

Ozonesonde launches from the University of Houston and Smith Point in support of DISCOVER-AQ

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AQRP Workshop
Pickle Research Campus
University of Texas
Austin, Texas
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Project Outline

- Funded for 30 ozonesonde launches from Smith Point and/or the University of Houston
- Calculate HYSPLIT back trajectories for each flight from 0.5, 1.0, 1.5, 2.0, 2.5, and 3.0 km.
- Provide links to supporting met data.
- Provide balloon trajectory info.
- Provide ascii text files with all data
- Develop an understanding of the context of the last decade to interpret and understand 2013



Launch from the University of Houston

Courtesy H. Selkirk (NASA GSFC)



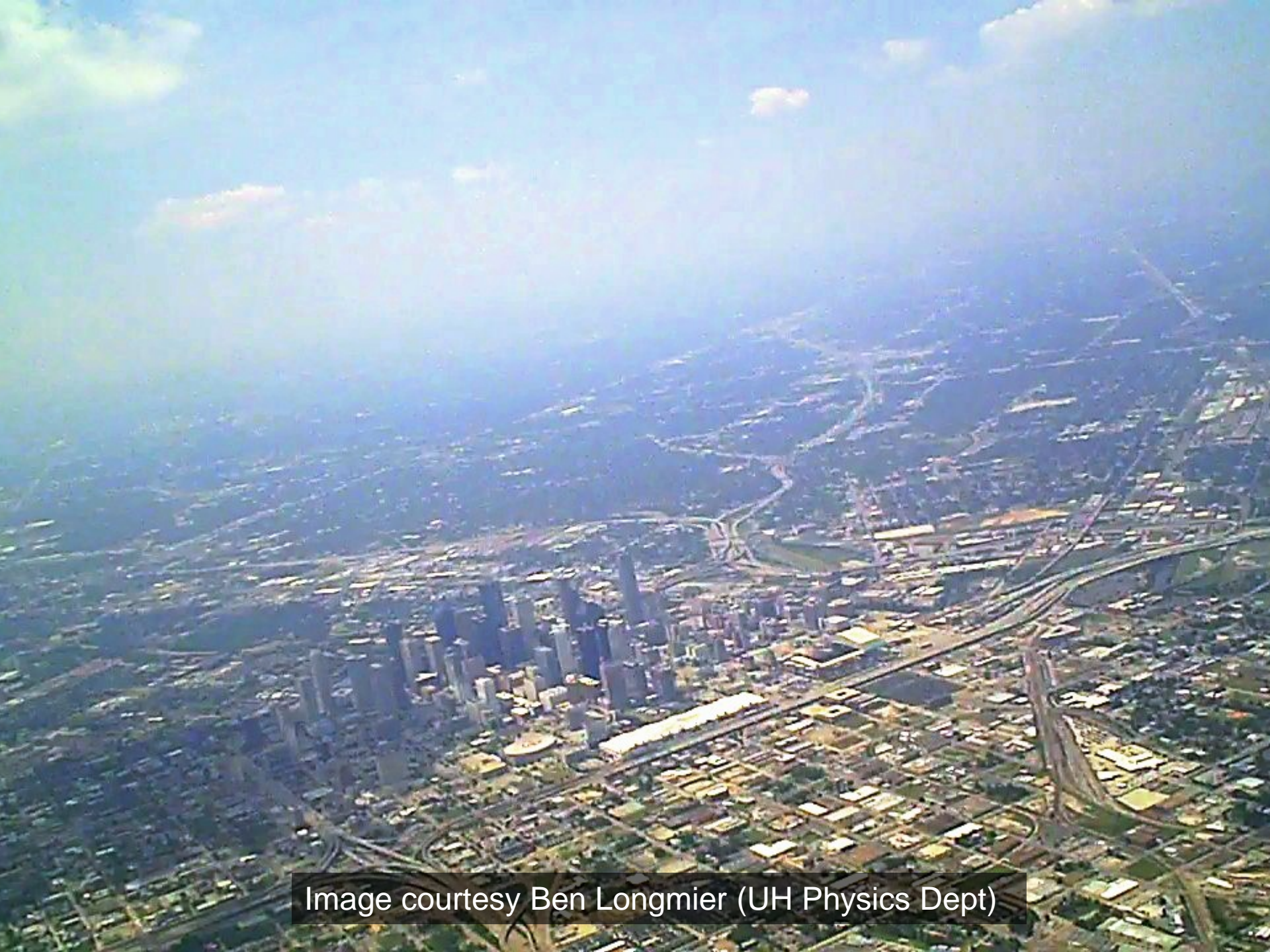


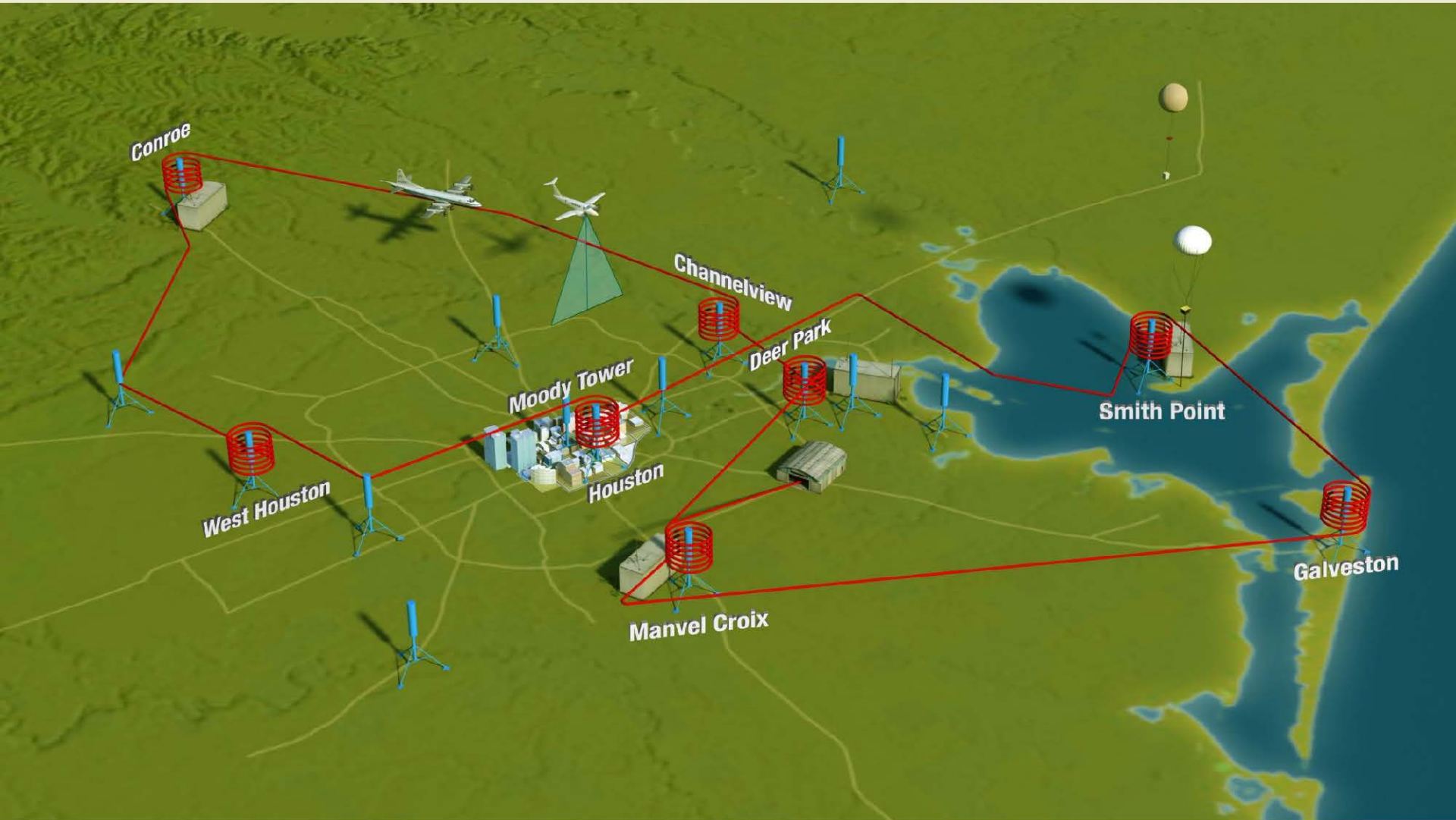
Image courtesy Ben Longmier (UH Physics Dept)

