

## VOCALS status of facilities: NSF/NCAR C-130

### Overall schedule

4 Aug - 28 Sep	Upload of instruments to C-130
29 Sep - 9 Oct	Test flights - JeffCo
10 Oct - 12 Oct	Ferry to Arica
15 Oct - 19 Nov	Observation period
21 Nov - 23 Nov	Ferry to JeffCo
24 Nov - 1 Dec	Download of instruments

Schedule is subject to minor tweaking, especially at end.



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## Crew duty limitations

### Crew Rest and Flight Duty Limitations:

Any 24-hour period.....	10 flight hours
Any consecutive 7 days.....	35 flight hours
Any 30-day period.....	110 flight hours
Consecutive working days.....	6 days
Crew Duty Period.....	14 hours
Minimum crew rest period.....	12 consecutive hours

**Note:** Above limits may be exceeded for ferry purposes at project pilots discretion.

Pis are expected to follow the same crew duty rules

The project pilot will always have the option of calling a no flight day when consecutive flights are scheduled and crew fatigue is a factor.

VOCALS allocation:	120 hours; 36 days (operations)
	12 hours (test)
	40 hours (ferry)
	172 hours; (total)
	160 hours; 44 days (in the field)

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### Crew duty limitations

120 hrs; 9 hrs per flight => 13+ flights

24-hour “notice” for change from day-flights to night-flights, and reverse.

Once on a night-schedule, then “maintenance access” is also only on night-schedule!

Day-time schedule:	7 AM - 9 AM	Warm-up and pre-flight
	9 AM - 6 PM	Flight
	6 PM - 7 PM	Post-flight

12 hour rest

Night-time schedule:	1 AM - 3 AM	Warm-up and pre-flight
	3 AM - 12 Noon	Flight
	12 Noon - 1 PM	Post-flight

12 hour rest

Expect smaller changes.

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### **Instrument**

- 1) Streaker on LTI, SEM, TEM
- 2) TSI 3010, 3025 CN counters
- 3) DMPS and APS
- 4) PSAP
- 5) 3 wavelength TSI nephelometer
- 6) Real time AMS
- 7) Liquid Water Collector
- 8) CVI
- 9) Giant Aerosol Impactor
- 10) APIMS – SO<sub>2</sub>
- 11) APIMS – DMS
- 12) UV Resonance Fluor. - CO
- 13) TECO – O<sub>3</sub> (slow)
- 14) NO chemiluminescence – O<sub>3</sub> (fast)
- 15) Fast CO<sub>2</sub>
- 16) Wyoming Cloud Radar
- 17) Wyoming Cloud Lidar
- 18) Microwave Radiometer
- 19) Wyoming CCN Counter
- 20) PVM-100 Liquid Water

