

Toward the mitigation of water disaster
in Indochina: **Efforts to make radar
composite maps over borders**

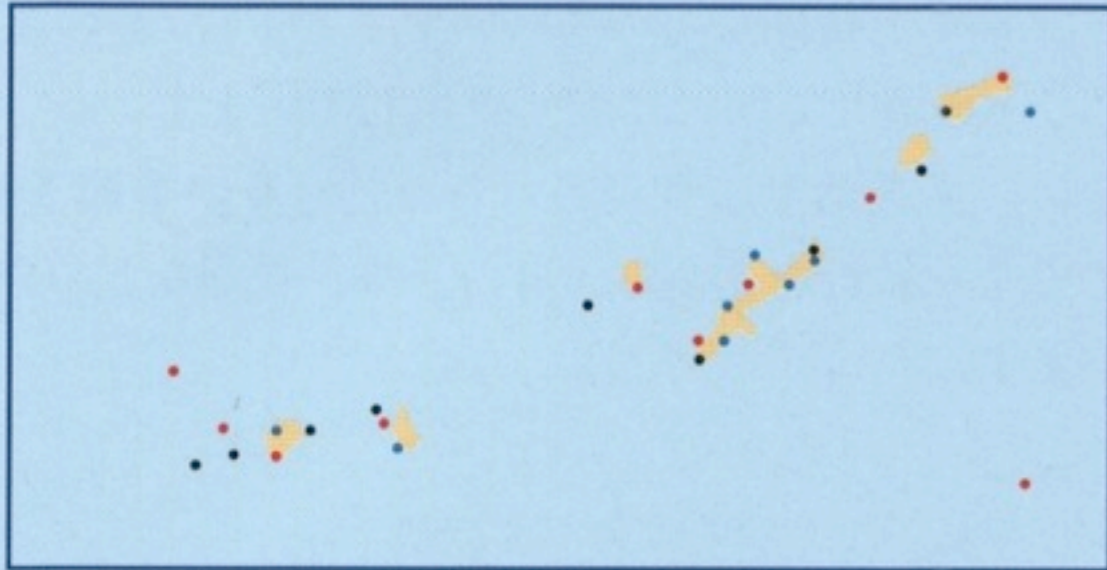
Takehiko Satomura
Graduate School of Science, Kyoto University

Radar-Raingauge Analyzed Precipitation in Japan

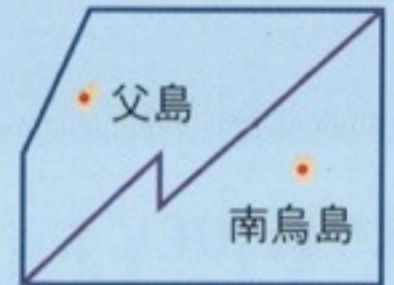
- Radar precipitation map **calibrated by rain gauge** network in **real time**

AMeDAS

■地上気象観測網

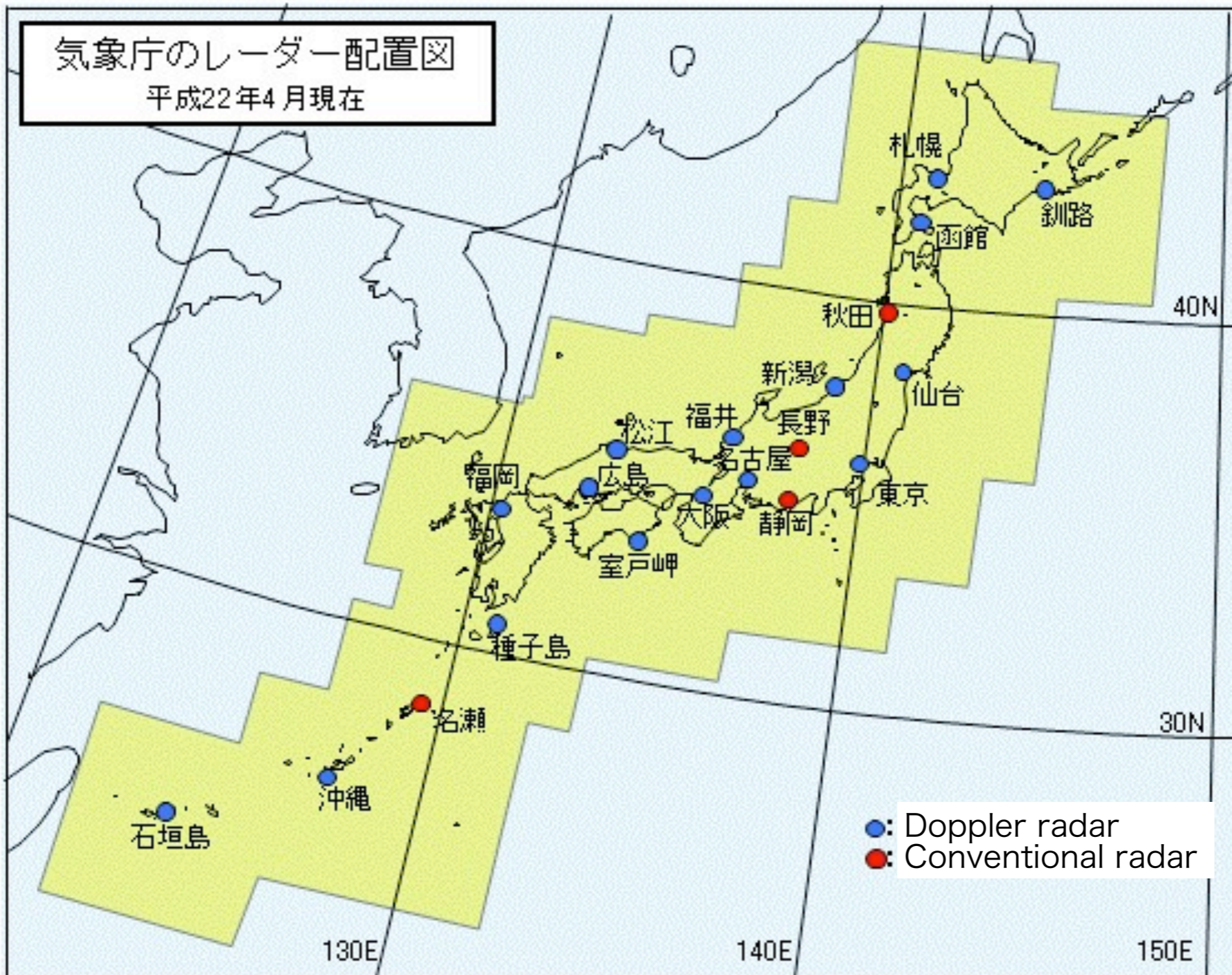


- 気象官署 (気象台、測候所など)
- アメダス (4要素観測所)
- アメダス (雨量観測所)
- + アメダス (積雪観測所)

