



Locata[®]

**The world's first wide-area
Locata Network for USAF**

Locata delivers completely new capabilities to the USAF



The Revolution Begins

Completely new capabilities for USAF

- **Locata** was granted a rare “**sole-source contract**” by the **USAF** to extend our standard LocataNet to cover a vast areas of their test ranges.
- The USAF needs cm-accurate positioning systems which will **continue to position their aircraft** at long ranges even **when GPS is being completely jammed**.
- Locata solved the contract requirements and in Oct 2011 fielded the LocataNet for the USAF for the first time, blanketing an area of over 3,500 sq km at the famed **White Sands Missile Range** in New Mexico.
- **The results shown by the USAF** at White Sands **are, frankly, spectacular** (see report referenced below). Given the USAF’s own public validation and published results, there’s very little we need to add.



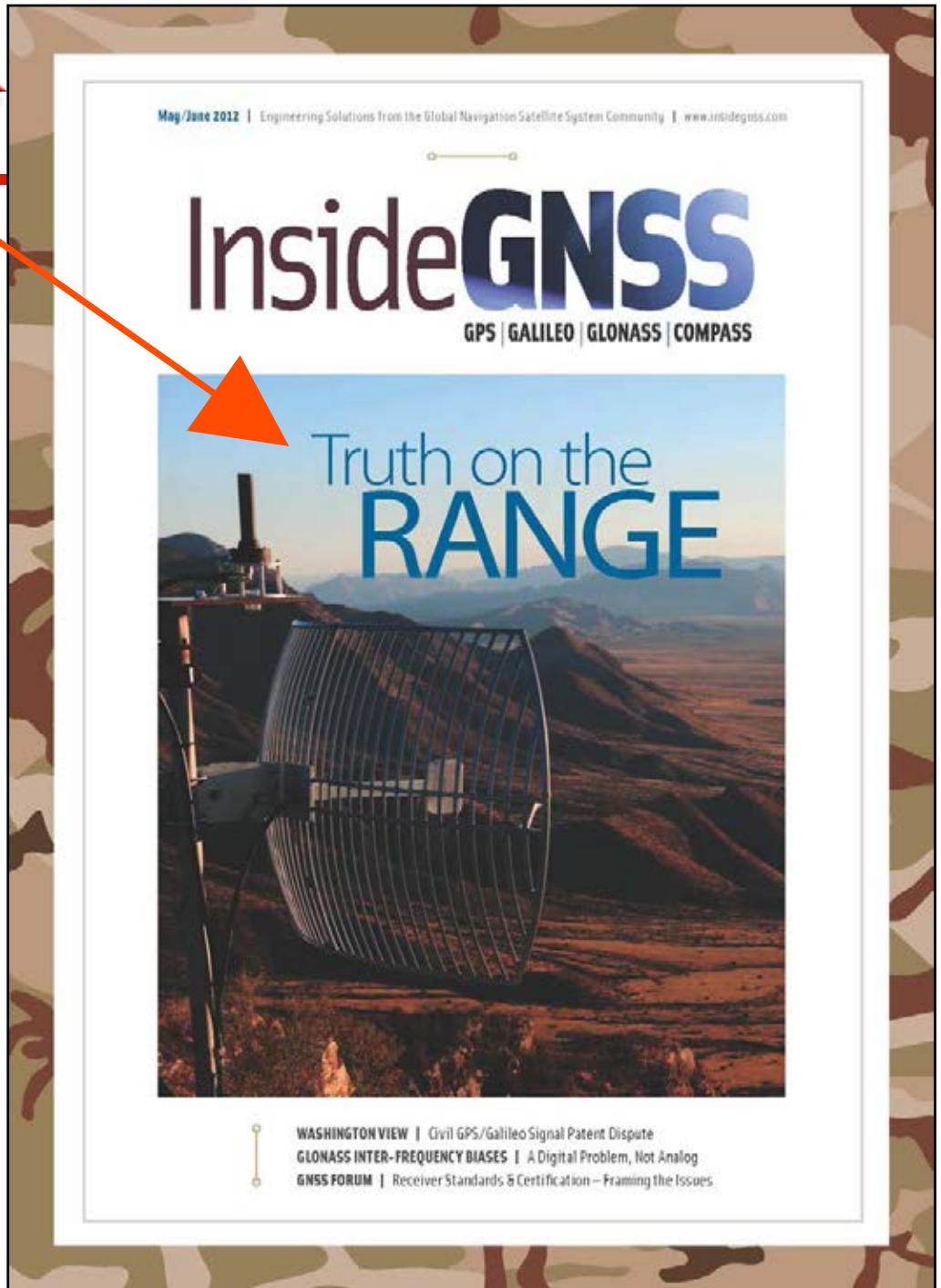
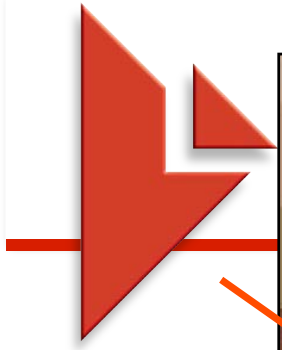
The Revolution Begins

Nothing else on earth can do this...

The following slides are a brief, pictorial description of the deployment and results obtained by the USAF with a LocataNet fielded over an area of 3,500 sq km at the White Sands Missile Range in New Mexico.

