

*The 6th Joint Project Team Meeting of Sentinel Asia STEP3 (JPTM 2018)
at Awaji Yumebutai, Awaji-island, Hyogo, Japan*

Analysis of PALSAR-2 and Field Survey of the 6 September 2018 Hokkaido Earthquake

November 1, 2018

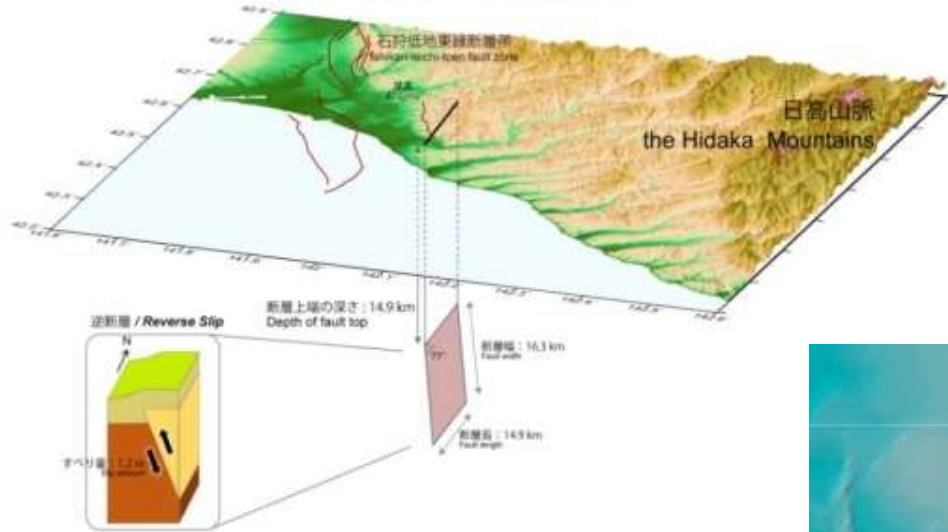
Fumio Yamazaki and Wen Liu



Chiba University, Japan

Source Model by GSI

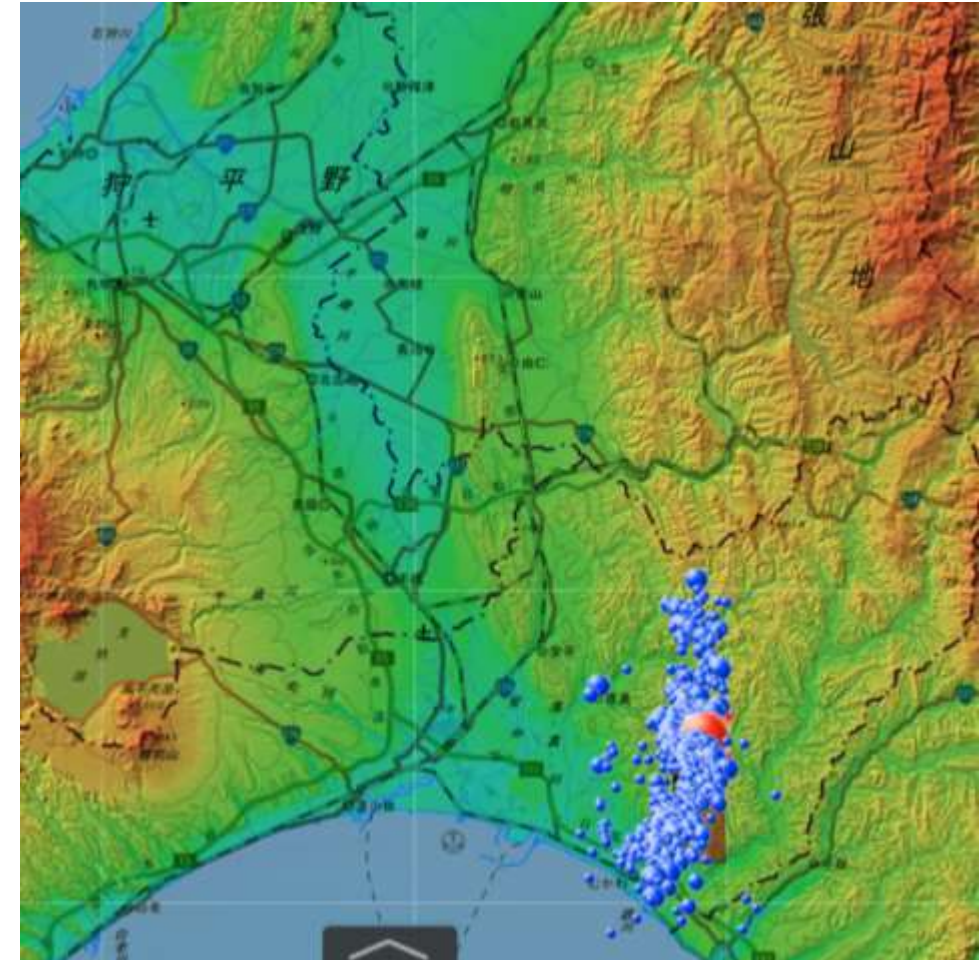
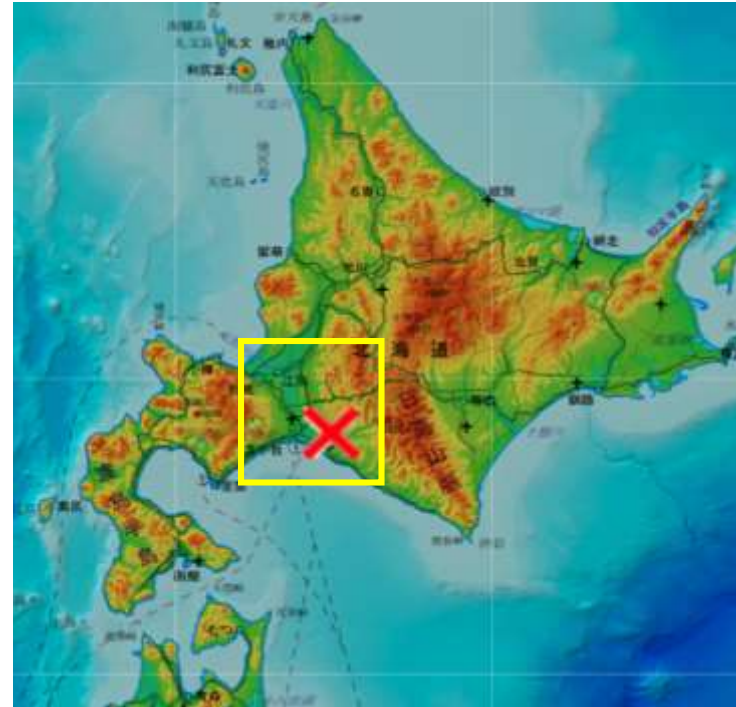
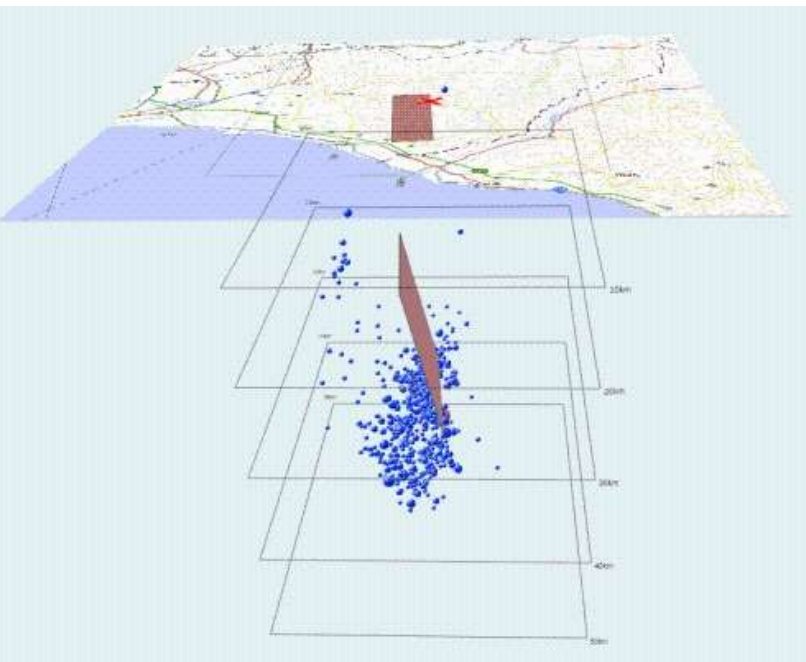
【概念図 / Schematic view】



