

KORUS-AQ Fall AGU Science Team Meeting 15 December 2015



<u>Agenda</u>

Detailed Mission Schedule

Transit Flight Plans

Open Issues

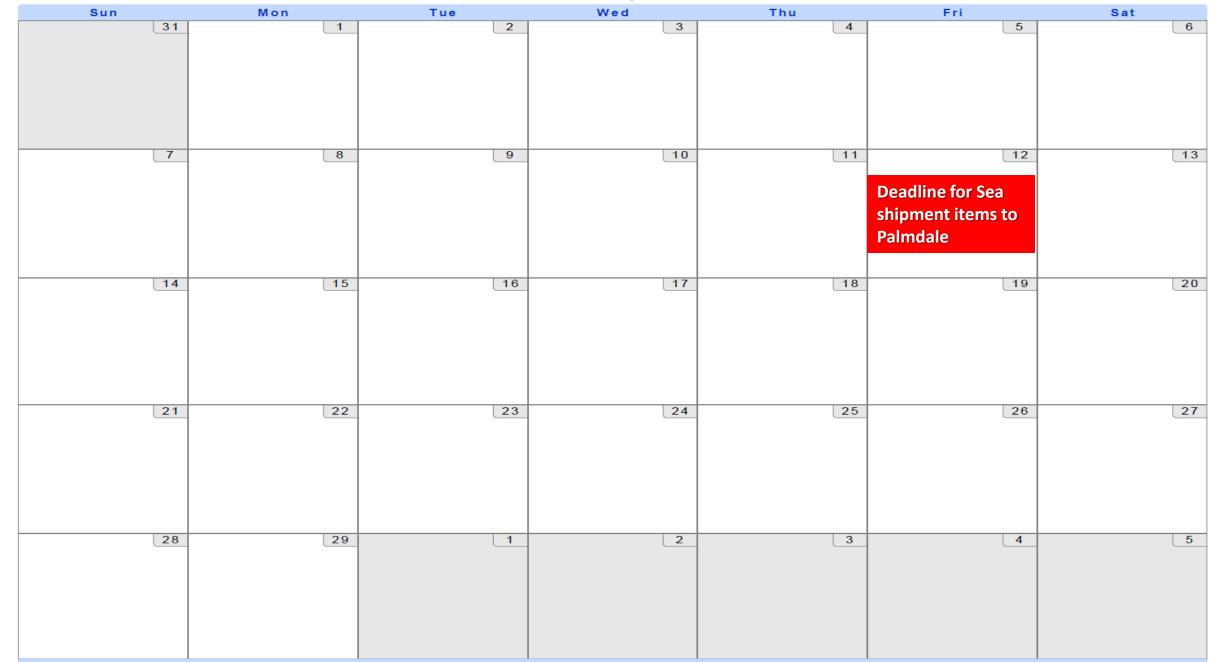
Shipping Update

Registration

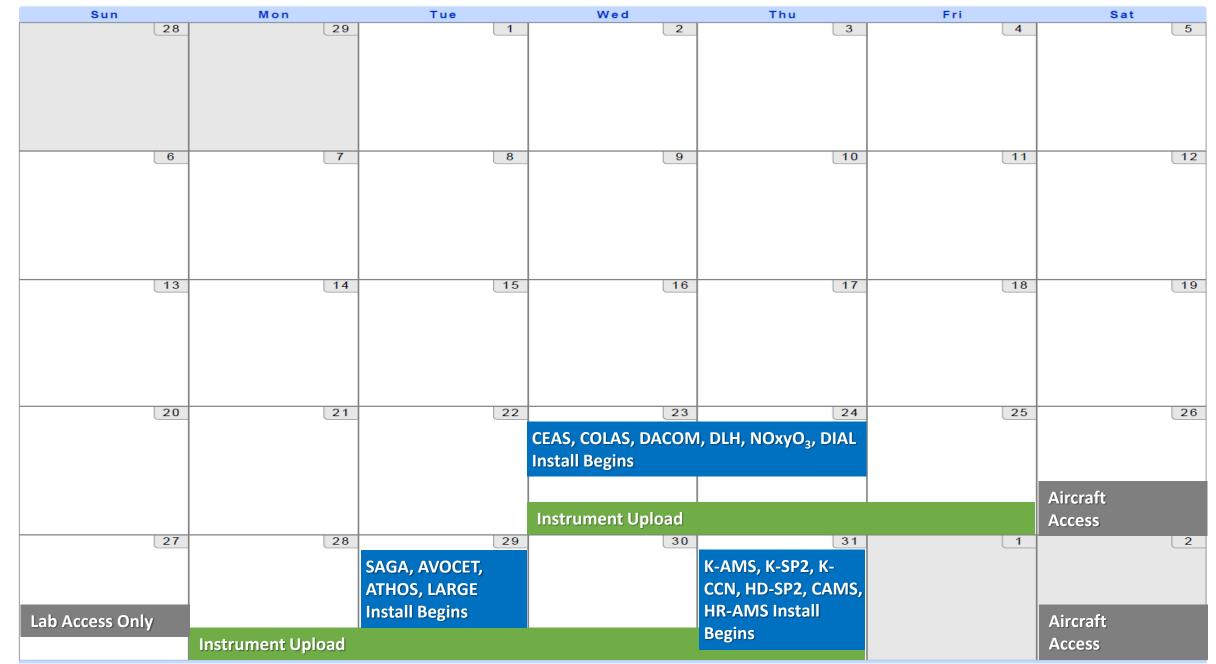
Osan Air Base Logistics

(Comments and questions from participants are welcome throughout the meeting)

