

CONTRAST GV General Ops



10-22-2013

CONTRAST payload specification

10/18/2013

Instrument	Rack req.	Operator	AL tanks (rack)	BL/CL tanks (i-beam)	Tank size	Floor plate	Wing	Inlet	Contact
VCSEL								1	Beaton
Fast O3	1					shared			Campos
NO-NO2	1		2	1	AL, CL	1		0.5	Weinheimer 100 lbs dry ice on ferry
VUV CO				1	BL?	shared			Campos
Picarro CO2, CH4			shared			shared		0.5	Campos
CH2O	0.7			1				1	Hanisco
GT-CIMS	1		1					1	Huey
AMAX-DOAS	1	1					1		Volkamer
Br	0.3			2					Flocke
AWAS	1							1	Atlas
TOGA	1	1	1	2				1	Apel
UHSAS	0.2						1		RAF
2D-C							1		RAF
CDP							1		RAF
MTP	0.1						1		Haggerty
HARP	1							1	Hall
Mission coord.	0.2	1							RAF
Mission sci.		1							Pan
Gas cylinder rack	0		0						RAF
Gas I-beam, x3	0			-6		3			RAF
Total:	8.5	4	4	1		4	5	7	
Capacity:	4 combined		3	0		varies	12	8	

Standard rack has 26U of vertical mounting space.

Assumption: CO, Picarro are combined with NO-NO2; MTP, UHSAS are in mission coordinator rack

Number of cylinders as of 3/7/2012. There is a 3-cylinder rack permanently installed on the GV.

There are 11 positions on the GV for seats or racks, plus 3 permanent seats.

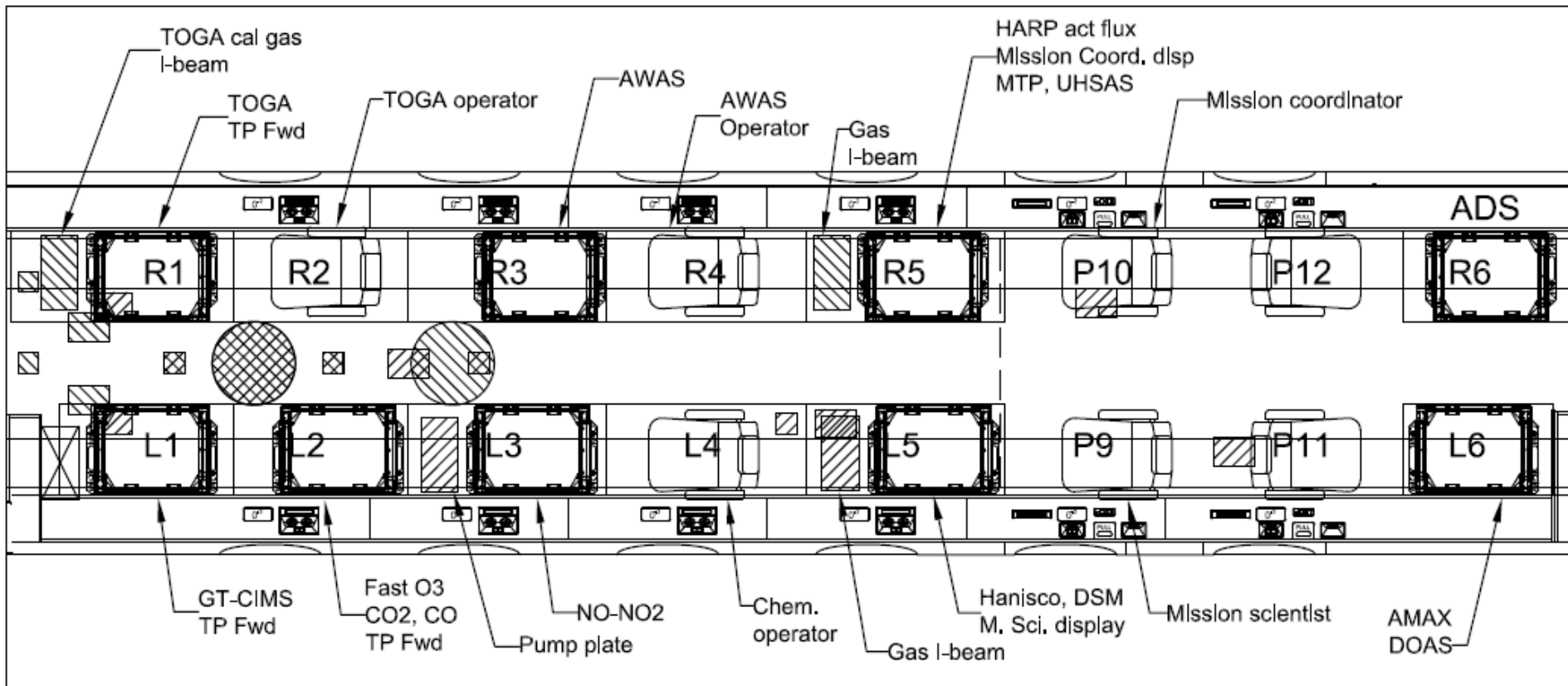
There are 8 total inlet positions. Red inlets are Gold HIMILS.