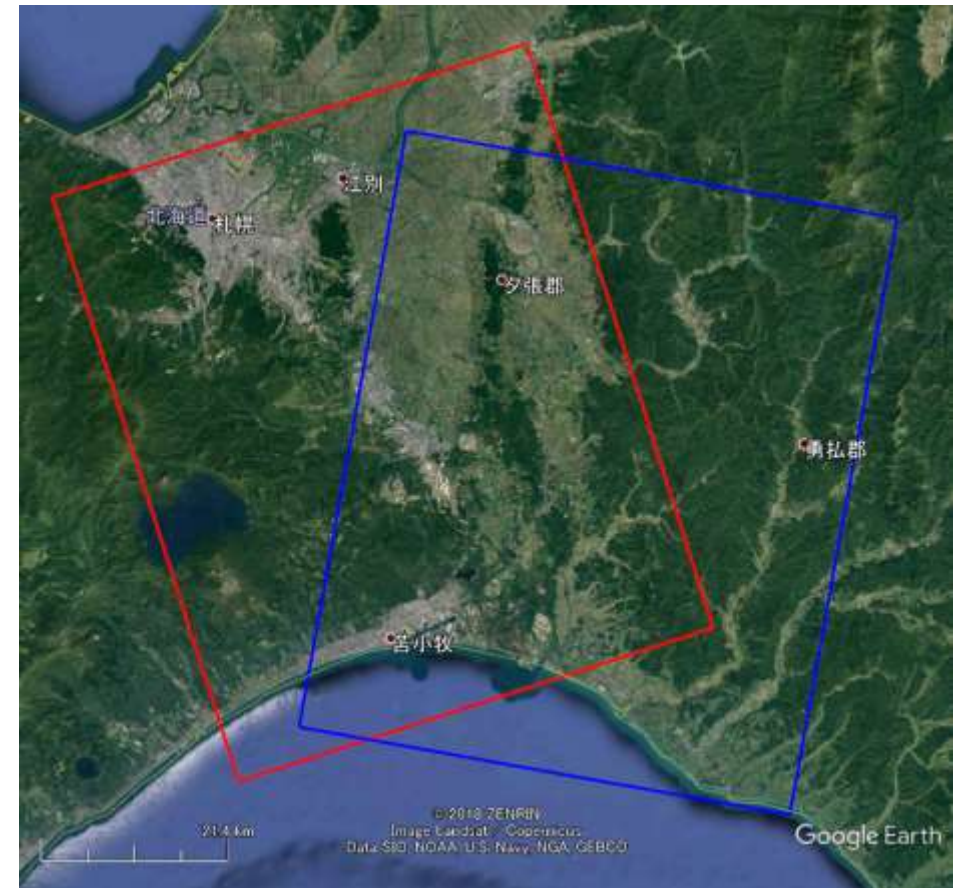
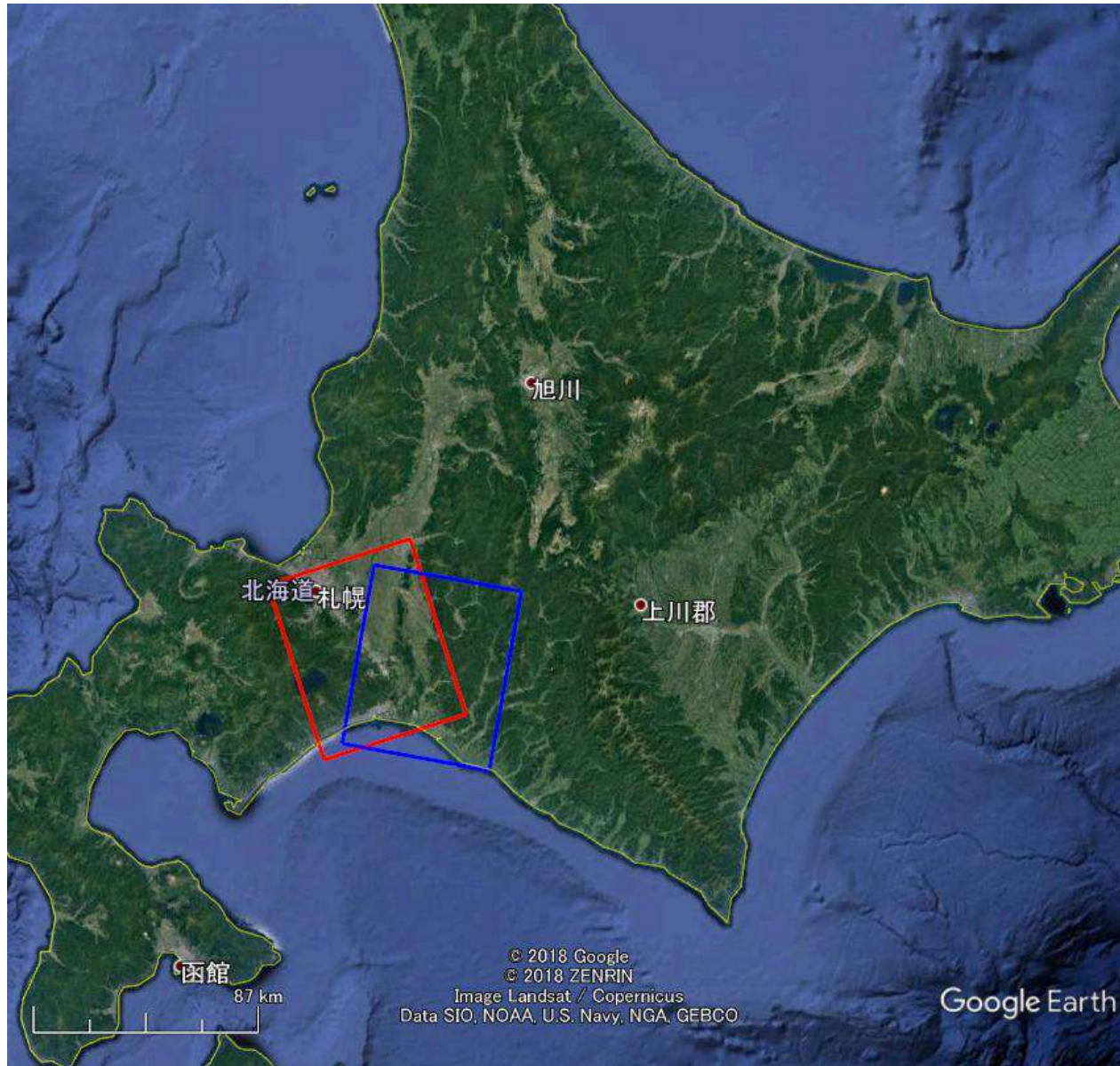
M_{JMA} 6.7

