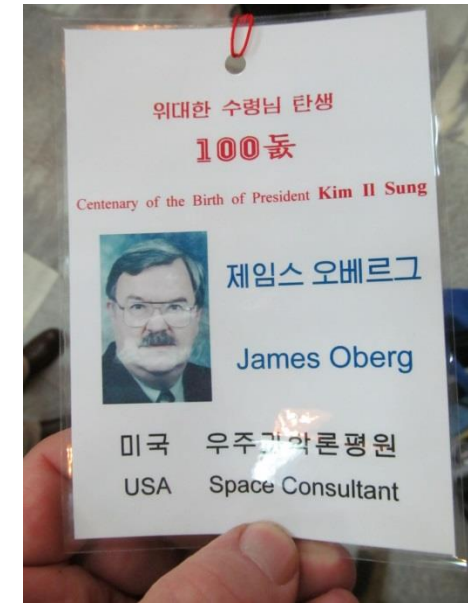


Rocket-spotting in North Korea

[June 1, 2013]



On April 4, 2012, Jim Oberg became the only Western ‘rocket scientist’ to walk up to the super-secret North Korean Unha-3 rocket, ever, at the forbidden Sohae Space Center [left]. Several days later he was the guest of honor at the never-before-seen ‘General Satellite Control Center’ [bottom right]. During these visits he kept looking around corners and over walls, taking hundreds of hi-res photographs, and noting down his impressions, maps, and estimates.



Oberg, a consultant to NBC-News, had been invited to join the group of foreign journalists attending what was billed as a “peaceful satellite launch.” North Korea had hoped to persuade the journalists to tell the world the launch was not a weapon – all their efforts failed. NBC News officials wanted Oberg to do more than just see what they were being shown, they wanted him to see what they were NOT being shown – and this is a report on the success of that mission to ‘find out’.



CUSTOMS DECLARATION IN THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

Name: JAMES DBERG Sex: M Age 67
 Nationality: USA Address: 915 AVENUE J ^{USA}
 Occupation: JOURNALIST DICKINSON TX 77539
 Name of delegation: NBC Destination PYONGYAN &
 Invited by GOVERNMENT
 Check in luggage 2 pieces Hand luggage 2 Pieces

Currency records

Currency	Amount	Currency	Amount
US	\$500		

- Please mark next to the item if you have any.
- 1 weapon, ammunition, explosives, killing device
 - 2 drug, exciter, narcotics, poison
 - 3 G.P.S or Navigator
 - 4 hand phone, cell phone and other communication means
 - 5 historical and cultural wealth, and artistic works
 - 6 publishing of all kinds

Listing all the “killing devices”, “exciters”, poisons, etc – and especially GPS and other navigation devices [but they never checked high-end wristwatches], mobile phones, and any ‘publishing’ [of all kinds]

Half of our camera luggage



Note: Even the luggage CART was part of our 'checked luggage'

Dominating the Pyongyang skyline & visible from a dozen miles outside the city is a giant futuristic building that NOBODY talks about, even as a joke or a curse. They just don't SEE it.





The missing '5'

Yang Gak Do hotel

WHY advertise a 'secret' floor by drawing attention to it by omitting its number from the elevator buttons? Why not include a button '5' and just make it not work?

The secret “Fifth Floor”

Americans called “seung nyang”, a hated/feared man-eating wolf-tiger of legend, on a who-to-hate poster

<http://monsoondiaries.com/2011/08/23/piso-cinco/>

"This bomb is the product of the Americans. Every product of the Americans is our enemy. Get revenge a thousand hundred times against the Americans."



APPARENTLY this floor contains the listening devices for monitoring foreigners

Military Threat? Wee are invited to 'prove peaceful rocket'.



