

Fog Alleviation: An Unintended Benefit of Airport Construction and Operations at Amsterdam's Schiphol Airport?

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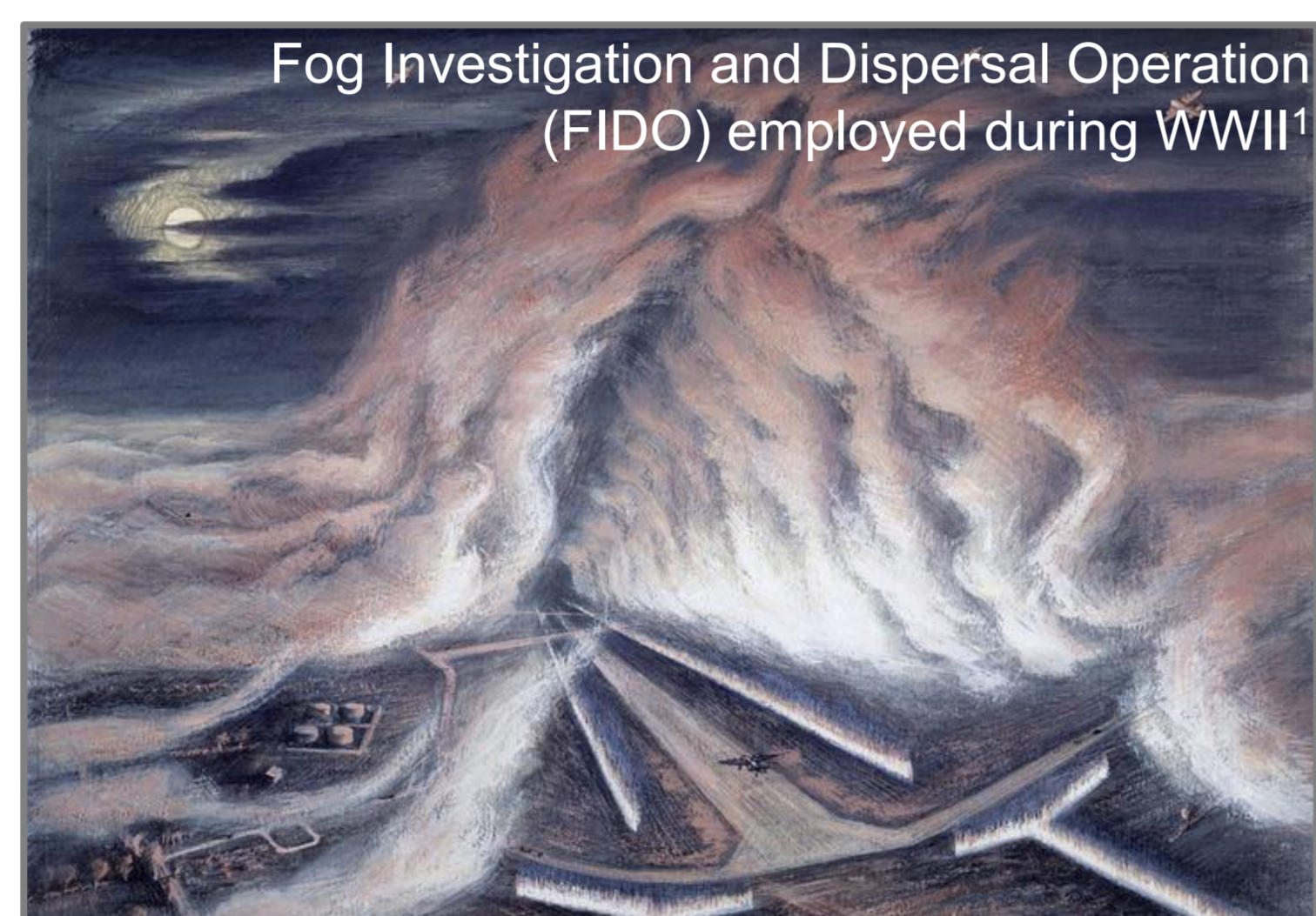
Fog Alleviation

An Unintended Benefit of Airport Construction and Operations at Amsterdam's Schiphol Airport?