February 2016



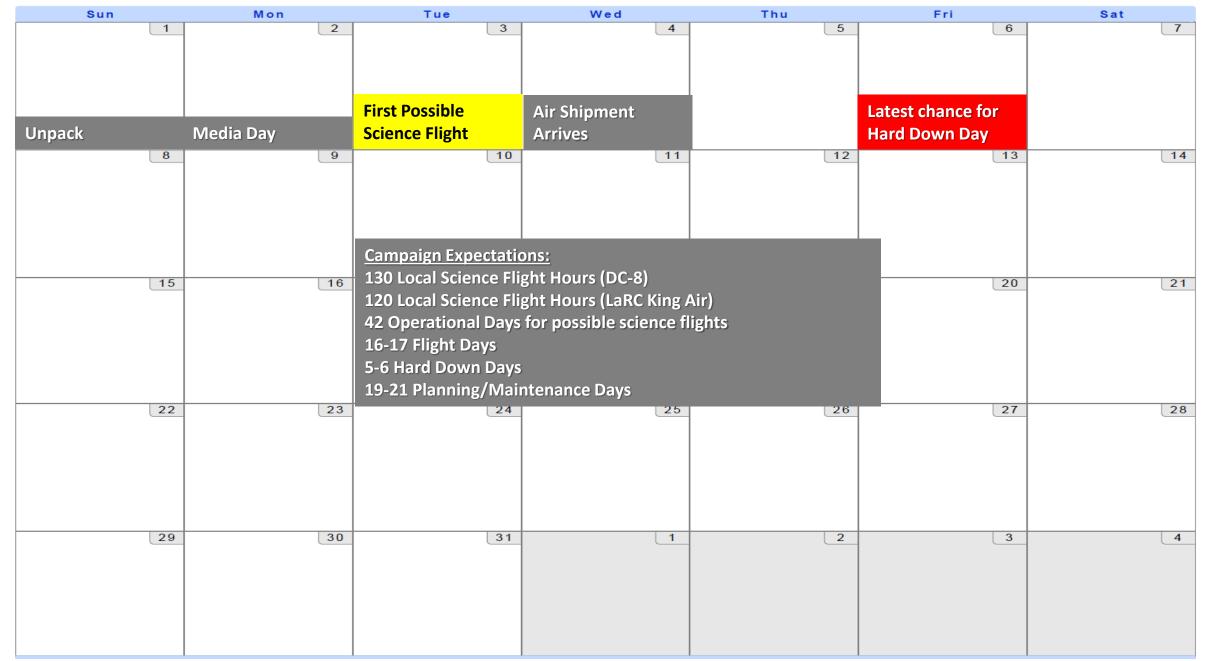
March 2016



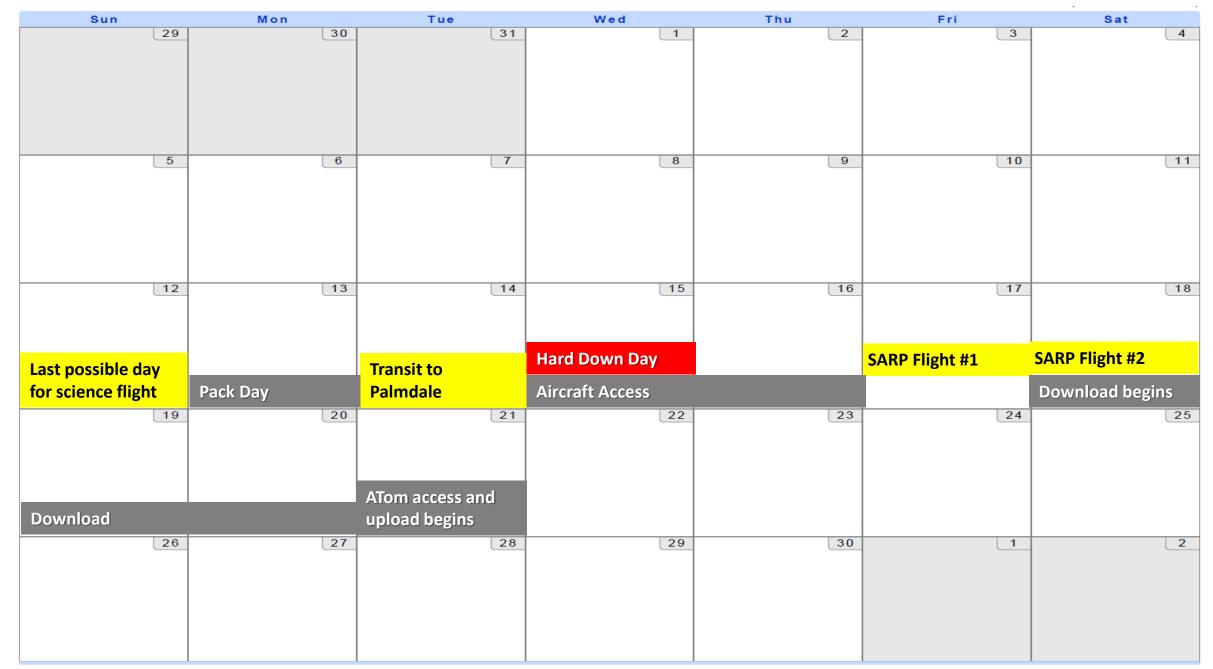
April 2016



May 2016



June 2016



Transit Flight Plans

The transit from Palmdale to Osan will be conducted on the following schedule:

- Stage 1 Palmdale to Anchorage (~5 hours)
- DC-8 Crew Swap (~2 hours, with power to instruments maintained) Stage 2 – Anchorage to Osan Air Base (~8 hours)
- -Current expected takeoff from Palmdale is 0600 (local) on 29 April -Flights will be at cruise altitude, with the exception of a descent over Rikubetsu (TCCON) and missed approach at Memanbetsu airport.
- -Overpass of TCCON is estimated to be at 0200 UTC
- -Arrival at Osan is expected to be after 0400 UTC (1300 local)

Open Issues

Waiver for travel in excess of 30 continuous days

The Langley travel office is in communication with the travel office at NASA HQ. The initial conversation is positive, but we are still waiting on a final ruling. We also hope this ruling will apply across all NASA centers.

<u>Transit cargo space on the DC-8 for experimenters</u> This is still being determined, but investigators should keep expectations low.

Open Issues (cont.)

Registrations on the ESPO website need to be completed

Location	Completed	Missing	Incomplete
Palmdale	116	91	19
Osan	161	95	30

*These numbers only account for team members that have been identified and emailed

Specific Travel Dates

With release of the detailed calendar, it is important that teams enter travel dates that are consistent with the manpower needs described in their proposals.

Open Issues (cont.)

