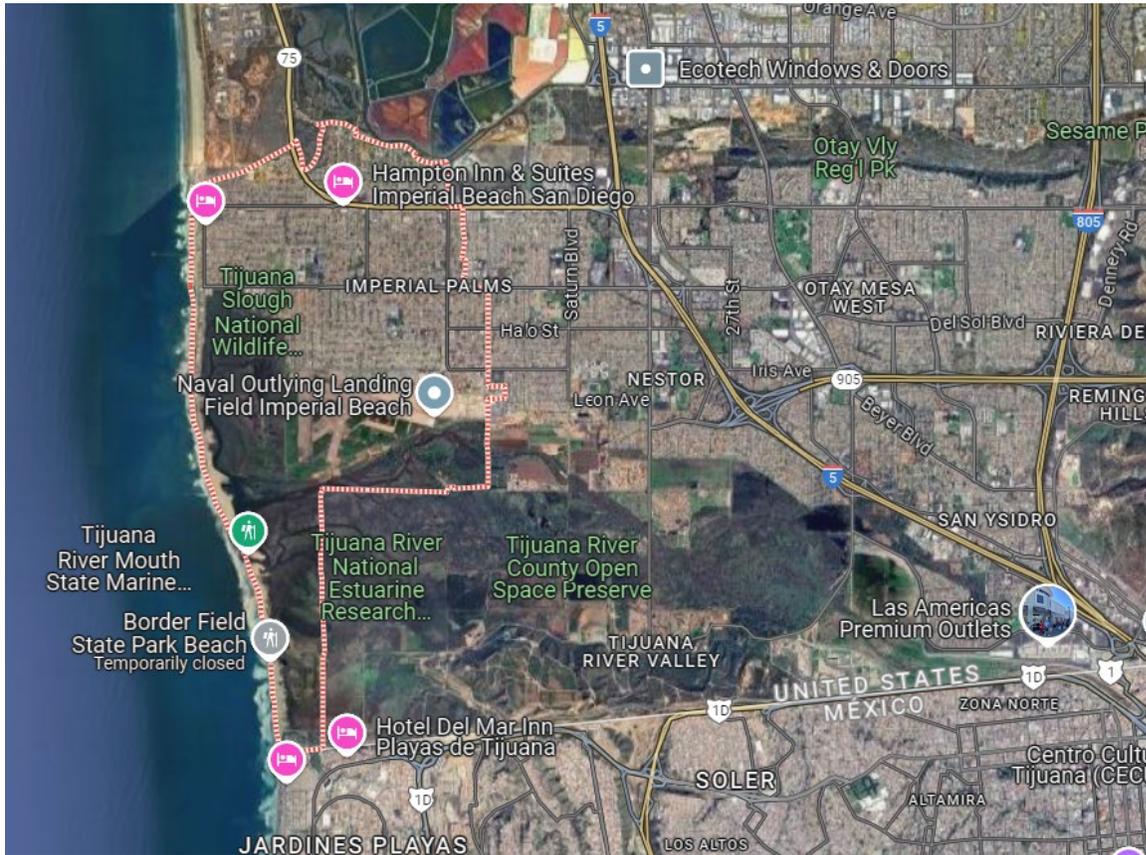
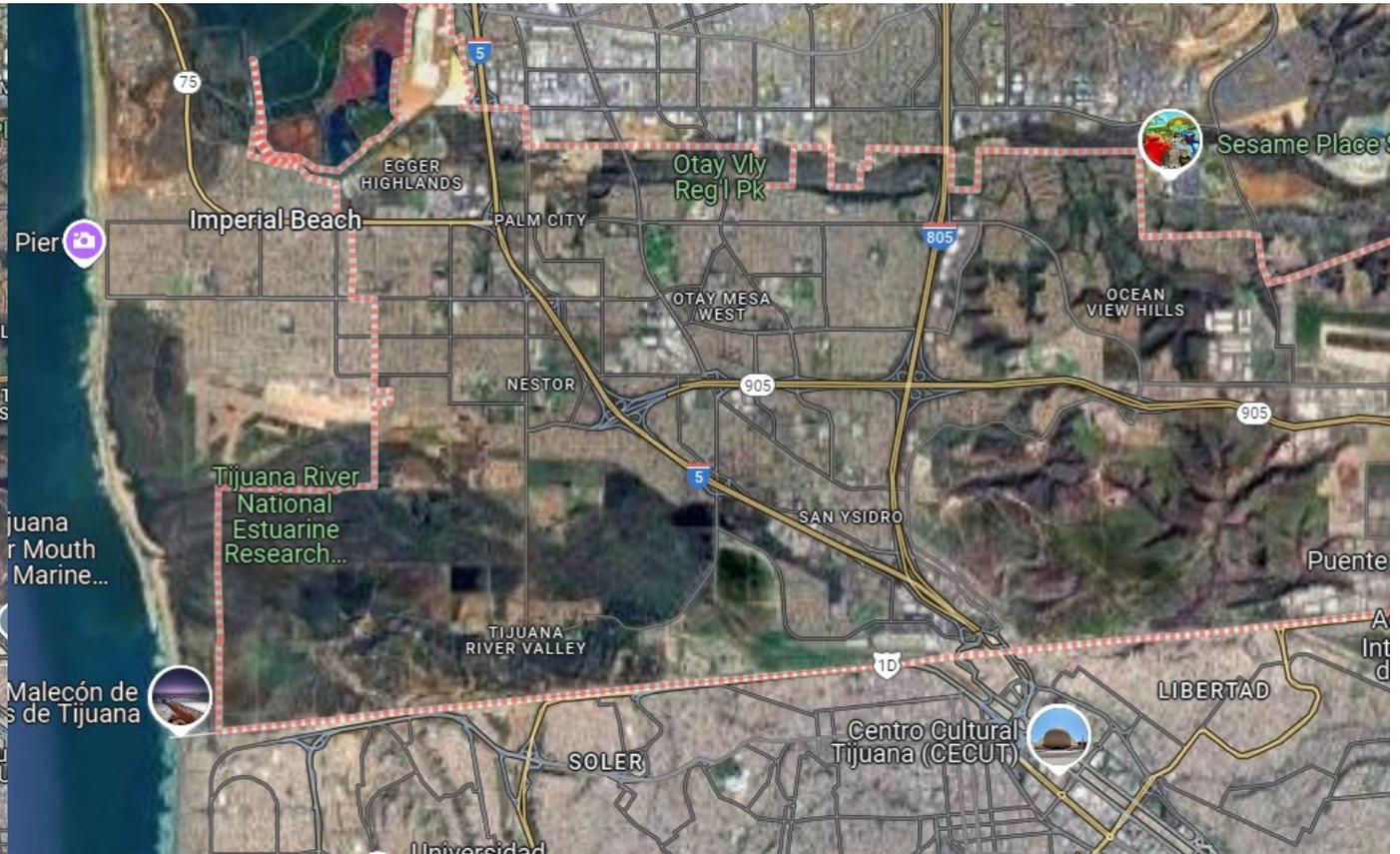