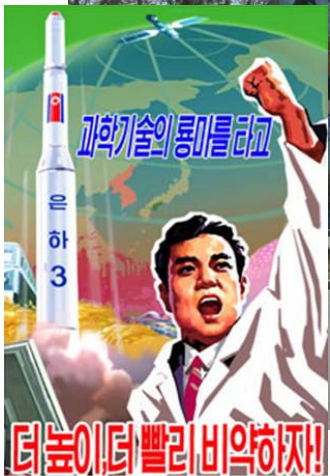
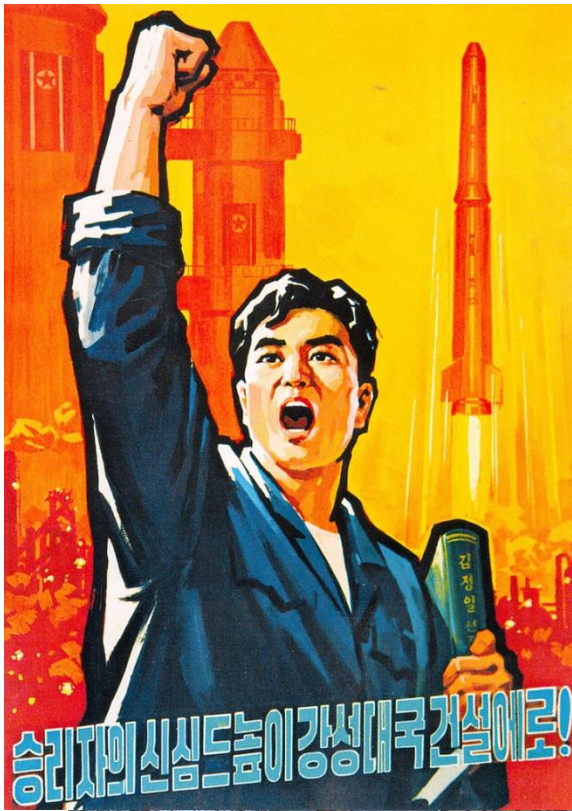
Kim Jong Il: "Military FIRST."

Kim Jong Un: "Military first, second, and third."



We demand rockets!!

The slogan reads "Let's raise the spirits of winners and build a strong and prosperous nation!"



Street scene in Pyongyang



Launch was planned to celebrate 100th anniversary of first dictator's birth, and delegations from all over the world flew in for feasting – in a land of famine. Views in our locked hotel.



04/15/2012 17:15

Dining Car on VIP Train Ride to Rocket Base

Five-hour trip through barren brown landscape with sullen peasants standing at attention as foreign guests rode past with unimaginable luxuries.

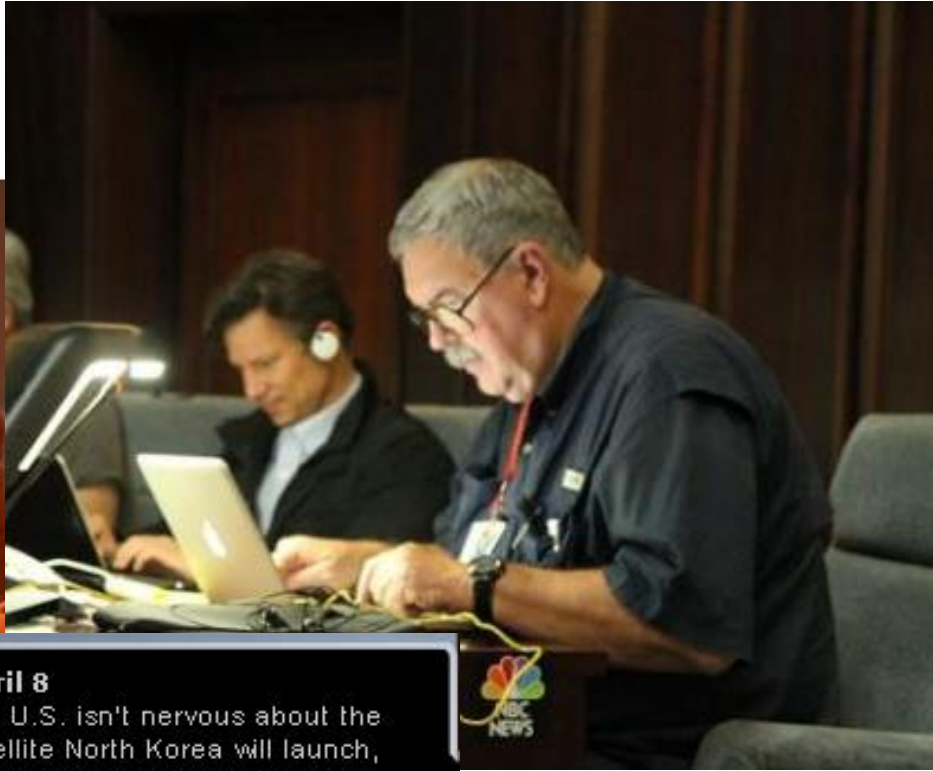


I broke the rules. Passing through a village I threw some unopened food packs out the window. So shoot me.