Locata is the only technology on earth that can deliver this performance in the total absence of GPS. The full story is here:

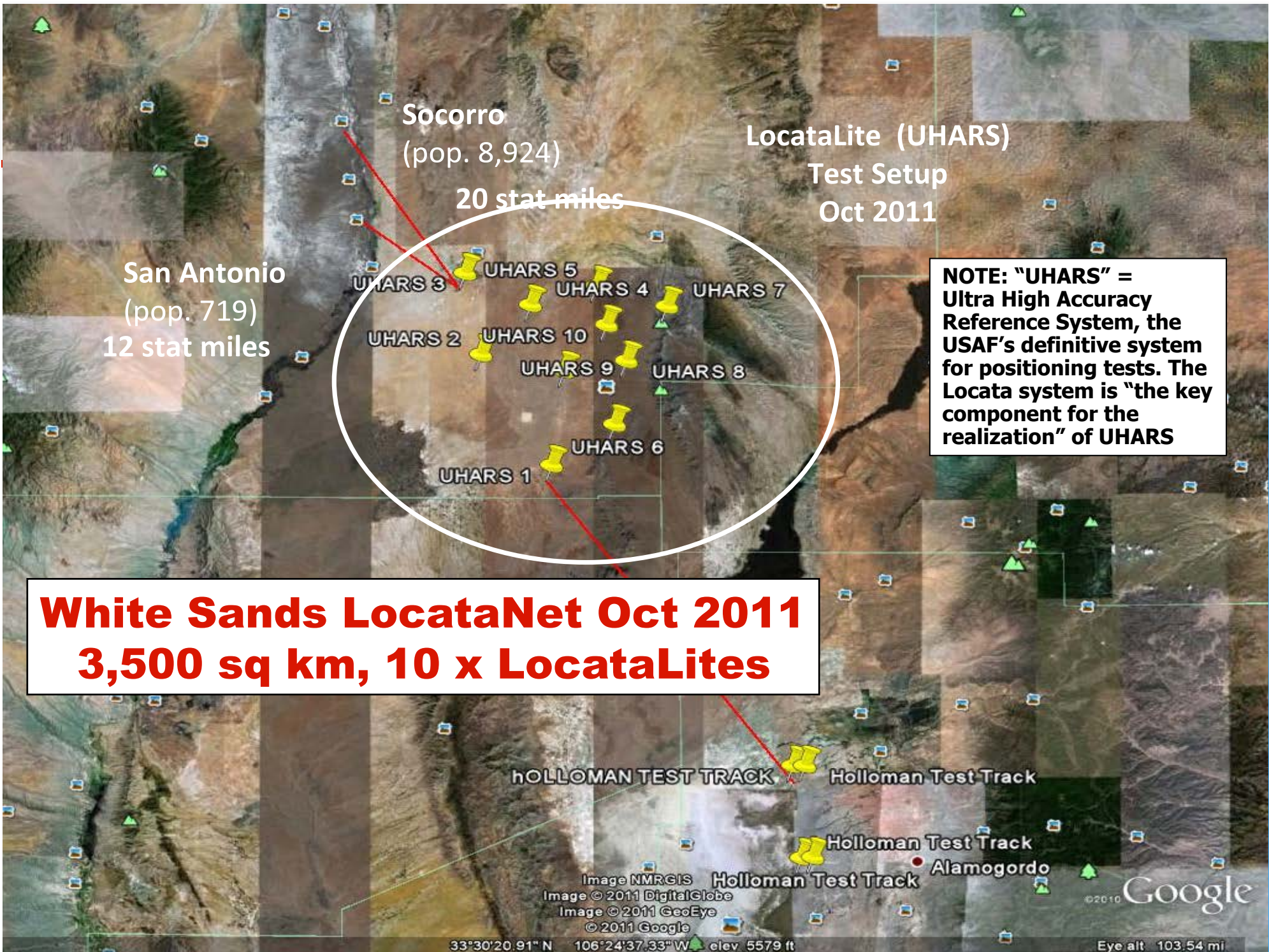
<http://www.insidegnss.com/node/3071>



June 2012
Front Cover

GPS
industry's global
technical
magazine

Locata has
spectacular
PUBLIC
validation
from
USAF & US
DoD



Socorro
(pop. 8,924)

LocataLite (UHARS)
Test Setup
Oct 2011

San Antonio
(pop. 719)
12 stat miles

20 stat miles

**NOTE: "UHARS" =
Ultra High Accuracy
Reference System, the
USAF's definitive system
for positioning tests. The
Locata system is "the key
component for the
realization" of UHARS**