$M_w=6.6$

2018. 09. 06 AM 03:08



ALOS-2 PALSAR-2 data



Ascending

2018/08/09

2018/08/23

2018/09/06 23:18

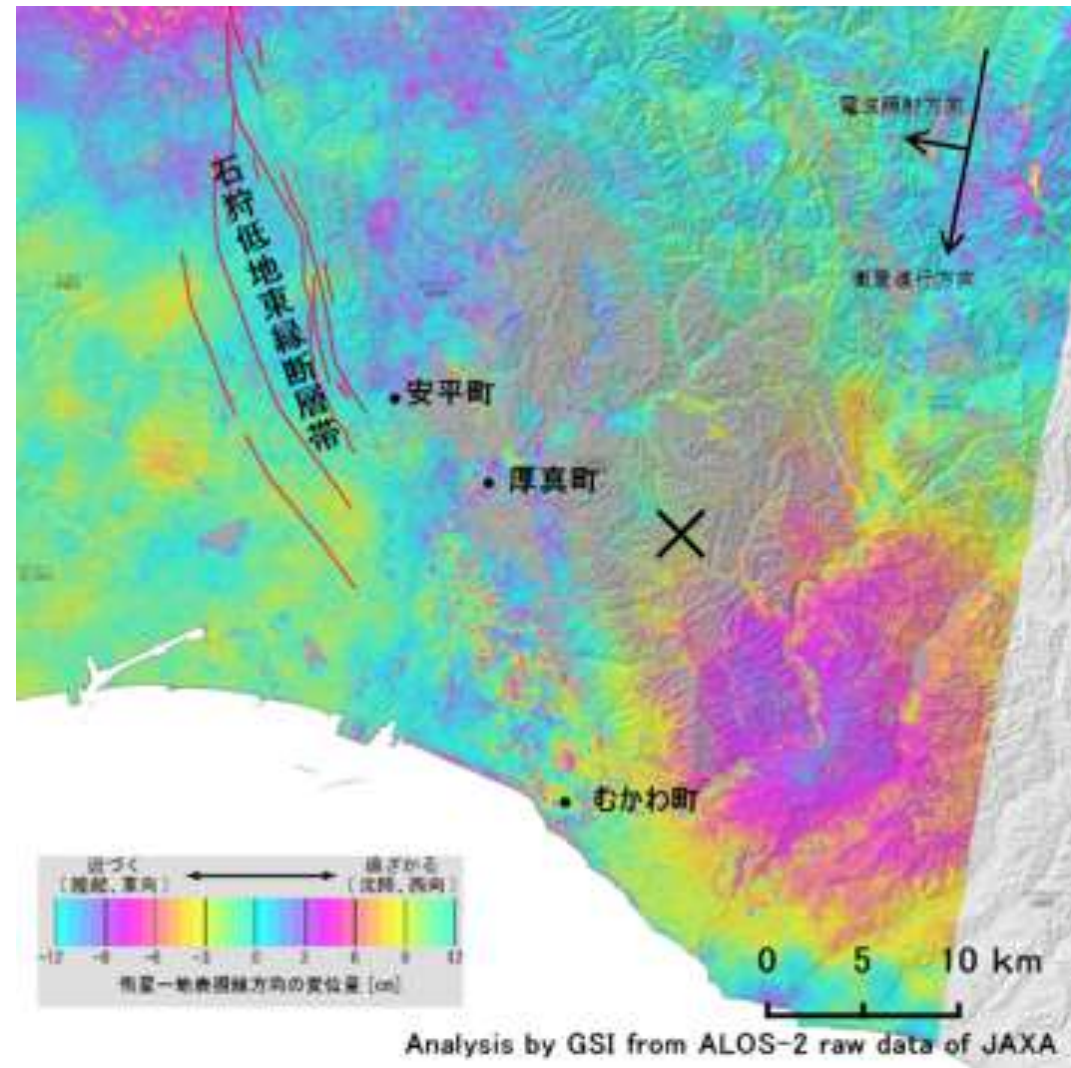
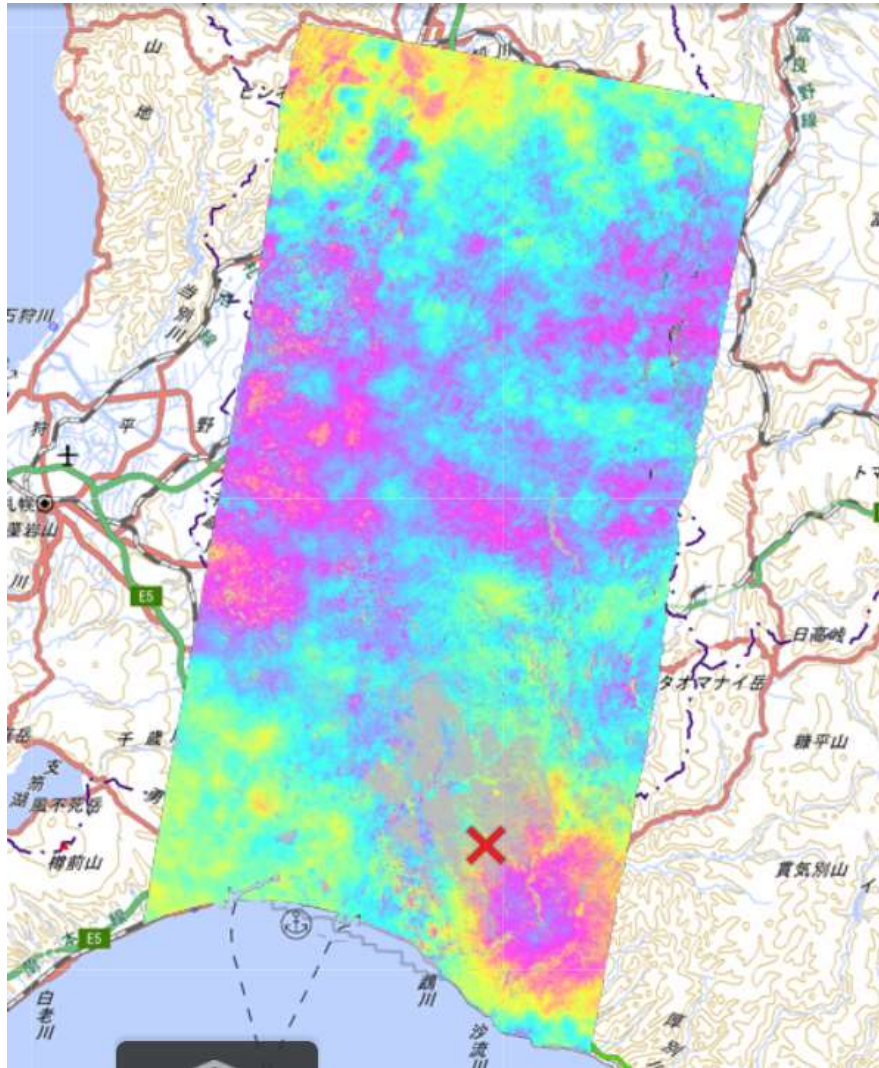
Descending

