Digital Ozoneonde Checklist

Flight # IB 102

Initial Preparation (3 - 7 days before flight)

I. Pump performance check
   1. Czone free (NC 03) air - 10 min
   2. Check pump current
   3. Pump pressure measurement
   4. Pump vacuum measurement

III. Charge chambers with solutions
   7. Charge cathode cell (3 cc)
   8. Wait 2 minutes
   9. Charge anode cell (1.5 cc)
   10. Rinse syringes

II. High ozone conditioning
   5. High ozone (HCl 03) air - 30 min
   6. Ozone-free (NO 03) air - 5 min

IV. Test operations
   11. Sensor background current - 15 min
   12. Sensor response time - 20 min
   13. Short ECC sensor leads
   14. Add cathode solution (2.5 cc)
   15. Re-pack sonde and store, rinse syringes

V. Storage

Flight Preparation (0 - 1 day before flight)

I. Balloon Track shows safe trajectory

II. Recharge chambers with solutions
   1. Inspect cathode cell for cell
   2. Remove cathode cathode tubing
   3. Add 1 - 2 oz of cathode solution
   4. Remove cathode solution
   5. Remove anode solution
   6. Charge cathode cell (3 cc)
   7. Wait 2 minutes
   8. Charge anode cell (1.5 cc)
   9. Rinse syringes

III. Test operations
   10. Sensor background current - 5 min
   11. Sensor response time - 5 min
   12. Record lab Press., Temp., RH
   13. Air flow rate measurement - 5 min
   14. Dry air flow rate (if necessary)

Air Flow Rate Times

<table>
<thead>
<tr>
<th>Trial</th>
<th>Flow Rate</th>
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<tbody>
<tr>
<td>Trial 1</td>
<td>28.47</td>
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<tr>
<td>Trial 2</td>
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<td>Trial 4</td>
<td>28.37</td>
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IV. Prepare secondary sonde (if necessary)

V. Connect radiosonde
   14. Power GPS ozeonesonde
   15. Connect radiosonde to ozeonesonde
   16. Power ON radiosonde
   17. Set and record radiosonde frequency
   18. Power ON ozeonesonde

VI. Setup STRATO
   16. Run STRATO for initial setup
   17. GPS connection test (if necessary)
   18. Ozone-free (NO 03) air - 10+ min
   19. Final ozone background measurement

VII. Prepare for launch
   20. Mount pump battery
   21. Load ozeonesonde into flight box
   22. Attach radiosonde to flight box
   23. Tape box closed & attach notices

Launch (begin 30 - 45 min before flight)

I. Initial launch preparations
   1. Connect GPS power (if necessary)
   2. 30-min. launch notifications
   3. Prepare launch site
   4. Activate wet-cell battery (if necessary)
   5. Assemble balloon train

II. Surface measurements
   6. Start STRATO
   7. Connect radiosonde battery
   8. Connect ozeonesonde battery
   9. Verify data transmission
   10. Start presspert/RH measurements
   11. Stc ozeonesonde measurement

III. Launch
   12. 5-min. launch notifications
   13. Start audio recording of flight data
   14. Inflated balloon
   15. Final data checks: O3, T, RH, Press, GPS
   16. Verify antenna pre-amp is "On."
   17. Release balloon
   18. Verify STRATO launch detection (C 1 min)
   19. Take Microtops measurements
   20. Get launch-time surface O3 measurement
   21. Update supply inventory list
   22. Put away launch equipment

IV. Post-Flight
   23. Stop data recoder
   24. Stop STRATO - NT ESC w/o floppy
   25. Turn off preamp & stow antenna
   26. Scan preprint
   27. Email data files & preprint
   28. File preprint
   29. Verify GPS all matches press. el.
      if not, pressure offset:
      Retran STRATO
   30. Create plots and update website

Launch Info

| Elevation (m) | 107 |
| Longitude | -04.73.77 |
| Latitude | 32.83.46 |
| Time Zone | -c.b.a |
| Slt Press | 995.6 |
| Slt Temp | 24.4 |
| Slt RH | 89.6 |

Flight Notes:

OPERATOR DB
SONDE 27 255545
CURRENT 1100 MA
PRESSURE 15 PSI
VACUUM 2.3 in Hg
BACKGROUND 0.49 MA
RESPONSE 79.22

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Wet Flow Rate Times

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OPRERATOR DW
FLOW RATE 28.475 s
LAB TEMP 24.2 C
LAB RH 62.1%
Avg. dry flow 9.16 s
Avg. wet flow 9.18 s
Flow Correction 9.152 to 9.162
RESPONSE 21.94 s
BACKGROUND 0.027 µA
FINAL BACKGROUND 0.000 µA

WIND: LIGHT-WIND

OPERATOR DW
a. Cloudy

Microtops 1 32.8 DU
Microtops 2 32.8 DU
Satellite C. O3 21.8 ppb
Satellite C. O3 21.8 ppb

Flight Notes: