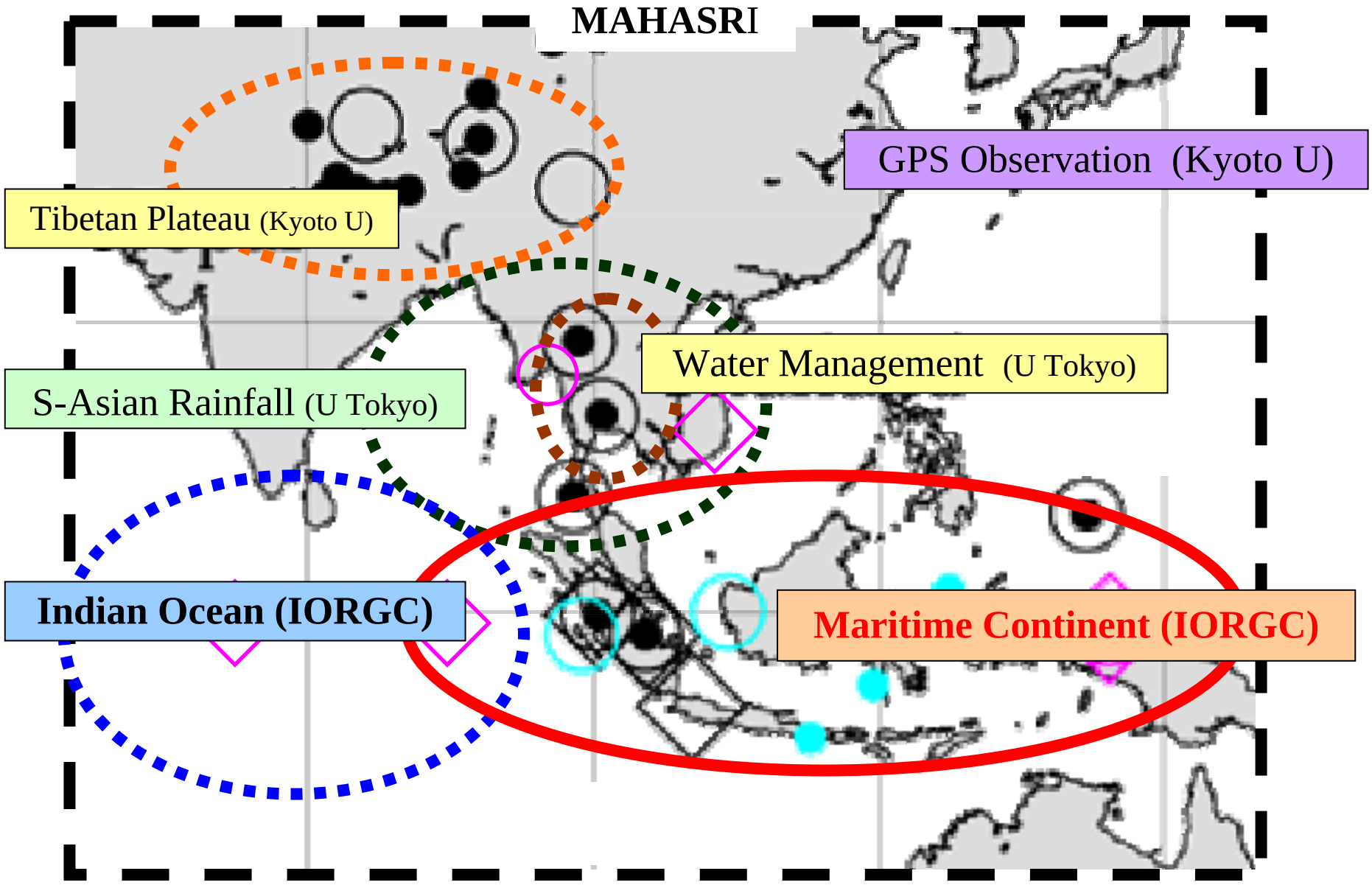
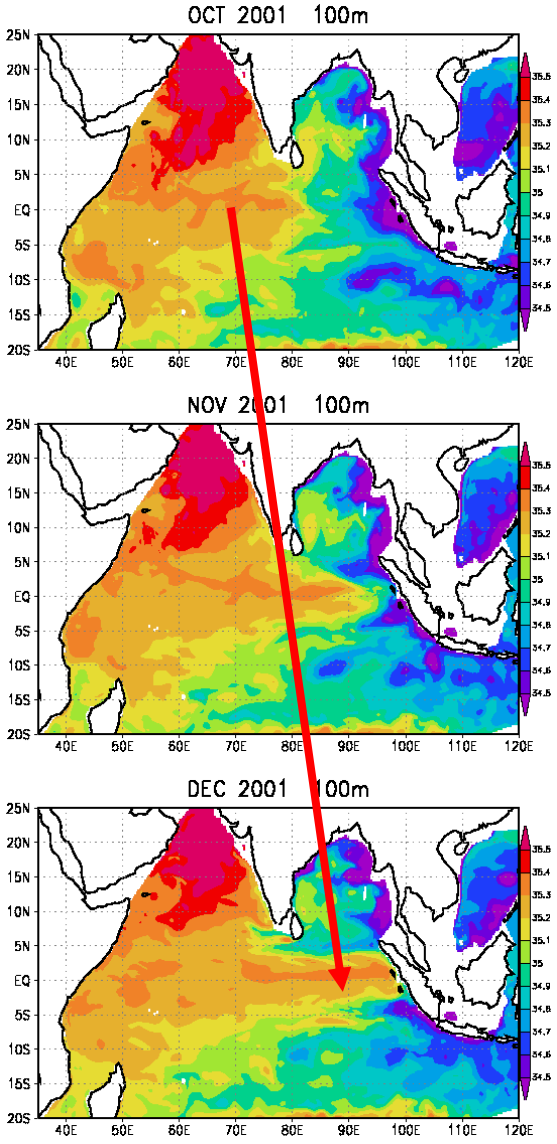
JEPPs and MAHASRI/GEWEX/WCRP