Reportage for NBC News with Richard Engel



On train departing from Sohae



April 8
The U.S. isn't nervous about the satellite North Korea will launch, but the rocket that will launch it. NBC's Richard Engel reports.
Nightly News

Arriving at rocket launch base, Sohae

w/ Richard Engel



JAMES OBERG
NBC NEWS SPACE EXPERT

SOHAE ROCKET BASE

Stylized official map

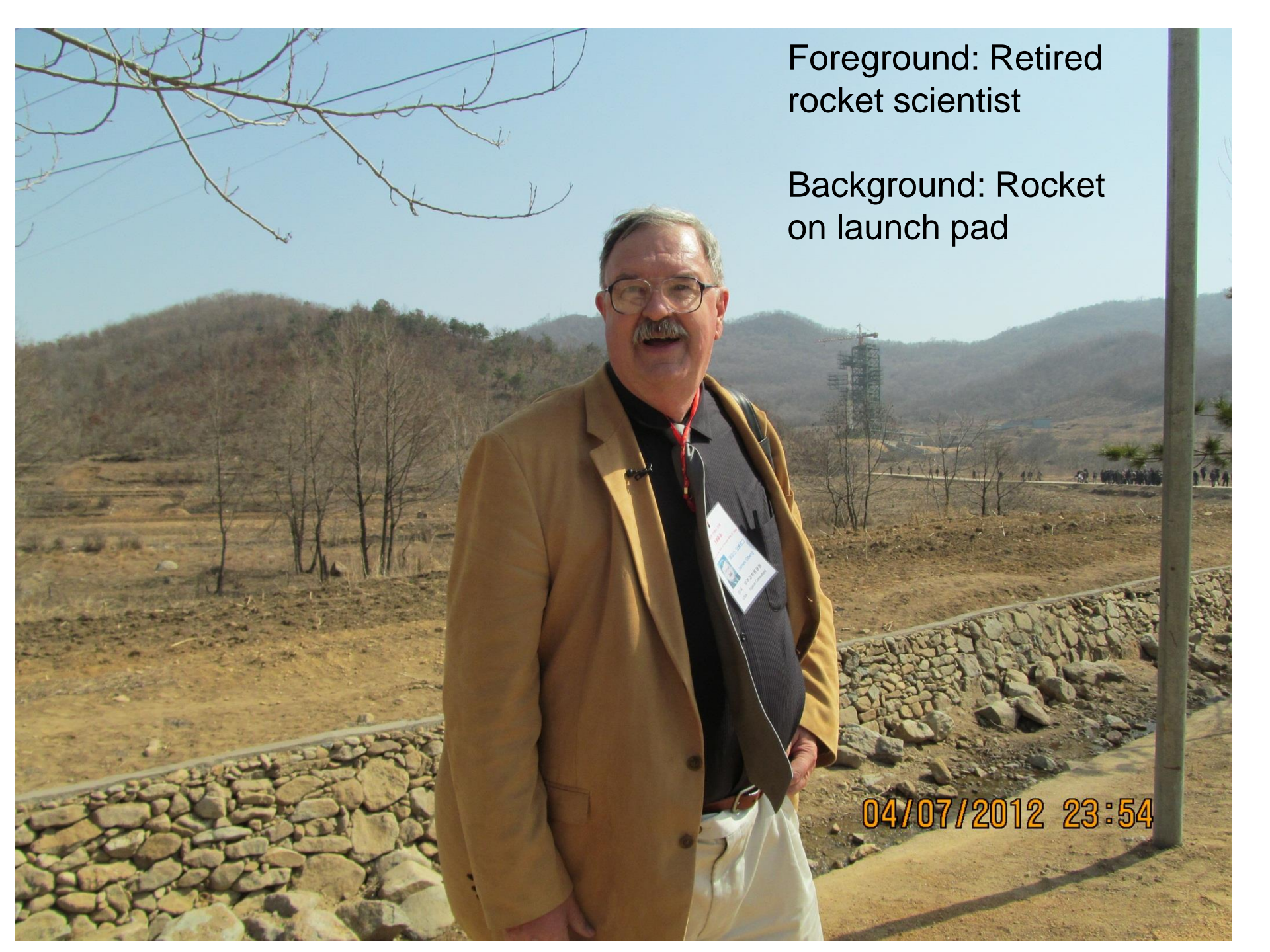
Assembly hall, 'Launch Control', launch pad



