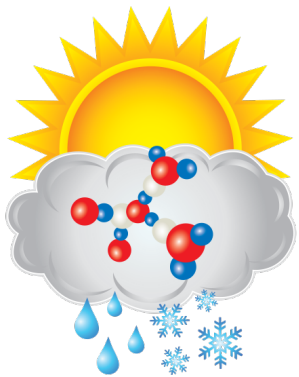


Tracking Aerosol Convection Interactions Experiment (TRACER)

Virendra P. Ghate¹, Michael P. Jensen² and many many more!

1. Argonne National Laboratory; 2. Brookhaven National Laboratory



ASR
Atmospheric
System Research

Argonne 
NATIONAL LABORATORY

ARM

TRACER+ Campaigns - Houston, TX Sept. 2021- Oct. 2022

TRACER (DOE) - Oct '21 through Sep '22

ARM Mobile Facility (Cloud, Aerosol)

C-band Scanning ARM Radar

See Poster (Jensen, Wales)

TRACER IOP (DOE) - Jun '22 through Sep '22

Ancillary (ANC) Site (Aerosol, Thermodynamics)

ARM Tethered Balloon System (TBS)

N-Pol S-band Radar (NASA)

Remotely-Piloted Aerial Systems (CU, OU)

See Posters (de Boer, Dubey, Sheesley, Rapp)

