

Flight and Debrief Notes

JF

Project: WAICO08

Flight: TF02

File: 20080205a

Crew:

T. Drew
P. Wechsler
J. French

Preflight:

GVR fixed following TF01.

Completed ELT install prior to flight

Flight is more of “calibration” than instrument test. Expect all ops will be in VMC conditions.

Four (4) items on wish list for today’s flight:

1. Northern most flight legs (under VFR conditions) for WWDC flights over Snowies, under 14 kft.
2. WCR beam calibrations at 3 levels
3. Rodi maneuvers
4. Lenschow maneuvers

Preflight weather does not look conducive for item (1) *{clouds over snowies}*.

Expect should be able to complete (2), (3), and (4). Maneuvers will likely be conducted north of Laramie.

Flight:

Wheels up @ 1716

Proceed to area North/Northwest of KLAR. Just south of where Rock River (creek?) comes out of Snowy Range. This area appears free of ground fog that covers much of prairie (but does not show up on radar). Set up for radar cals. Plan is to begin at 3 kft AGL and work our way up.

Radar file 17-26-08 for 3 kft AGL calibration (3 kft AGL)

172650, begin right 45 deg. circles
172850, end right circles
~173130(?), begin left 45 deg. circles
173343, end left circles
173422, begin S/L with tail wind
173522, end S/L
173700, begin S/L into wind
173800, end S/L

Radar file 17-44-52 for 10 kft AGL calibration (FL172)

174522, begin right 45 deg. circles
174740, end right circles
174744, begin left 45 deg. circles
175021, end left circles
175240, begin S/L with tail wind
175340, end S/L
175532, begin S/L into wind
175635, end S/L

Radar file 18-05-17 for 17 kft AGL calibration (FL245)

180737, begin S/L into wind
180837, end S/L
181030, begin S/L with tail wind
181130, end S/L
181630, begin right 45 deg. circles
181853, end right circles
182024, begin left 45 deg circles
182257, end left circles

End radar beam calibrations

Descend to FL140 for Rodi maneuvers, noted on earlier ascent that this level had relatively light winds, relatively devoid of strong shear. The vertical wind variation on the order of 0.5 m s^{-1} .

Begin Rodi Maneuvers

~183300, begin right turn with yaws
~183550, begin left turn with yaws
~183830, end turns with yaws

~183930, begin left turn with airspeed variation
~184155, end left turn with airspeed
~184205, begin right turn with airspeed variation
~184440, end right turn with airspeed

End Rodi Maneuvers

Remain at FL140 for Lenschow maneuvers, try to conduct in roughly same area as Rodi Maneuvers.

Begin Lenschow Maneuvers

Pitch up/dns
184635, begin set 1
184740, 15 sec S/L between sets
184845, complete set 2

Yaws rgt/lft

185045, begin set 1

185145, 15 sec S/L between sets

185245, complete set 2

S/L into/out of wind

183505, begin 60 sec into wind

185410, end S/L

90/270

185550, begin 60 sec out of wind

185650, end S/L

Wind Circles

15 sec S/L

185745, begin wind circle right

190008, end wind circle right

15 sec S/L

190105, begin wind circle left

190337, end wind circle left

15 sec S/L

S/L speed run

15 sec S/L

190445, begin speed run (Res AS → min AS → max AS → min AS → Res AS)

190930, end speed run

15 sec S/L

End Lenschow Maneuvers

1914, at FL100 set Licor flow

1922, wheels down

Post Flight:

AIAS/BIAS disagree, this is calibration issue, fixed in post processing using the corrections file

No control of 4th seat from 3rd seat; thus did not run WCL idl display program, because of how data system display is piped, could not easily (quickly) reboot 4th seat, from now on should run realtime with -d option (so no data system display piped to 4th seat)

No video tape for flight (operator error, I failed to start recording...)