2018/06/14

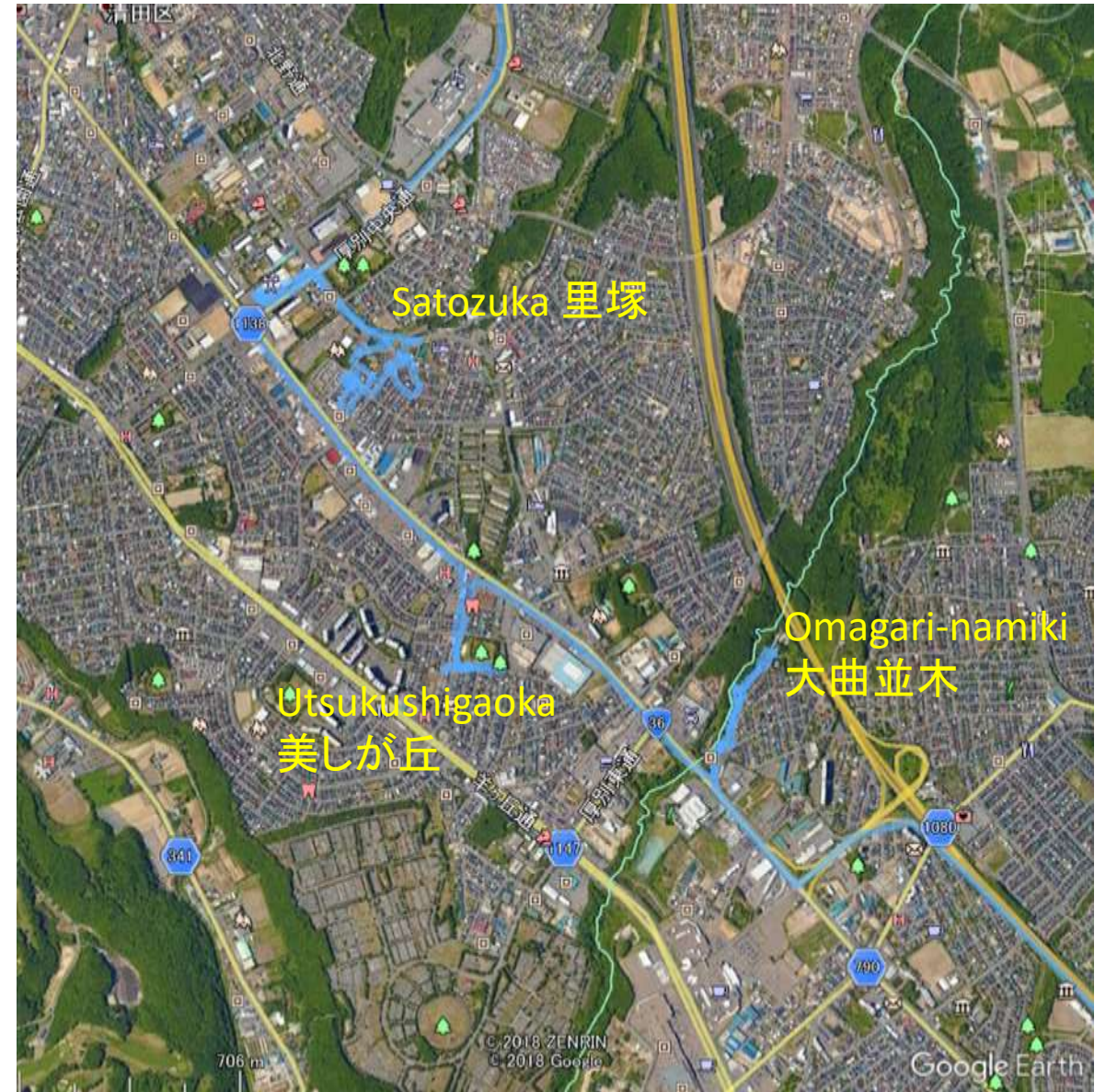
2018/08/23

2018/09/06 11:41

Interferogram for a descending pair (2018/8/23- 2018/9/06) by GSI



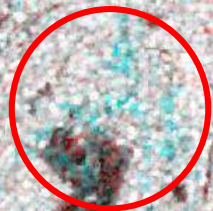
Field survey route on Oct. 3, 2018



Kiyota 2 – Kitano 1
清田 2 条～北野1条



Kiyota 5-7
清田 5 ～ 7 条