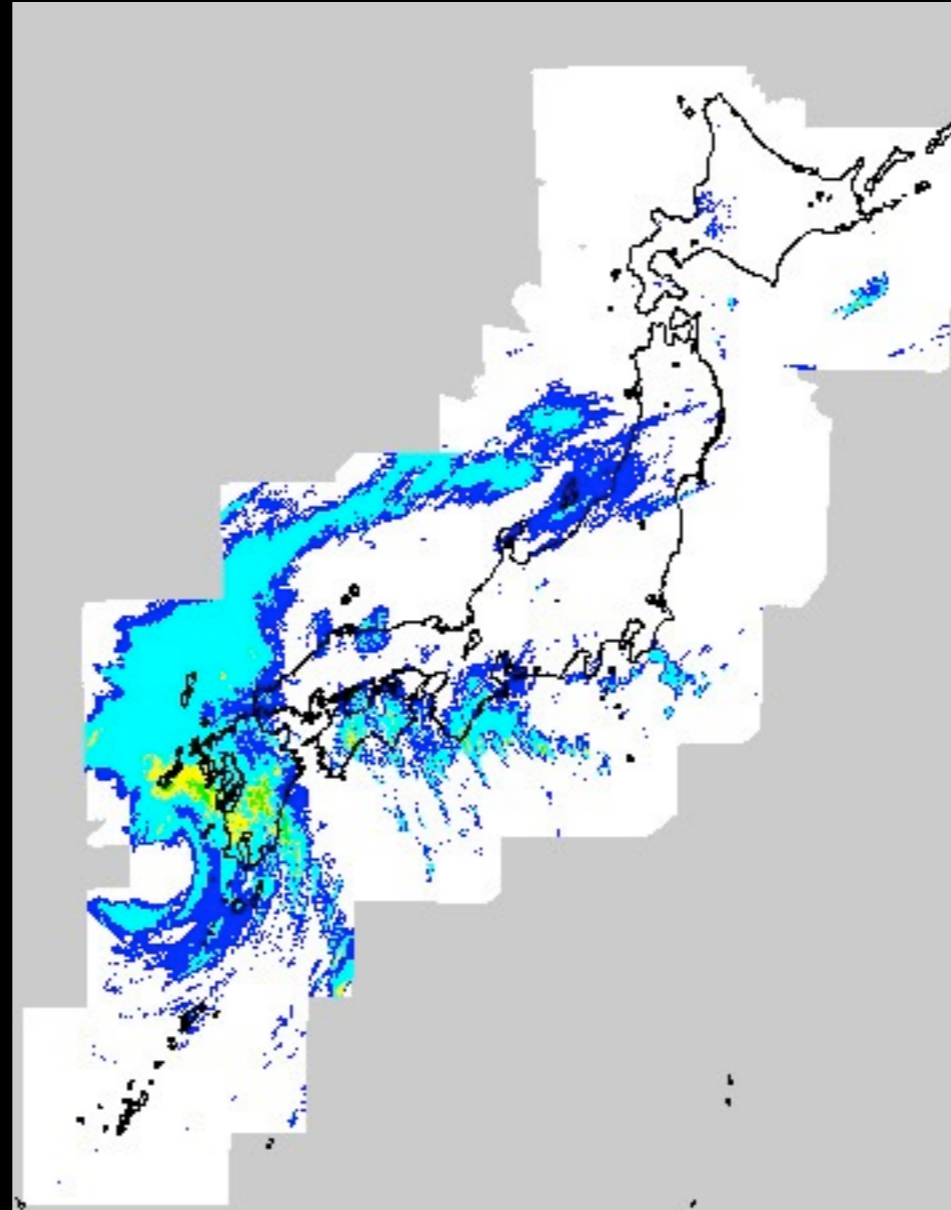


~1,300 points
 $\Delta < 20$ km

Radars

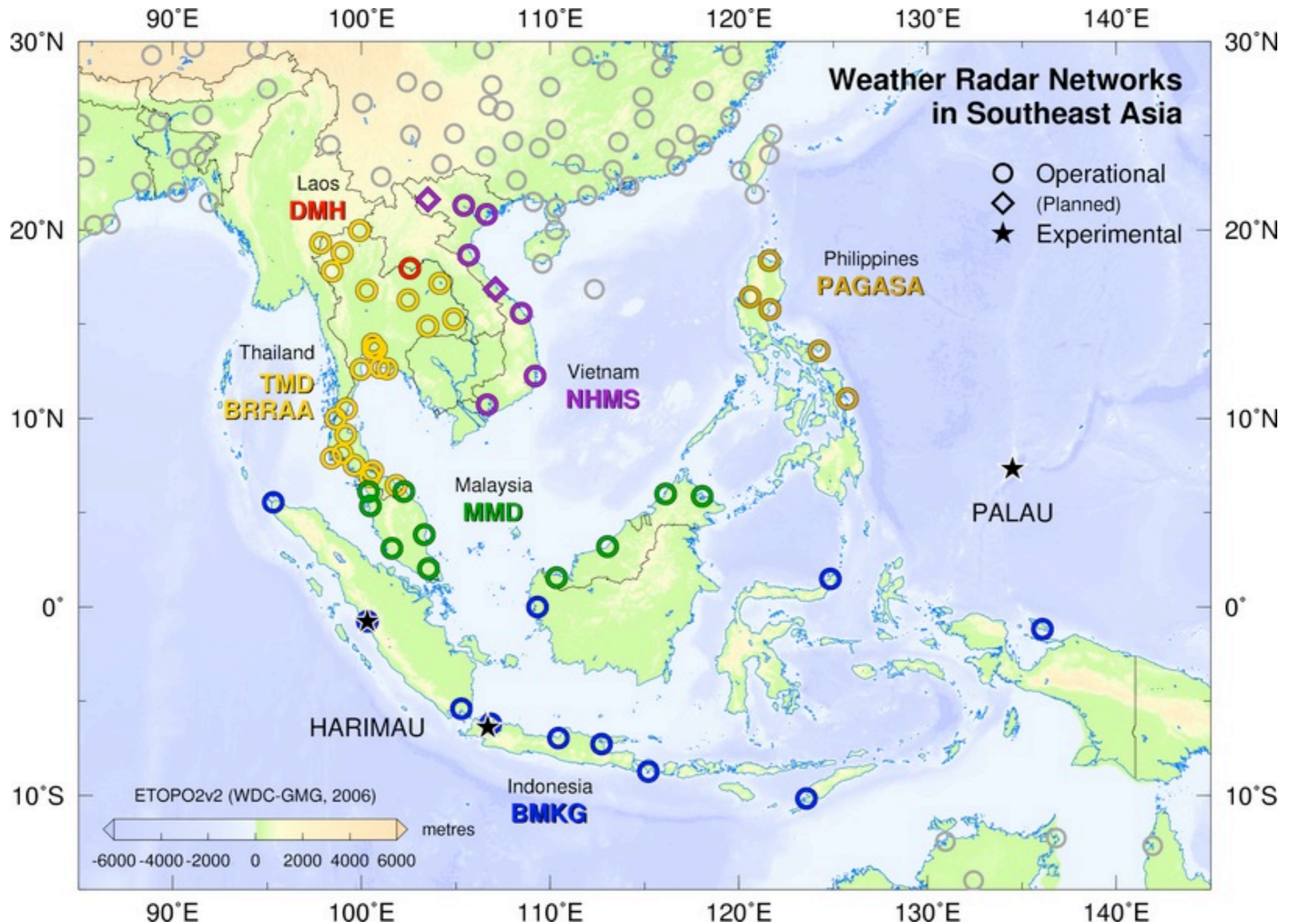


Product

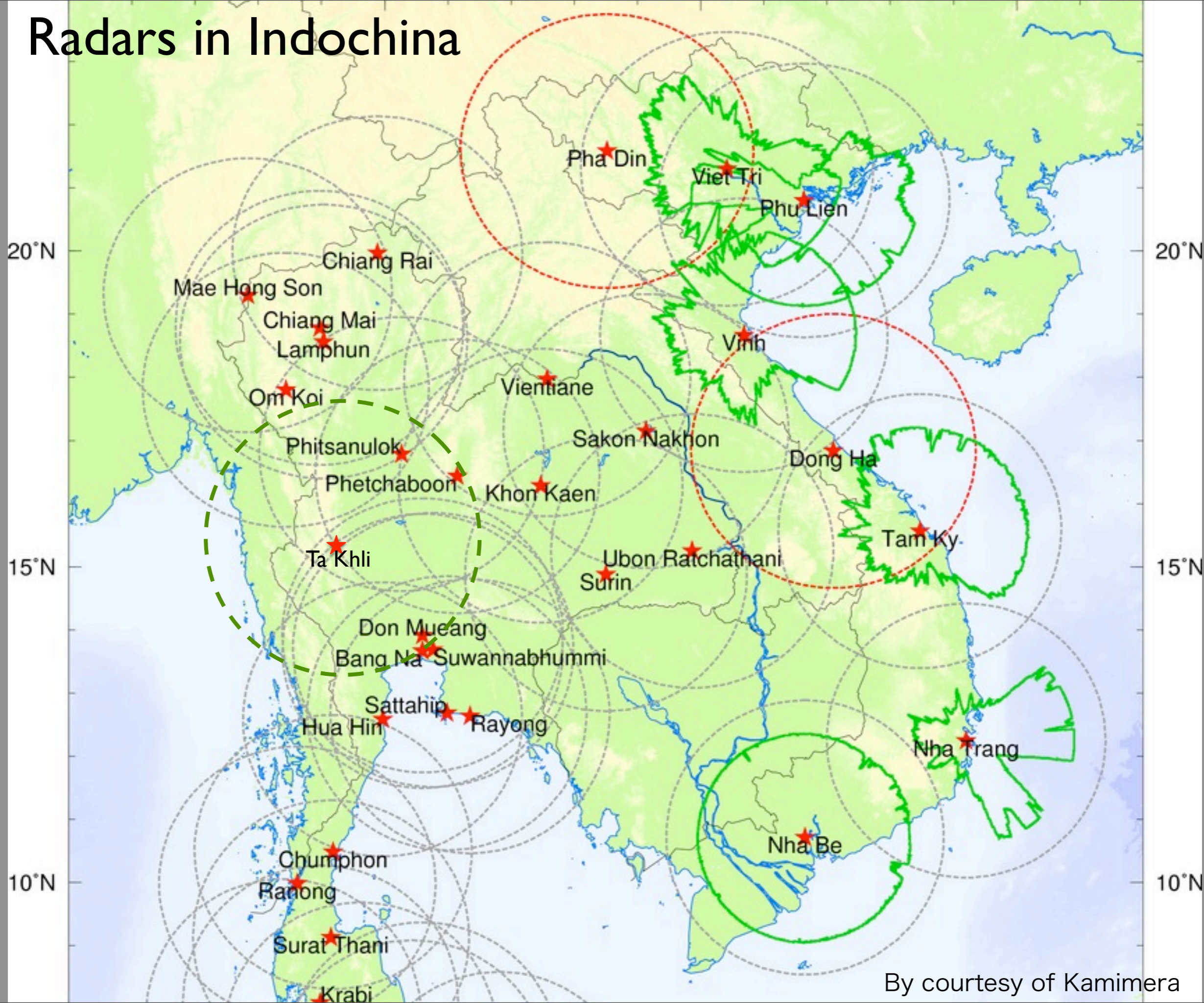


Detail of Japanese system will be presented by JMA