Family and Friends visiting Korea

Some team members may be joined by spouses, family members, or significant others. Will it be possible for them to enter Osan Air Base? If so, will the process be the same as for team members?

Shipping

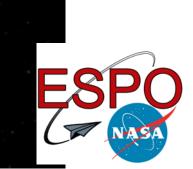
KORUS-AQ Mission Website Regularly Updated with Shipping and POC information



Shipping

ing ^{••}	KORUS-AQSPO
Registration Help	Home > Logistics > KORUS-AQ Shipping
Instrument Teams	View Edit Revisions
Participants	
Mission Planning	KORUS-AQ Shipping
Science	Current as of: December 9, 2015
 Logistics 	
Shipping	KORUS-AQ Shipping Overview
Travel Contract	There will be two modes of shipping that will be utilized during the mission, a sea shipment and an air shipment.
Shared Files	Please return the completed sea shipment manifest to Steven Todorov by 1/18/16. Please return the completed air shipment manifest to Steven Todorov by 3/4/16.
Platforms	Palmoare to Usan AFB
Photos	Sea Shipment- All Items To Be Delivered to the PMD Hangar by February 12, 2016 The sea shipment is scheduled to arrive at Osan AB on 22nd of April. Some items that are classified as dangerous goods can
Meetings	not be shipped via aircraft and still others may be prohibitively expensive to do so. In either case we will need to arrange for the advance shipment of these items on this February shipment. Please make any advance arrangements to ship any required calibration gasses in this shipment.
	Shipments to Palmdale
Add to Calendar	Please pack any fragile of sensitive equipment in hard shell cases with plenty of cushioning and avoid shipping loose items
Add Daily Schedule Entry	whenever possible. Clearly label all boxes with "KORUS-AQ" the instrument name, the PI's name, and contact mobile phone
Add Daily Forecast Entry	number. Before you ship your items to Palmdale, please email Steven Todorov and Karen Richards with the number, size and weights of each shipment. Include the expected arrival date and carrier information.
Add News Item	Shipping Point of Contact (POC) Info
Submit Science Report	ESPO Steven Todorov (steven.m.todorov@nasa.gov) (650) 996-9335
Upload Image	DC-8/Palmdale Karen Richards (karen.l.richards@nasa.gov) (661) 276-3675 / (661) 209-6569
Upload Document	Shipping Address - Palmdale CA
Add Mailing List	NASA Aircraft Operations Facility 2825 East Avanue P
	Palmdale, CA 93550 Attn: (your name)/Karen Richards (661) 276-3675

Palmdale to Osan AFB Air Shipment- 28 APRIL to 5 MAY (TENTATIVE) Please return the completed air shipment manifest to Steven Todorov by 3/4/16.





Sea Shipment

Sea shipment manifest is due on 1/18/16

All items to be shipped must be in Palmdale by 2/12/16



Sea Shipment Manifest

mbei	her	Instrument Name: ABC Ins Instrument POC: John Q	trument Researcher	Email: Mobile:			ç € Q	intity	e	uo	Ca	ise Dir nches		ight
Case Number	ltem Nun	Instrument Name: ABC Ins Instrument POC: John Q Item Description	Manufacturer	Мо	del Number and Serial Number	Country of Manufacture	Estimated Value (US \$)	ltem Quantity	Total Value (US \$)	Case Description	Length	Width	Height	Case Weight (pounds)
	1 I	Osciliscope (Example)	Acme Manufacturing	Model: S/N:	ABC-123 987450984752098437	USA	\$1,000	4	\$4,000					
	2	LED Monitor (Example)	Dell	Model: S/N:	Latitude 2430 98374098347	China	\$200	1	\$200					
	3	Power Supply, 220v (Example)	EI Acme Manufacturing	Model: S/N:	PS-210 123546EN-12KT	M ex ico	\$500	2	\$1,000					
	4	Hand Tool Kit (Example)	NA	Model: S/N:	NA NA	China	\$300		\$0					
	5	Box of Nitrile Glove (Example)	Sani-Glove Co.	Model: S/N:	34 NA	China	\$30	2	\$60	plastic			40	100
1	6	M isc. Air Fittings (Ex ample)	NA	Model: S/N:	NA NA	NA	\$50	1	\$ 50	Black Plastic	48	24	18	100
	7			Model: S/N:		-			\$0	ш				
	8			Model: S/N:		-			\$0					
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	2			M odel: S/N:		-			\$0					
	3			M odel: S/N:		-			\$0					
	4			M odel: S/N:		-			\$0					
	5			Model: S/N:					\$0					
2	6			M odel: S/N:					\$0					
	7			M odel: S/N:					\$0					

Sea Shipment Manifest Haz Mats

//	JN No. Or ID No.	Proper Shipping Name	Hazard Class	Packing Group (Subsidiary Risk)	Quantity and type of Packaging	Packing Instr.	Authorization	Manufacturer	Country of Manufacture	Cost	Unit Quantity	Total Unit Cost
U	JN 1002	AIR, COMPRESSED	2.2		1			Scott-Marin	USA	\$500	1	\$500
									USA			
									USA			
									USA			
									USA			
									USA			
									USA			
									USA			
									USA			
									USA			
									USA			

DO NOT FILL IN THIS SECTION. ESPO WILL COMPLETE.

Air Shipment Manifest

Case Nt	tem Nui		Instrument Q Researcher Manufacturer	Email: Mobile:	del Number and	Manufacture	Estimat ed Value	tem Qu:	Total Value (US \$)	ase Jescrip	Ca	ase Di Inches	ms s	Case Weight
		Osciliscope (Example)	Acme Manufacturing	Model:	ABC-123 987450984752098437	USA	\$1,000	4			θ			
	2	LED Monitor (Example)	Dell	Model: S/N:	Latitude 2430 98374098347	China	\$200	1	\$200					
	3	Power Supply, 220v (Exampl	e) El Acme Manufacturing	Model: S/N:	PS-210 123546EN-12KT	Mexico	\$500	2	\$1,000					
	4	Hand Tool Kit (Example)	NA	Model: S/N:	NA NA	China	\$300		\$0					
	5	Box of Nitrile Glove (Example) Sani-Glove Co.	Model: S/N:	34 NA	China	\$30	2	\$60	Black Plastic				
1	6	Misc. Air Fittings (Example)	NA	Model: S/N:	NA NA	NA	\$50	1	1 \$50	lack F	48	24	18	100
	7			Model: S/N:		-			\$0					
	8			Model: S/N:		-			\$0					
	9			Model: S/N:		-			\$0					
	10			Model: S/N:		-			\$0					
F	1			Modet S/N:					\$0					
	2			Modet		 			\$0					
				S/N:			1		-					