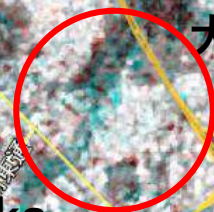
Satozuka
里塚



Omagari-namiki
大曲並木



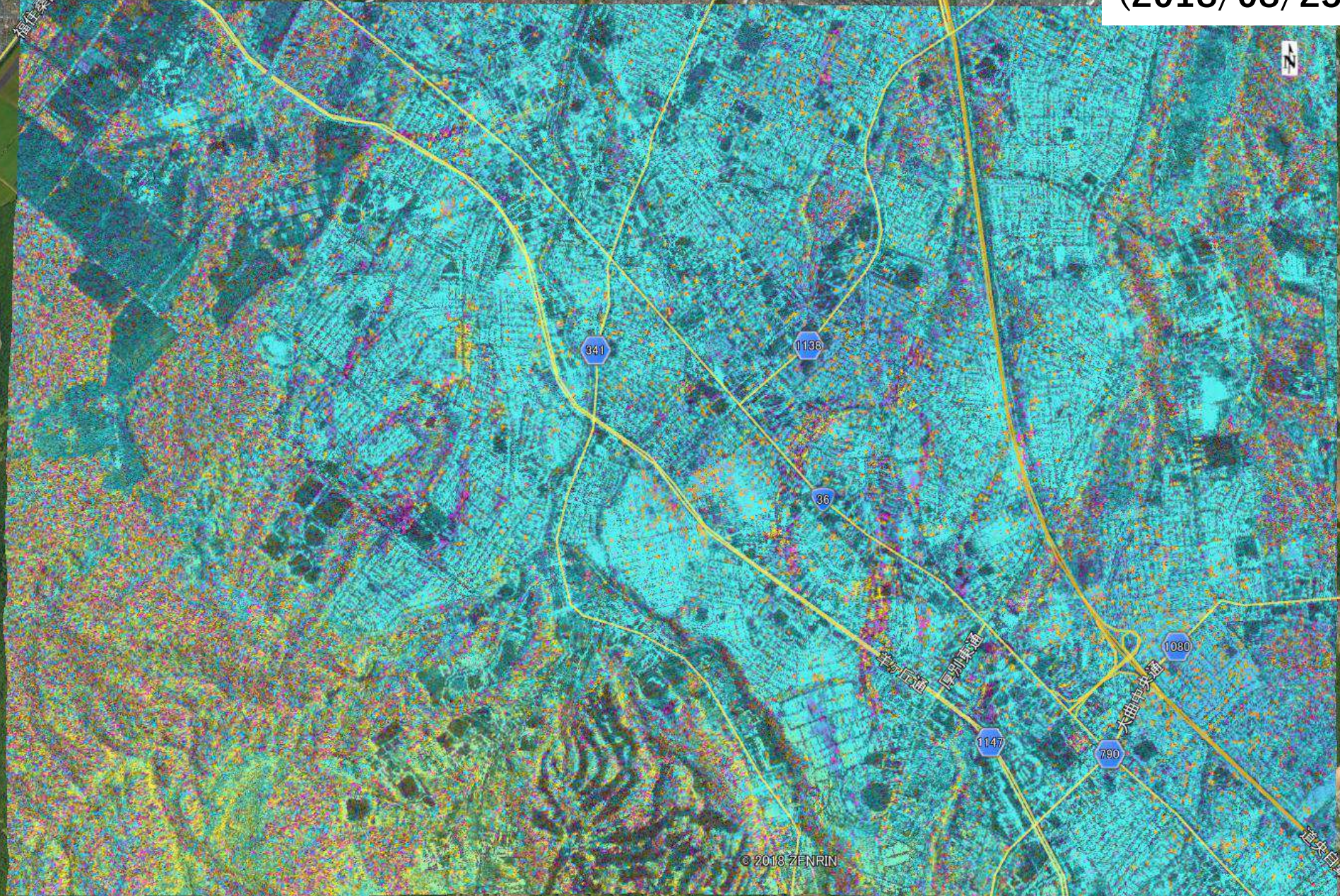
Utsukushigaoka
美しが丘



Color composite of coherence
R: Co-event
G&B: Pre-event



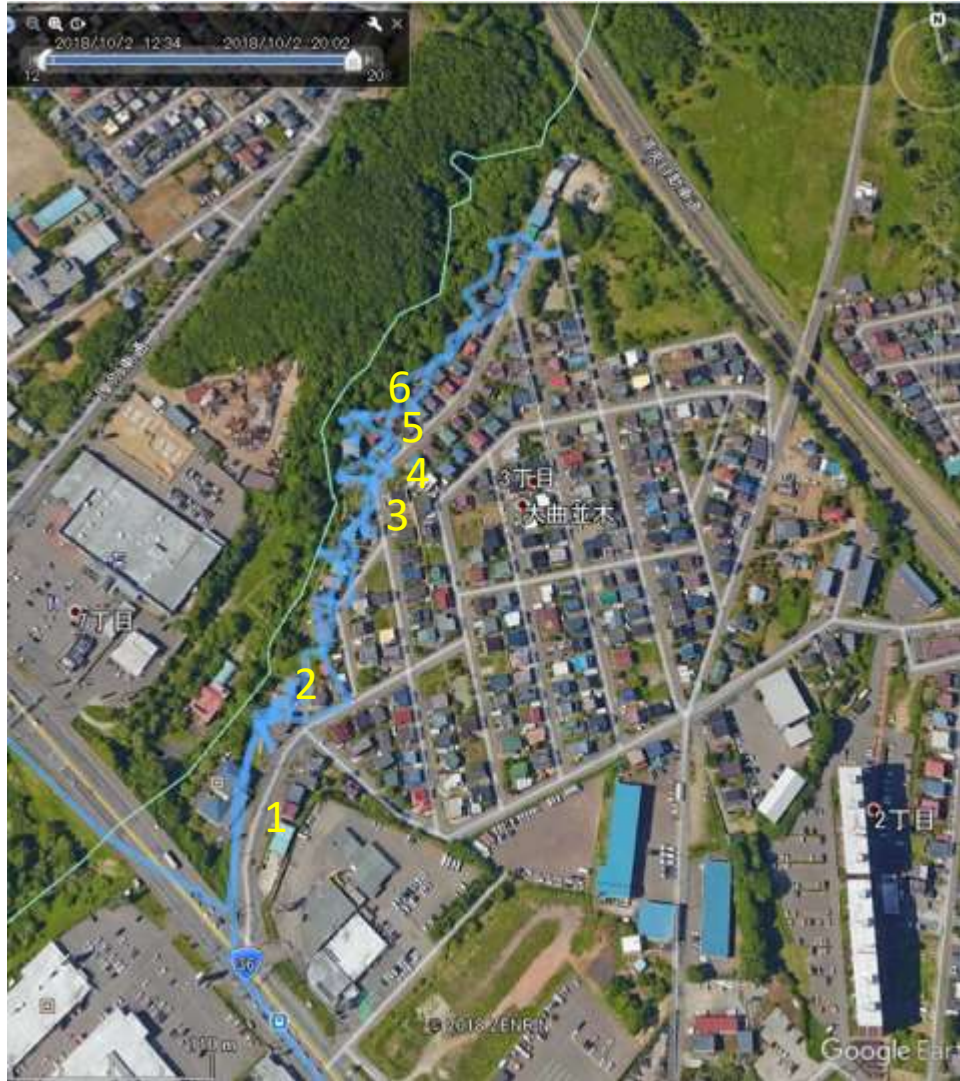
Fringe of InSAR pair
(2018/08/23~2018/09/06)