RAF will look if positioning AMAX-DOAS into outboard pylon is possible.

Aft gas rack	3	AL size
i-beam	2	BL / CL size
GV gas rack	4	AL size

CONTRAST GV payload

08/20/2013



Top

TOGA Gold HIMIL

R1

R2

R3

R4

R5

P10

P12

R6

L1

L2

L3

L4

L5

P9

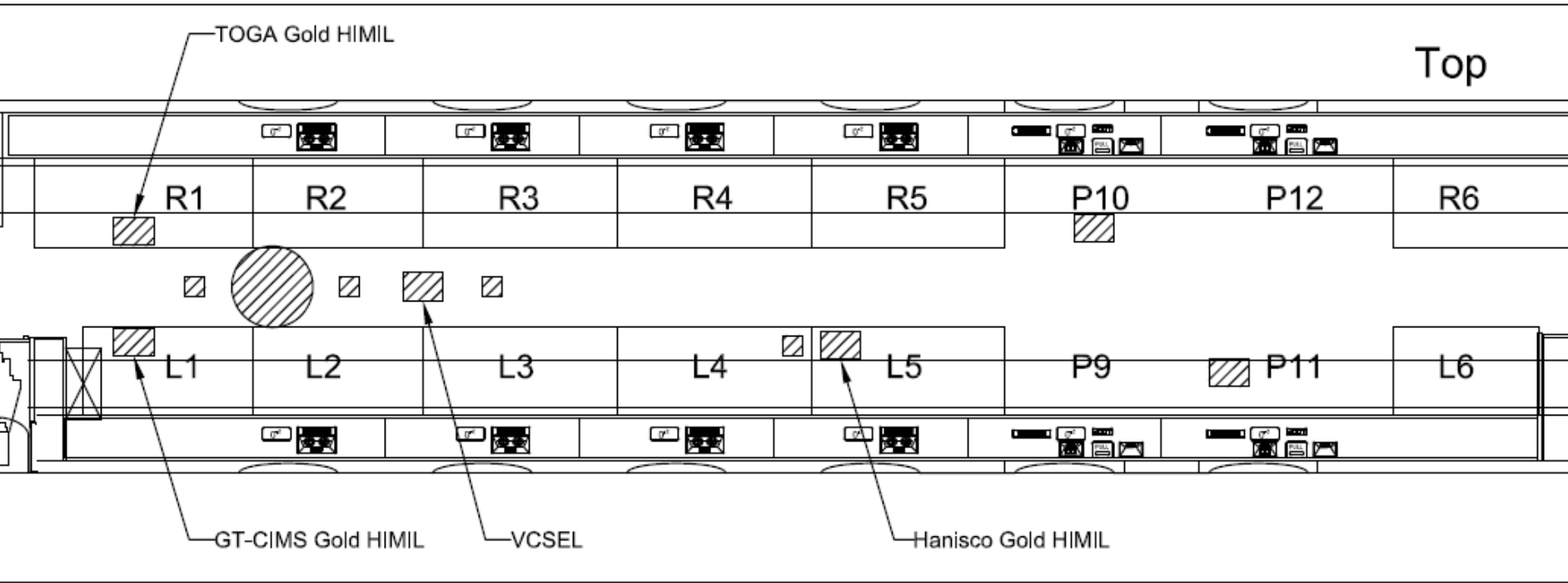
P11

L6

GT-CIMS Gold HIMIL

VCSEL

Hanisco Gold HIMIL



Belly

AWAS red unheated HIMIL

NO-NO2 special HIMIL

R1

R2

R3

R4

R5

P10

P12

R6

L1

L2

L3

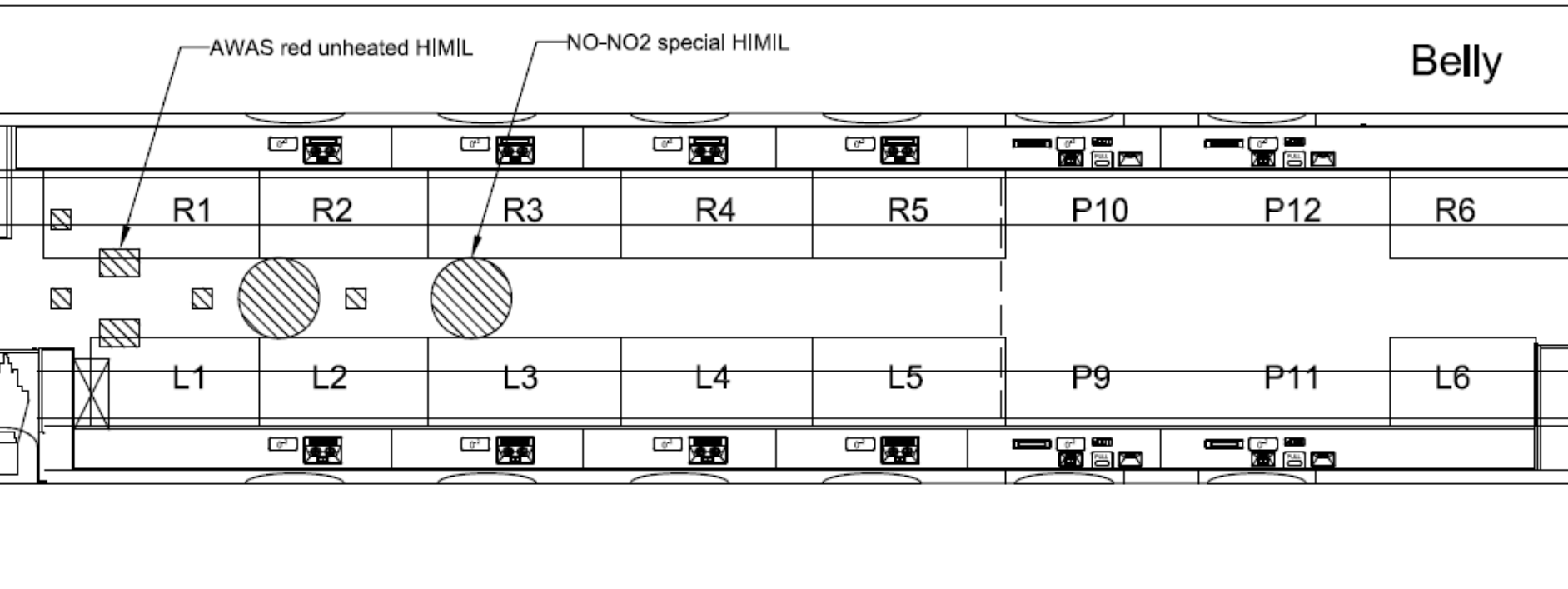
L4

L5

P9

P11

L6



Upload schedule for CONTRAST, Jan-Feb 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11/3	11/4 Install wing stores Install cabin infrastructure	11/5 Install AMAX-DOAS fiber	11/6	11/7	11/8 Cabin ready for racks	11/9
11/10	11/11	11/12	11/13 Install L6 AMAX-DOAS	11/14	11/15	11/16
11/17	11/18 Install R5 HARP Install L5 Hanisco	11/19	11/20 Install i-beams	11/21	11/22	11/23
11/24	11/25 Install L3 NO-NO2 Install L2 Fast O3	11/26	11/27	11/28	11/29	11/30
12/1	12/2 Install R3 AWAS	12/3	12/4 Install R1 TOGA	12/5	12/6	12/7
12/8	12/9 Install L1 GT-CIMS	12/10	12/11	12/12	12/13 All racks installed	12/14
12/15	12/16 Configure and prepare all instruments Calibrations	12/17	12/18	12/19	12/20	12/21