# Imperial Beach



# San Diego

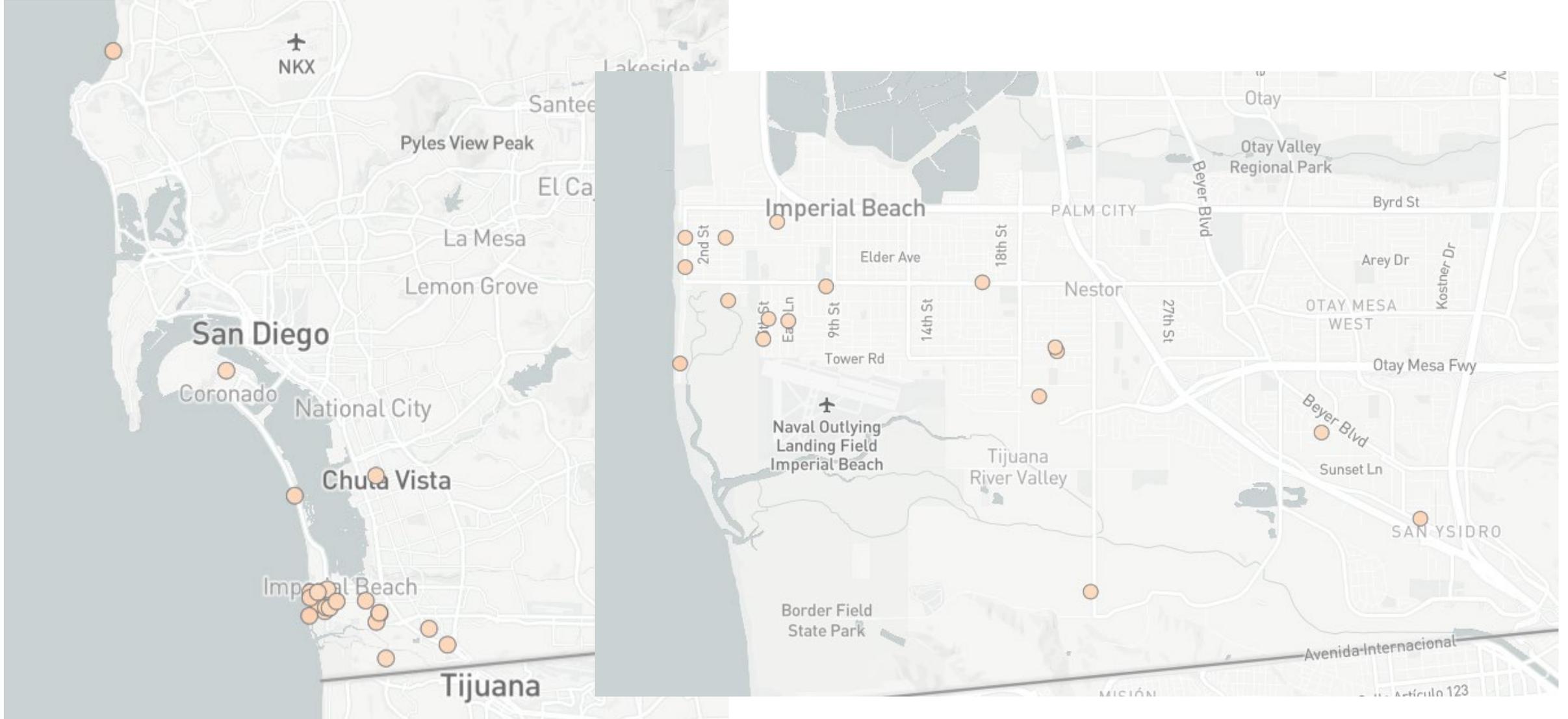


# Additional air quality measurements (Prather trailer)



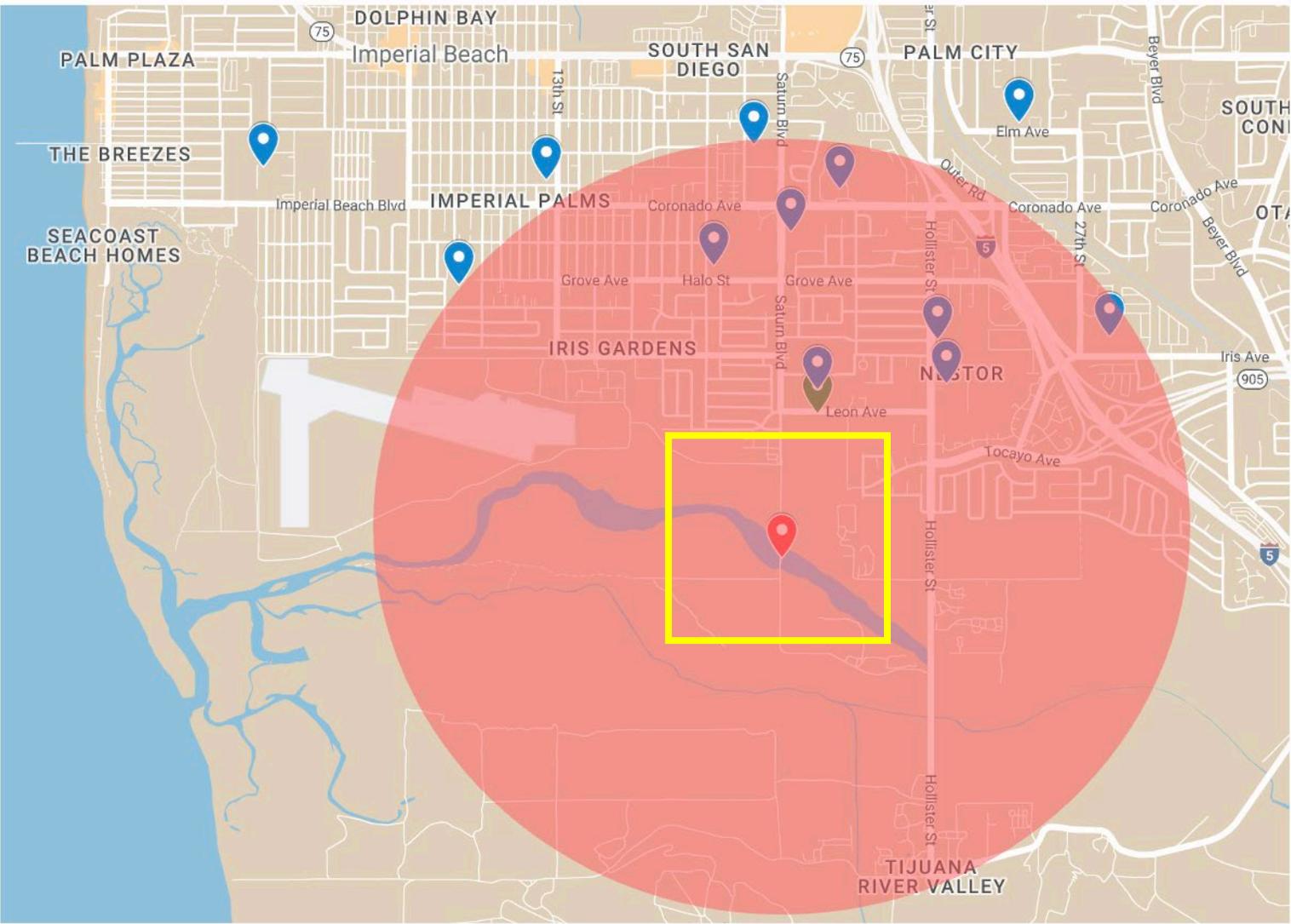
Instrument	Measurement
Teledyne-API T101	H <sub>2</sub> S and SO <sub>2</sub>
Teledyne-API T102	Total Reduced Sulfur and SO <sub>2</sub>
Teledyne-API T201	NH <sub>3</sub> , NO, NO <sub>2</sub> , and NO <sub>x</sub>
QuantAQ Modulair	0.25um - 40um aerosol sizing PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>10</sub> CO, NO, NO <sub>2</sub> and O <sub>3</sub>
Sonic Anemometer	Wind speed and direction