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Google Earth

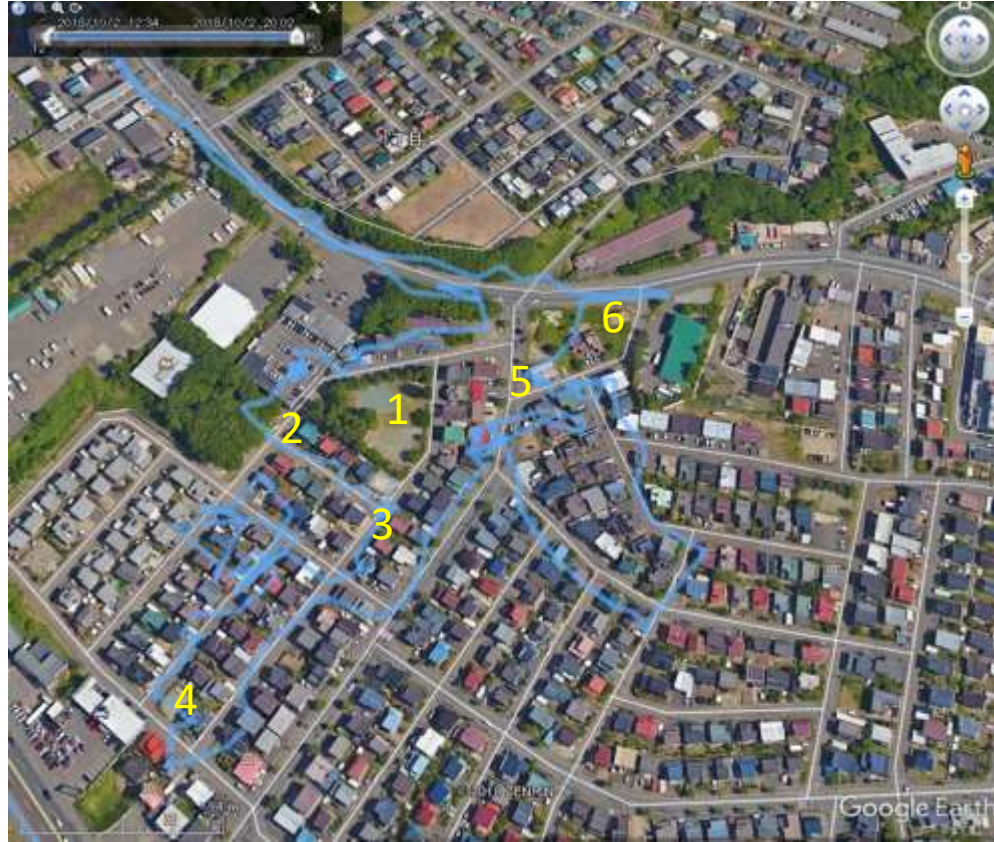
Omagari-namiki 大曲並木



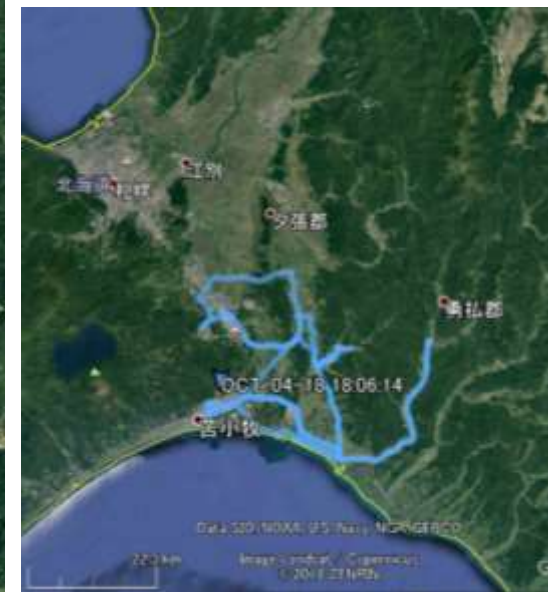
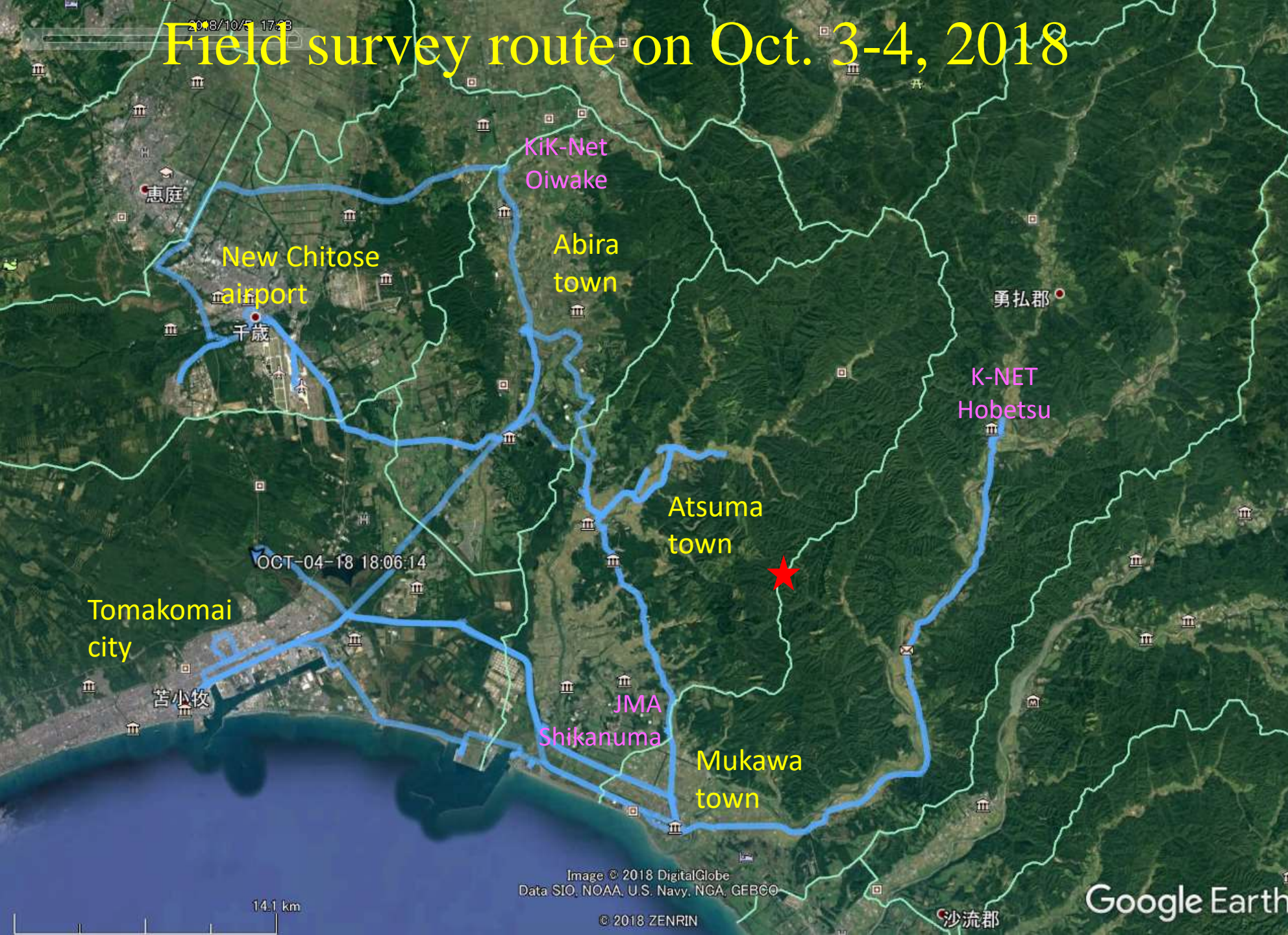
Utsukushigaoka 美しが丘