Air Shipment Manifest



Lithium Batteries as Cargo in 2016

Background

The 25th meeting of the ICAO Dangerous Goods Panel meeting (DGP/25), which was held in Montreal 19 – 30 October 2015, considered a number of proposals to address safety concerns associated with the carriage of lithium batteries as cargo, including:

 a total prohibition on the carriage of lithium ion batteries (UN 3480) as cargo on passenger aircraft;

- deletion of Section II of Packing Instructions 965 and 968;
- restricting the transport of lithium ion batteries to be at no more than 30% state of charge (SoC);

KORUS-AQSPC **KORUS-AQ Home** Login Help Registration **Registration Help** Home > Logistics > KORUS-AQ Shipping Instrument Teams Edit Revisions View **Participants KORUS-AQ Shipping Mission Planning Science** Current as of: December 9, 2015 Logistics **KORUS-AQ Shipping Overview** Shipping There will be two modes of shipping that will be utilized during the mission, a sea shipment and an air shipment. **Travel Contract** Please return the completed sea shipment manifest to Steven Todorov by 1/18/16. Shared Files Please return the completed air shipment manifest to Steven Todorov by 3/4/16. Platforms Palmdale to Osan AFB Sea Shipment- All Items To Be Delivered to the PMD Hangar by February 12, 2016 Photos The sea shipment is scheduled to arrive at Osan AB on 22nd of April. Some items that are classified as dangerous goods can not be shipped via aircraft and still others may be prohibitively expensive to do so. In either case we will need to arrange for the Meetings advance shipment of these items on this February shipment. Please make any advance arrangements to ship any required calibration gasses in this shipment. Shipments to Palmdale Add to Calendar Please pack any fragile of sensitive equipment in hard shell cases with plenty of cushioning and avoid shipping loose items Add Daily Schedule Entry whenever possible. Clearly label all boxes with "KORUS-AQ" the instrument name, the PI's name, and contact mobile phone number. Before you ship your items to Palmdale, please email Steven Todorov and Karen Richards with the number, size and Add Daily Forecast Entry weights of each shipment. Include the expected arrival date and carrier information. Add News Item Shipping Point of Contact (POC) Info Submit Science Report ESPO Steven Todorov (steven.m.todorov@nasa.gov) (650) 996-9335 Upload Image DC-8/Palmdale Karen Richards (karen.l.richards@nasa.gov) (661) 276-3675 / (661) 209-6569 Upload Document Shipping Address - Palmdale CA NASA Aircraft Operations Facility Add Mailing List 2825 East Avanue P Palmdale, CA 93550 Attn: (your name)/Karen Richards (661) 276-3675 Palmdale to Osan AFB

Shipping to the PMD Hangar

All items to be shipped must be in Palmdale by 2/12/16

Currently I am planning on shipping:

- 30 Pallets
- 120 cylinders of compressed gas

This requires planning for receiving and staging prior to the shipment.

Please email Karen Richards and Steven Todorov when you ship.



Return Shipping Dates

AIR SHIPMENT 6/21

SEA SHIPMENT 8/8



Consumables

Cryogens LN2 Dry Ice • CIT-CIMS • SAGA • NOxyO3



Consumables

Zero Air and UHP Nitrogen Requests

Zero Air	UHP Nitrogen
 AMS* DACOM/DLH HR-ToF-AMS CAFE 	 HR-ToF-AMS AMS* CIT-CIMS CAMS



Consumables

Gasses Procured in South Korea

The KORUS mission is providing UHP NI and Zero Air in steel cylinders.

I will be posting vendor information on the website for those wanting gasses in aluminum cylinders

Detailed Regulator and Adaptor Info is forthcoming



Shipping Point of Contact Information

Steven Todorov Earth Science Project Office <u>Steven.m.todorov@nasa.gov</u> (650) 996-9335



Mission Registration Base Information Logistics

Earth Science Project Office

Jhony Zavaleta, Kent Shiffer, Steven Todorov



ESPO Website Mission Registration

NASA	ESPO	ESPO Archive Flight Request Mission Tools						
	> Log in to KORU	AQ > Create New Account Search						
KORUS-AQ Home Login Help]	KORUS-AQSPO						
Participants		KORUS-AQ						
Mission Planning								
Science								
Logistics		KORUS-AQ: An International Cooperative Air Quality Field Study in Korea						
Shared Files		US Steering Group: Jassim Al-Saadi, Gregory Carmichael, James Crawford, Louisa Emmons, and Saewung Kim						
Platforms		Korean Steering Group: Chang-Keun Song, Lim-Seok Chang, Gangwoong Lee, Jhoon Kim, and Rokjin Park						
Photos		Introduction						
Meetings		Air Quality is an environmental concern of fundamental importance across the globe. The need to monitor and understand air quality requires continual effort as populations grow energy use increases, and industrial activity evolves. Air quality goals						



ESPO Website Mission Registration

NASA	ESPO	ESPO Archive	Flight Request	Mission Tools						
	> My account > Log out			Search						
KORUS-AQ Home Login Help Registration	KC	RUS-AQS	PO							
Registration Help	View	View Edit AC & Teams Schedule Menu Revisions Blocks Mission DB Reports								
Instrument Teams	KORUS	-AQ								
Participants										
Mission Planning										
Science	KOR	US-AQ: An International Coop	erative Air Quality Field Stud	ly in Korea						
Logistics		US Steering Group: Jassim Al-Saadi, Gregory Carmichael, James Crawford, Louisa Emmons, and Saewung Kim								
Shared Files		Korean Steering Group: Chang-Keun Song, Lim-Seok Chang, Gangwoong Lee, Jhoon Kim, and Rokjin Park								
Platforms		Introduction								
Photos		Air Quality is an environmental concern of fundamental importance across the globe. The need to monitor and understand air								
▶ Meetings	qualit	quality requires continual effort as populations grow, energy use increases, and industrial activity evolves. Air quality goals have also evolved as improved understanding of health effects has demonstrated the added benefit of setting lower targets for								



