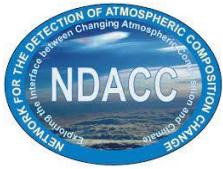


# Mexican activities around NDACC, COCCON and TCCON

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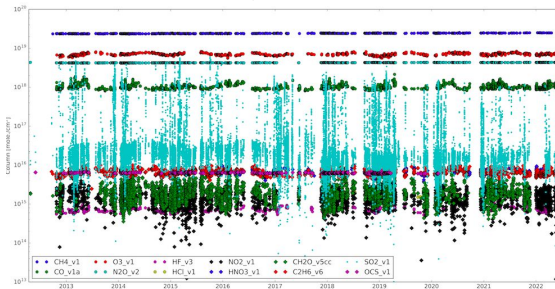
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Y CAMBIO CLIMÁTICO



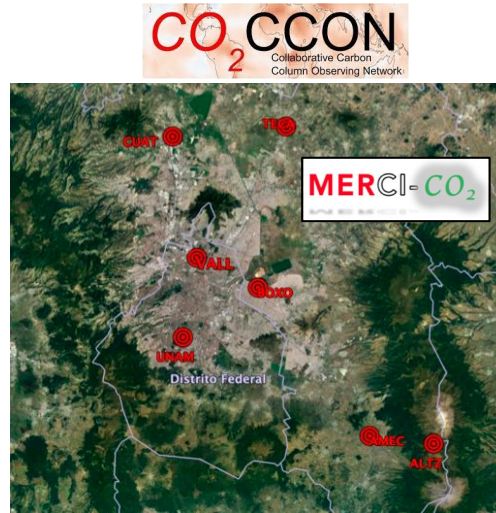
ANNIVERSARY  
of ALTZOMONI

- This year we celebrate **10 years of data collection** at the Altzomoni Atmospheric Observatory, the highest NDACC-IRWG site located at **4,000 m a.s.l.** in central Mexico
- Thanks to a contract with an external N2(l) provider and remote operation, the site was able to keep **collecting data during the COVID-19 pandemic**.
- A **new photovoltaic system** was installed in March 2022, and through its interconnectivity to the power company, electricity consumption was reduced by more than 50%.

10-year time series



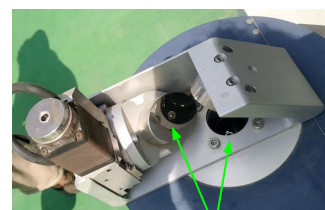
Altzomoni



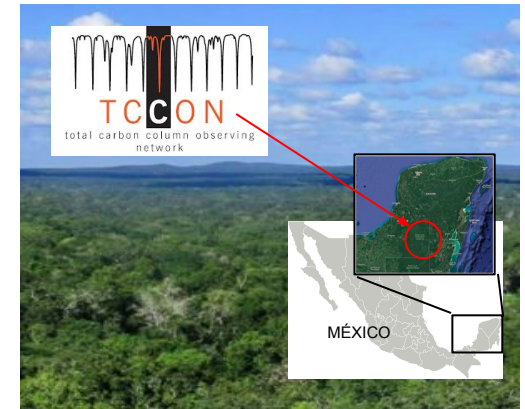
- Continuous measurement with EM27/Sun at two **fixed sites**:
  - UNAM, since 2016
  - VALLEJO, since 2019
- **Campaign** from Oct 2020 to May 2021 as part of the MERCi-CO2 project in collaboration with LSCE and KIT:
  - 6 EM27/Sun
  - 1 IFS125 HR (Altzomoni)
  - 3 Picarro analyzers (CO<sub>2</sub>, CH<sub>4</sub>, CO, H<sub>2</sub>O)
- Current OCO-3 **satellite validation** study with these data is under preparation (Lauvaux et al. 2022).
- Methane emission study under preparation by Hernández-Gutierrez et al. 2022 (See Luis' poster)
- Complementary measurement in the **UV/VIS**: A commercial grating spectrometer (Avantes) and a fiber optic was installed within the guiding metallic tube of the EM27/Sun after the solar tracker, for simultaneous measurements in the UV/visible region for NO<sub>2</sub> and SO<sub>2</sub> retrieval (See Wolfgang's poster and picture below)



EM27/Sun Motorized Dome



optical fiber → UV/VIS spectrometer



- **New IFS125 HR** to be installed by the end of 2022, in a container
- Site not yet defined, but somewhere in the **tropical forest** of the Calakmul Natural Reserve, in the Yucatán peninsula.
- Measurements to do **carbon cycle studies** with satellite validation capabilities, including:
  - Met. station
  - Flux tower
  - In situ analyzers (CO<sub>2</sub>, CH<sub>4</sub>, CO, H<sub>2</sub>O
  - Particulate matter (PM2.5)
  - FTIR solar absorption spectroscopy (TCCON)
  - Sun photometer (Pandora)
  - Radiometry
  - Deposition
  - Surface and vegetation characterizations
- Thanks to the financial support of the Mexican Space Agency (AEM) and the National Institute of Ecology and Climate Change (INECC)
- **Collaborations** to pursue this exciting project are **VERY welcome!**