Satozuka 里塚



Field survey route on Oct. 3-4, 2018

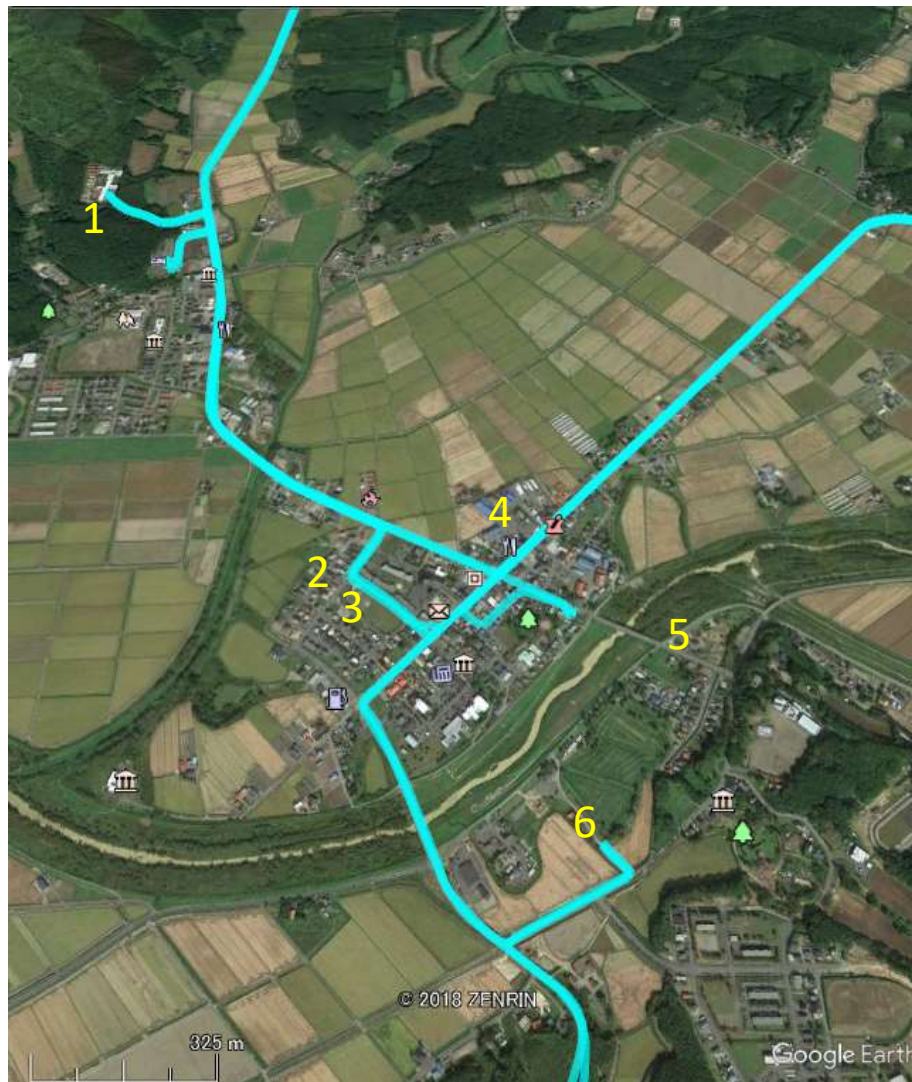


Abira town to Atuma town 安平町から厚真町



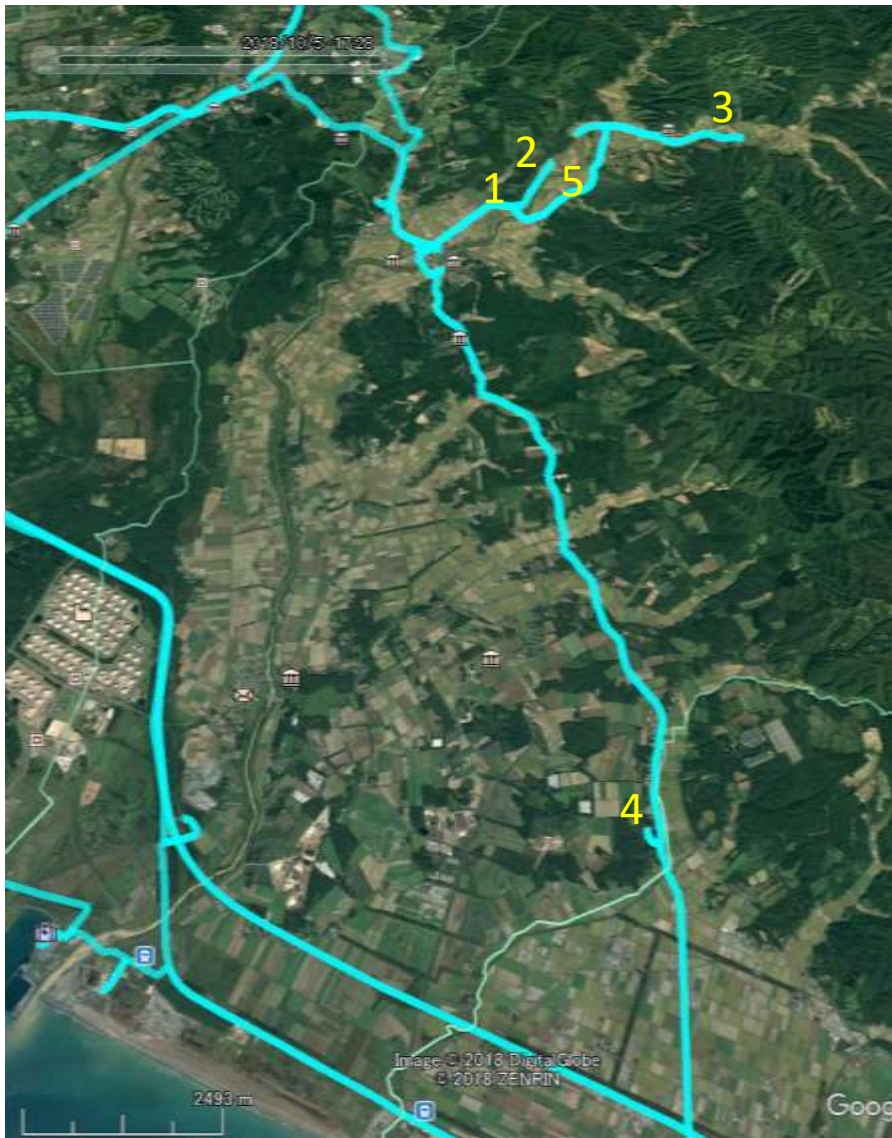
Atsuma town (1)

厚真町



Atsuma town (2)

厚真町



3 Tomisato water treatment plant



4 JMA Shikanuma



5 Yoshino district

Color composite of intensity

R: 2018/09/06

G&B: 2018/08/23

Yoshino

Tomisato

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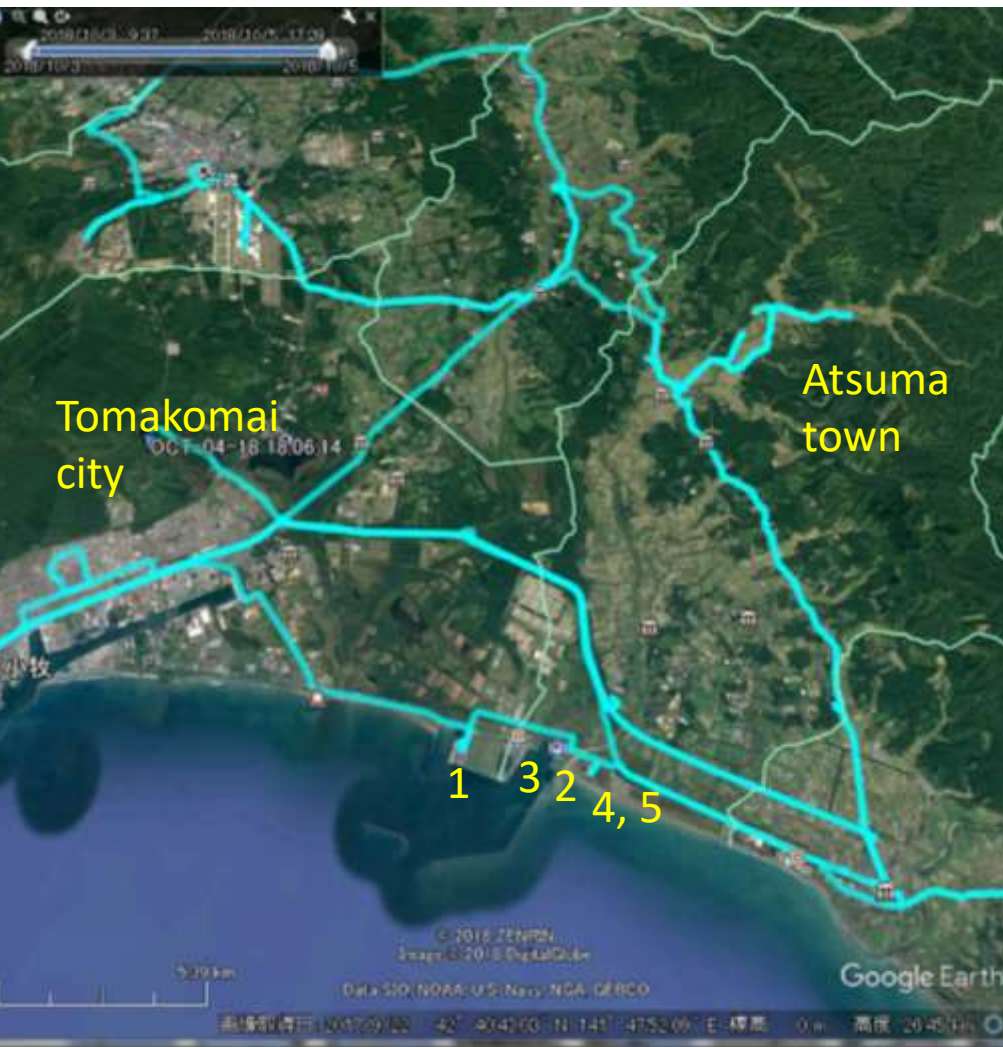
Google Earth