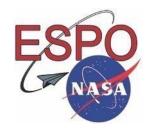
ESPO Website Registration

- Provide separate travel information for specific activities:
 - Integration (March 21st April 29th)
 - Armstrong Flight Research Center (AFRC) in Palmdale, CA
 - Deployment (April 30 June 14)
 - Osan Air Base, Republic of Korea
 - De-integration (June 14 June June 20)
 - Armstrong Flight Research Center (AFRC) in Palmdale, CA
- Dates should indicate arrival date and departure date at the site.
 - (NOT the departure and arrival date from your starting point)



ESPO Website Registration

- Provide separate travel information for specific activities:
 - NO TRAVEL
 - No information is requested.
 - PLANNED
 - All travel details are requested
 - CONFIRMED
 - All travel details are requested
 - CONTINGENCY
 - Only information for base access is requested. No travel plans are requested.



Citizens from Designated Countries

- Need to identify specific escorts no later than *February* 1st, 2016
- Citizens from Designated countries: <u>must be escorted</u> <u>at all times</u> and <u>cannot</u> stay on base.



ESPO Website Registration

Korean Nationals

- USFK Form 82-E
- Korean ID (KID)/Passport* scan
- Passport style photo for badging.

*If visiting AFRC

** Retired US military: No Osan ID card to be issued, notify ESPO, name will be submitted to DBIS.

If planning to bring a vehicle, include vehicle information:

• Make, model, year, Registration number, & Insurance policy number

• All others **

- USFK Form 82-E
- Passport Scan
- Passport style photo for badging.



ESPO Website Registration

• <u>MUST</u> upload requested photographs/scans (head/face - passport style)

Passport Scan



inch inch inch inch inch inch inch to 1 3/8 inch 1/8 inch to 1 3/8 inch



Badge Photo

Osan Air Base Access

- Identification while on base:
 - Base Issued ID
 - KID or passport
 - ESPO issued mission badge

 US citizens can escort up to <u>3 people</u> and <u>one vehicle</u>.







Notes

- Ensure that information is entered accurately
 - Watch out for Default Values (i.e. Citizenship)



Mission Updates & Social Media

• Mission RSS Feed:



- <u>https://espo.nasa.gov/home/korus-aq/daily-schedule/rss.xml</u>
- (Short URL: https://goo.gl/nSRvAj)
- Twitter: https://twitter.com/korus_aq
- Facebook: https://www.facebook.com/sciflychannel





More Information

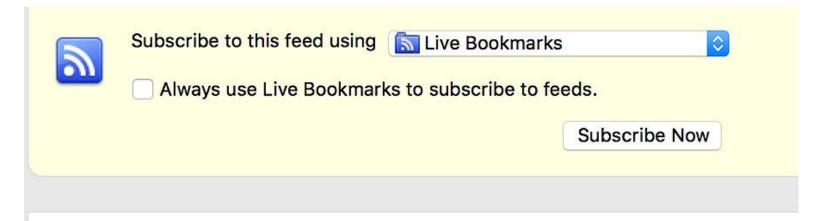
• ESPO will distribute a comprehensive *Traveler Information Package* before the deployment *(End of March, 2016)*. Check website for information.



Extra slides



https://espo.nasa.gov/home/korus-aq/daily-schedule/rss.xml



Daily Schedule

KORUS-AQ 12/12/15 Mission Daily Schedule

December 12, 2015 at 9:18 AM

Now you can follow our mission updates via Twitter! Follow us @KORUS_AQ



SAFARI

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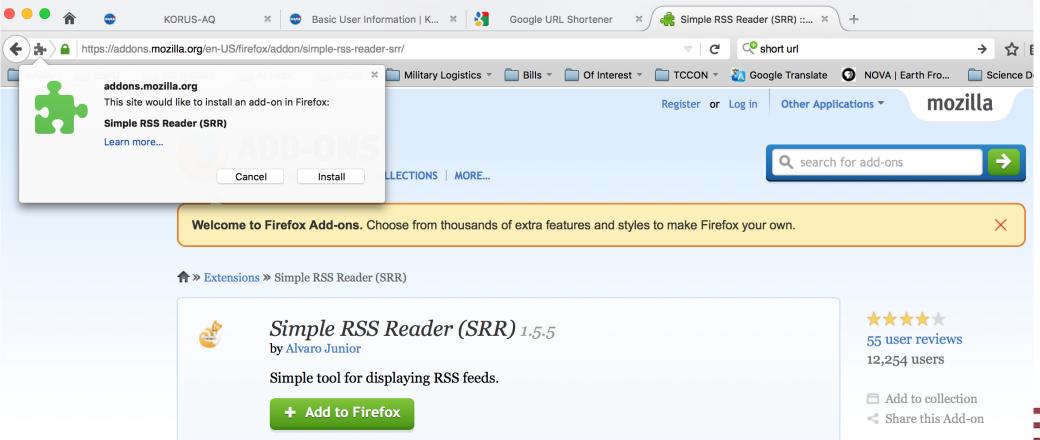
-180 -150 -120 -90

-60 -30 0 30 60

90 120 150 180

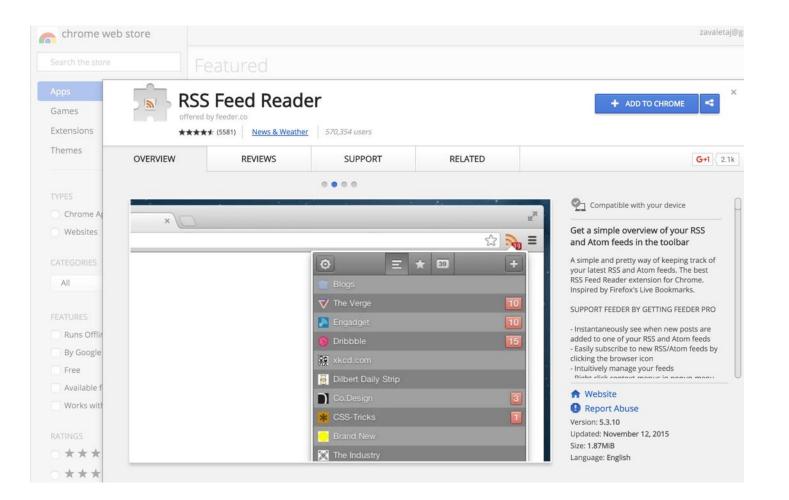
Subscriptions

Firefox





Chrome





To subscribe to a feed using Internet Explorer

- 1. Open Internet Explorer by clicking the Start button
- 2. Go to the website that offers a feed.
- 3. Click the Feeds button to view feeds on the webpage. ...
- 4. Click a feed (if more than one is available). ...
- 5. Click Subscribe to this feed.