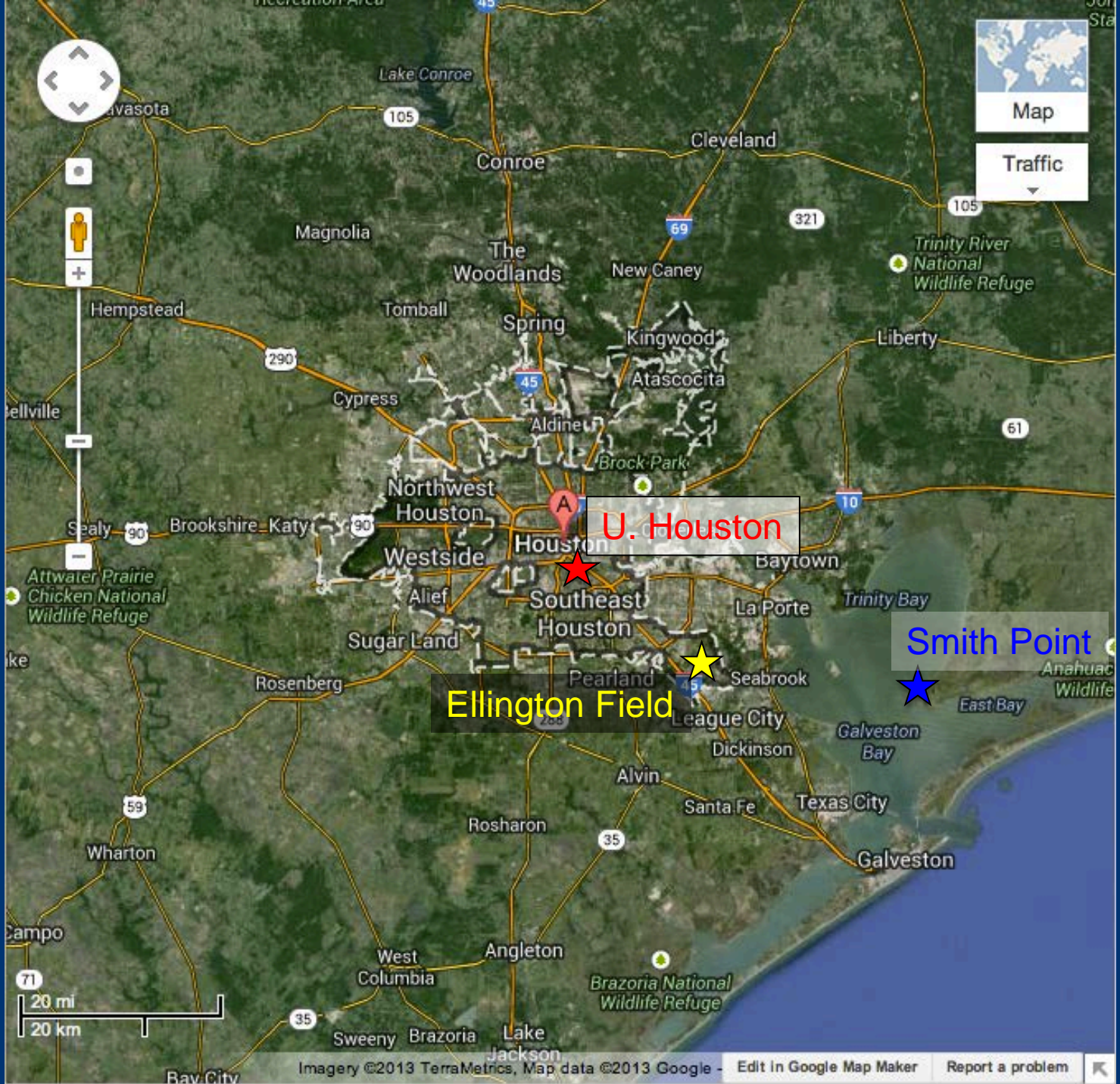


Image courtesy Ben Longmier (UH Physics Dept)