**White Sands LocataNet Oct 2011
3,500 sq km, 10 x LocataLites**

HOLLOMAN TEST TRACK

Holloman Test Track

Holloman Test Track

Holloman Test Track

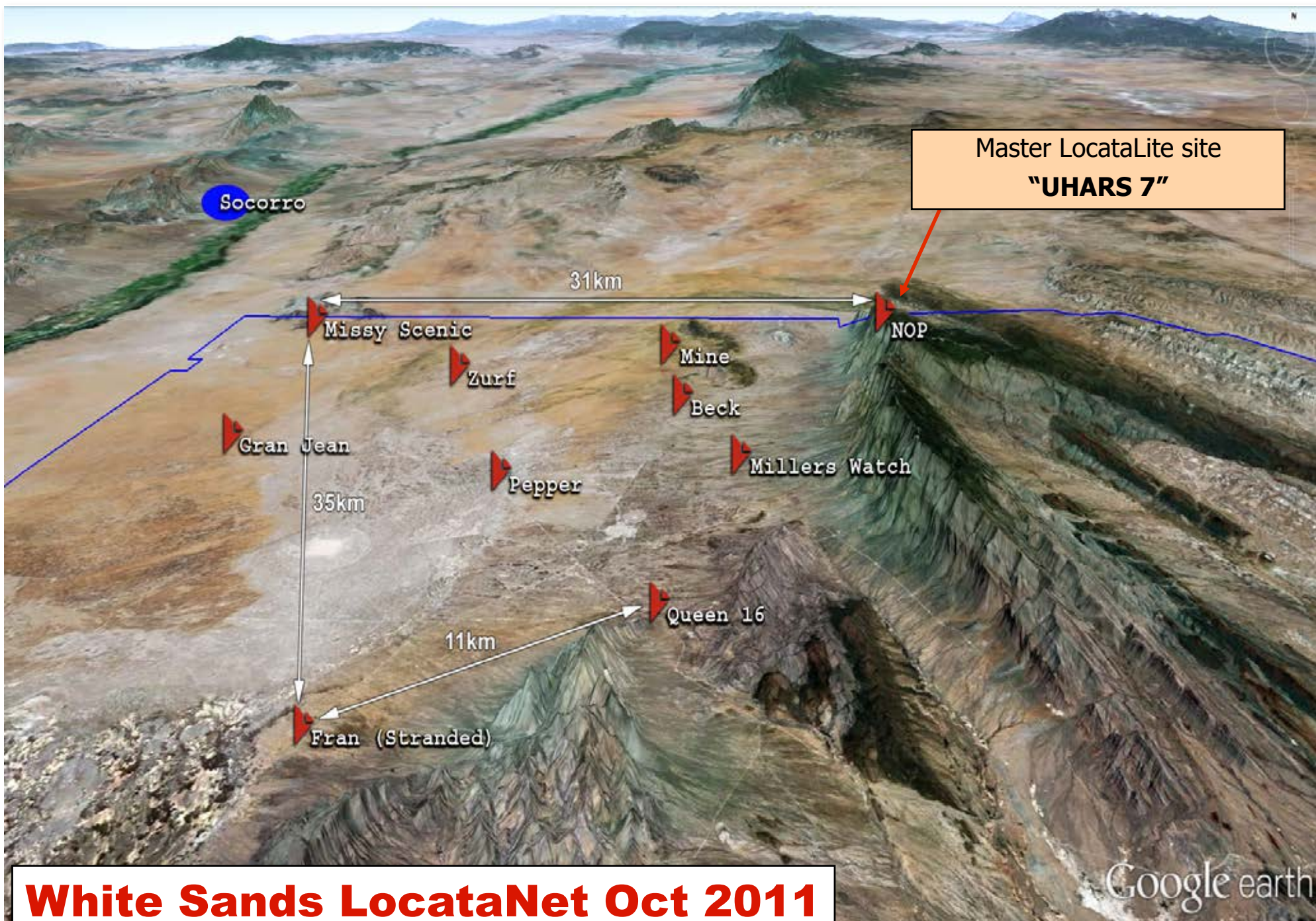
Alamogordo

Image NMRGIS
Image © 2011 DigitalGlobe
Image © 2011 GeoEye
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©2010 Google

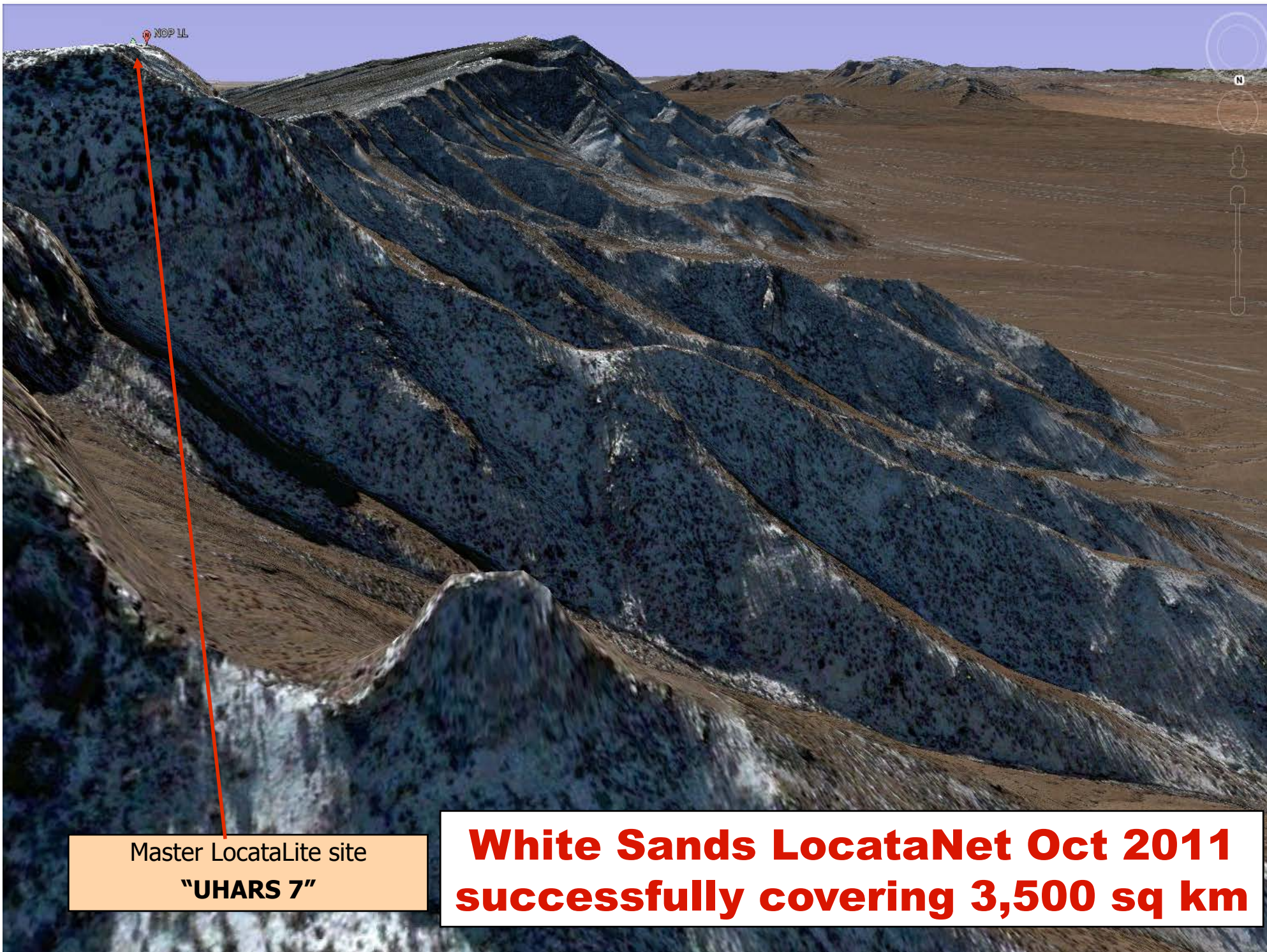
33°30'20.91" N 106°24'37.33" W elev 5579 ft