Operational Weather Radar “Networks” in SE Asia



Radars in Indochina

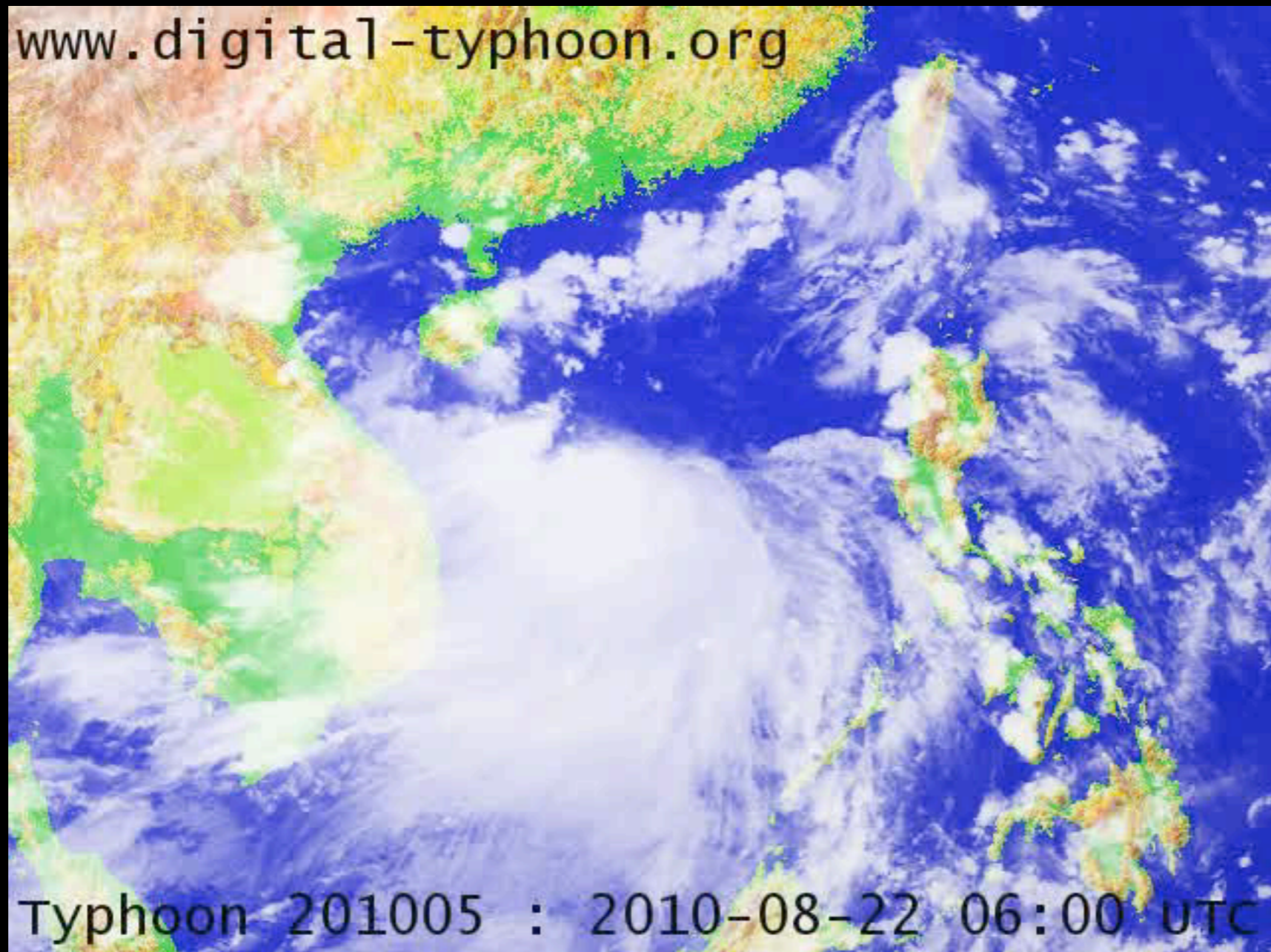


By courtesy of Kamimera

Mindull 2010 Aug



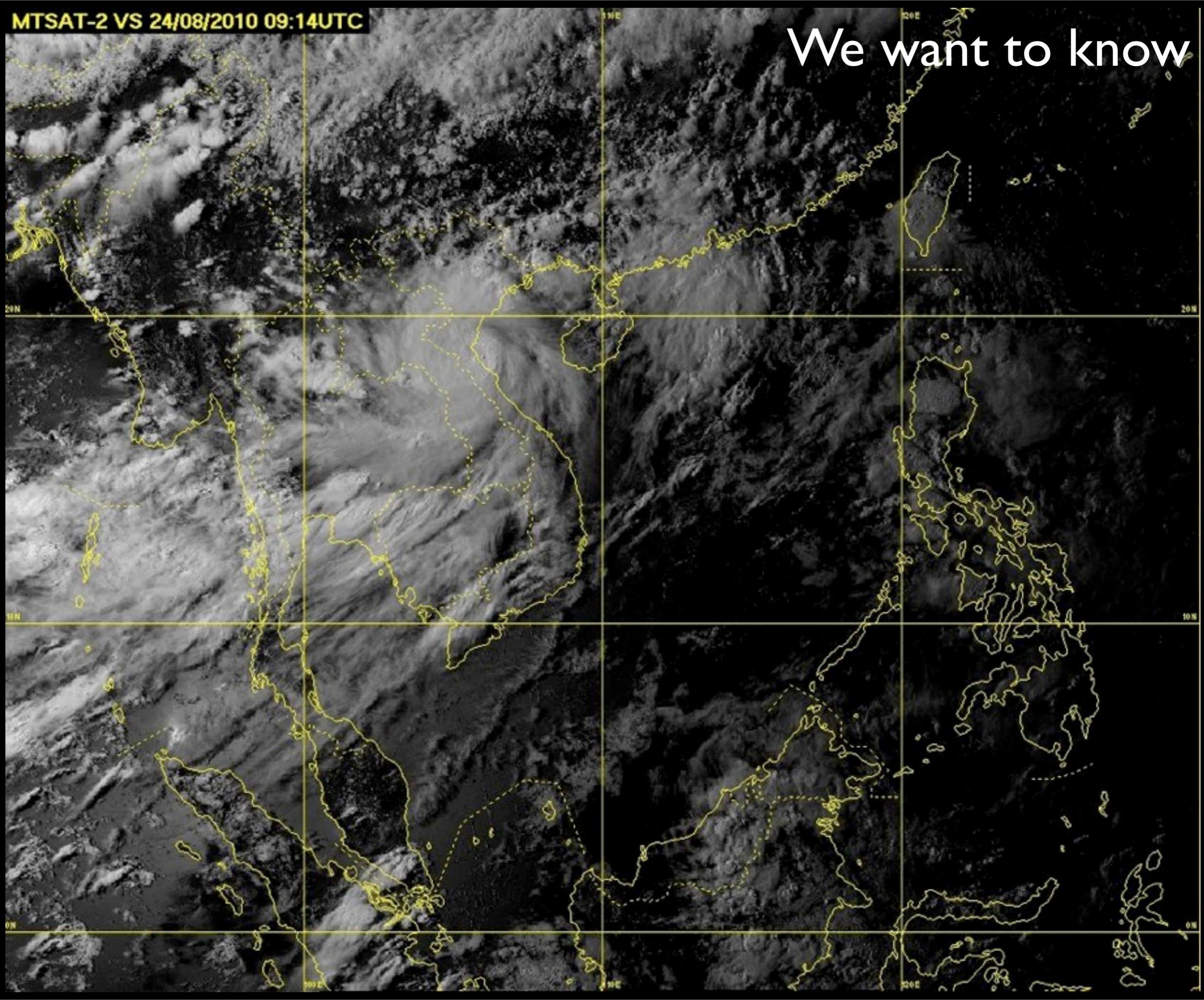
www.digital-typhoon.org



Typhoon 201005 : 2010-08-22 06:00 UTC

