## To do something from Nagasaki, Japan

Nagasaki University
Jun, Byungdug

Eng. Dr. Professor



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#### Part-1

### Historical Mission

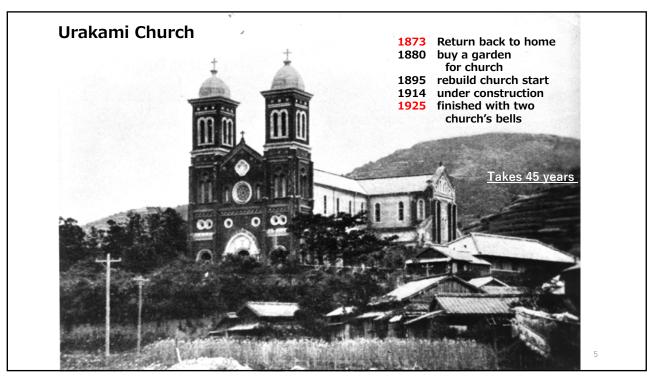
2



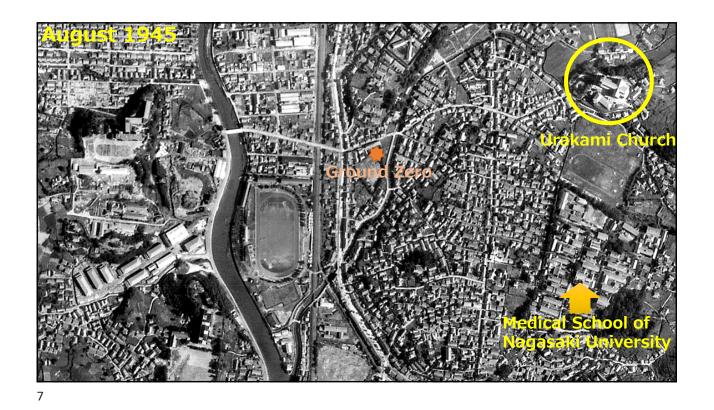
Movie "Silence" in 1600s

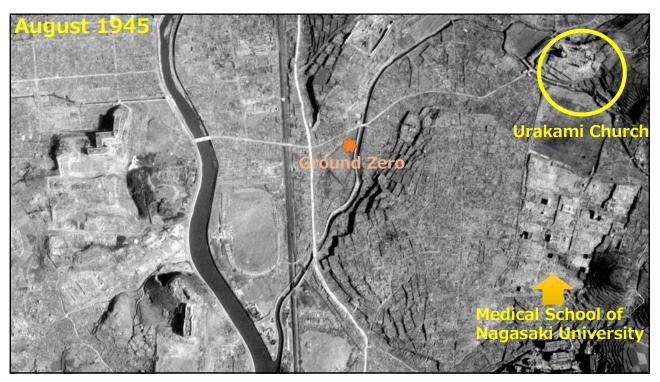


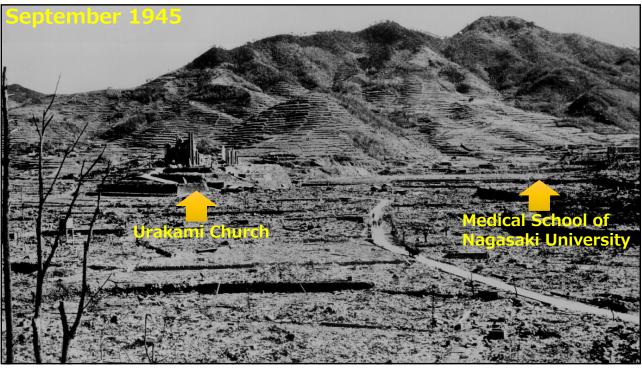
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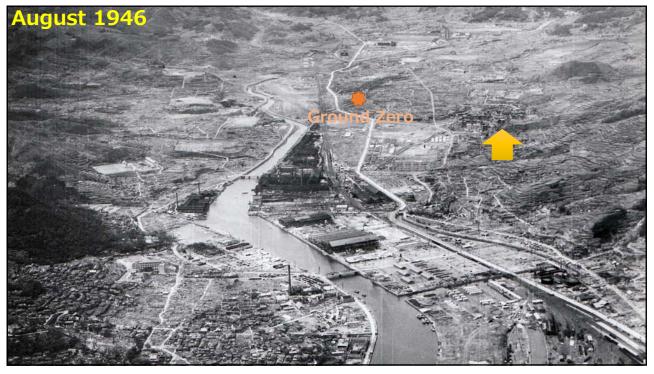












## -Anger of Hiroshima! -Prayer of Nagasaki!

Dr. Nagai Former Prof. of Nagasaki Univ.