Foreground: Retired
rocket scientist

Background: Rocket
on launch pad

04/07/2012 23:54





Booster model [home made]

The Sohae gantry tower is taller

Structure for much longer rocket added

Musudan [2009], below; Sohae [2012], right



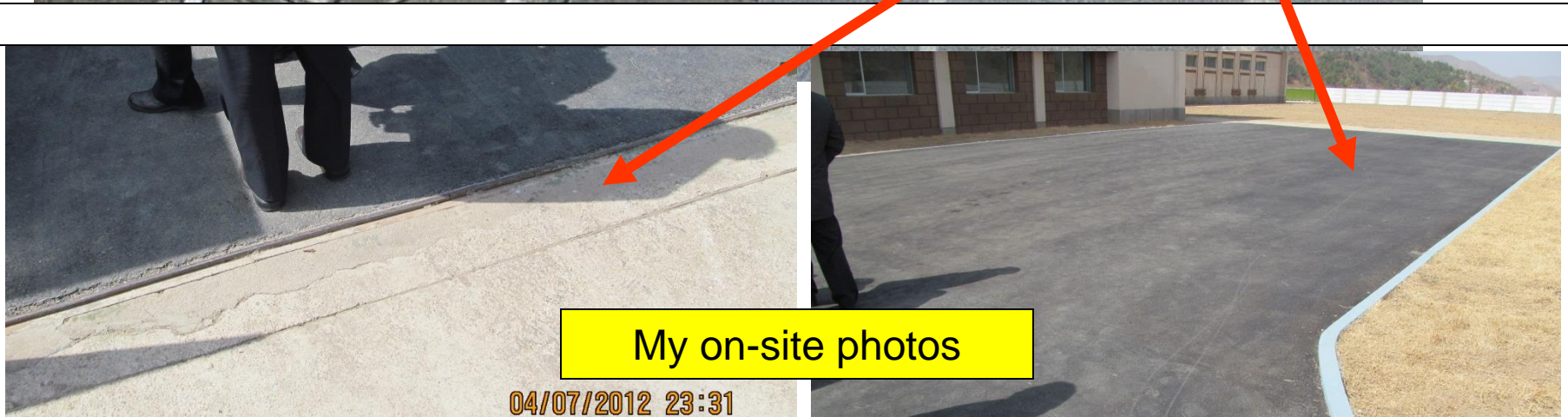
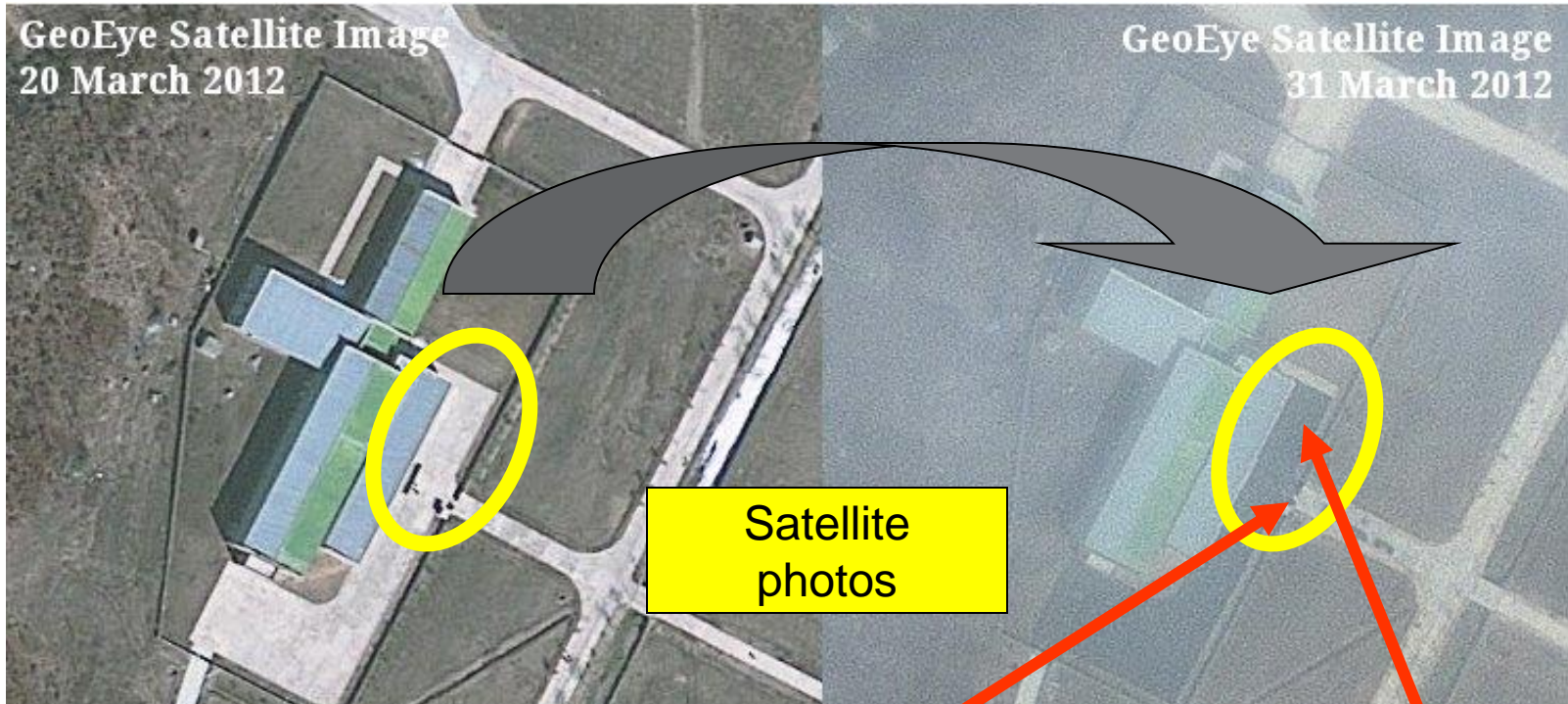
Mobile launch platform inserted under base and wheel tracks for access to as-yet unbuilt vertical assembly building at apron's south end