# Measurements: 22 sites in Imperial Beach and San Diego



# Schools within 1.5 miles of Saturn Bridge

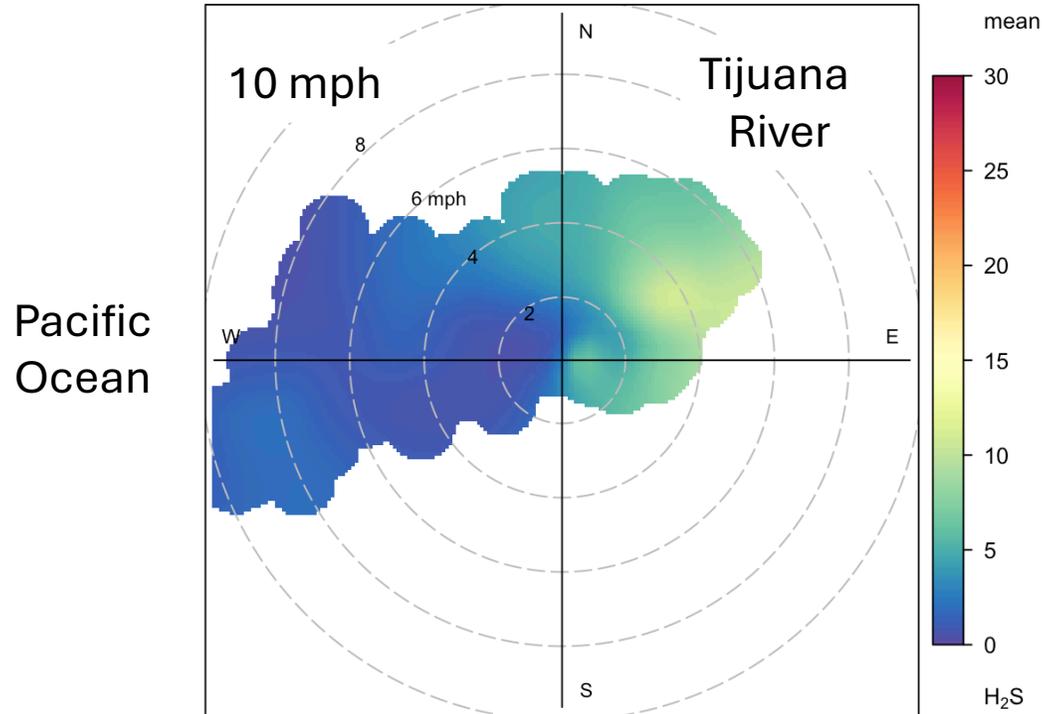
- Red Pin: Saturn Bridge
- Green Pin: Sampling Location
- Blue Pins: Local Schools



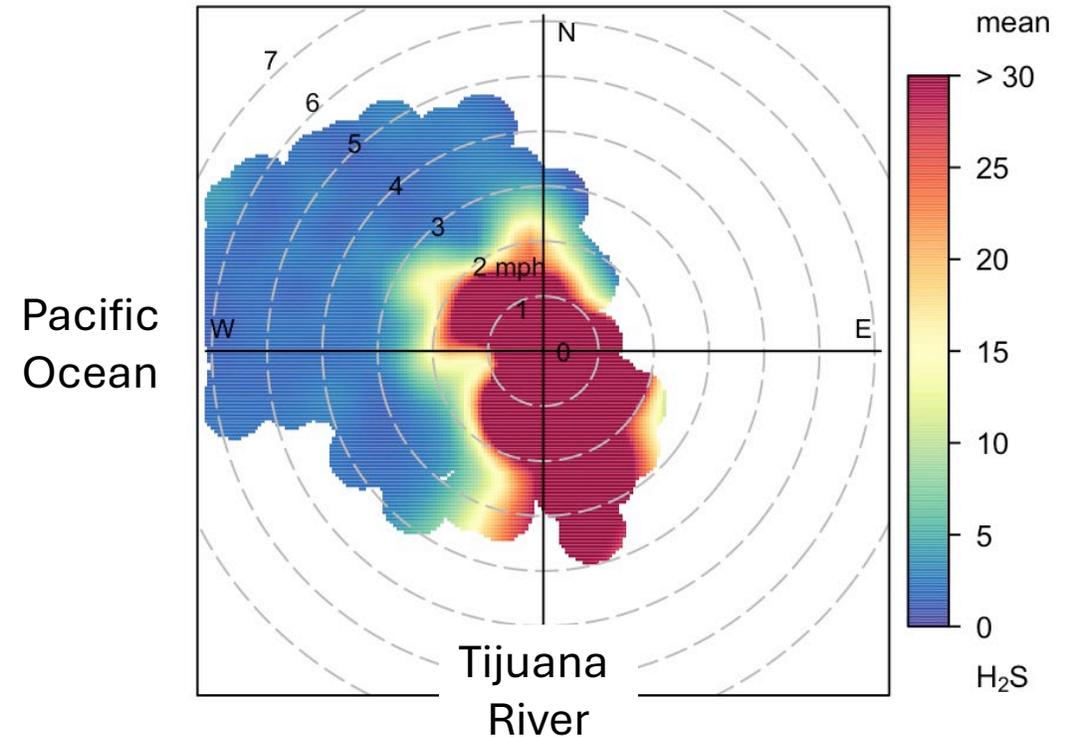
# Wind speed, wind direction and H<sub>2</sub>S concentrations (color)

Red = >30 ppb (CA Hourly H<sub>2</sub>S standard)

Border Field (08/24)