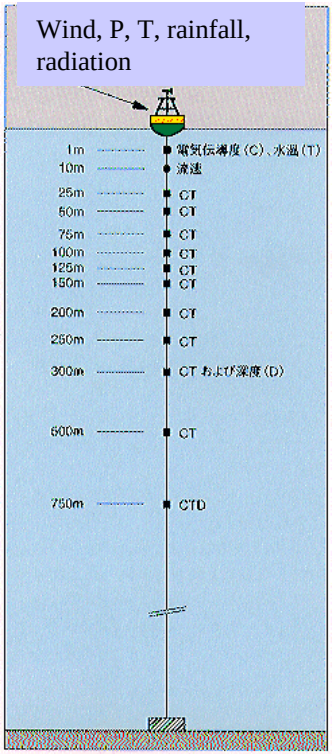


Indian-Ocean Triton Buoy Network (partly JEPP)

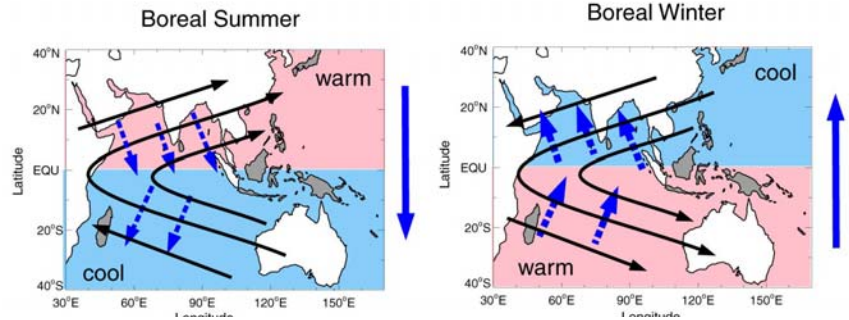
JAMSTEC

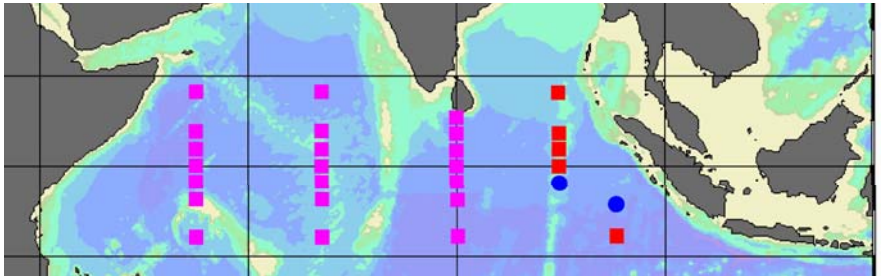
Intraseasonal Variations



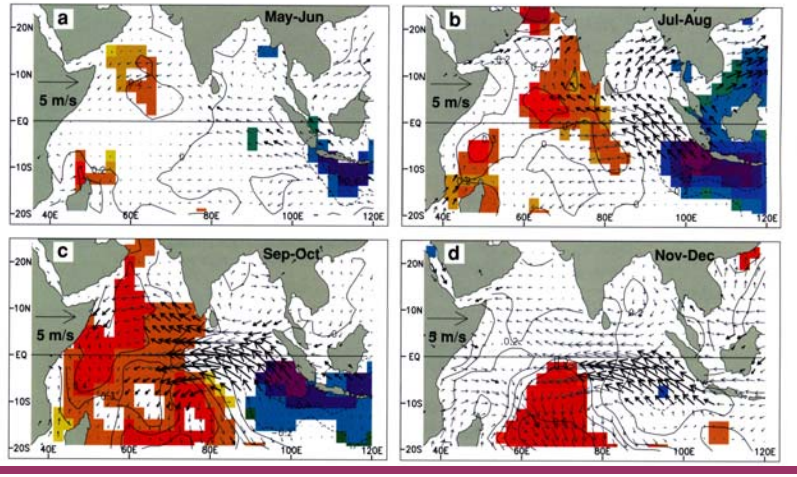


Seasonal Variations





Interannual Variations (Dipole Mode)



Japanese EOS Promotion Program (JEPP)