Eye alt 103.54 mi



Master LocataLite site
"UHARS 7"

White Sands LocataNet Oct 2011
3,500 sq km; 10 x LocataLites



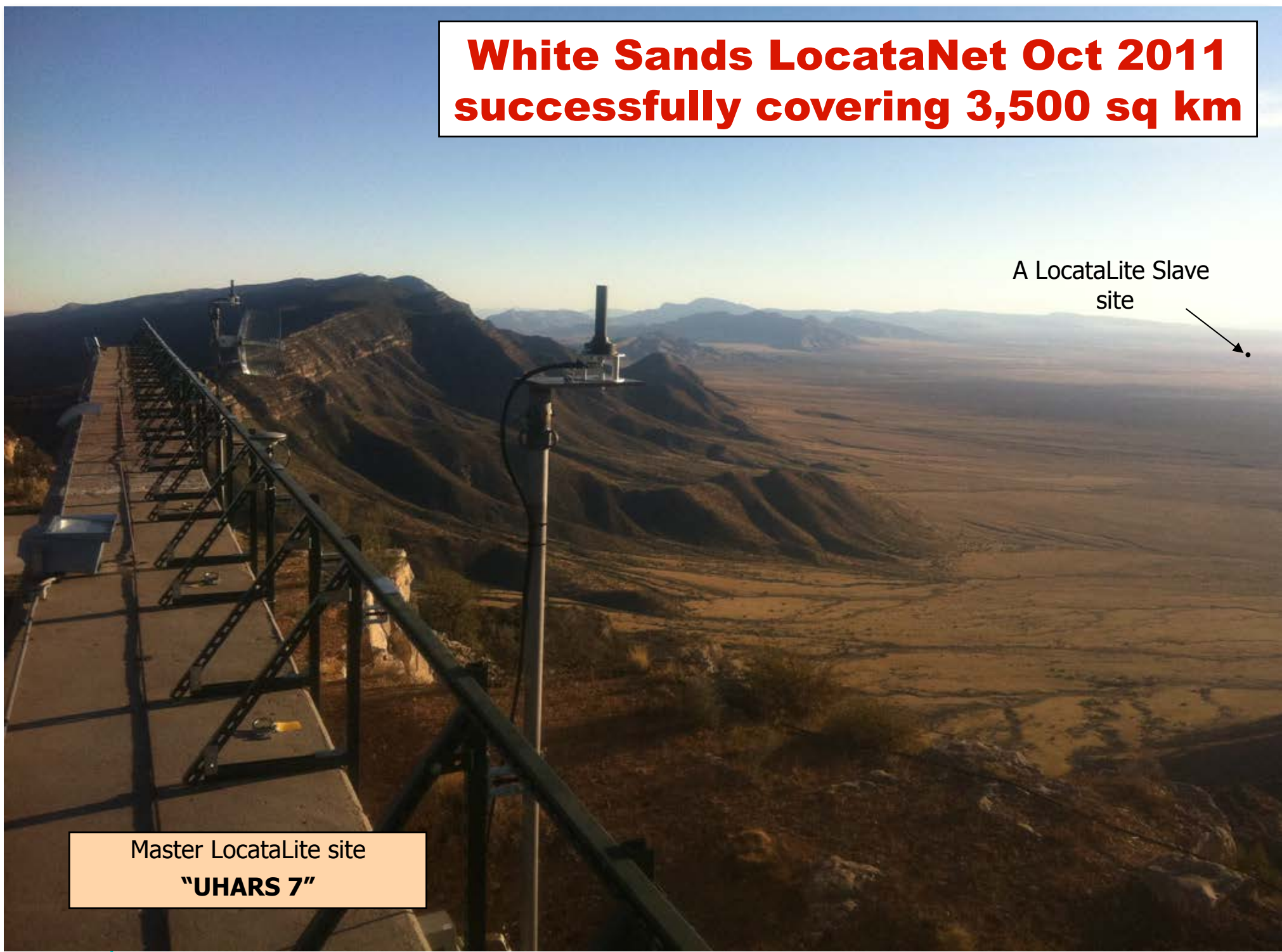
Master LocataLite site
"UHARS 7"

**White Sands LocataNet Oct 2011
successfully covering 3,500 sq km**

**White Sands LocataNet Oct 2011
successfully covering 3,500 sq km**

A LocataLite Slave
site 

Master LocataLite site
"UHARS 7"