More items...

How to use RSS feeds in Internet Explorer 9 - Windows

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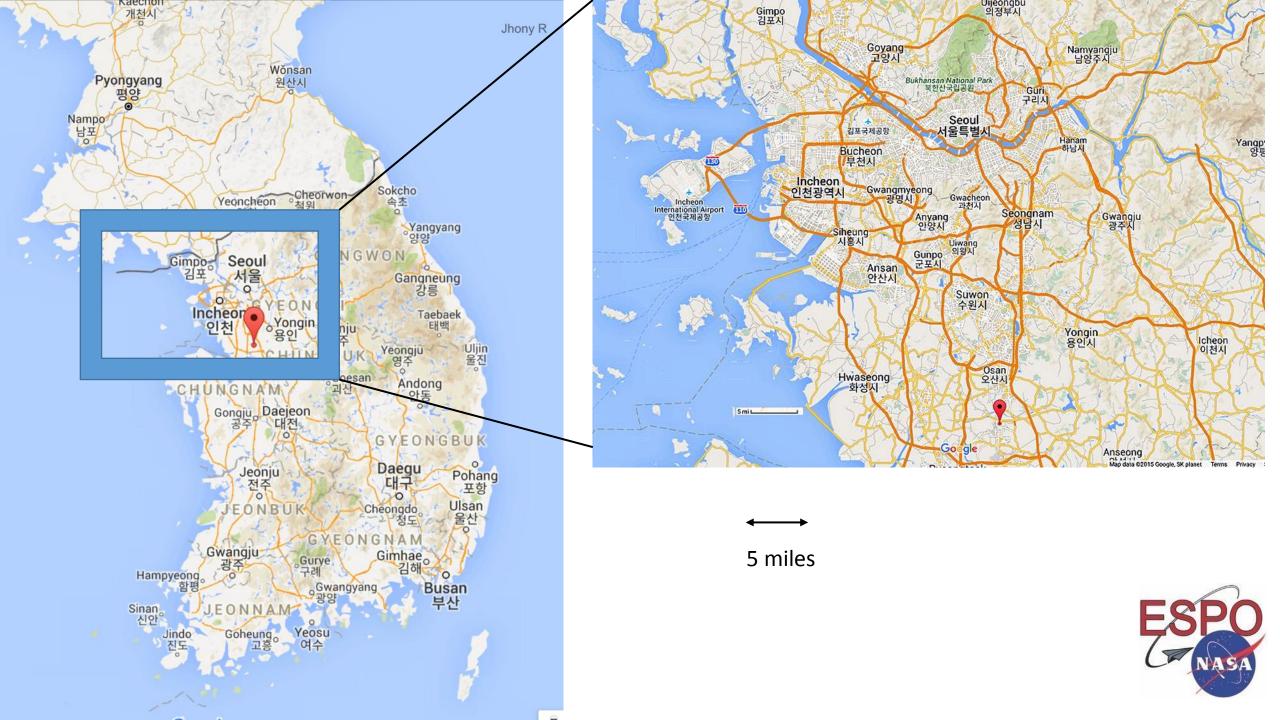