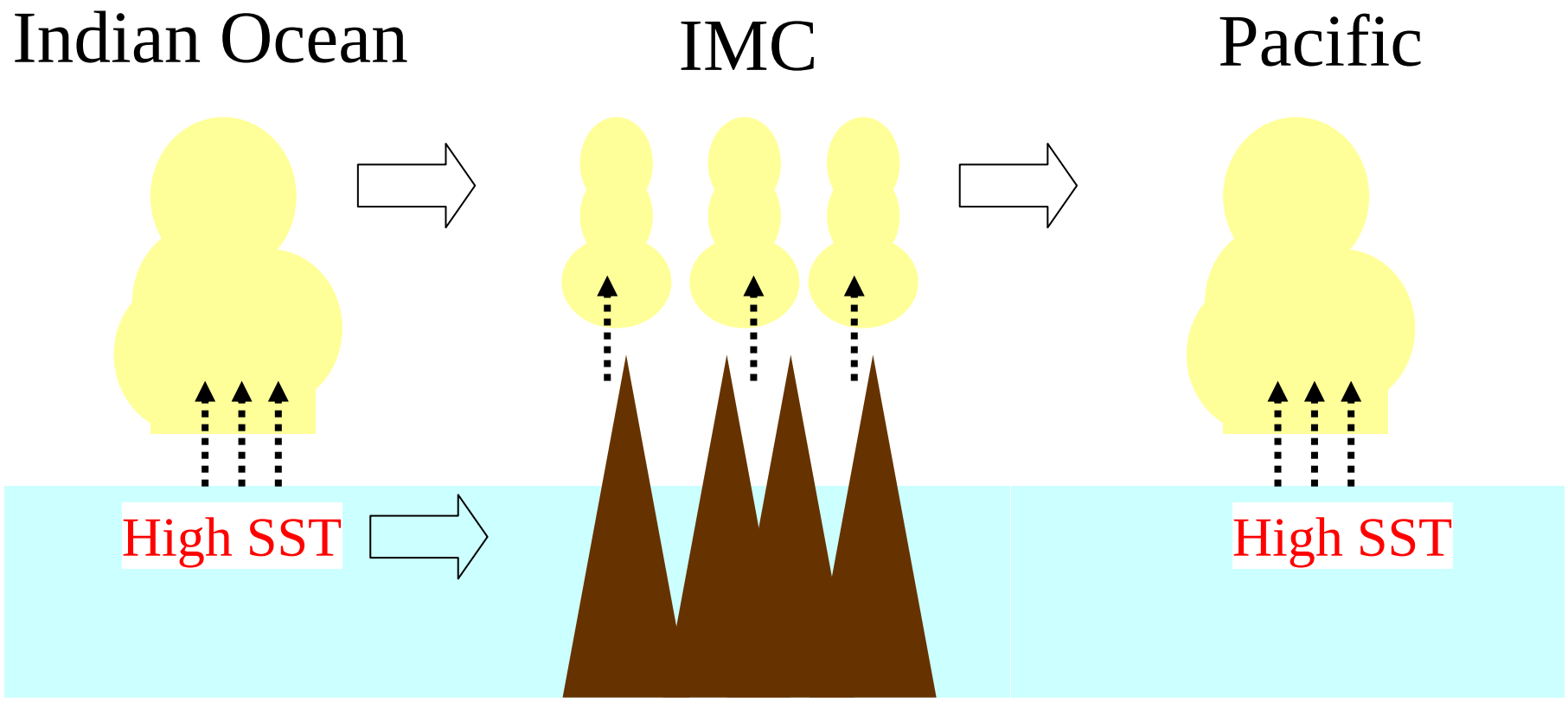
Hydrometeorological Array for ISV-Monsoon Automonitoring (HARIMAU)

IORGC/JAMSTEC **TISDA/BPPT**

Objectives

- Construction of **Radar-profiler network** over Indonesian Maritime Continent
- Observation of **Intra-Seasonal Variations** for understanding global climate

Intra-Seasonal Variations



Atmos.-Ocean coupled

Diurnal-cycle heating

"Mini El Nino"

