Ozonesonde Data from Houston and SE Texas

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www.rice.edu/ozone

Moody Tower Data Analysis Workshop
July 16 - 19, 2007
170 balloon launches in Texas from July ‘04 to Nov. ‘06.

<table>
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<tr>
<th></th>
<th>Houston</th>
<th>Beaumont</th>
<th>College St.</th>
<th>Nacogdoches</th>
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<td>‘04</td>
<td>‘05</td>
<td>‘06</td>
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<td>‘06</td>
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Houston profiles reveal seasonal variability in ozone.
Intensive, multi-launch days examine local ozone production.

Intensive days:

05 Aug 2004
03 Aug 2005
17 Aug 2006
31 Aug 2006
02 Sept 2006
14 Sept 2006
15 Sept 2006
20 Sept 2006
25 Sept 2006
26 Sept 2006
05 Oct 2006
08 Oct 2006
17 Nov 2006
July/August ozonesonde data show interannual variability.

Mean Houston Profiles for July/August

All Afternoon Data
2004 Alaskan fires impact ozone levels in Houston (7/19 & 7/20)
Mean profiles below 5 km also impacted by the ‘04 fires.

Mean Houston Profiles for July/August

All Afternoon Data
Mean profiles below 5 km also impacted by the ‘04 fires.

Mean Houston Profiles for July/August

No data from 19 - 20 July 2004
Continued launches in SE Texas will further our understanding.

Future work

• MILAGRO links Mexico City & Houston
• Analysis of additional pollution events, both local and long-range transport.
• Further analysis of intensives to better quantify local sources/impact of residual layer.
• Comparisons with CMAQ (assimilation?)
Shell, NASA, & TCEQ fund program at Rice U. & U. of H.

Shell Center for Sustainability at Rice University

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