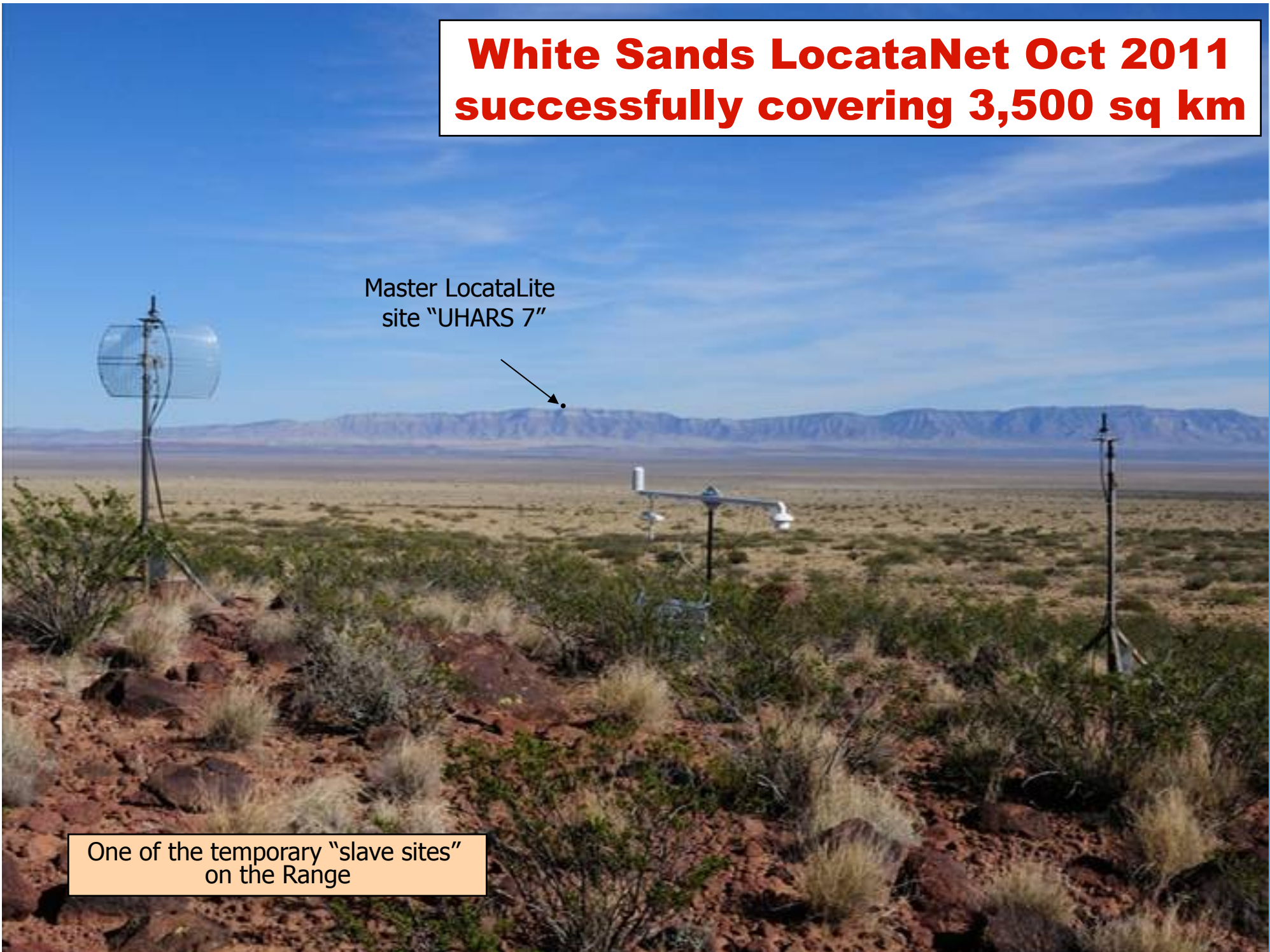


**White Sands LocataNet Oct 2011
successfully covering 3,500 sq km**

Master LocataLite
site "UHARS 7"



One of the temporary "slave sites"
on the Range



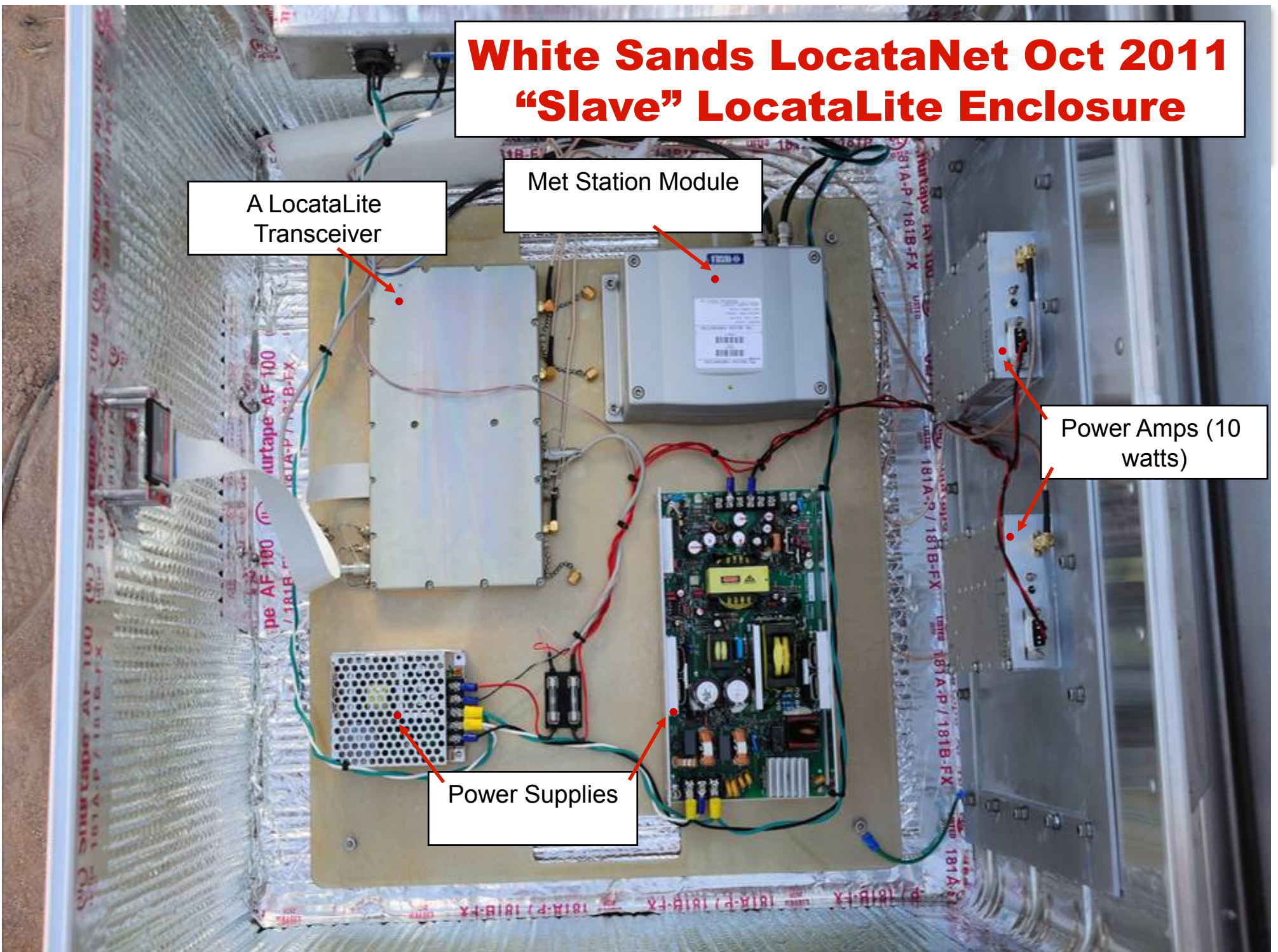
White Sands LocataNet Oct 2011 "Slave" LocataLite Enclosure