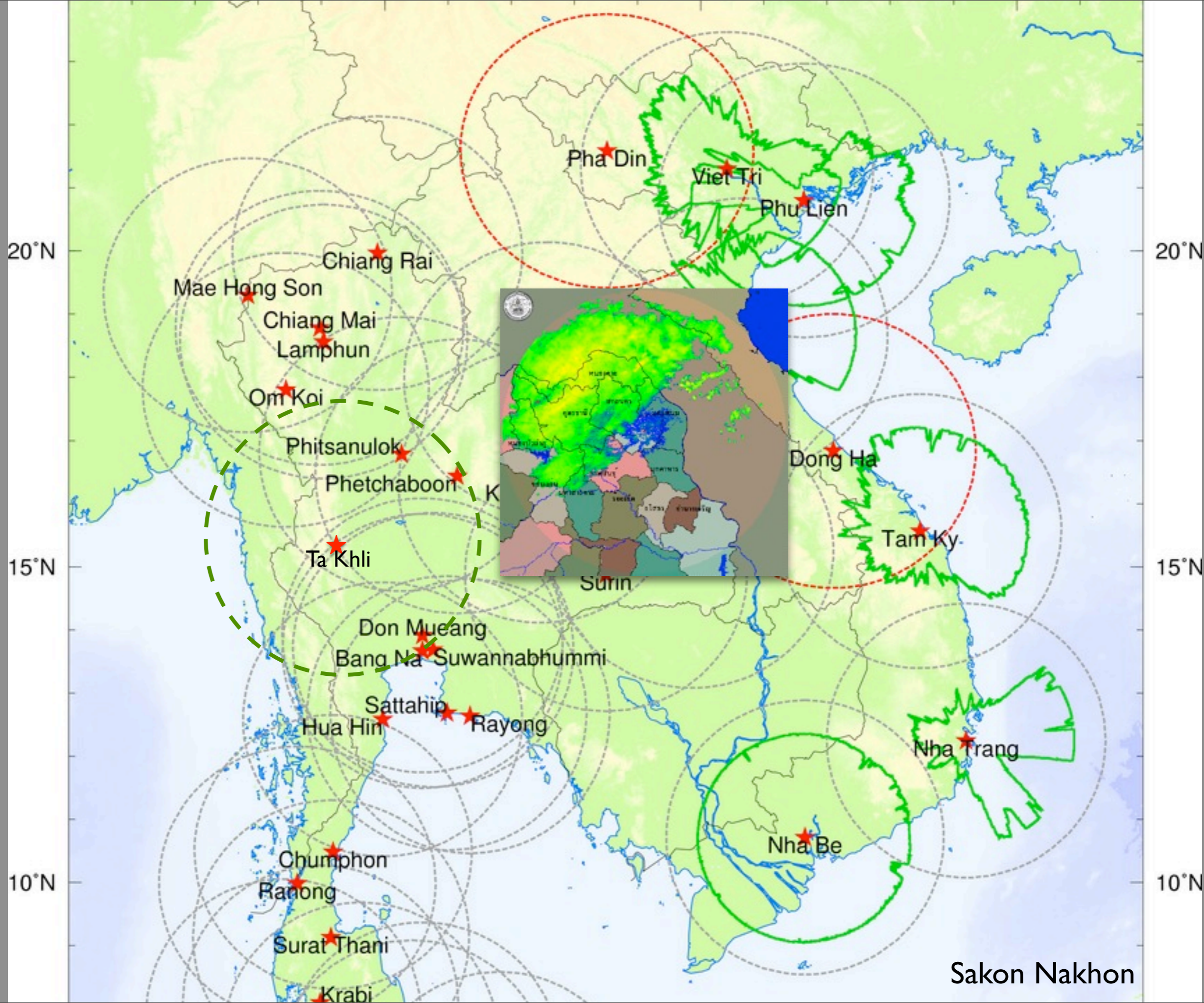
MTSAT-2 VS 24/08/2010 09:14UTC

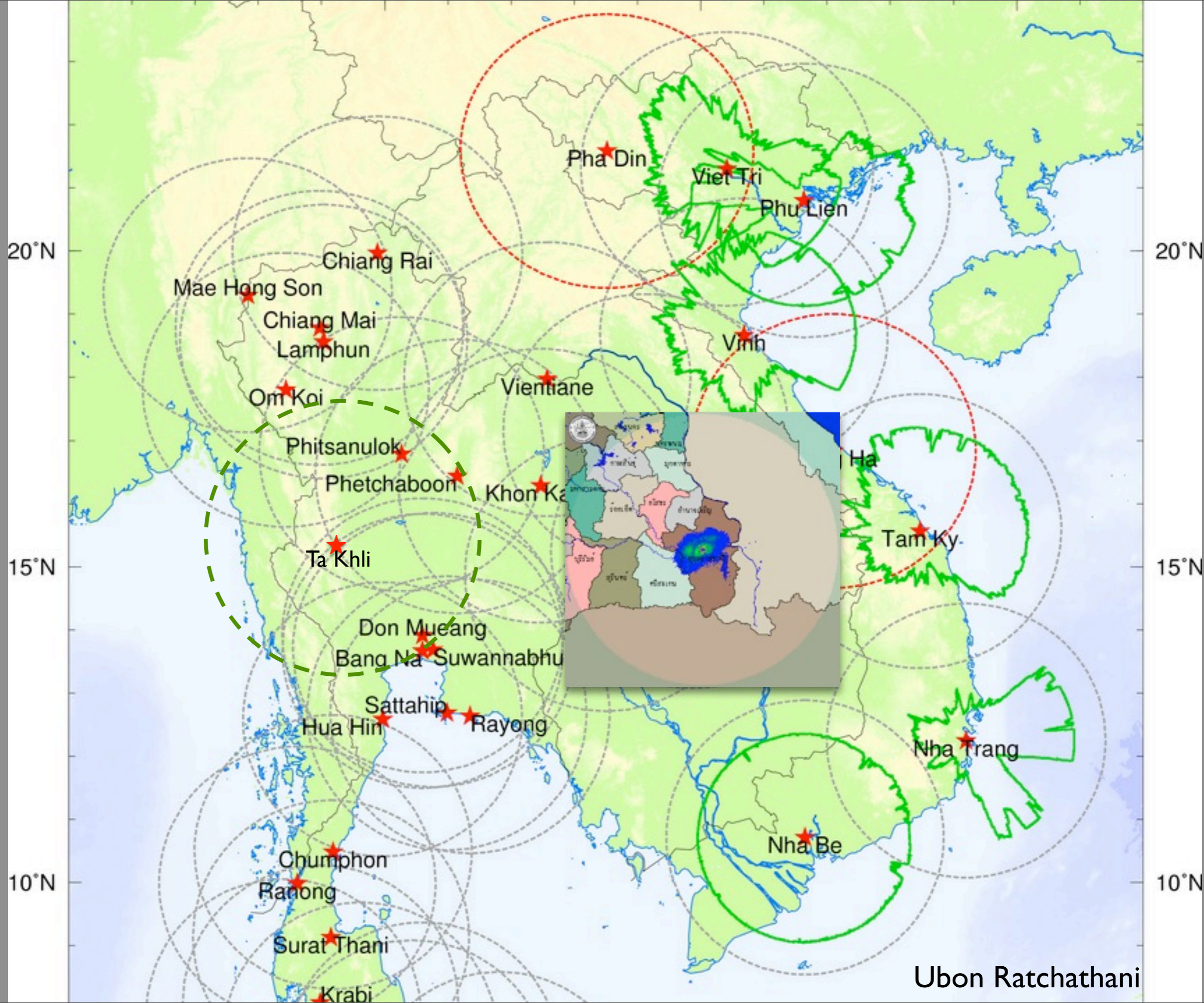
We want to know





By courtesy of Kamimera





Ubon Ratchathani

Vientiane (C-band) (JRC/Sigmat IRIS)