Mystery: Change in color of pavement around assembly building

posted on April 6, 2012 at 07:30

<http://www.northkoreatech.org/2012/04/06/launch-preparations-underway-at-sohae/>



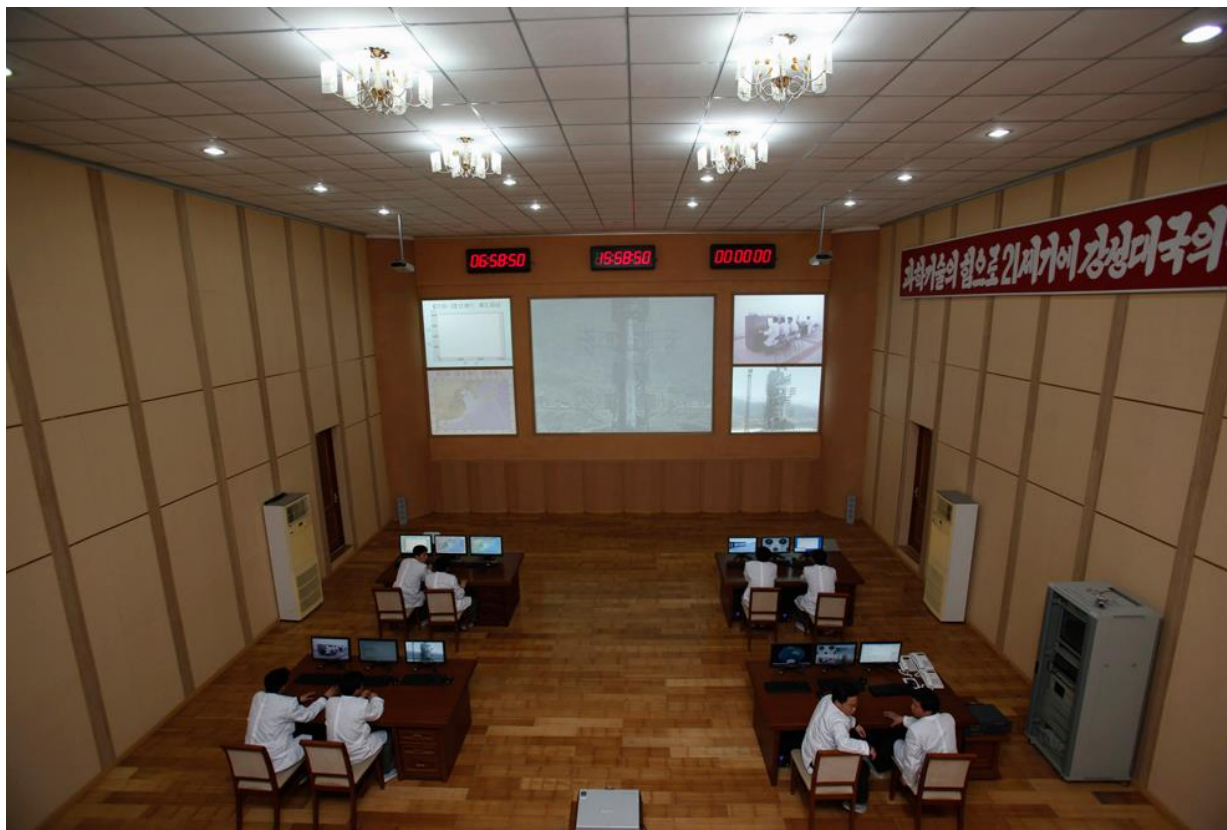


Satellite overhead imagery



LAUNCH CONTROL CENTER [LCC] at Sohae – April 2012 press access

LCC Main Hall



April 2013 --

Four tables with 3 flat-screens each

Front-projector front wall display

Civilian specialists

Wooden slat floor

General Satellite Control Center GSCC

- * Half-hour bus ride NE of Pyongyang
- * Never before visited by foreigners
- * Site probably pinpointed by one newsman w/ wristwatch-GPS [not me]



General Control Center

Director greets the visiting journalists
[but Oberg just isn't paying attention]



The object of my attention
[probably a telemetry receiver]



Everybody else was getting great shots of the director's face

“Pardon me while I just get some views over that way...”



KCNA



GSCC

April 2012 --
Foreign press
corps in
viewing
gallery [me
and director
at center of
cameras,
above left]

Official KCNA photo from floor
shows curious view of back of
consoles -- mostly empty space!

Space appears to house modem
for feeding flat screen display.
Brightness-enhanced view seems to
reveal reverse of front display.



PATH CULMINATES HIGH IN SKY 80 SECONDS AFTER LIFTOFF FROM 'SOHAE'

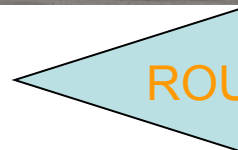
Plan to view the rocket's path



'CONFERENCE CENTER' {AKA "PRESS CENTRE"}



PARKING LOT WITH CLEAR VIEW TO WEST



ROUTE OF THE "ROCKET DASH"



Launch day – the press room is fully staffed



Launch!

Simulated view only....



- * No advance word of impending launch