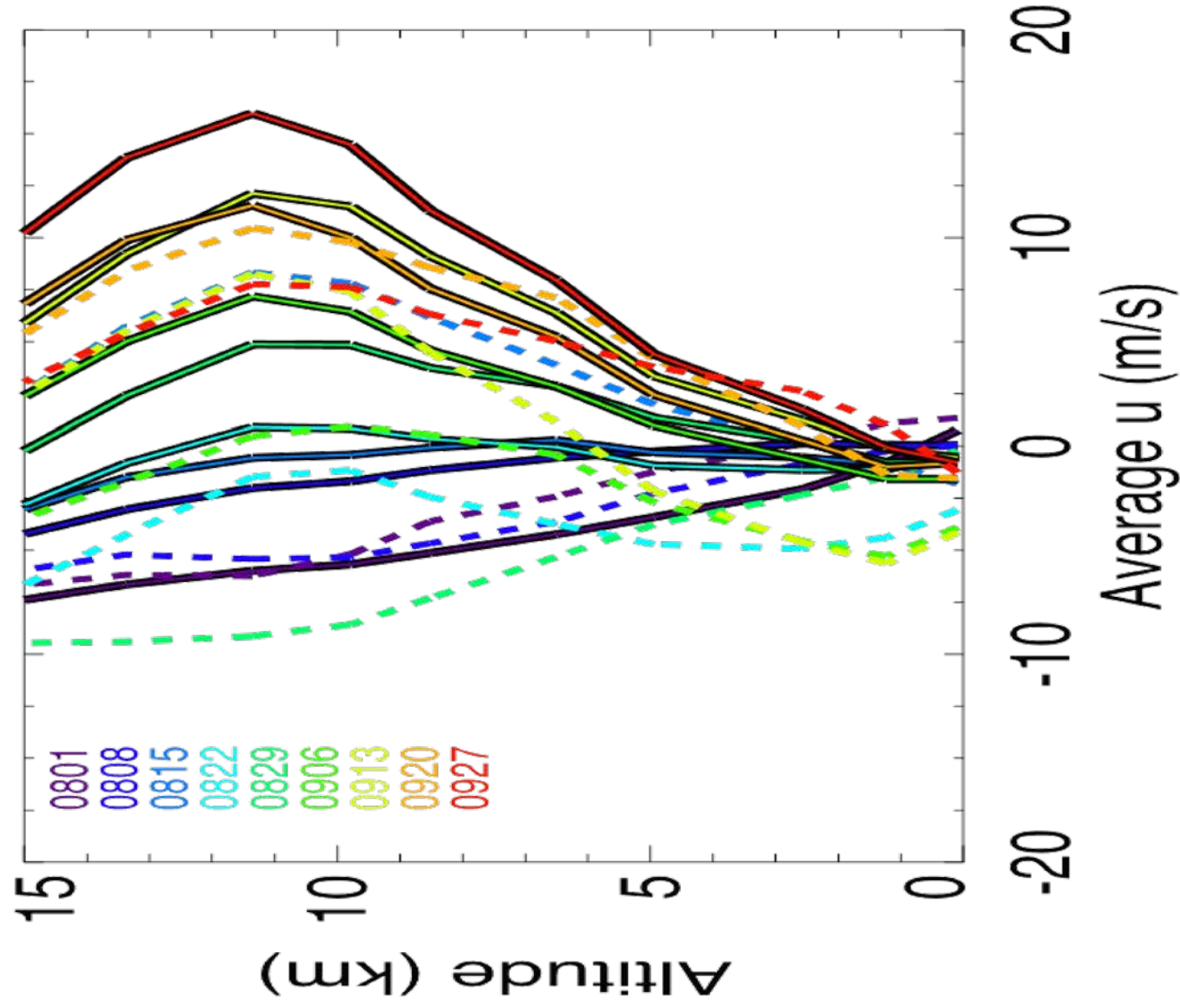
Image courtesy Ben Longmier (UH Physics Dept)