Latent heating

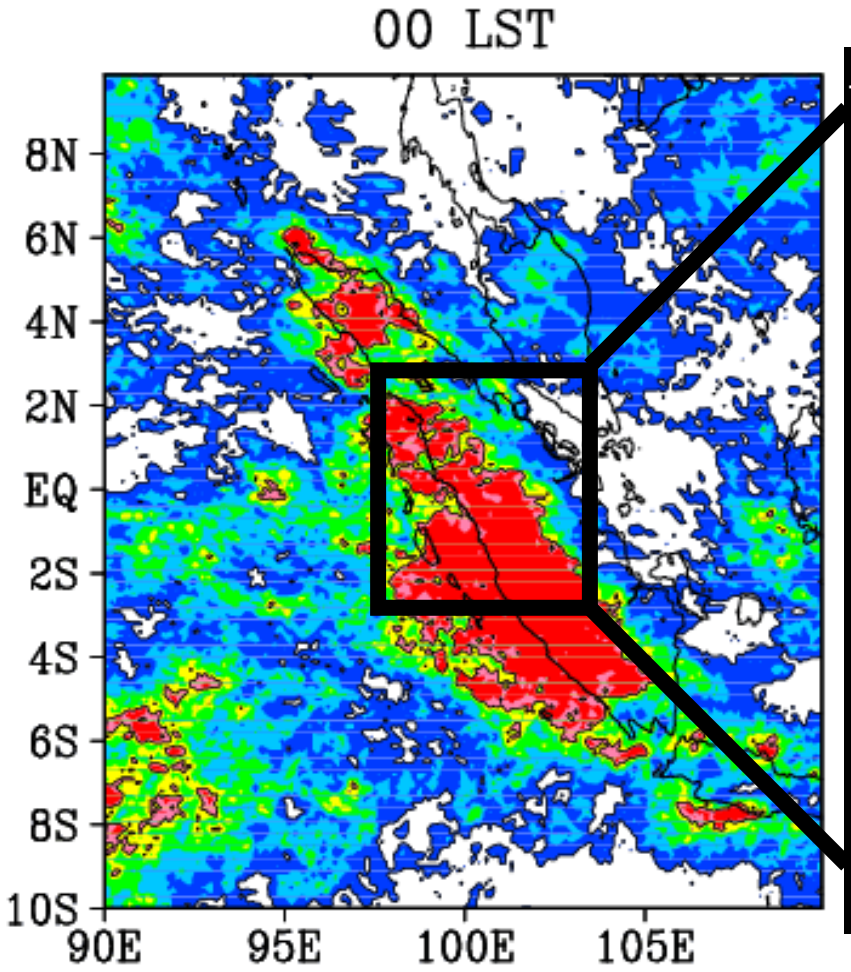
Sensible heating

Giant Diurnal Cycle over Sumatera

(Single station obs.: Renggono et al., 2001, *AG*; Murata