### **Contact**

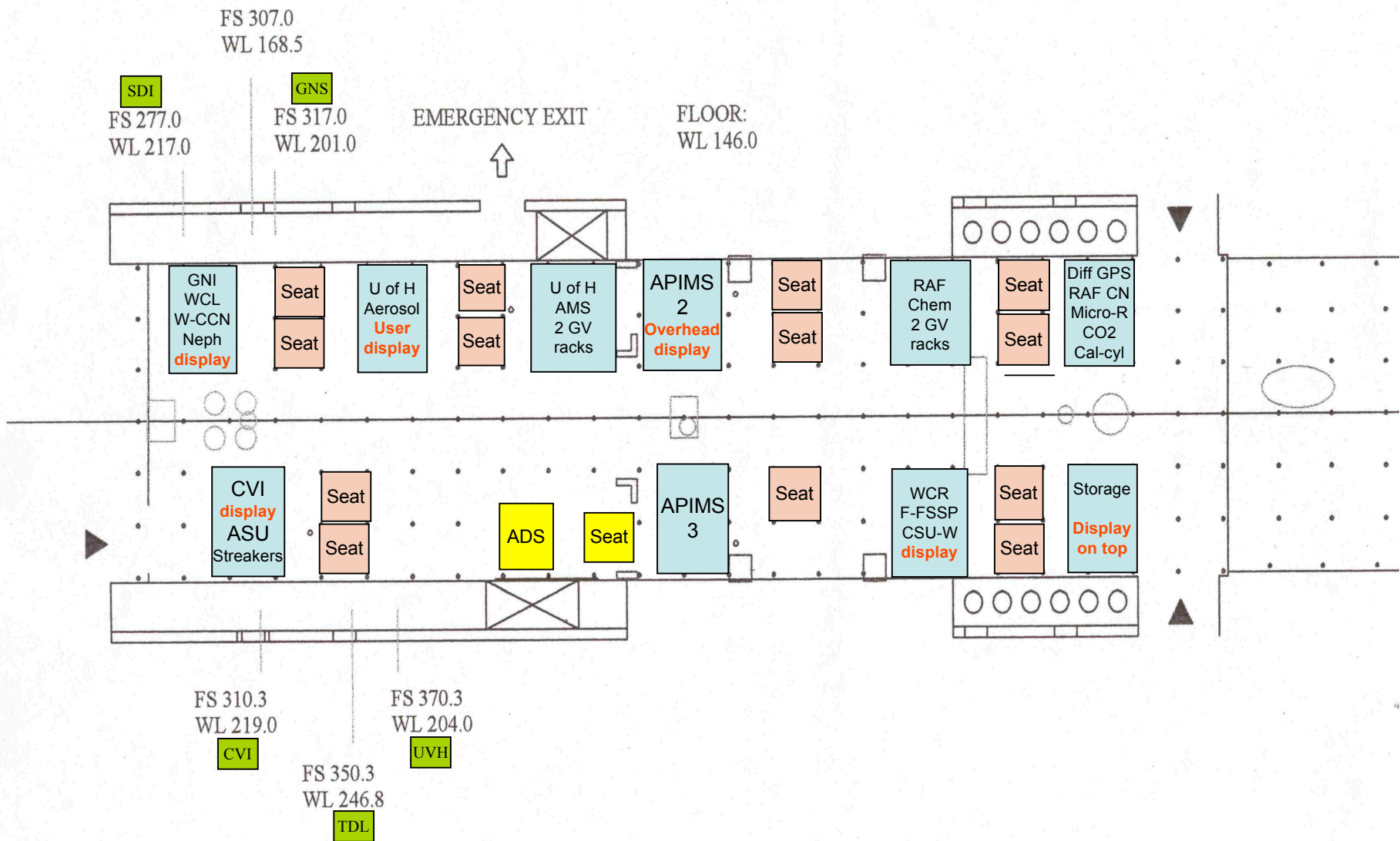
Jim Anderson  
Howell&Clarke  
Howell&Clarke  
Howell&Clarke  
Howell&Clarke  
Jeff Collett  
Cindy Twohy  
Jorgen Jensen  
Alan Bandy  
Alan Bandy  
NCAR / RAF  
NCAR / RAF  
NCAR / RAF  
NCAR / RAF  
Univ of Wyoming  
Univ of Wyoming  
P. Zuidema  
Jeff Snider  
NCAR / RAF

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<b>Instrument</b>	<b>Contact</b>
21) SPP-100	NCAR / RAF
22) SPP-200	NCAR / RAF
23) SPP-300	NCAR / RAF
24) PMS-260X	NCAR / RAF
25) PMS-2D:C	NCAR / RAF
26) CDP Cloud Probe	NCAR / RAF
27) OPHIR Radiometric Temp	NCAR / RAF
28) Differential GPS	NCAR / RAF
29) RAF Remote Sfc Temp – Up	NCAR / RAF
30) French Fast FSSP	J.L. Brenguier
31) TDL Hygrometer	NCAR / RAF
32) Wyoming CN Counters (2)	Jeff Snider
33) UV Fast Hygrometer	NCAR / RAF

# DRAFT C-130 LAYOUT FOR VOCALS

## 2/14/08



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### Communications

Iridium:	Baud rate:	2400 baud
	Full duplex:	(up/down)
	Reliability:	Satellite coverage is uncertain
Inmarsat:	Bud rate:	64-kbits/sec
	Full duplex:	(up/down)
	Reliability:	Drop-outs in turns Satellite coverage is uncertain

Voice, limited data (1 sps), Google Earth with flight tracks and data, up/down loading of images