A LocataLite
Transceiver

Met Station Module

Power Amps (10
watts)

Power Supplies





**Current
“USAF Truth”
payload fitted to
746TS aircraft.
A Locata
antenna and
receiver were
added to this
configuration**

**746TS Aircraft fitted with
Locata antenna and receiver**



**746TS Aircraft fitted with
Locata antenna and receiver**



Locata Antenna

**746TS Aircraft fitted with Locata
antenna and receiver**





Desiree Craig
USAF Program Manager
UHARS & Locata

**Success! First acquisition.
40 Locata signals in view**



Results?

Locata at White Sands

White Sands Missile Range, NM

USAF Example Results...

Flight - Sunday Oct 30, 2011

NOTE: Distribution Statement A

Approved for public release.

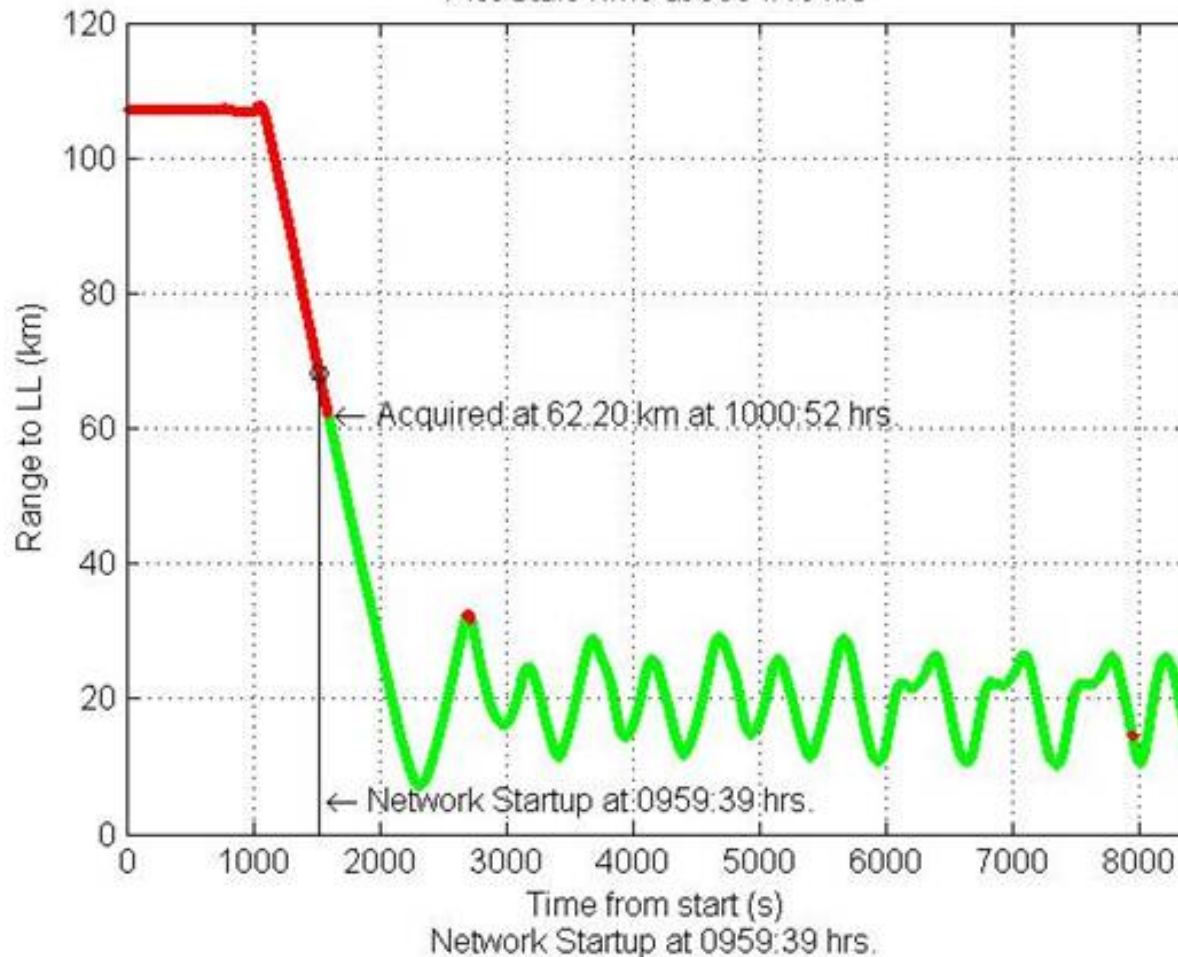
Distribution is unlimited.

PA number: 96ABW-2012-0116

Results: Acquire & Track

Locata at White Sands

Acquisition of First Signal (NOP) for Sunday, Oct. 30th
Plot Start Time at 0934:19 hrs