Oh! Nagasaki The Lamb of God!





Mr. Motoshima Former Mayer of Nagasaki

Oh! Hiroshima Do not anger!

ΤŢ

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#### Part-2

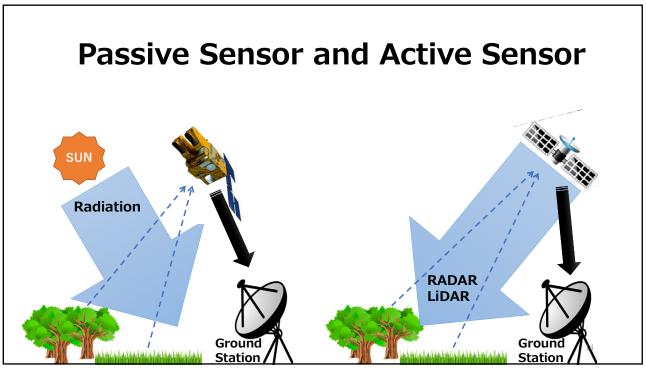
## Remote Sensing

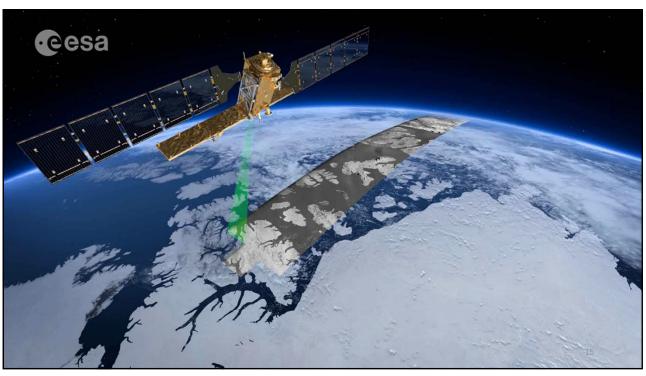
#### **Remote Sensing**

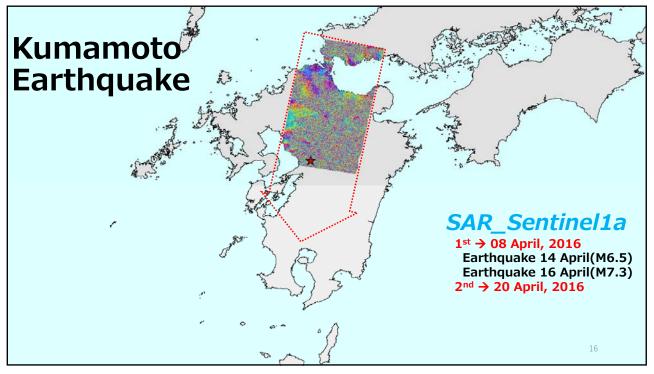
- Remote sensing is a tool or technique similar to mathematics. Using sensors to measure the amount of electromagnetic radiation (EMR) exiting an object or geographic area **from a distance** and then extracting valuable information from the data using mathematically and statistically based algorithms is a scientific activity. It functions in harmony with other spatial data-collection techniques or tools of the mapping sciences, including cartography and geographic information systems (GIS) (Clarke, 2001).
- Introductory Digital Image Processing. 3rd edition. Jensen, 2004