Jonathan G Izett, B J H van de Wiel, P Baas, R B Schulte

Might urbanization, and even aircraft movements, play a role in reducing fog occurrence at airports?

Weather modification that prevents, or disperses fog has been attempted, but is expensive (and dangerous!)

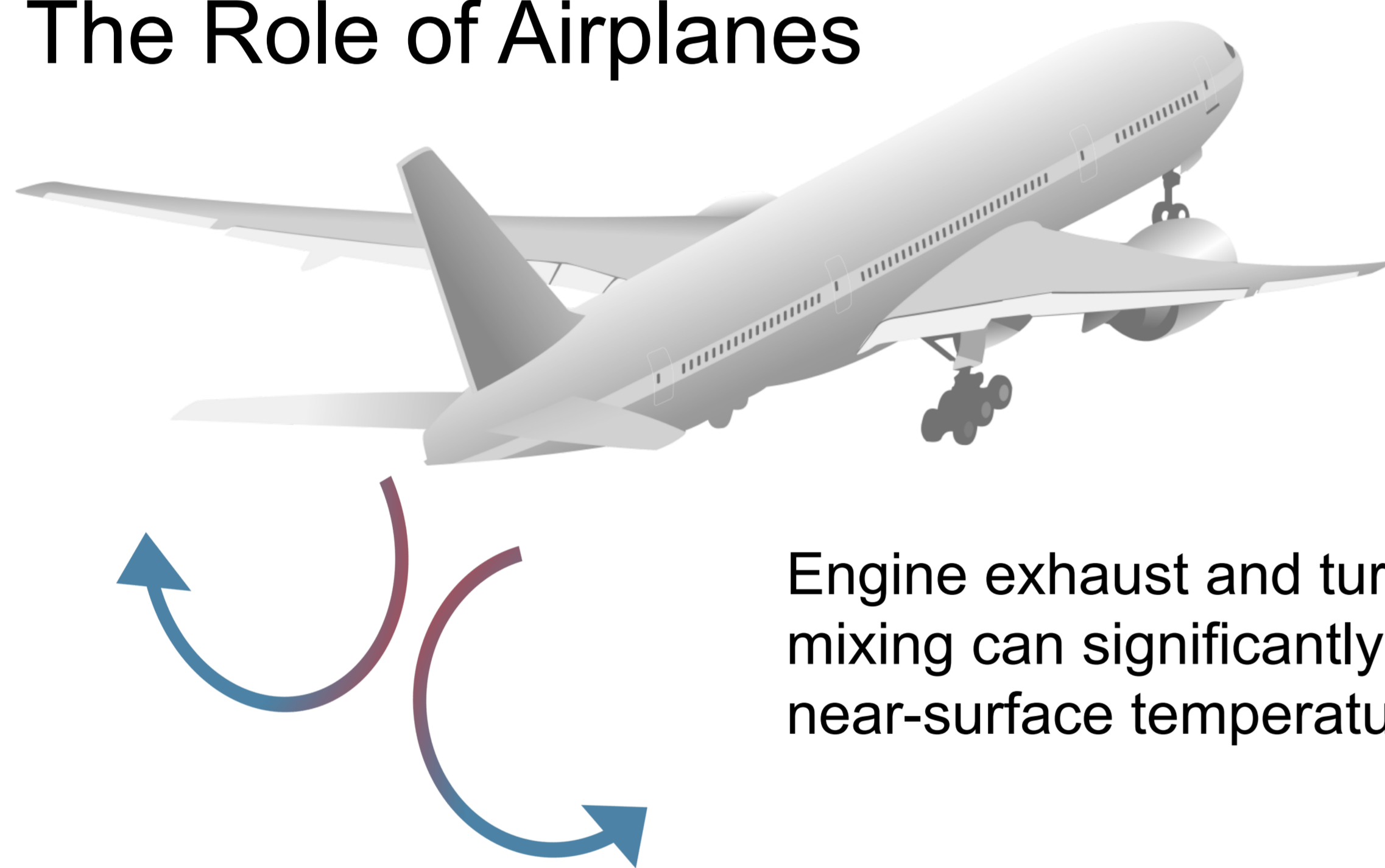


Video

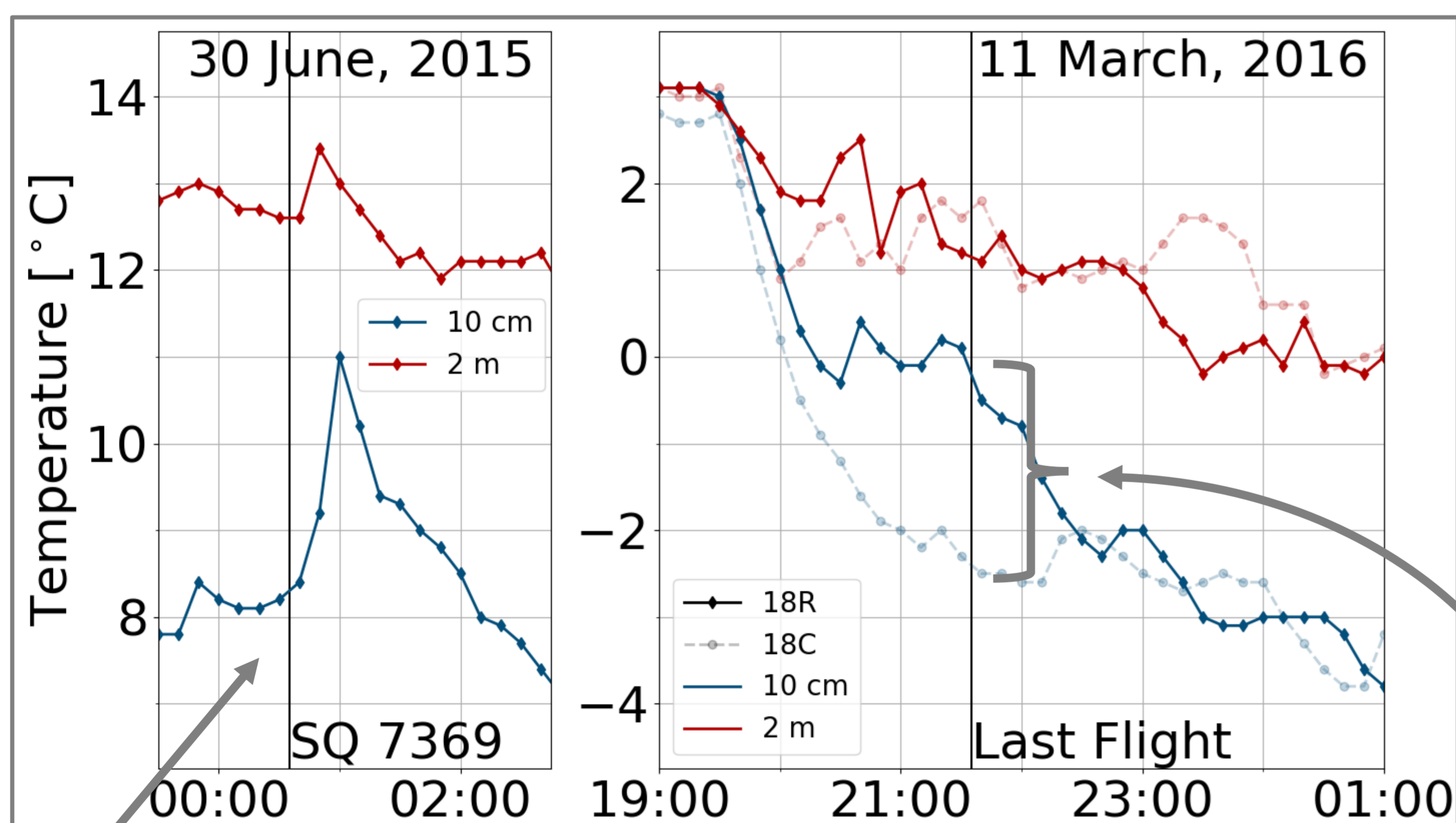
...but, conditions at large airports may already be less favourable for (radiation) fog formation².

Fogginess – the observed occurrence of fog – is certainly much lower at Schiphol than its surroundings.

The Role of Airplanes



Engine exhaust and turbulent mixing can significantly elevate near-surface temperatures⁴.



Spike due to take-off of a single Boeing 747!