Sun 1	Mon 2	Tue 3	Wed 4	Thu 5	Fri 6	Sat 7
<ul style="list-style-type: none"> Smith Point - 9 pm 	<ul style="list-style-type: none"> NASA Aircraft arrive Smith Point - 1 pm UH Sonde - 2 pm 	<ul style="list-style-type: none"> Smith Point - 2 pm UH Sonde - 2 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day Smith Point - 9 am Smith Point - 1 pm UH Sonde - 2 pm EFD sonde - 4 pm EFD sonde - 7 pm 	<ul style="list-style-type: none"> Smith Point - 1 pm UH Sonde - 2 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day Smith Point - 10 am UH Sonde - 12 pm Smith Point - 2 pm EFD sonde - 8 pm 	<ul style="list-style-type: none"> Smith Point - 2 pm
<ul style="list-style-type: none"> Smith Point - 2 pm 	<ul style="list-style-type: none"> UH Sonde - 2 pm Smith Point - 2 pm EFD sonde - 6 pm 	<ul style="list-style-type: none"> UH Sonde - 2 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day Smith Point - 9 am UH Sonde - 1 pm Smith Point -3 pm EFD sonde - 6 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day Smith Point - 9 am UH Sonde - 1 pm Smith Point -3 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day Smith Point - 9 am UH Sonde - 1 pm Smith Point - 2 pm EFD sonde - 5 pm 	<ul style="list-style-type: none"> NASA Aircraft Flight Day UH Sonde - 2 pm Smith Point - 2 pm
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Weekly Average u-wind Aug. - Sept. vs. 2013

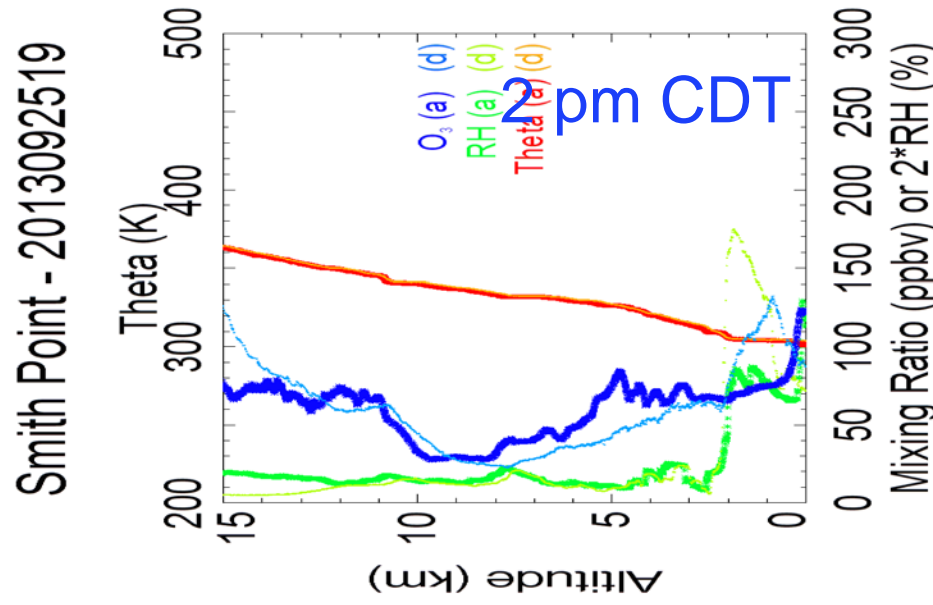
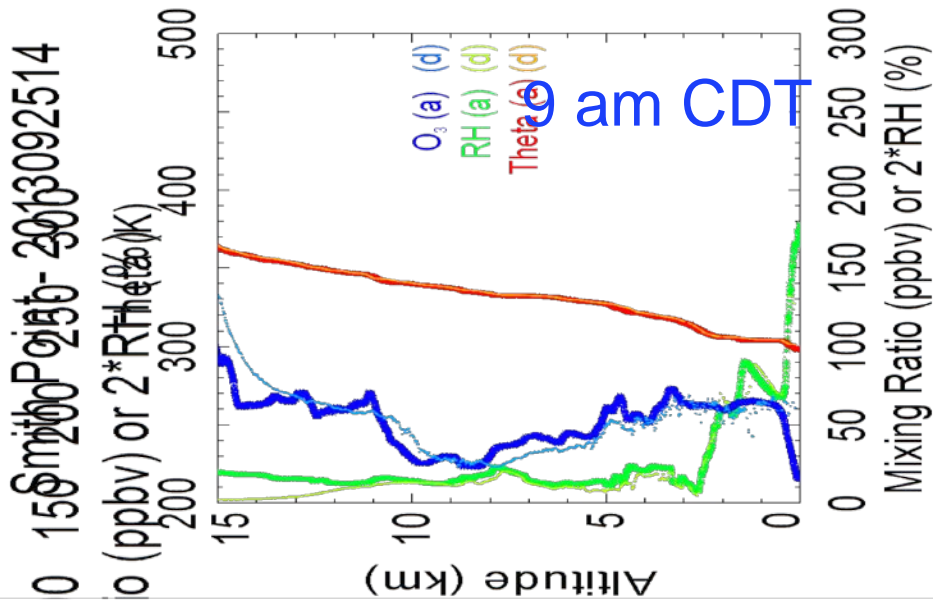
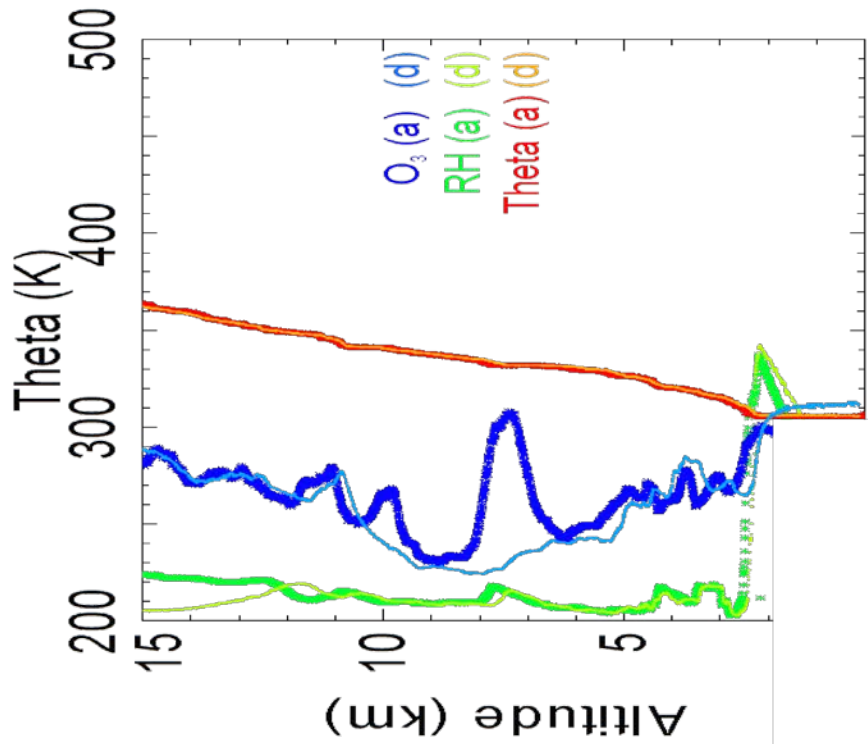