20°N

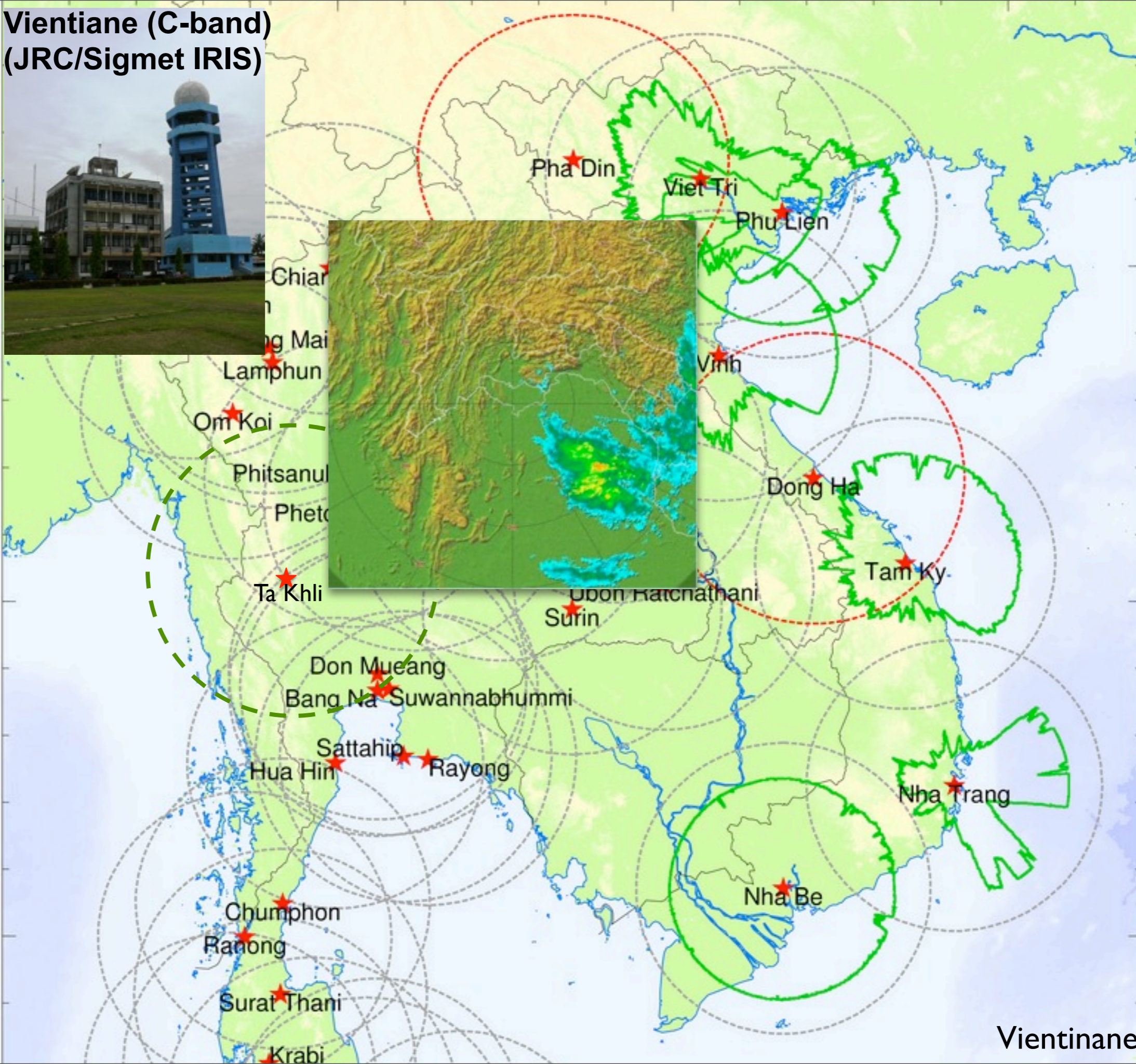
20°N

15°N

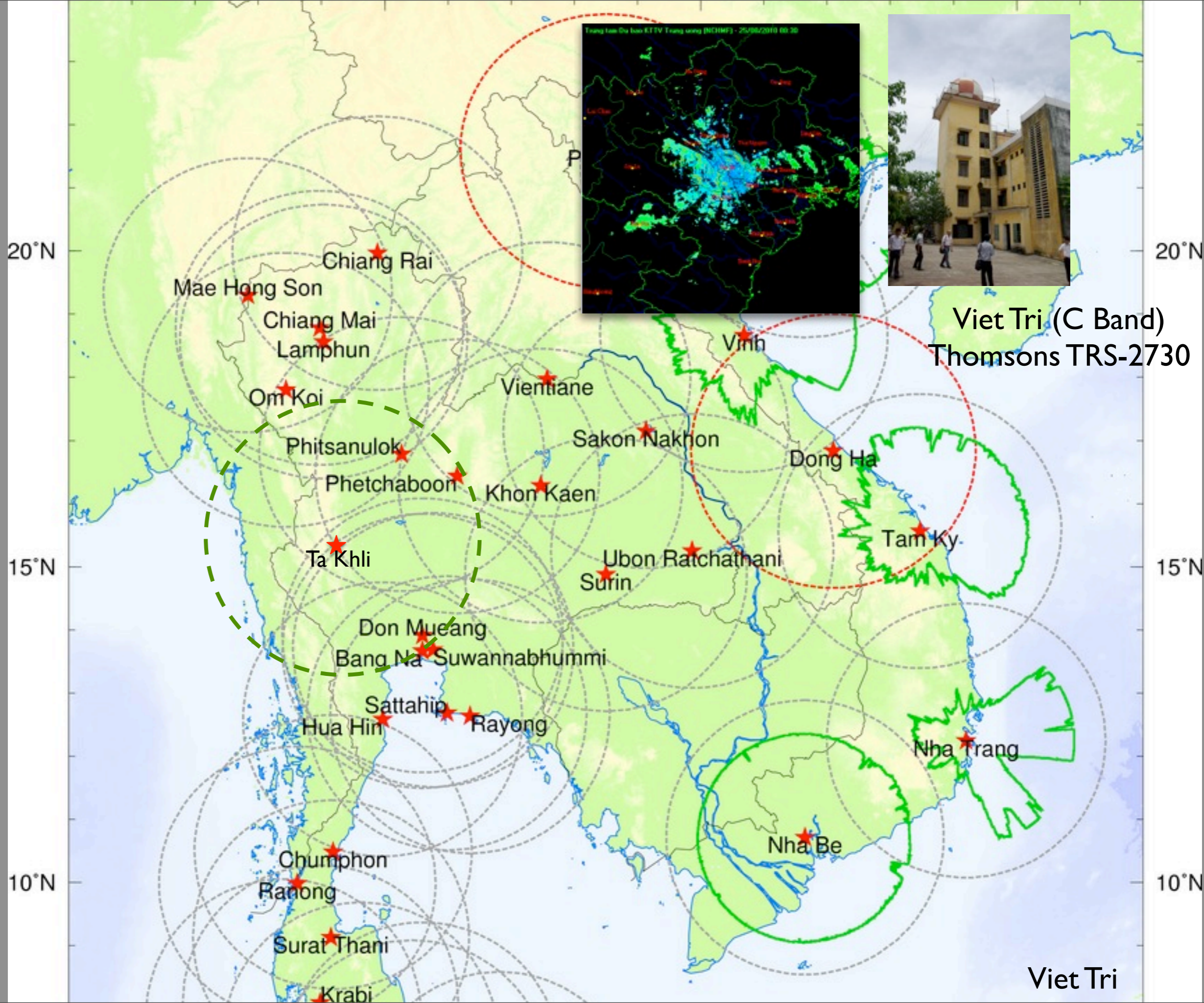
15°N

10°N

10°N

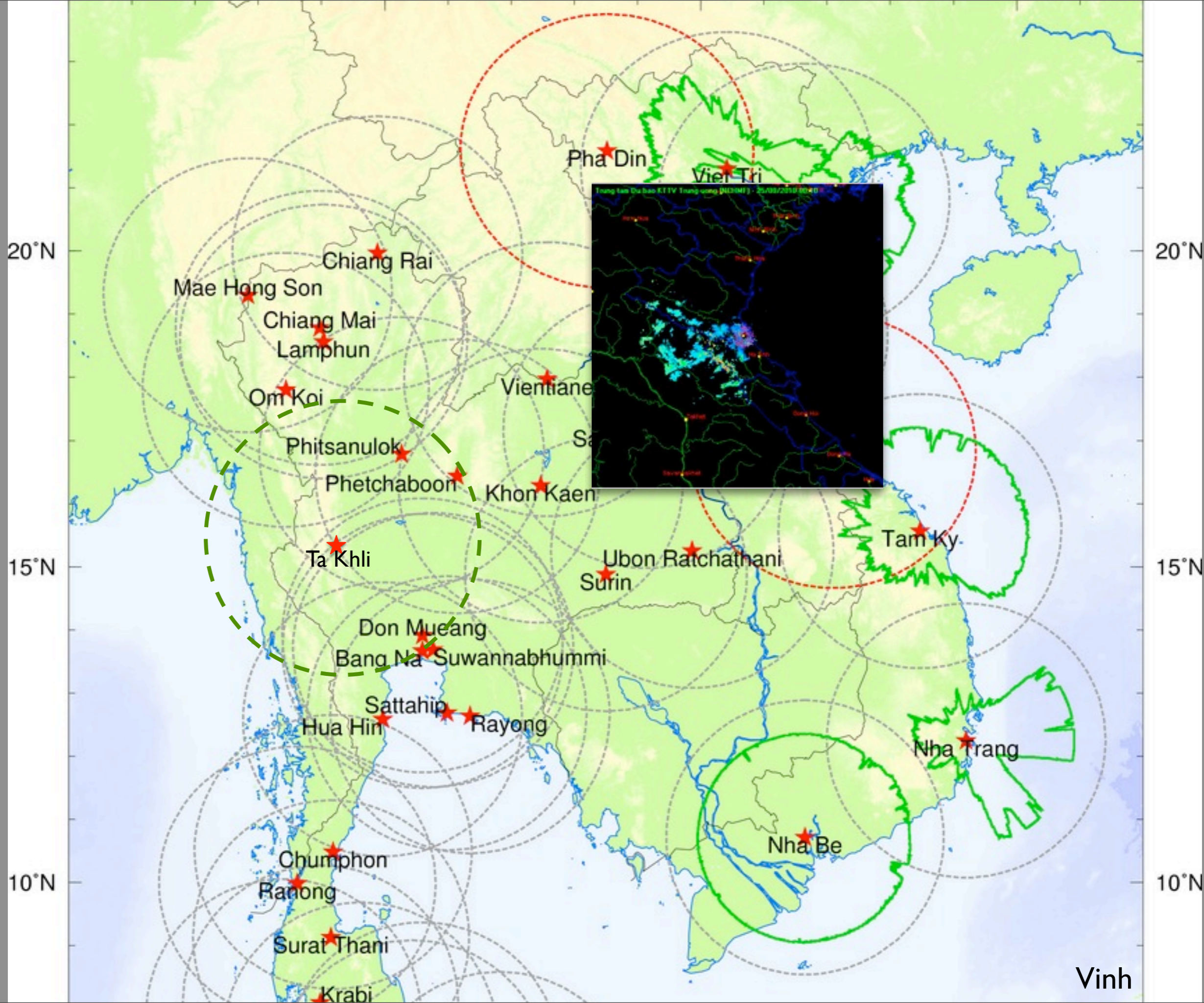


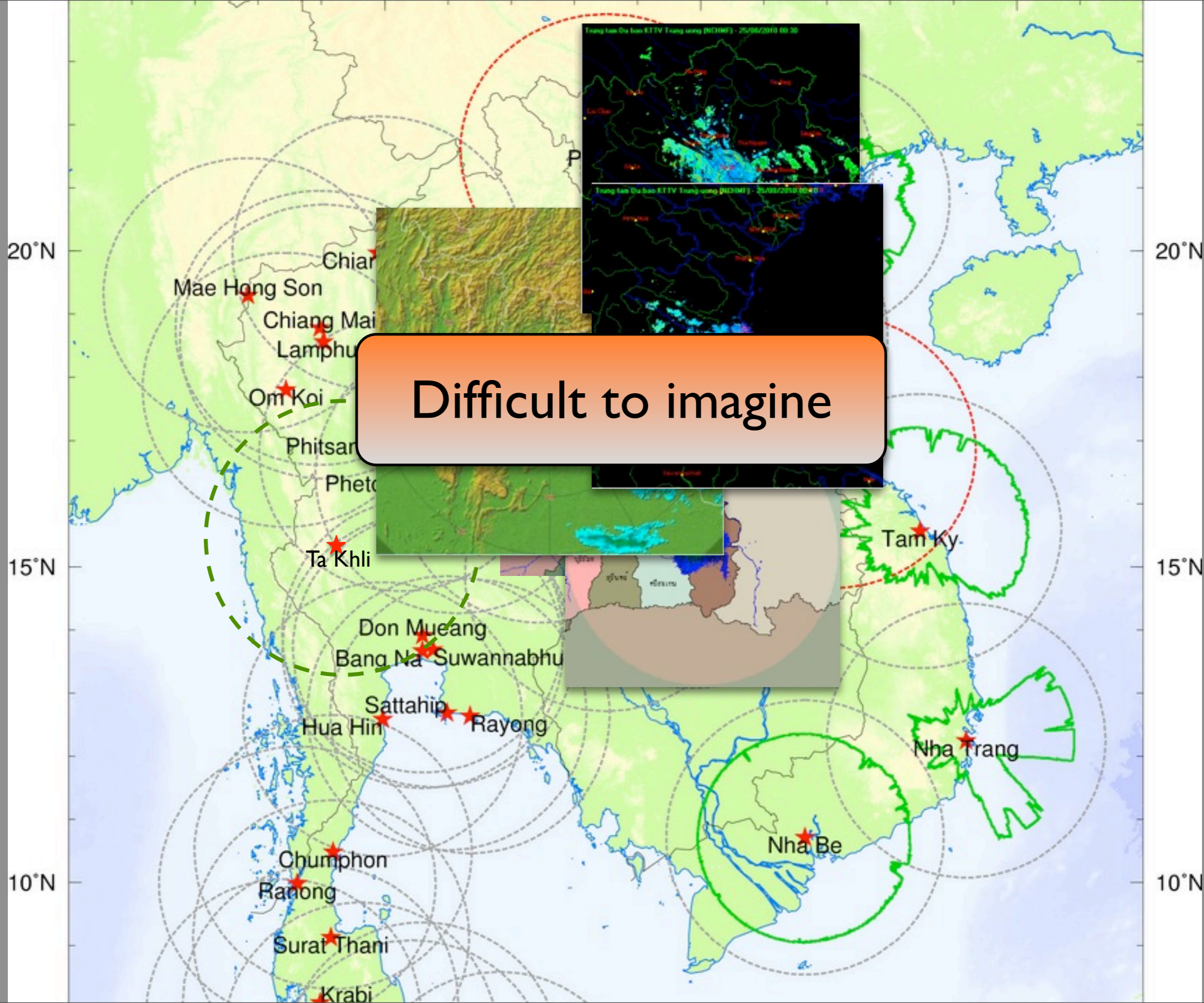
Vientiane



Viet Tri (C Band)