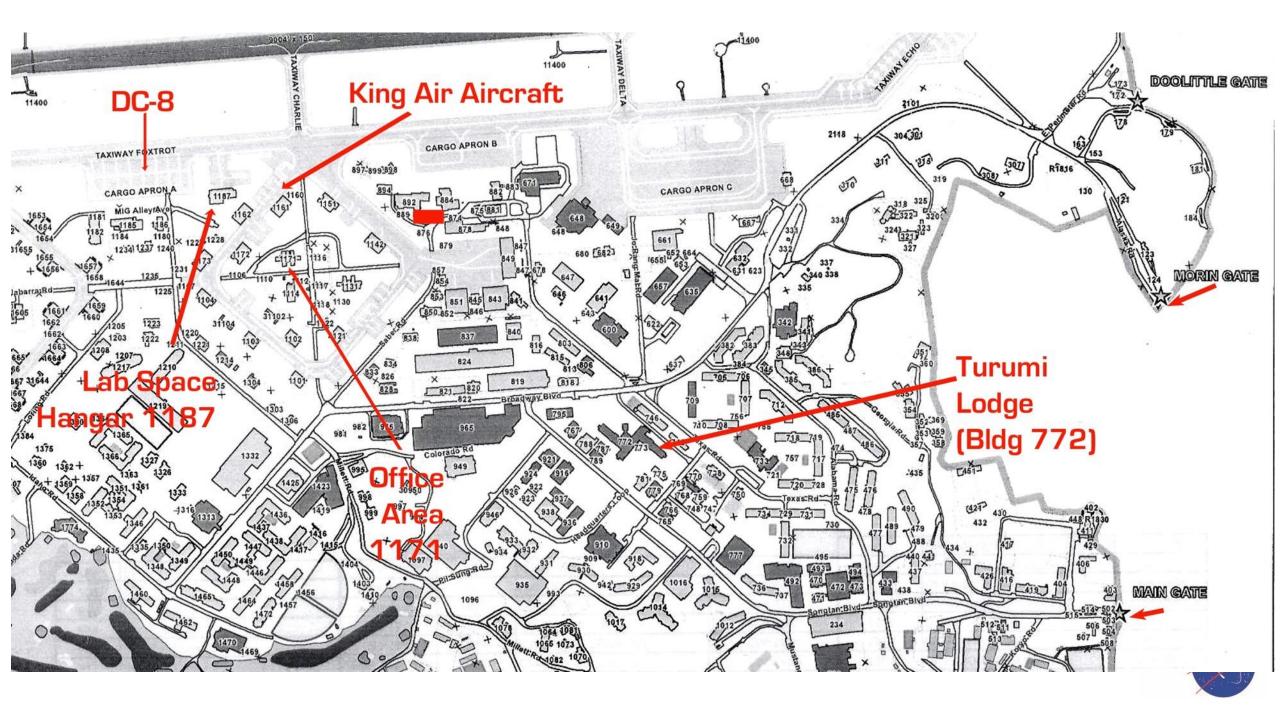
Orientation -Osan Air Base

Earth Science Project Office

Jhony Zavaleta, Kent Shiffer, Steven Todorov



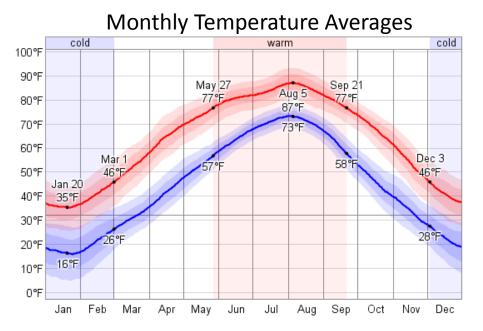




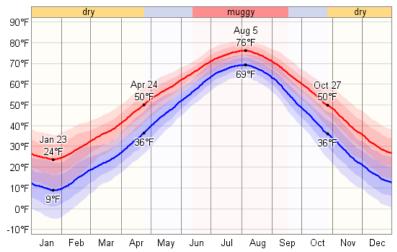




Osan AB - Weather Averages



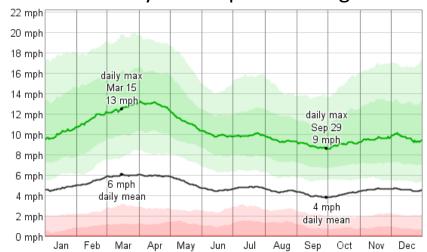
Monthly Humidity Averages



light snow light rain 70% Jul 28 60% 60% 50% Jan Dec 31 light rain (21%) 41% 41% Apr 1 40% Oct 10 35% 33% 30% moderate rain (18%) light snow (16%) 20% moderate snow (13%) 10% thunderstorms (15%) 0% Feb Mar Apr May Jul Aug Sep Oct Nov Dec Jan Jun

Monthly Precipitation Averages

Monthly Wind Speed Averages





Osan Air Base Restrictions

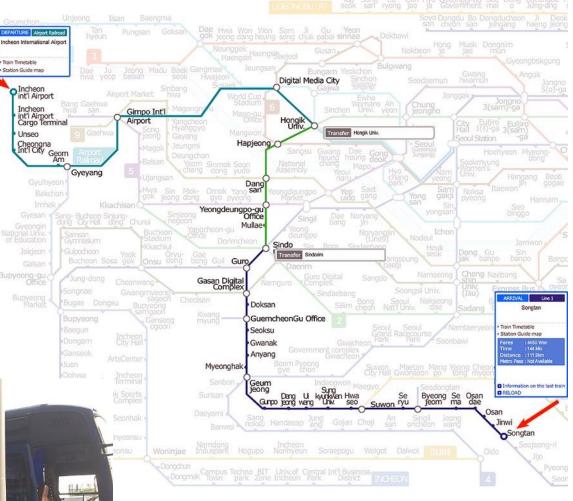
- No Photography in the flight line or towards the runway. No photographing of military aircraft.
- DCP escorted at all times
- Always carry Identification: and proof of any special access/training as needed.
- Last minute visitors:
 - Must be escorted at all times
 - No after hours access
 - Cannot stay on base
 - No DCP
 - Still, must notify ESPO



Transportation

- From Airport to Osan AB
 - Bus Transportation
 - Metro
 - Taxi (not recommended)