12/22	12/23	12/24 EMI if ready	12/25	12/26	12/27 Payload flight ready	12/28
12/29	12/30 SAR	12/31	1/1	1/2 Weigh GV Safety brief EMI, FRR	1/3 TF01	1/4

Deployment schedule for CONTRAST, Jan-Feb 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1/1	1/2 Weigh GV Safety brief FRR	1/3 TF01	1/4
1/5 Down	1/6	1/7 TF02	1/8	1/9 TF03	1/10	1/11 RF01 KBJC-PHKO
1/12 Down	1/13 RF02 PHKO-PGUM	1/14 Arrive PGUM Day lost	1/15	1/16 RF03	1/17	1/18 RF04
1/19 Down	1/20	1/21	1/22 RF05	1/23	1/24 RF06	1/25
1/26 Down	1/27	1/28 RF07	1/29	1/30 RF08	1/31	2/1 RF09
2/2 Down	2/3	2/4 RF10	2/5	2/6 RF11	2/7 Down	2/8
2/9	2/10	2/11 RF12	2/12	2/13 RF13	2/14 Down	2/15
2/16	2/17 RF14	2/18	2/19	2/20 Down	2/21 RF15	2/22
2/23	2/24	2/25 RF16	2/26 Down	2/27	2/28 End flight ops Pre-pack	3/1 Pack
3/2 PGUM-PHKO PHKO-KBJC Day gained	3/3	3/4	3/5	3/6	3/7	3/8

GV Research-Ferry ops

- GV to ferry via Honolulu (HNL)
- Support staff fly commercially to Guam, meet / send off GV in HNL
- Send to Pavel shipping and storage requirements for ferry flights, to be arranged at the FBO in HNL
- Hotel in HNL: RAF will arrange for GV crew, if desired can coordinate for other people
- Gases / dry ice in HNL: notify RAF, arrange to deliver to FBO
- RAF mechanics, PM will fly commercially to give seats to science team if needed
- Baggage pit contents: coordinate with RAF. HARP cal, dry ice, other?
- Hard down day in HNL of the way to Guam

Crew Rotation

		January																																					
Role	Days	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	
							11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	
GV Pilot	50						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	
GV Pilot	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
GV Pilot	28																													2	3	4	5	6	7	8	9	10	11
	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
GV Support	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
Chem. Support	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
GV Support	29																													2	3	4	5	6	7	8	9	10	11
Chem. Support	29																													2	3	4	5	6	7	8	9	10	11
GV Support	28																													2	3	4	5	6	7	8	9	10	11
GV Support	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
GV Support	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
Logistics																																							
GV PM	28						11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8				
GV PM	29																													2	3	4	5	6	7	8	9	10	11