et al., 2002, *JMSJ*; Wu et al., 2003, *JAM*)

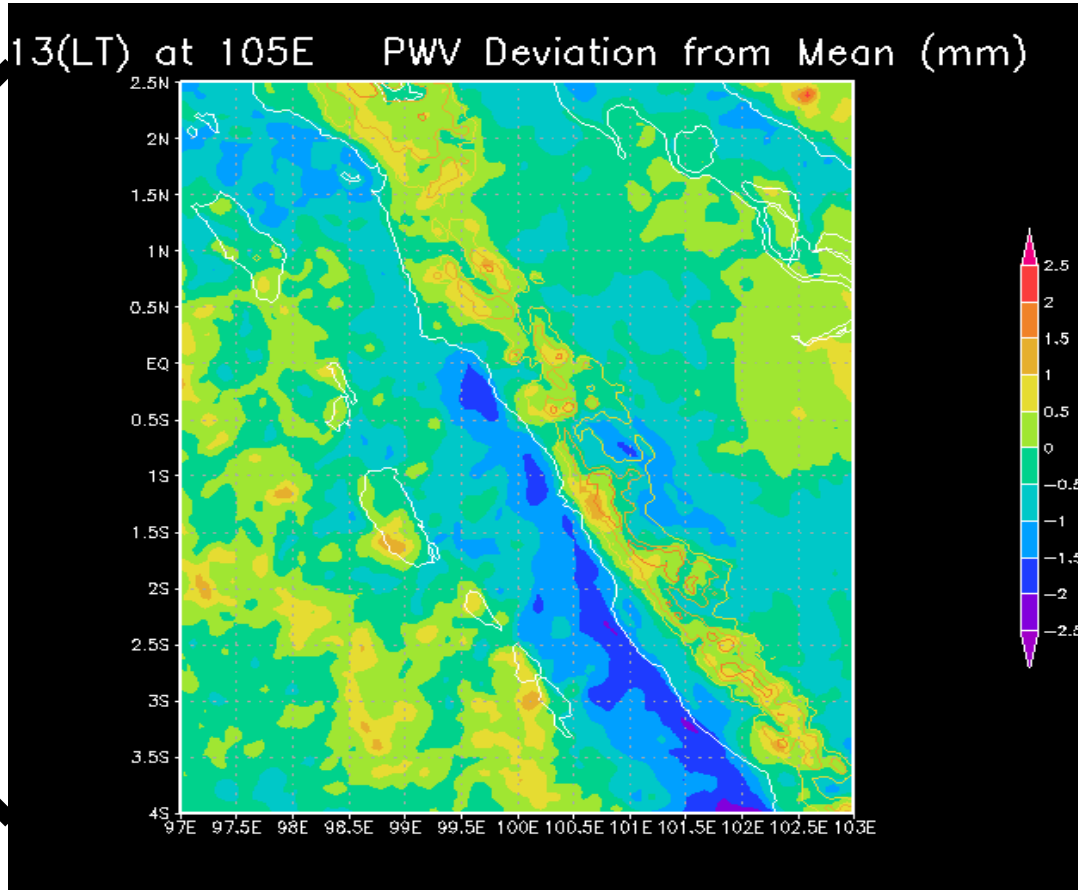
Satellite Observation

(Mori et al., 2004, *MWR*;
Sakurai et al., 2005, *JMSJ*)