Thomsons TRS-2730

Viet Tri

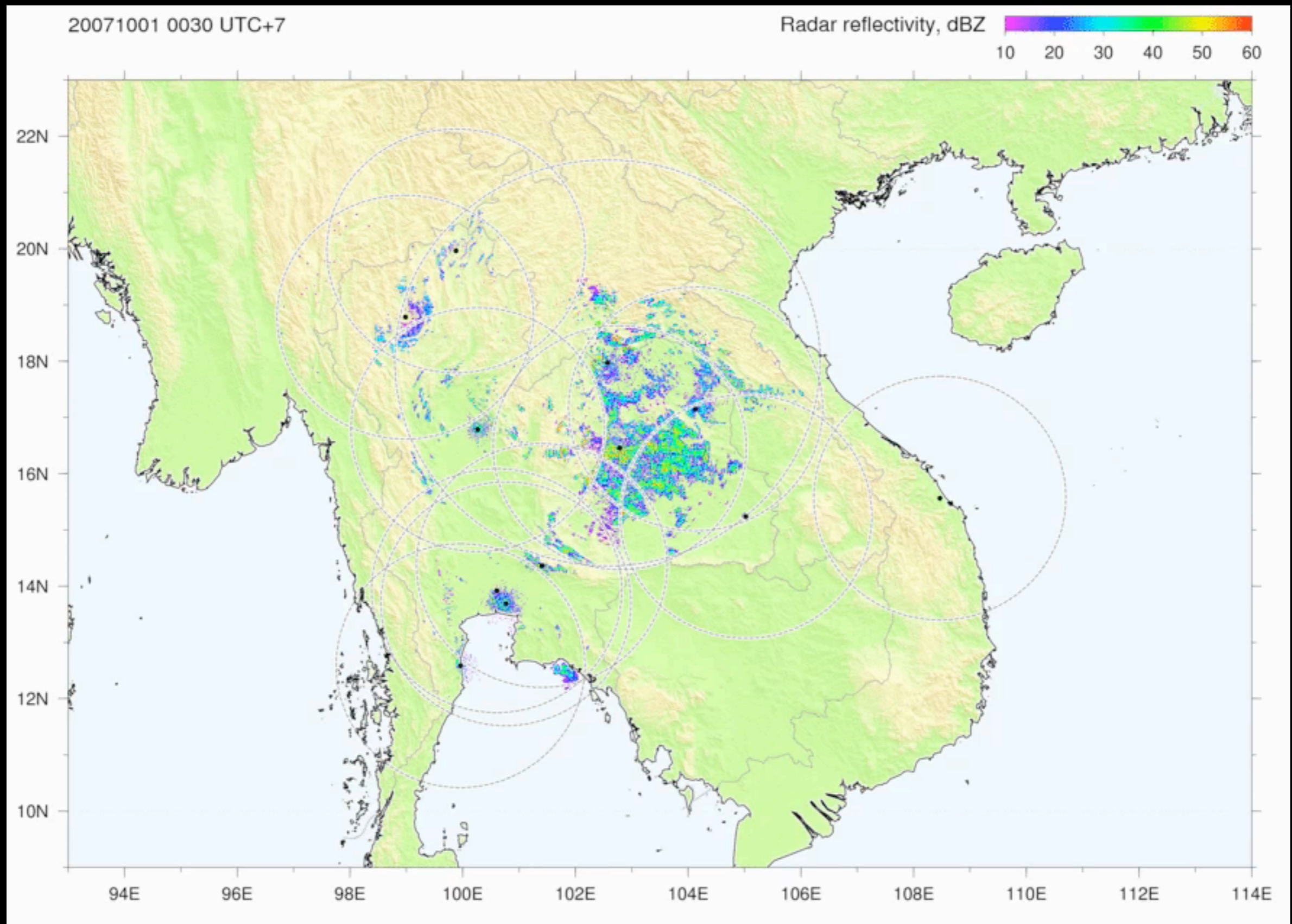




Difficult to imagine

A simple trial

By courtesy of Kamimera



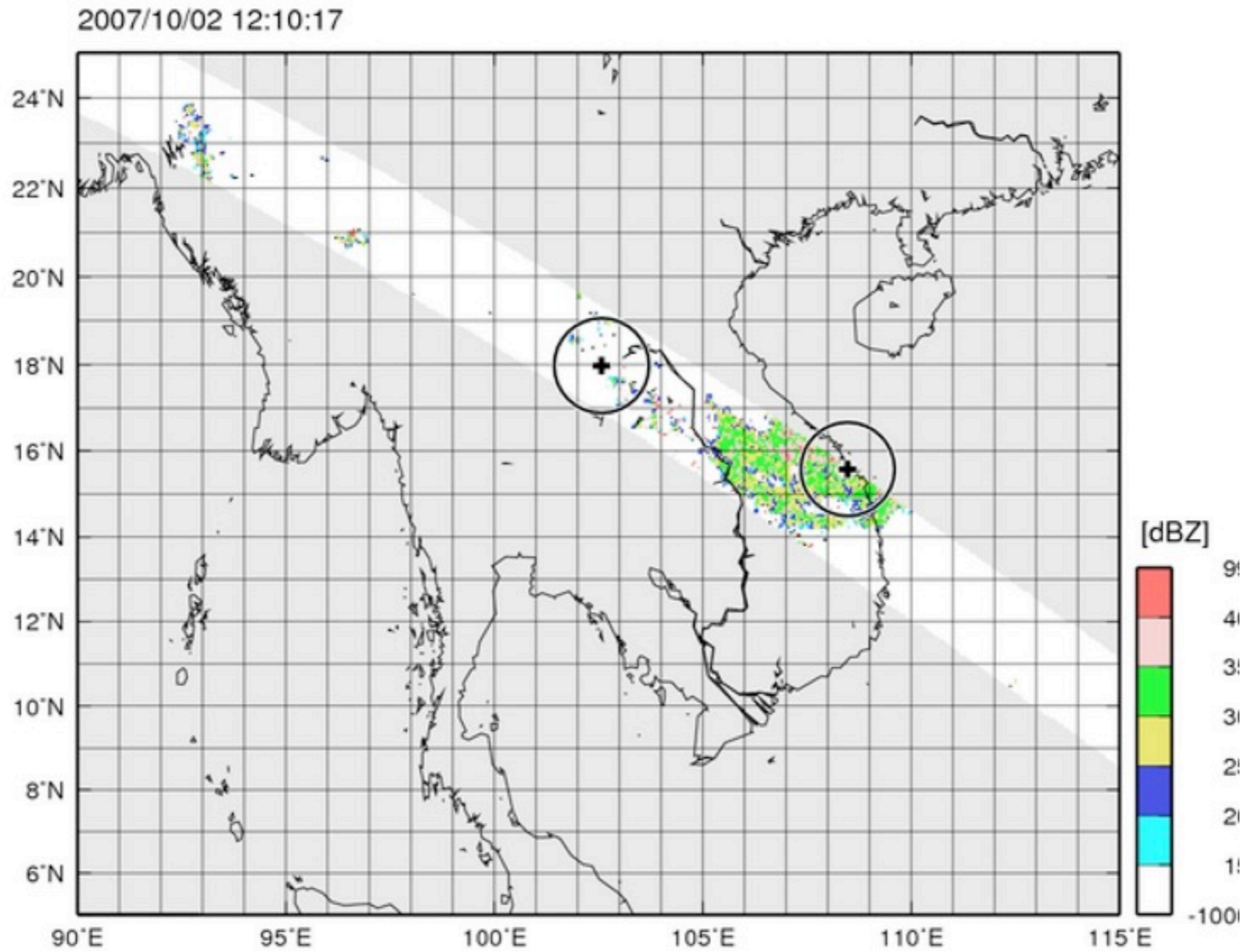
Issues to be addressed

- Inconsistency at multiple radar overlap regions
 - ✓ some radar obs areas include **insufficient RGs**
- Un-optimized Z-R relationship.
- Attenuation by strong rain.
- Discrepancies between rain gauge rainfall and radar rainfall at rain gauge points.