2486 m



Muroran city 室蘭市



1 Tomakomai-Higashi port



2. Near Ferry terminal



3. Tomato-Atsuma power plant



4. Hama-Atsuma Beach park



5

Muroran city
室蘭市

Railway deformation

Mukawa town
鷓川町



Color composite of coherence

R: Co-event (2018/08/23~2018/09/06)

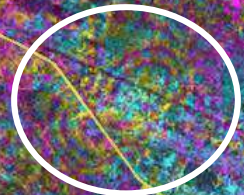
G&B: Pre-event (2018/08/23~2018/06/14)

Google Earth

Mukawa town 鶴川町



Railway deformation



目高自動車道(無料区間)

983

575

10

235

蒲河国道

74

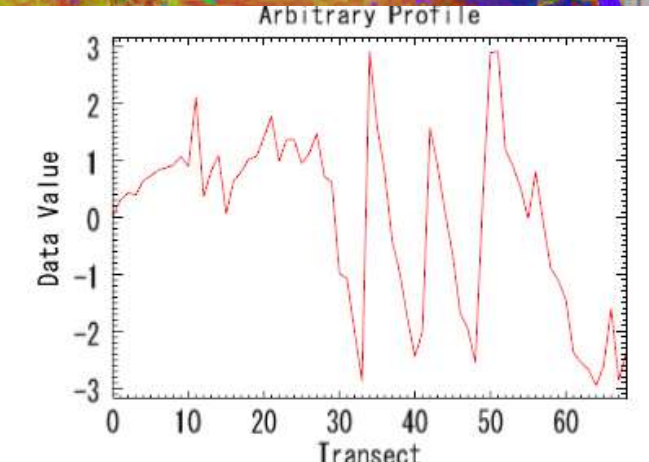
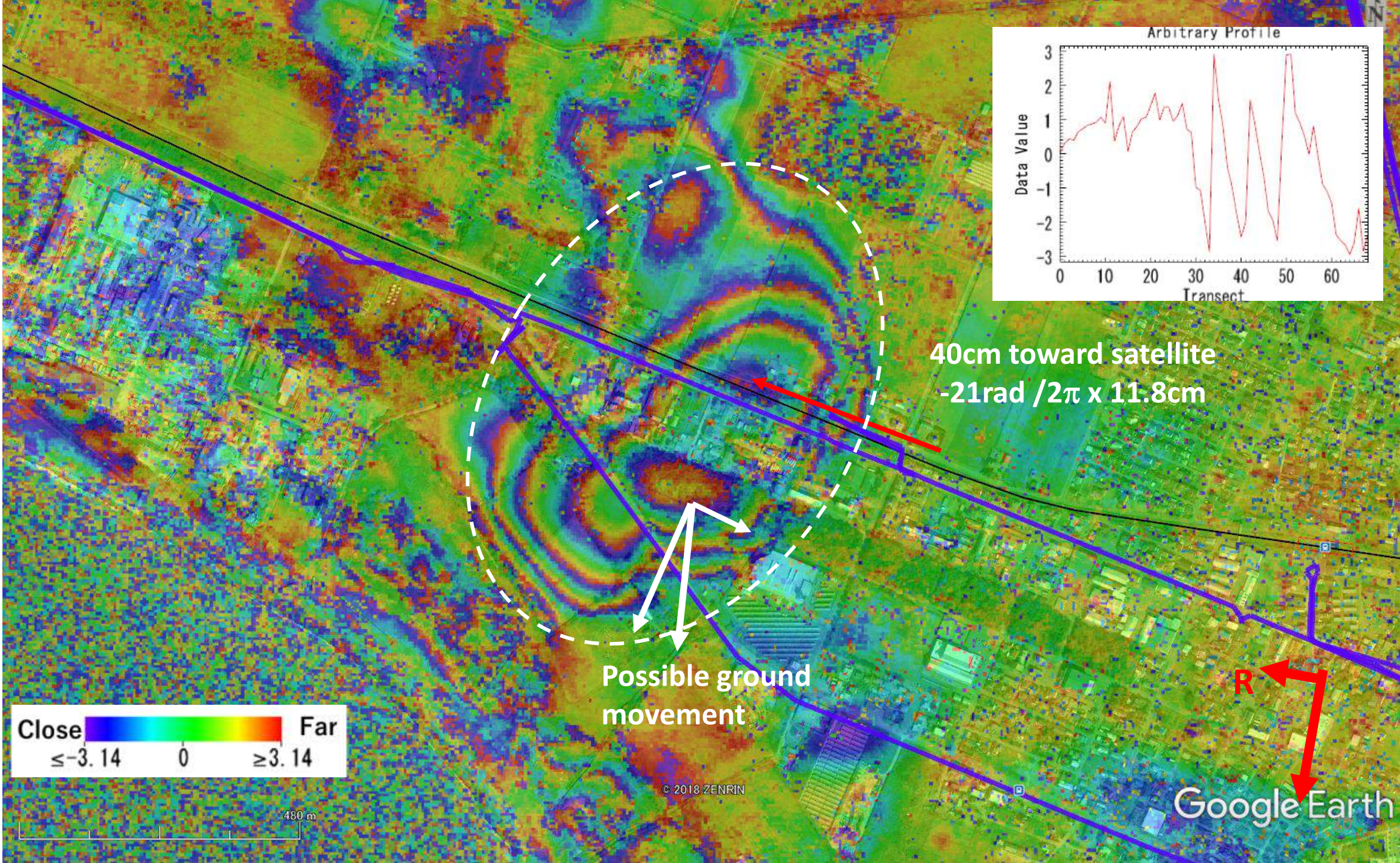


Mukawa town
鷺川町

Interferogram of InSAR pair
(2018/08/23~2018/09/06)

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Image © 2018 TerraMetrics
Data SIO, NOAA, U.S. Navy, NGA, GEBCO


Google Earth



40cm toward satellite
 $-21\text{rad} / 2\pi \times 11.8\text{cm}$

Possible ground movement

R
Google Earth

Close  Far
 ≤ -3.14 0 ≥ 3.14

480 m

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Comparison of pre- and post-event aerial photos and InSAR result