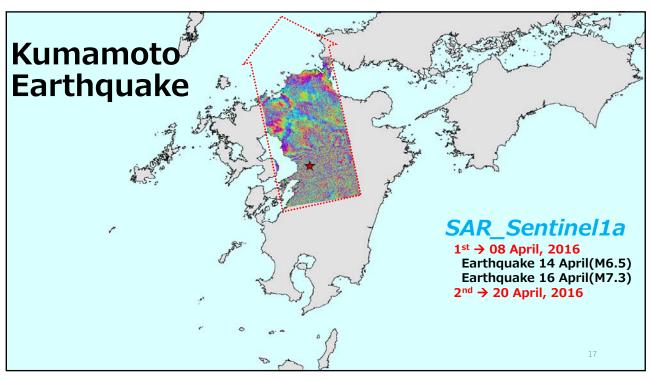


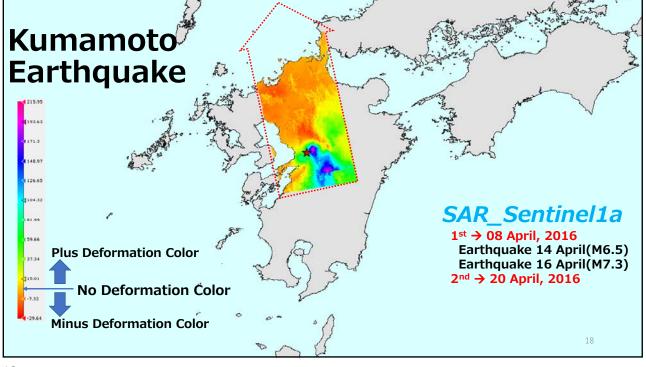
13



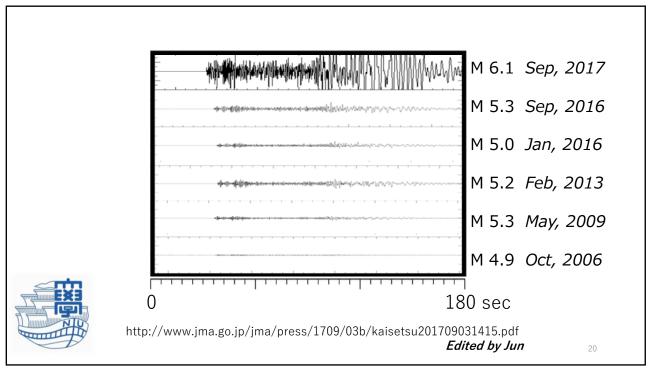












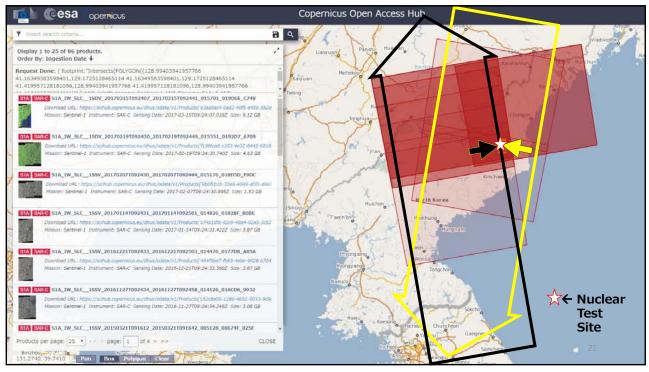
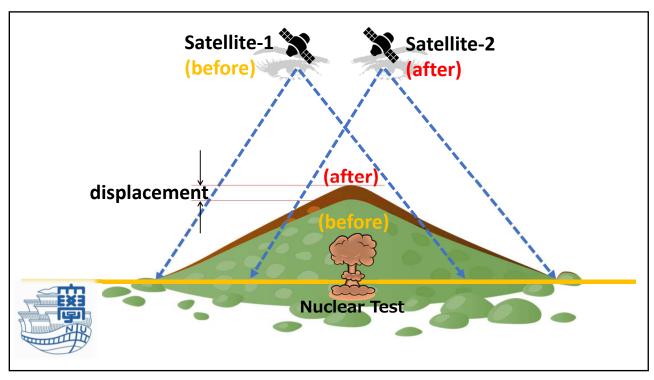


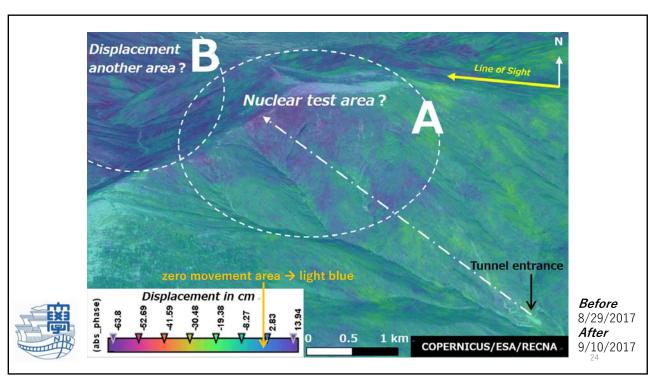
Table 1: Sentinel data sets used in this study

Area	Data set
Kumamoto,	S1A_IW_SLC1SSV_20160408T091355_20160408T091430_010728_01001F_83EB.zip*
Japan	S1A_IW_SLC1SSV_20160420T211630_20160420T211658_010910_01059E_8779.zip*
Punggye-ri,	S1B_IW_SLC1SDV_20170829T213026_20170829T213053_007160_00C9E7_617F.zip
North Korea	S1B_IW_SLC1SDV_20170910T213026_20170910T213053_007335_00CF07_6DE9.zip

\* Verification data set of interferograms

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# Thank you