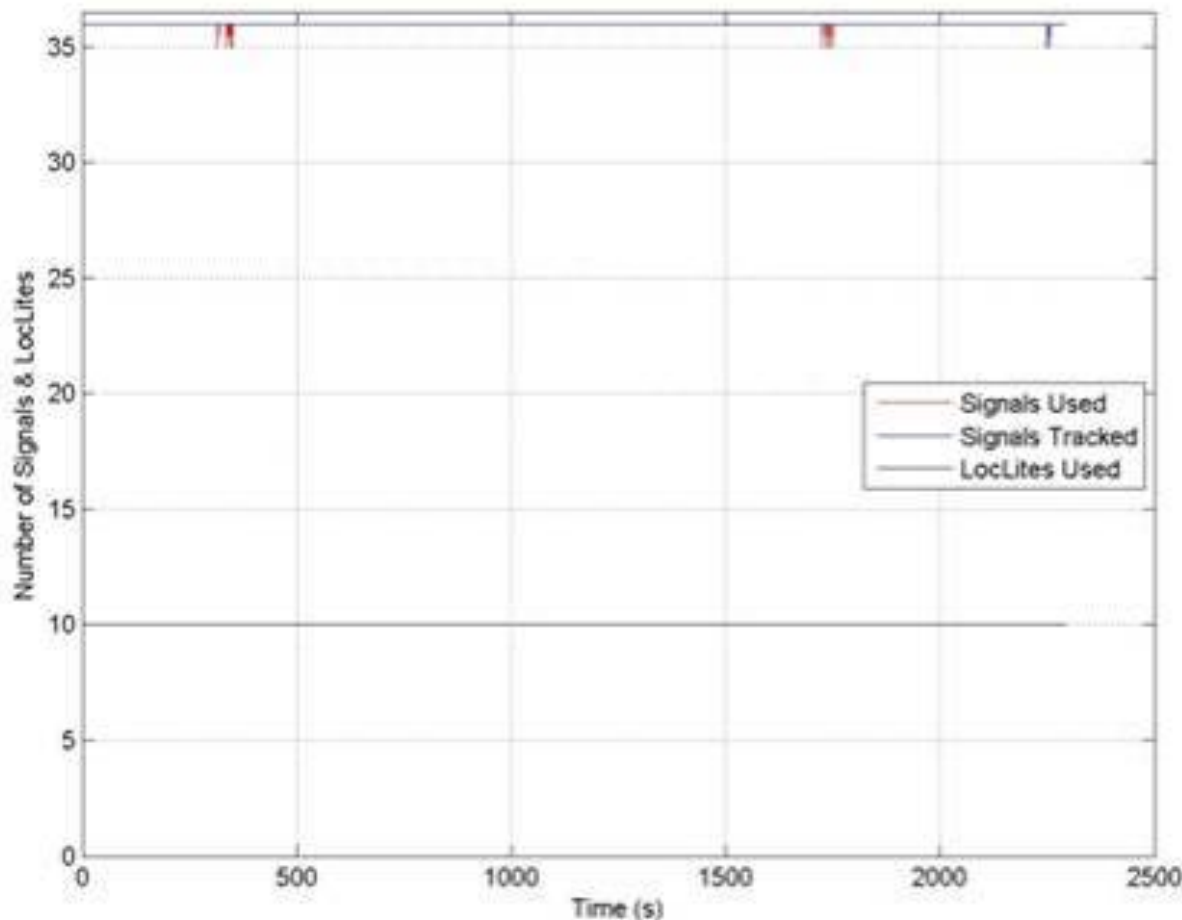
**Example Flight
Oct 30, 2011**

**Locata Signal
Acquired &
Tracked at**

**more than
40 miles**

Results: Useable Signals

Locata at White Sands



**Example Flight
Oct 30, 2011**

**Aircraft @
25,000 ft @
up to 550 km/hr**

**Always 35+
Locata
signals
“in view”**

Results: Position v. USAF Truth

Locata at White Sands

**Example Flight
Oct 30, 2011**

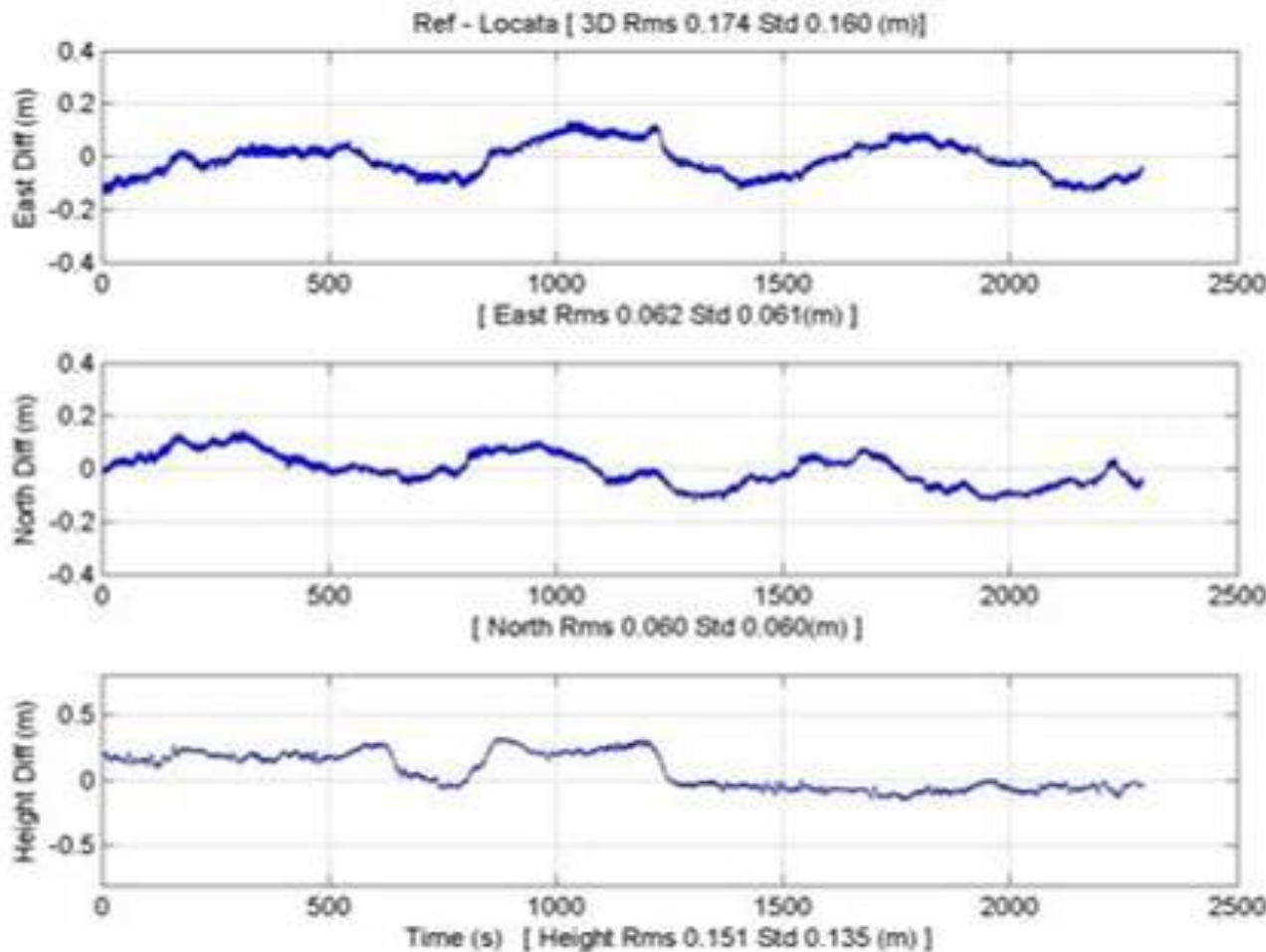
**Locata v. USAF
ACCURACY**

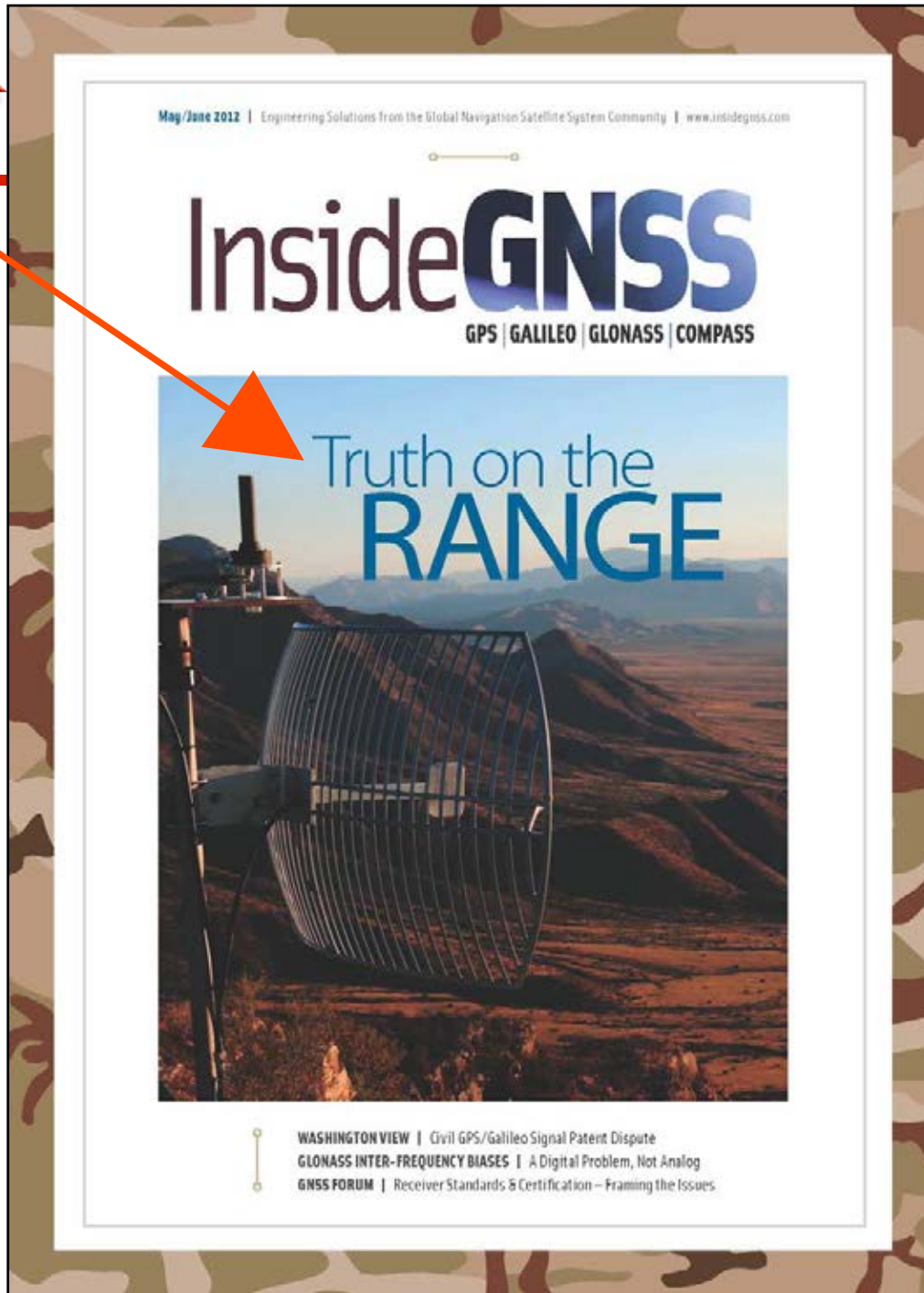
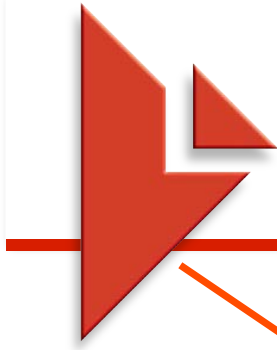
**~30 mile range,
up to 550 km/hr**

**Horizontal:
~6cm (2.5")**

**Vertical:
~15cm (6")**

**Absolutely
Amazing**

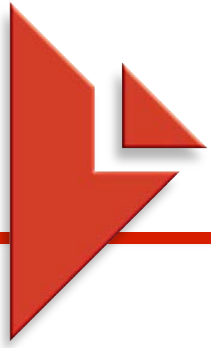




June 2012 Front Cover QUOTES

“Locata is the
key component
for the USAF’s next-
gen Ultra High
Accuracy Reference
System”

...will become the
new
“**gold standard**
truth system”
for future navigation
systems for the U.S.
Dept of Defense.”



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