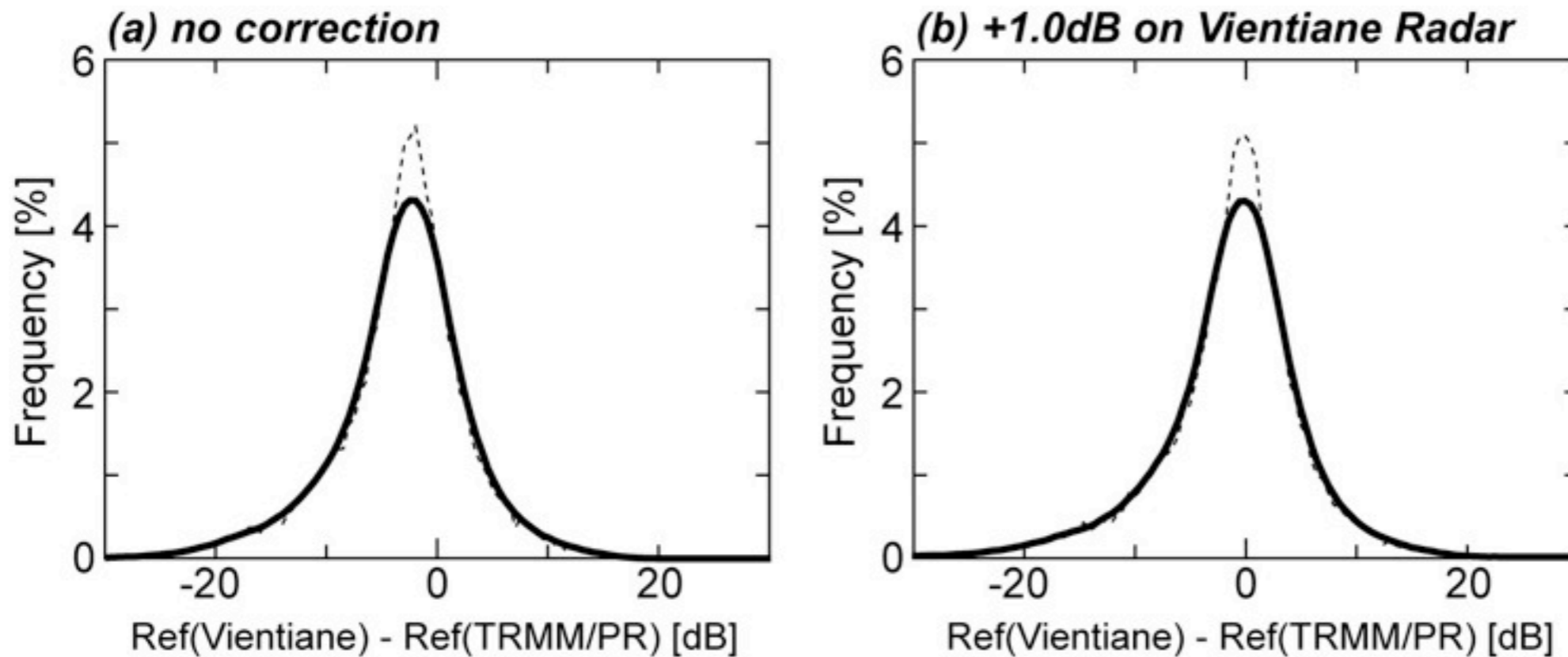
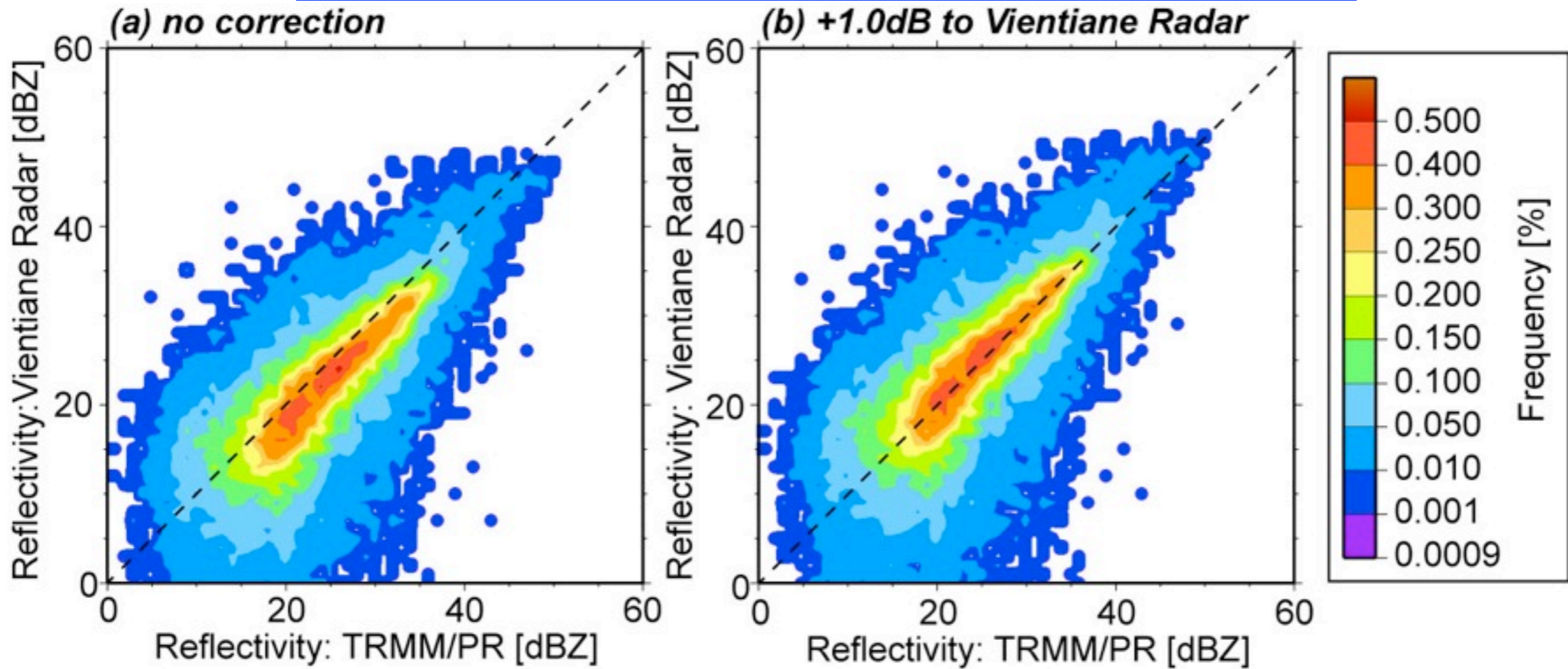
An example how to solve issues

- The issue of inconsistency
 - ➔ TRMM-PR or GPM-DPR
 - ✓ Old-fashioned but useful

Example of TRMM overpass for Lekima



Ref. Comp.: Vientiane Radar vs. TRMM/PR



Near Future?