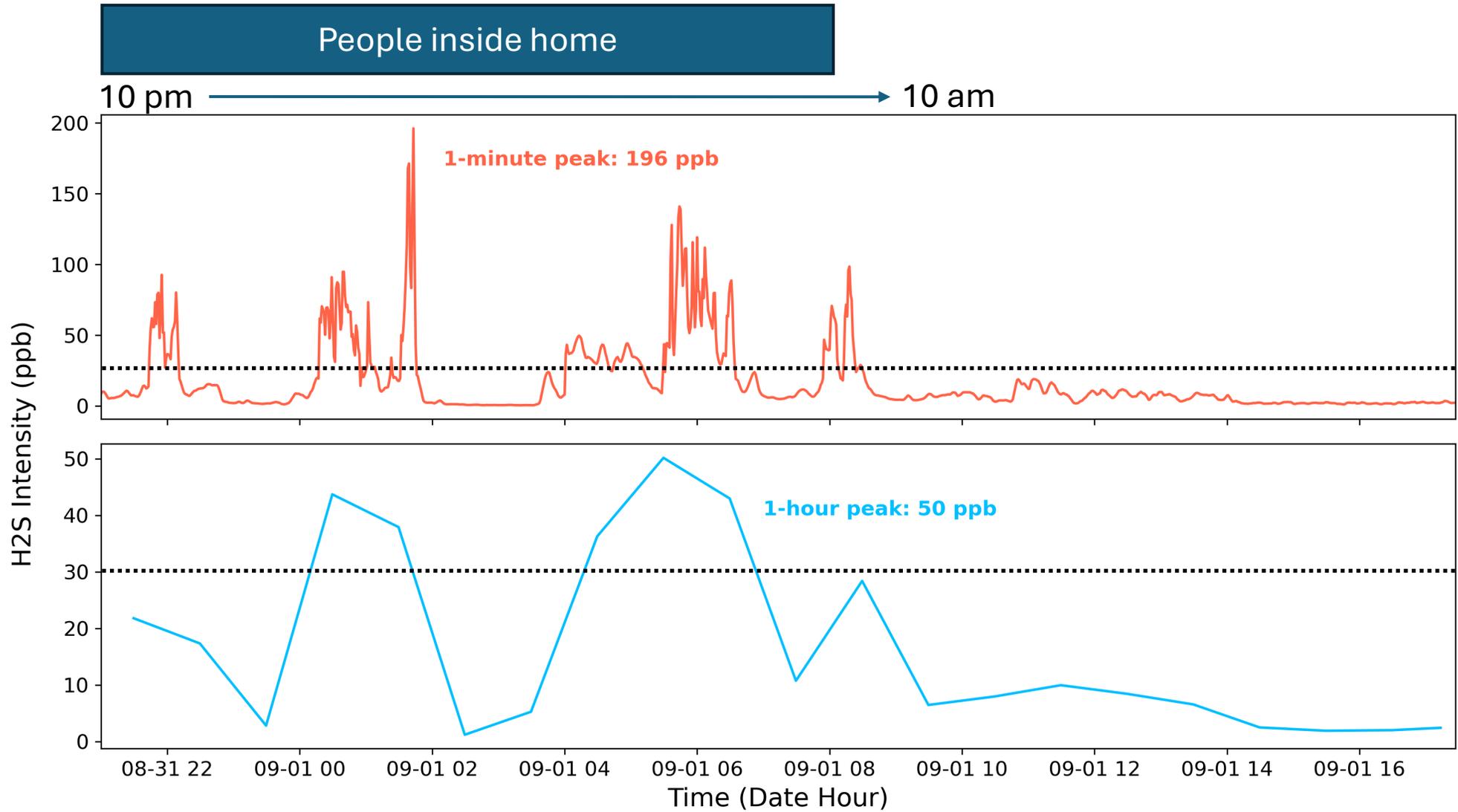
Saturn Blvd Residence (08/28)



Day has strongest winds from west/ocean: Lowest H<sub>2</sub>S concentrations  
Night has weak winds from east: Highest H<sub>2</sub>S concentrations