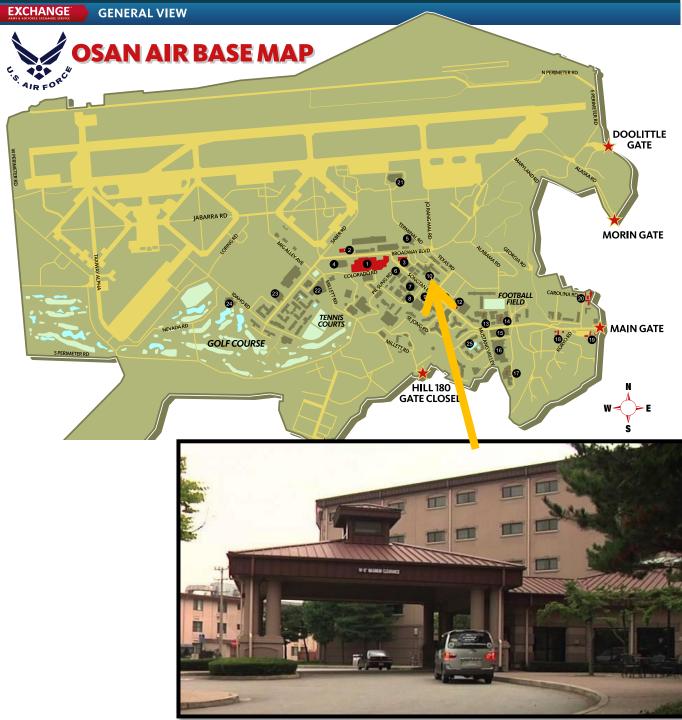
Transportation

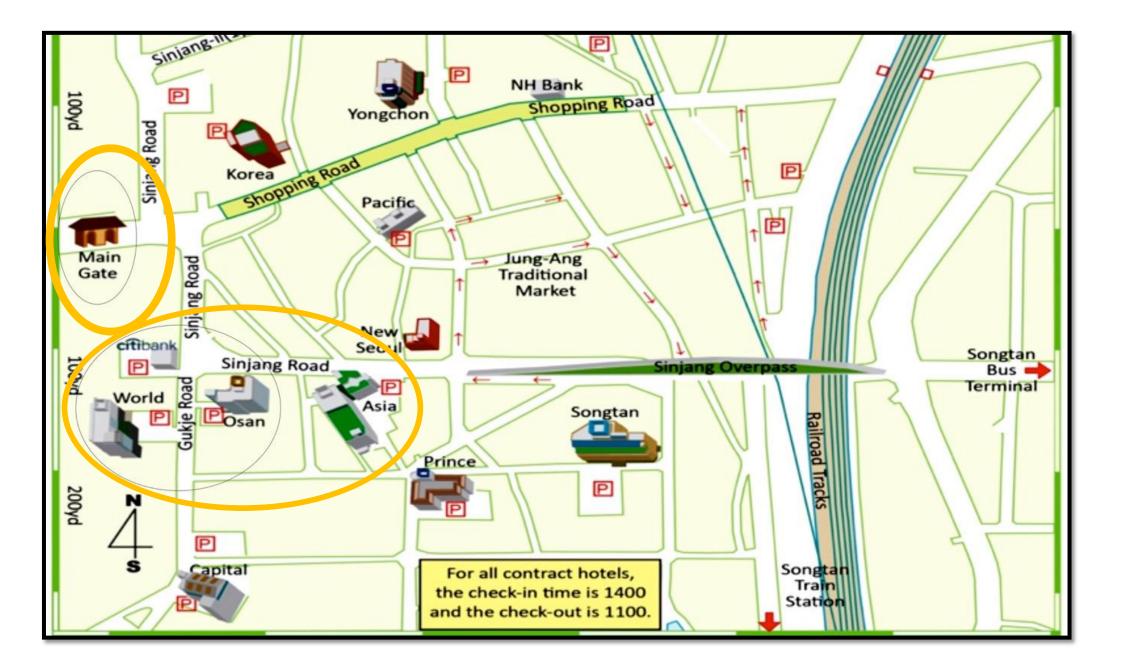
- On base (everything is within 1.5Km (1 mile) distance)
 - Privately owned vehicles are OK
 - Taxi (~3000 Won/~\$3USD)
 - Walking
 - Bike
- Off base: (See the orientation package)
 - Train
 - Bus



Lodging

- On base: Turumi Lodge
 - Rate: \$60/night
- Off base:
 - Contract hotels just outside the base
 - Rate: ~\$85USD
- Per Diem rates are different in each case.
 - Osan Air Base (Other):\$77/\$52
 - Off-base hotels (Pyongtaek City): \$82/\$63



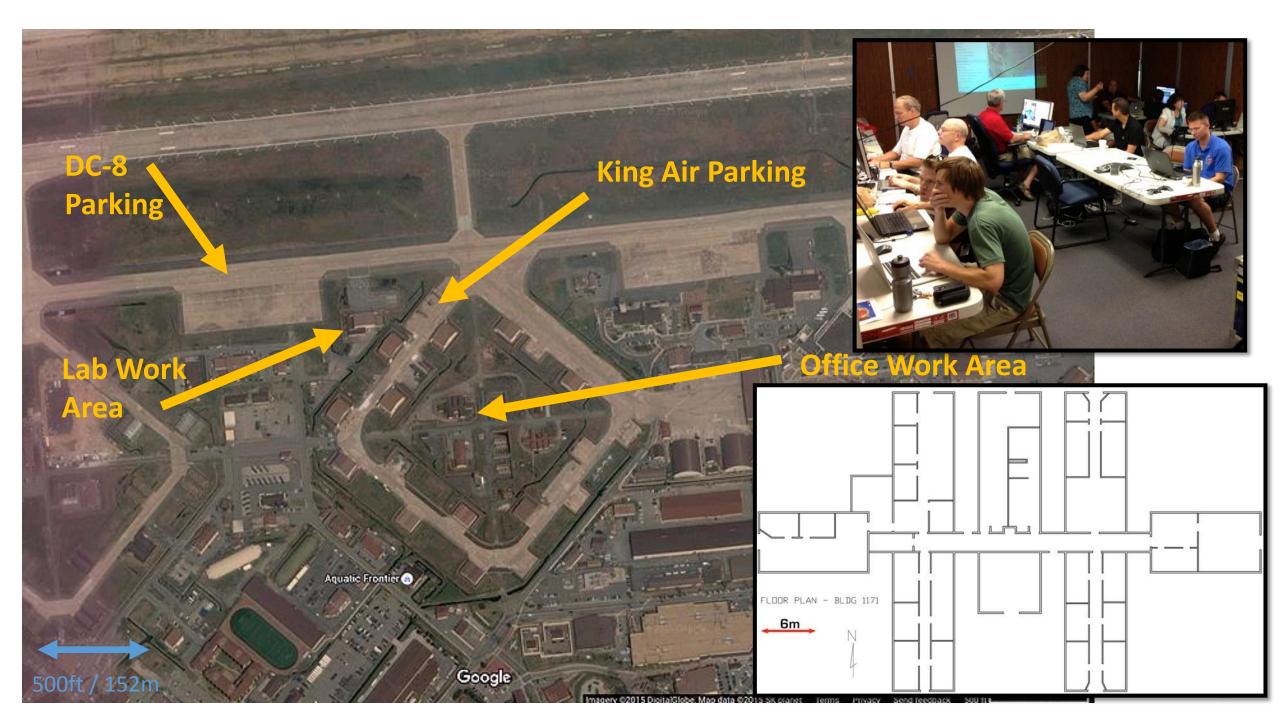




Work and Lab Spaces

- Office Space (building 1171)
- Science team, forecast teams, flight crews, etc.
- Power available is 120V/60Hz (on 20A circuits)
 - If needed, higher amperage can be requested.
- Wi-Fi (100Mbs). Is a static IP needed?















Work & Lab Spaces

- Hangar Space (building 1187): Instrument Work
- Closest proximity to DC-8
- No air conditioning
- Power available is 120V/60Hz (on 20A circuits)
 - If needed, higher amperage can be requested.
- Wi-Fi (100Mbs). Is a static IP needed?