ESCAPE (NSF) - Jun '22 through July '22

Aircraft: C-130, SPEC Learjet

Radar: CSU C-band, OU/NSSL X-bands, SBU PAR

Mobile: SBU Weather Truck, BNL Research Truck

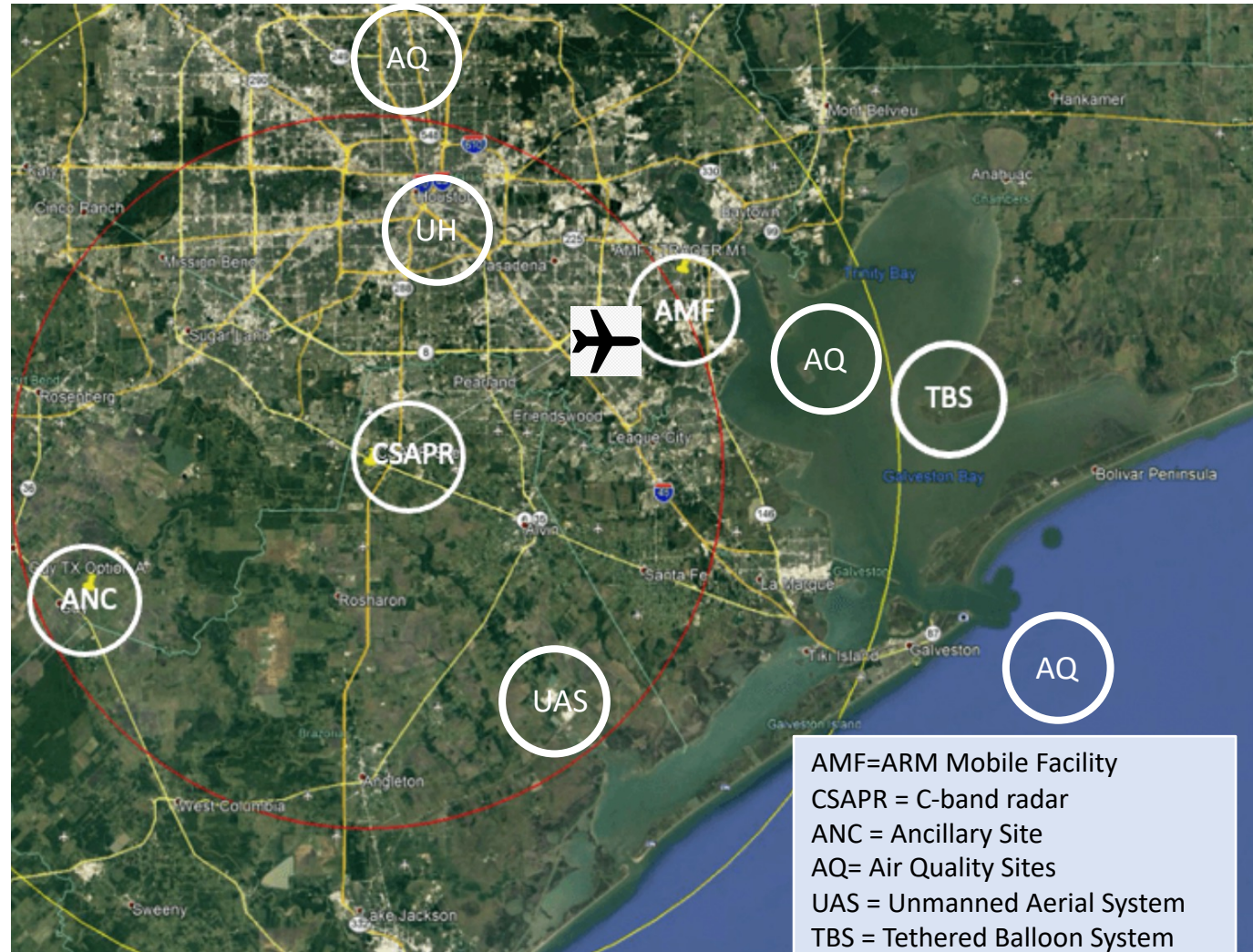
TRACER-AQ (NASA, TCEQ) - Sep '21

Aircraft: Gulfstream V

Remote Sensing: TOLNet, Pandora

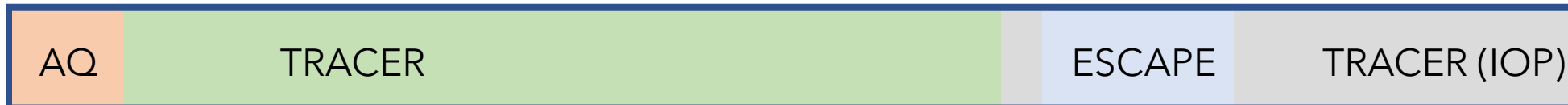
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09/21 10/21