- * We learn of launch, and failure, from phone calls from colleagues in Japan
- * None of our hosts ever mentioned the rocket, or the reason we had come, ever again – it was memory-wiped clean.

Beijing International Airport — homeward bound



December 2013 – New launch succeeds [but satellite dies]



'ROCKETCAM' view shows receding launch pad, where we stood in April

2012-12-12 Wed 14:02:58

Camera 01

Recovered rocket debris

- First stage tanks and engines
- NorKorea never complained
- Significant intel on imported tech
- US Navy got aero shroud [no pix]
- NO recoveries from April crash
- They say.



Most Surprising Find: Significant differences between April & December configurations of center

*MAJOR REMODELING
OR
DIFFERENT FACILITY?*



[ABOVE] April 2012

- Left & right walls altered
- Control consoles replaced
- Floor tile edges darker
- Main screen projector gone
- Multi-screen front displays?
- Right wall units atop platforms



[LEFT]
December 2012



Launch Control Center [Sohae]

April 2012 [left]

December 2012 [below]

Unchanged: floor paneling, walls, free-standing equipment, main control panel, front TV screens, corner floor-to-ceiling wire run.

DIFFERENT: Controller consoles, tables/chairs, front bottom panel, nature of personnel at consoles.





APRIL 2012

EQUIPMENT REPLACED!!
Official images from LCC floor confirms: April view of civilian technicians with real flat-screens replaced by hollow consoles for December photo-op.

These consoles with mostly empty space, containing a flat screen and MODEM [?], look identical to the consoles seen by us at GSCC the previous April. Visitor [background] is Kim Jung Un, which perhaps explains why operators are all young military personnel.



DECEMBER 2012