**Note: All results are preliminary so please do not share**

# San Diego Farm Time Series (8/31 – 9/1)

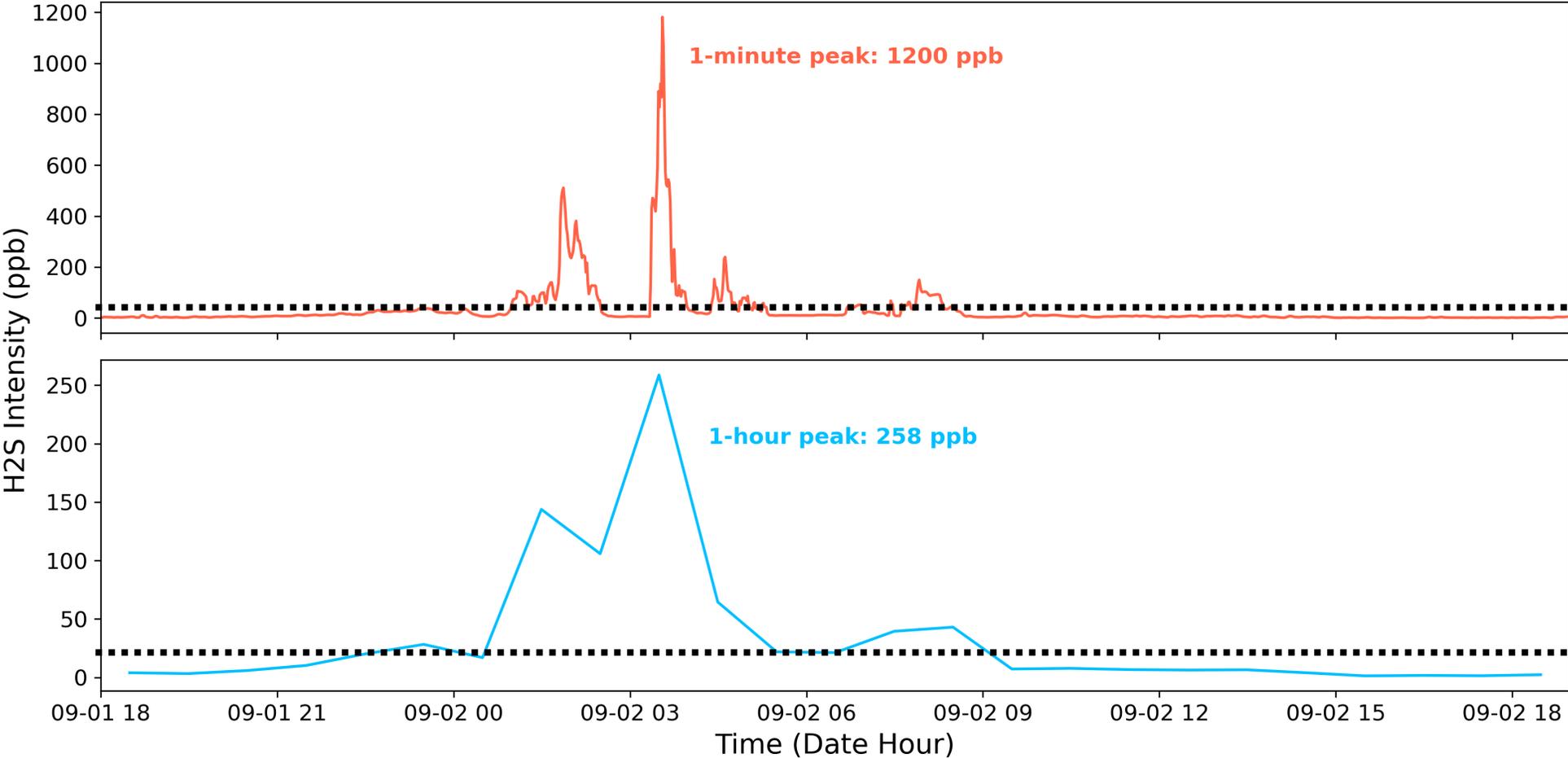


**Note: All results are preliminary so please do not share**

# San Diego Farm Time Series (9/01 – 9/2)

People inside home

2 am → 9 am

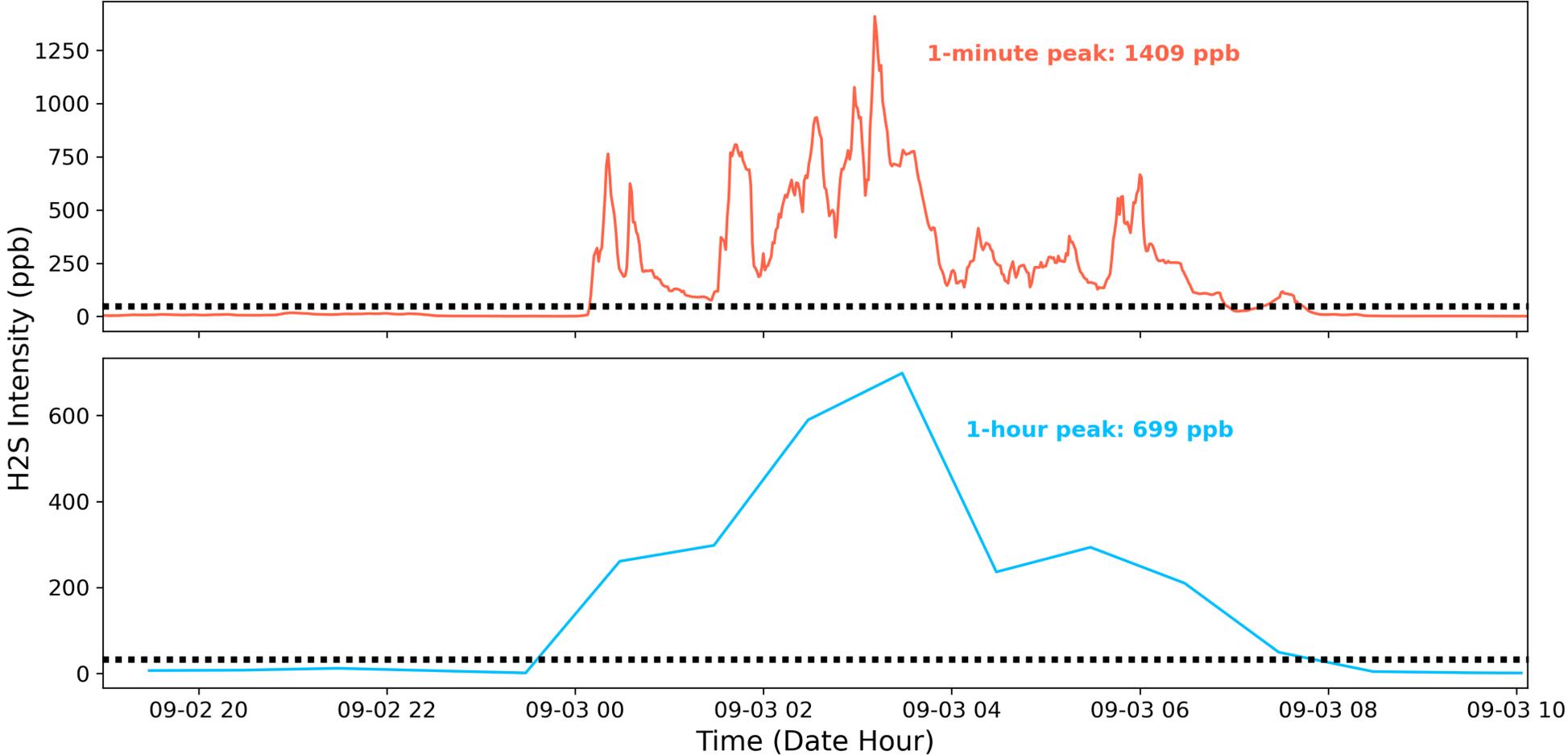