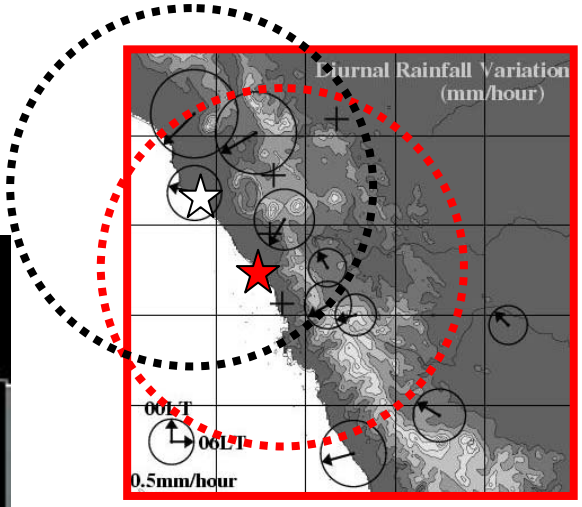


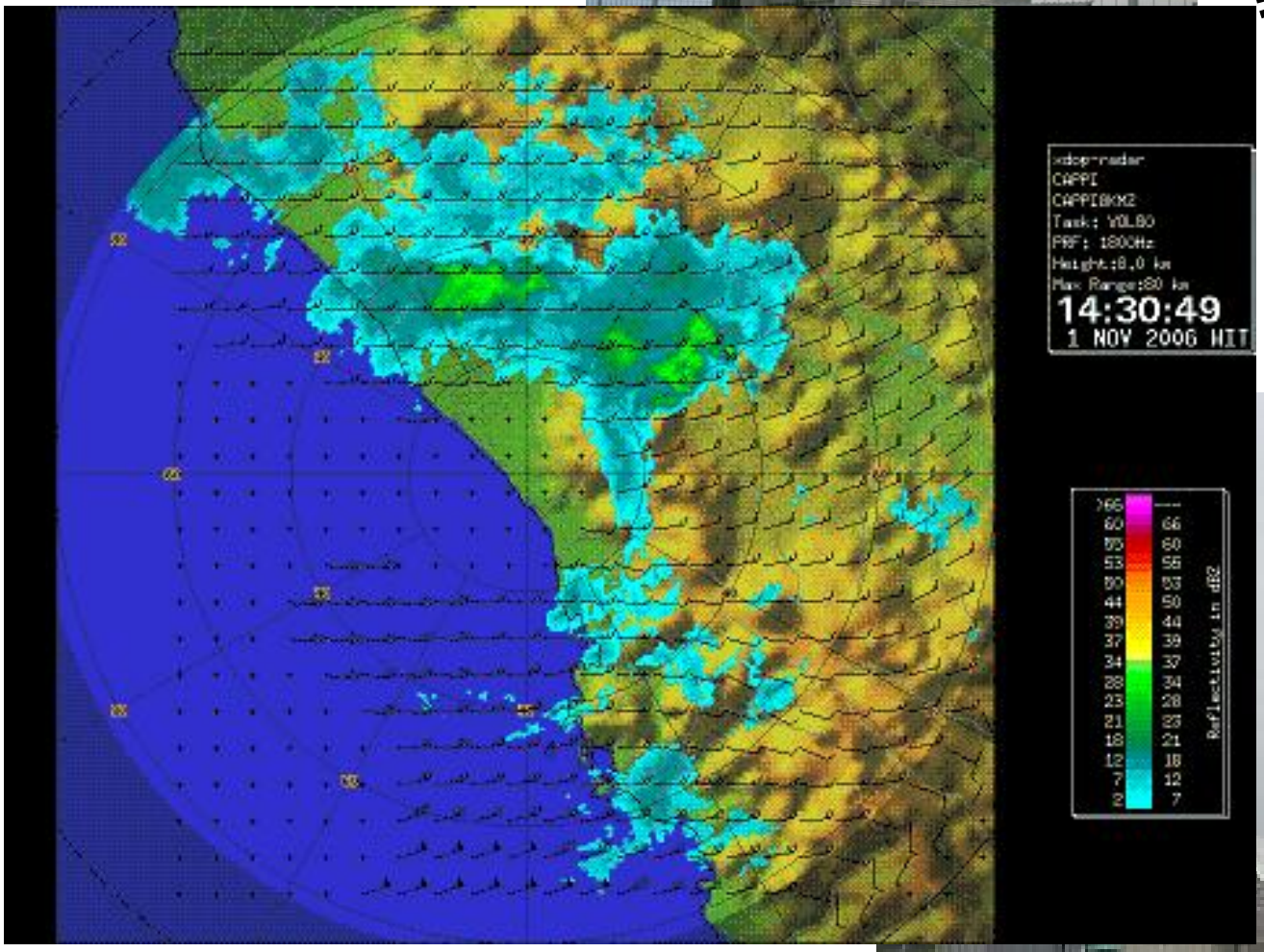
Numerical Modeling

