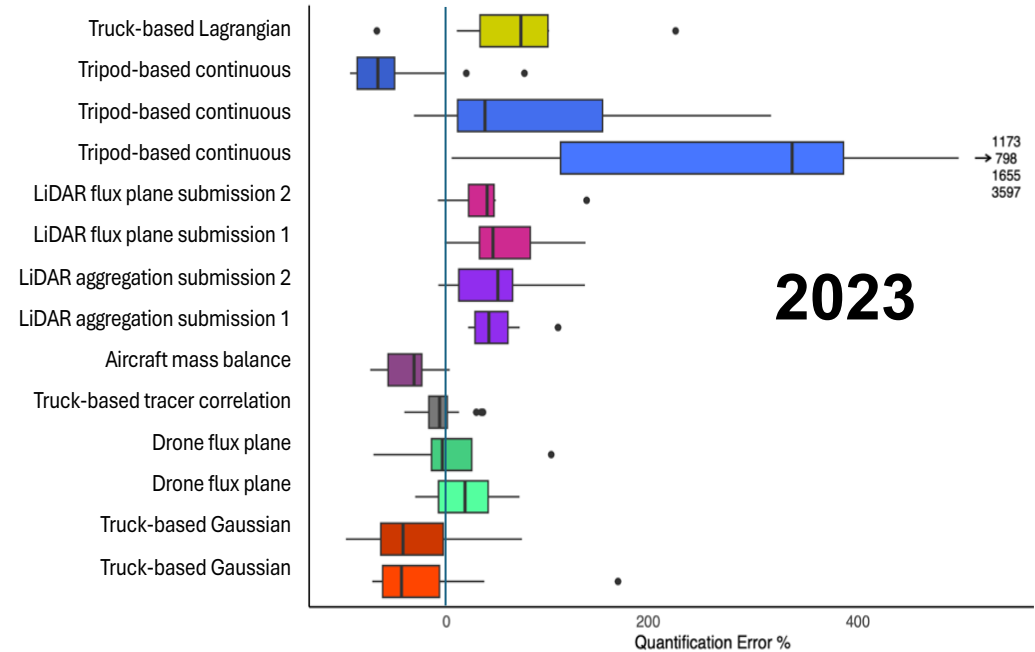
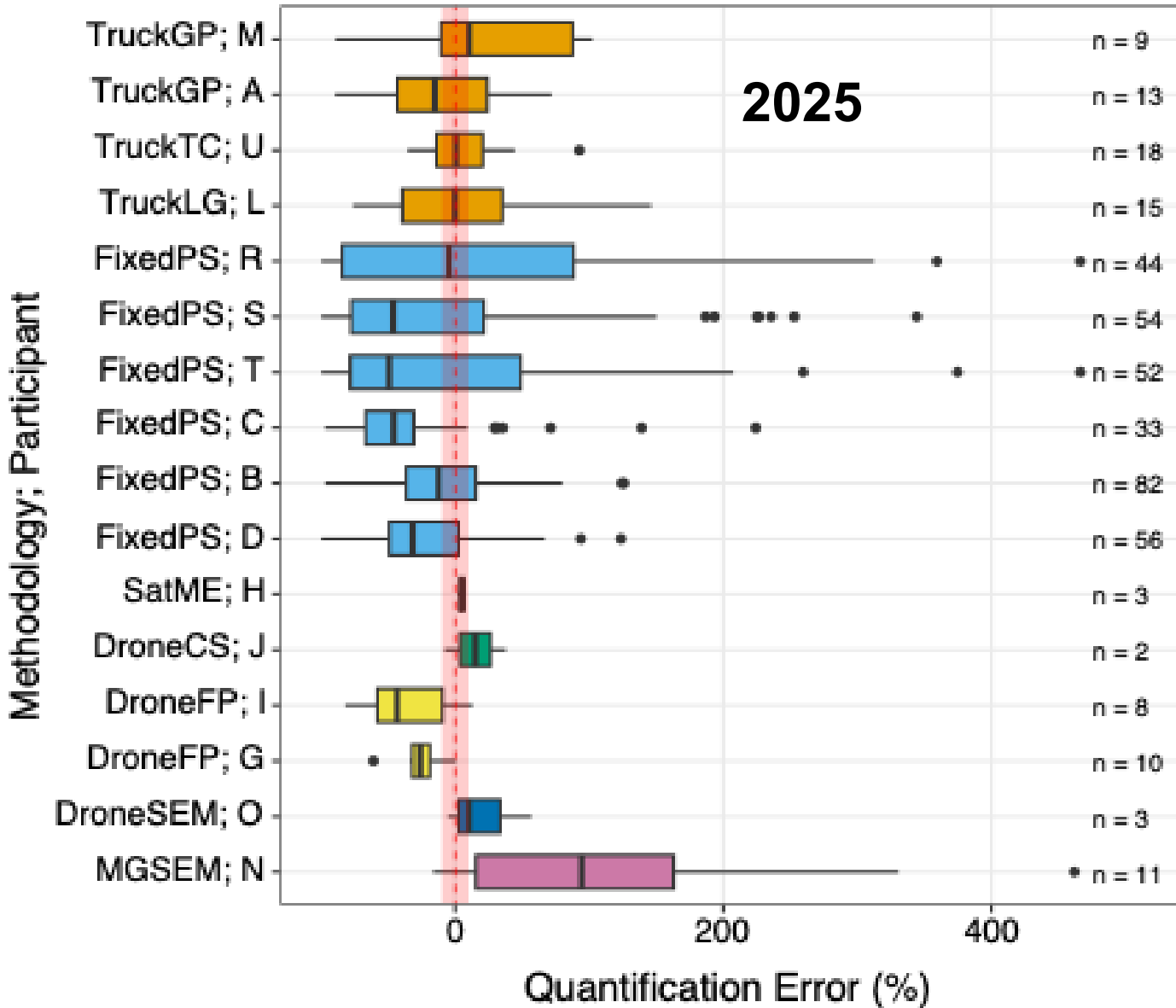
**Fact:** 1. Most leaks on Canadian landfills are <10 kg/hr.

### Takeaway:

Faster and cheaper than SEM, these have enough sensitivity. LiDAR and others suitable too.



# Key Results - Quantification



## Takeaways:

1. Most measurements are performing much better than inventory FOD Models
2. Measurements are improving and most now overlap zero error (returning helps!)