**Note: All results are preliminary so please do not share**

# San Diego Farm Time Series (9/02 – 9/3)

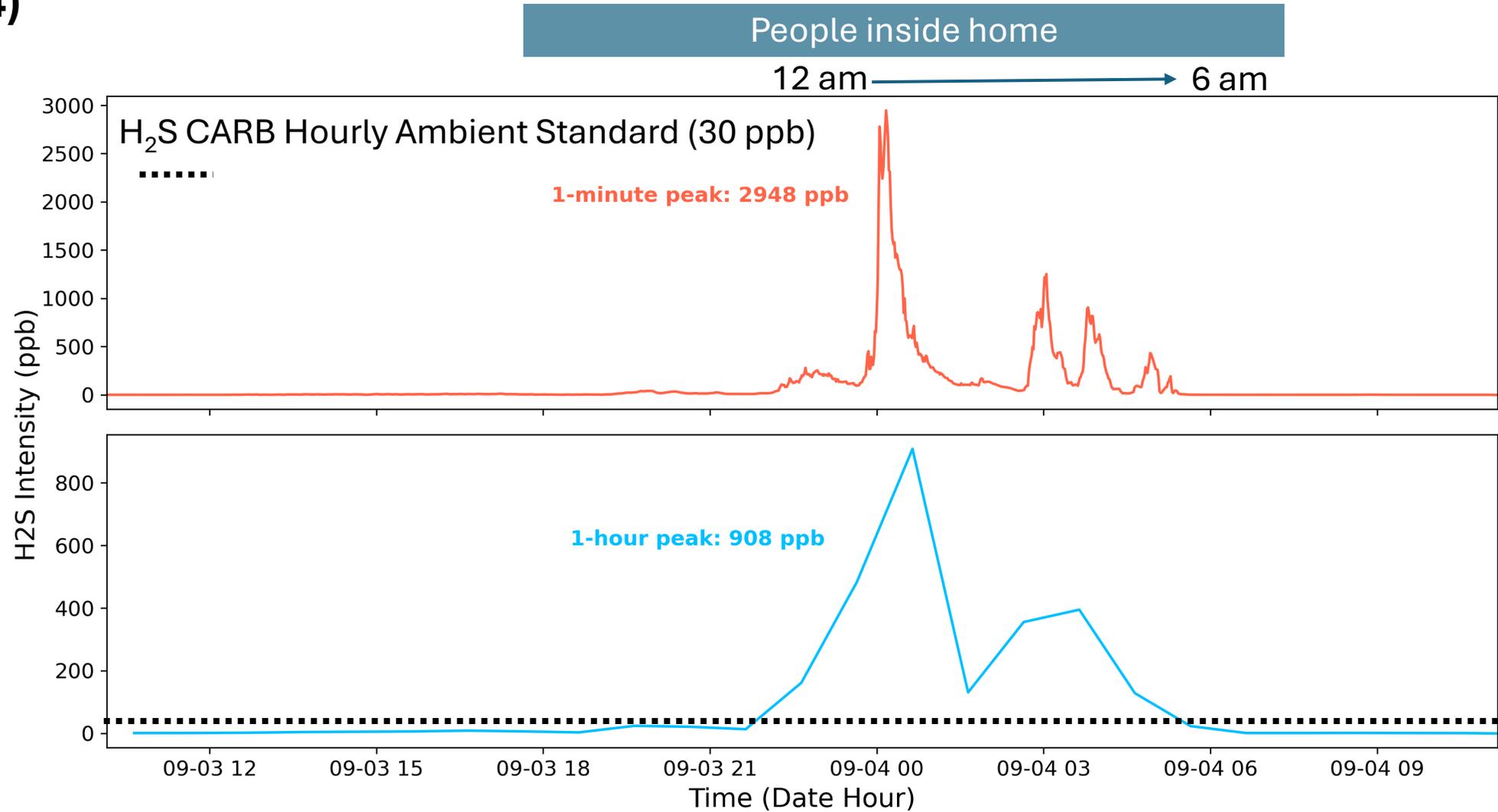
People inside home

3 am → 8 am



**Note: All results are preliminary so please do not share**

# San Diego Farm Time Series (9/03– 9/4)



kprather@ucsd.edu

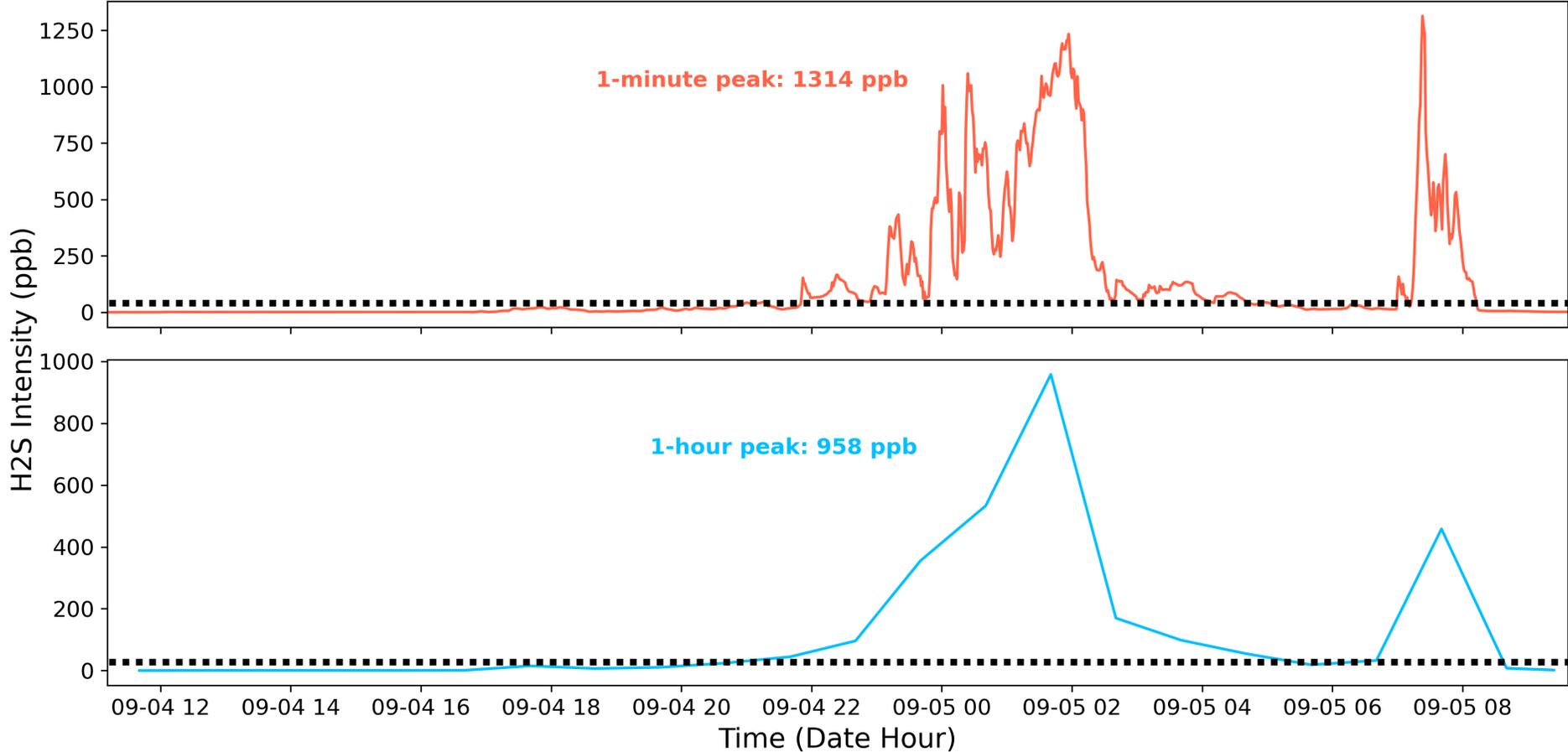
**Note: All results are preliminary so please do not share**