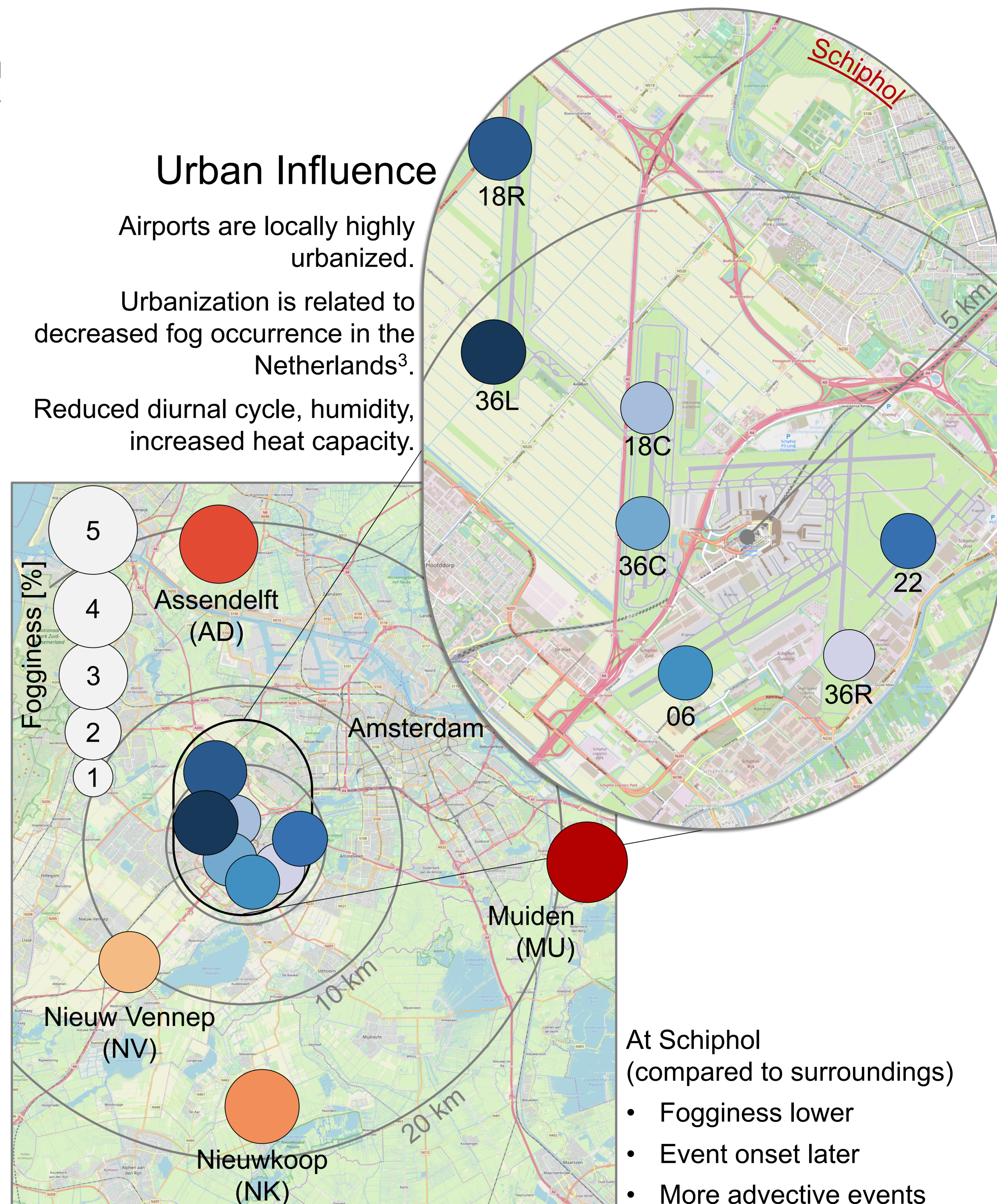
Successive take-offs delay nocturnal cooling. Delayed cooling means delayed fog formation. Lots of time for conditions to change²!

Urban Influence

Airports are locally highly urbanized.

Urbanization is related to decreased fog occurrence in the Netherlands³.

Reduced diurnal cycle, humidity, increased heat capacity.



At Schiphol (compared to surroundings)

- Fogginess lower
- Event onset later
- More advective events

