Status of TODWL and GWOLF

G. D. Emmitt & C. O’Handley
SWA
January 2006
2 mJ, 330 nsec, 500 Hz

10 cm telescope

two axis scanner, ±30° & ±120° deg, side door mount

Digitization rate 500 MHz

~7-10% total system efficiency
New system installed 9 December 2005
Checkout flights 14, 15 & 16 December 2005
Ready for missions. However, installation configuration to be changed to use less real estate so that the DWL can co-fly with other experiments
Checkout Flight Objectives

- Hardware performance checkout (OK)
- Evaluate new “complex terrain” scan pattern
- Underfly Quiksact and/or WindSat
- Collect new series of profiles over the ridge/valleys near Monterey, CA
Flight Path on 14 Dec 2005
Flight Path on 14 Dec 2005
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Flight Path on 14 Dec 2005
<table>
<thead>
<tr>
<th>Date</th>
<th>Time (PST)</th>
<th>WS (kts)</th>
<th>WD</th>
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<td>2:50</td>
<td>3.9</td>
<td>N</td>
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GWOLF

- NASA provided hemispherical scanner for installation on top of GWOLF trailer.
- Scanner installed in December
- Racks and internal hardware need to be fabricated and installed (finish expected March 15)
VALIDAR & GWOLF at the Lidar Intercomparison Facility

Location Of Target Lights
Bldg 1297
R-B-Y-G
Observation Plan for GWOLF

• Co-operate with LaRC’s VALIDAR and GSFC’s GLOW at LaRC’s Lidar Intercomparison Facility.
• Conduct random set of observations designed to generate a distribution of vertical performance throughout all seasons (in Virginia).
• Participate in NSF funded experiment in Arizona to study desert dust redistribution within sparsely vegetated regions.
• Planning to participate in proposed plume studies at Redstone Arsenal
• Co-operate next to CIRPAS radar in a tornado study in 07.