06/22

10/22

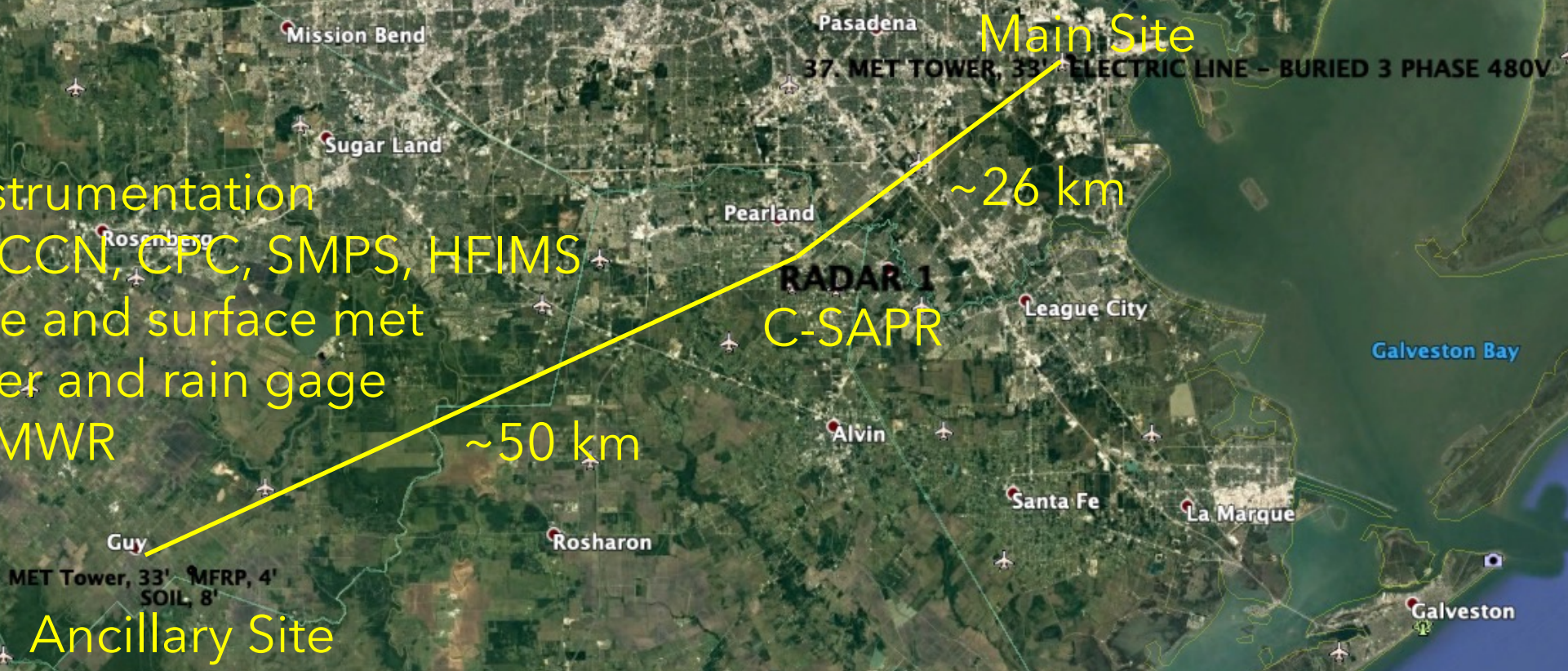


Overall_map

Write a description for your map.

Legend

- Aerosol Instrumentation
 - ACSM, CCN, CPC, SMPS, HFIMS
- Radiosonde and surface met
- Disdrometer and rain gage
- 2 channel MWR



Google Earth

Image Landsat / Copernicus
© 2021 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

30 km



Primary AMF Location



LACI Related Observations

- Texas Commission on Environmental Quality (TCEQ) sites
 - 75 sites within the Houston metropolitan area collecting air quality measurements.
- Ground-based Texas Soil Observation Network (TxSON)
 - Three sites near the AMF.
 - Soil type, moisture content, and temperature
- AMF measurements
 - Standard surface and PBL characterization.

TRACER - Boundary Layer Processes Group

- Organizing boundary layer processes studies including observational strategies, post-campaign analysis and modeling.
- Led by Virendra Ghate (ANL) and Katia Lamer (BNL).
- Coordinating data products for boundary layer studies
 - PBL height and TKE dissipation rates
- Case identification through quick-look plots
 - Cases of sea breeze, shallow cumulus conditions etc.

How to get involved in TRACER+ Science Activities

TRACER Science and Operations ([M. Jensen](#)) - Ongoing discussions (monthly telecons) of preparations for TRACER+ field campaigns.

TRACER-AQ Air Quality Studies ([L. Judd](#), [J. Sullivan](#)) - Planning and organization (bi-monthly telecons) for TRACER-AQ deployment in September.

TRACER+ Sub-Groups

Modeling Group ([J. Fan](#), [S. van den Heever](#)) - Organization of modeling efforts.

Weather Forecasting ([S. Collis](#)) - Operational forecasting for TRACER+ campaigns.

Boundary Layer Processes ([V. Ghate](#)) - Organization of boundary layer processes studies including observational strategies, analysis and modeling.

Radar Scanning and Cell-Tracking ([P. Kollias](#)) - Discussions of radar observational strategies

Aerosol Processes ([M. Dubey](#)) - Discussions and coordination around aerosol processes measurements and following analysis.

Sounding Operations ([P. Walter](#)) - Coordinating radiosonde and other profiling operations.