25 September 2013

Smith Point

U. Houston - 3 pm CDT

Houston - 2013092520



3 pm CDT

2 pm CDT

Ozonesonde Observations Summary

- >500 ozonesonde profiles in Houston since 2004, with August – September season very well sampled
- 36 profiles from Smith Point, 22 from U. Houston, and 6 from Ellington Field in Sept. 2013 as part of DISCOVER-AQ
- U. Houston had 5 additional launches in August in preparation for DISCOVER-AQ and 4 launches in July as part of a training workshop.
- 2013 meteorology was very unusual, with the first frontal passage during Sept. not occurring until the 21st.
- Ozone and winds resembled early – mid August rather than September conditions.
- High ozone event of 25 – 26 Sept. well sampled by sondes, with 3 launches from U. Houston and 5 launches from Smith Point.

Thanks for all the help!

To my collaborators:

B. Lefer (U. of Houston)

F. Clowney (Intermet)

A. Thompson and H. Selkirk (NASA GSFC)

D. Musselwhite, P. Morris-Smith (U. Houston, Downtown)

D. Martins (Penn State U.)

And lots of students:

A. Kotsakis, R. Finzel, M. Spychala, and C. Miko (Valparaiso U.)

D. Anderson, E. Marero, L. Judd, S. Alvarez, J. Naruk, E. Velasco, V. Caicedo (U. Houston)

E. Johnson, M. Robinson, M. Rodriguez, M. Richter (U. Houston, Downtown)

R. Stauffer, N. Balashov, H. Halliday (Penn State U.)

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