Measurements by Prather Lab, UC San Diego

# San Diego Farm Time Series (9/4 – 9/5)

People inside home

10 pm → 8 am

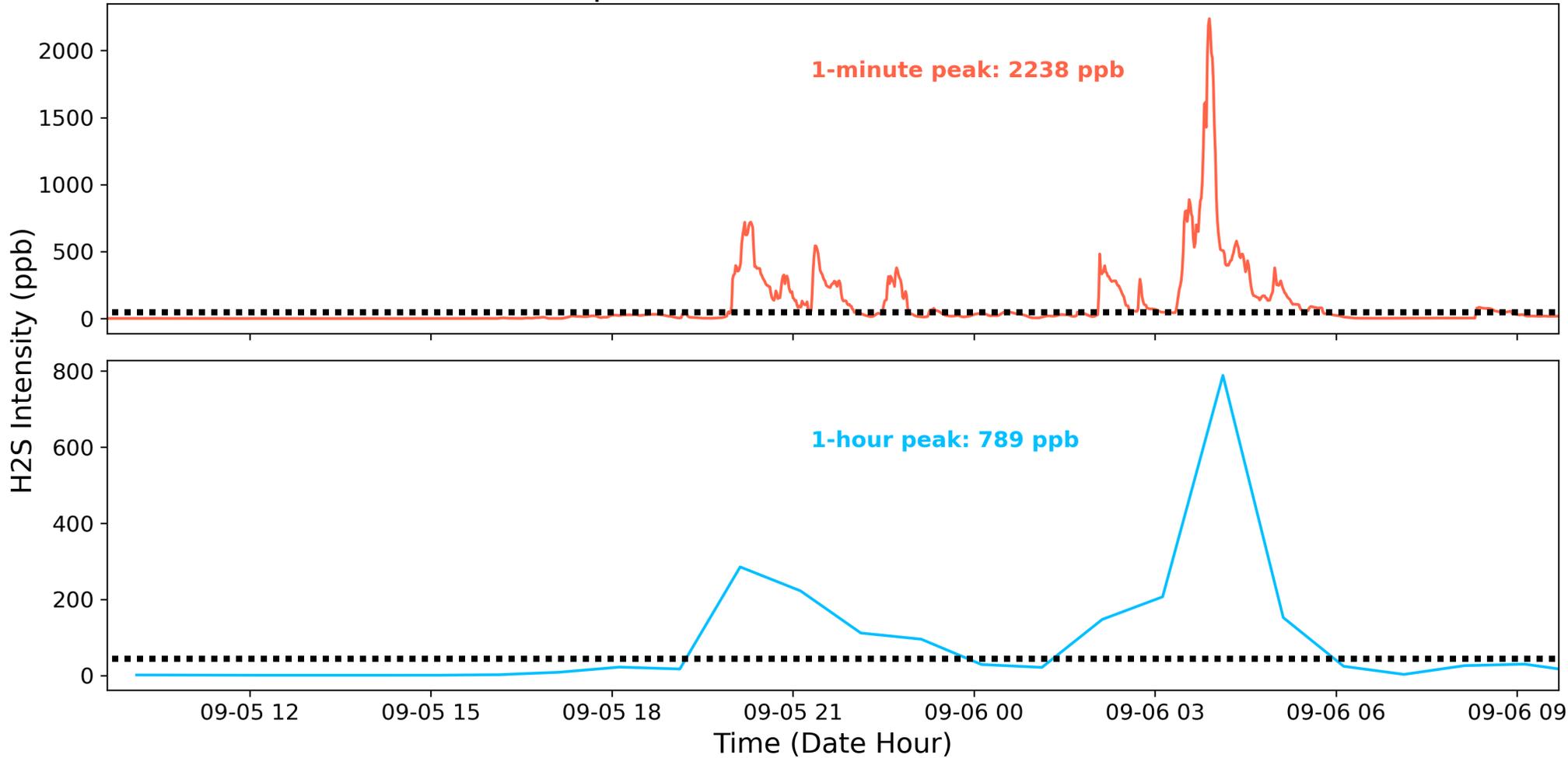


**Note: All results are preliminary so please do not share**

# San Diego Farm Time Series (9/5 – 9/6)

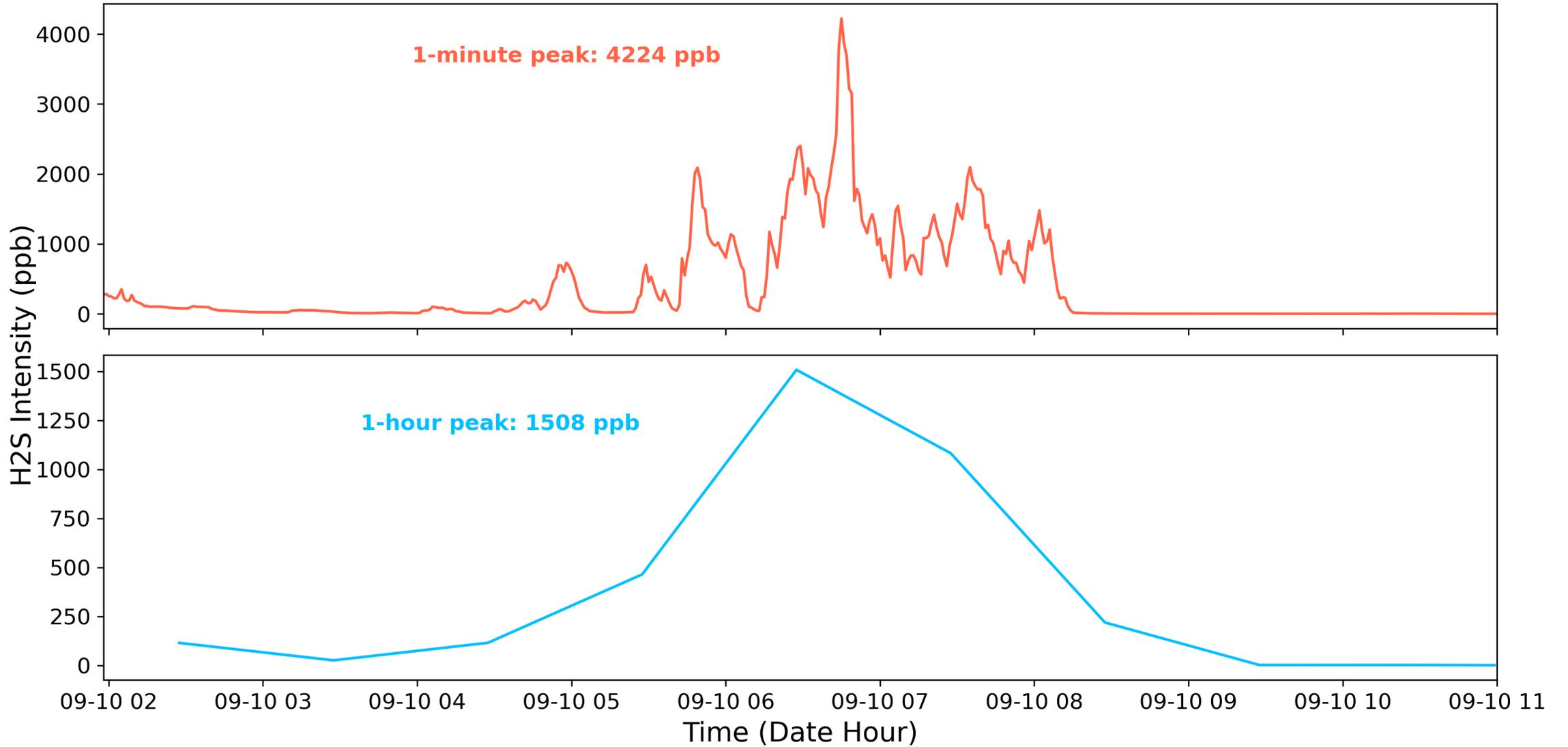
People inside home

6 pm → 6 am



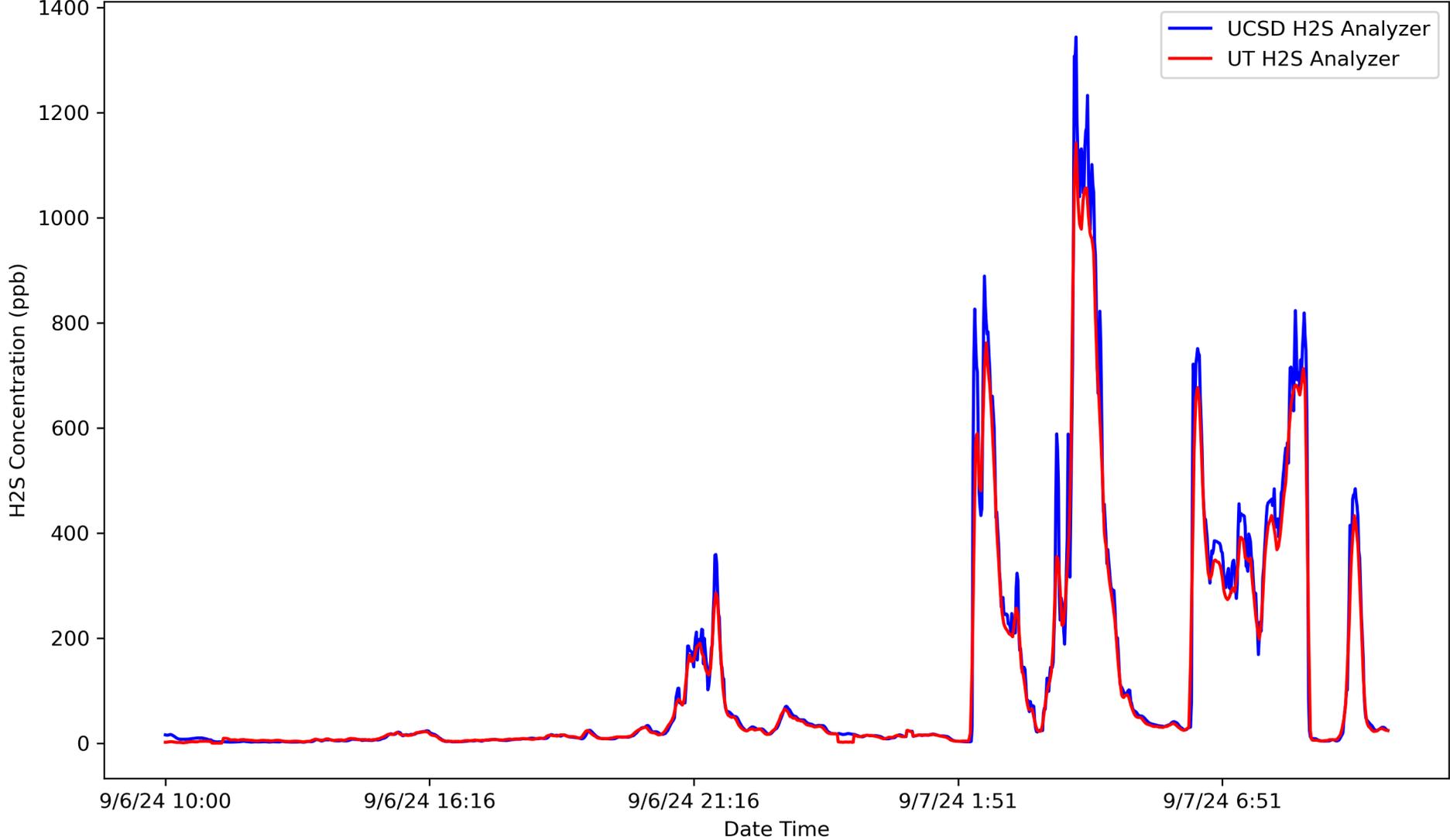
**Note: All results are preliminary so please do not share**

9/9-9/10

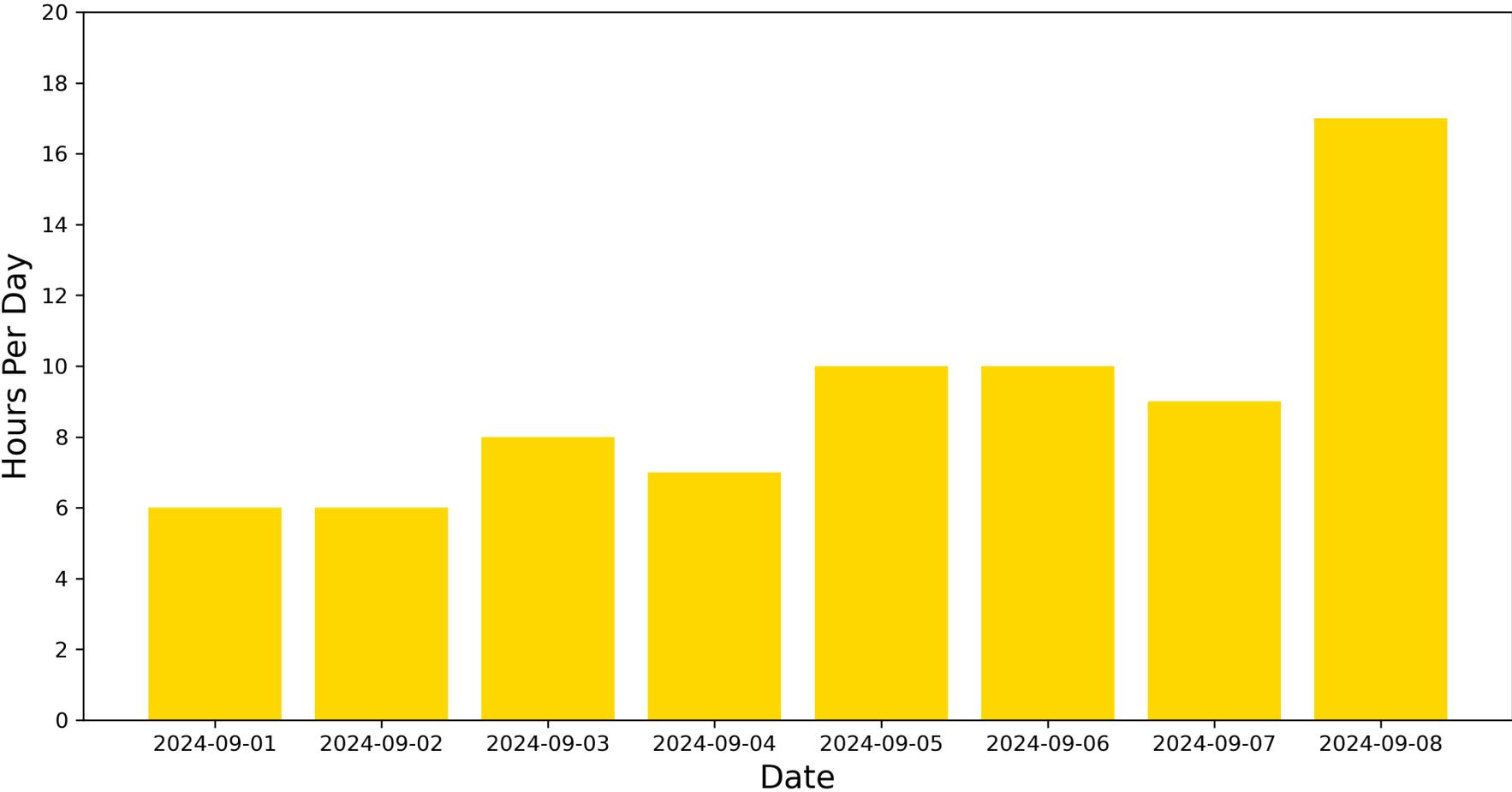


# UCSD UTA H2S Analyzer Colocation (9/6 – 9/7)

## Excellent agreement across instruments for H<sub>2</sub>S



**Hours Per Day Exceeding CARB 30 ppb Hourly Exposure Limit (9/1– 9/8)**  
**Most exposure occurs at night (appropriate filters can reduce this exposure)!**



# Key findings (so far)...

- H<sub>2</sub>S levels are well above CARB air quality standard (30 ppb)
- We have identified river is the major source of odors. Also, we have identified a hot spot at Saturn Blvd near the Nestor community.
- Levels reach 4000 ppb at night.
  - Winds are reduced (so not blowing pollution away)
  - Air pollution gets “trapped” close to the ground
  - When river flow reduced yesterday, concentrations at night plummeted to the lowest levels (<100 ppb H<sub>2</sub>S)—still above standard but a factor of 10-40x times less.