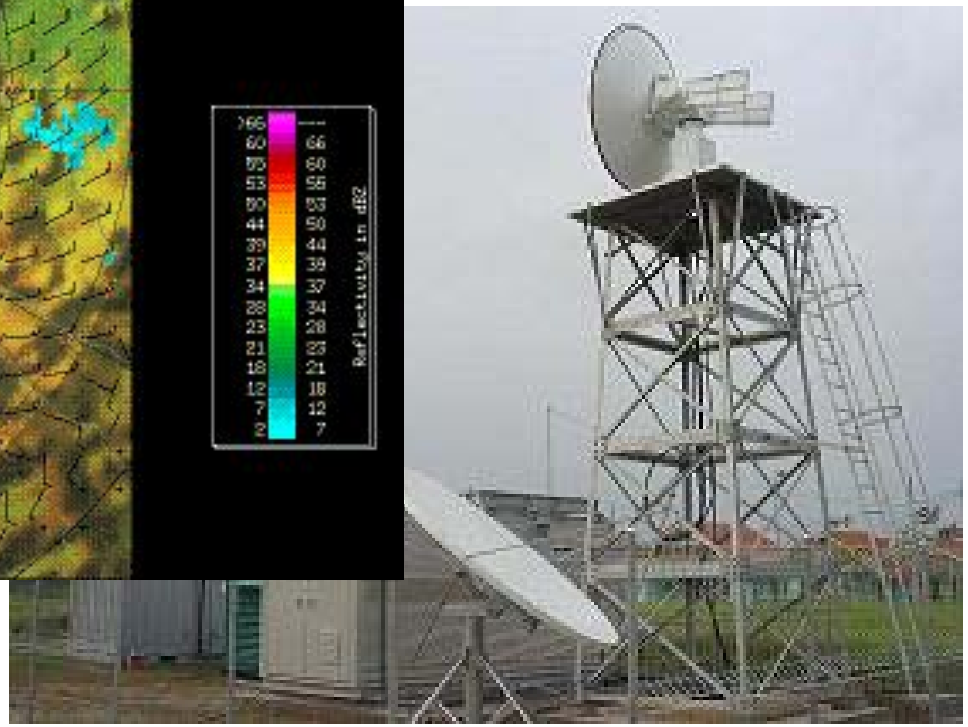
(Sasaki et al., 2004, *GRL*;
Wu et al., submitted to *JAS*)



MIA and Tiku XDR Stations, Sumatera





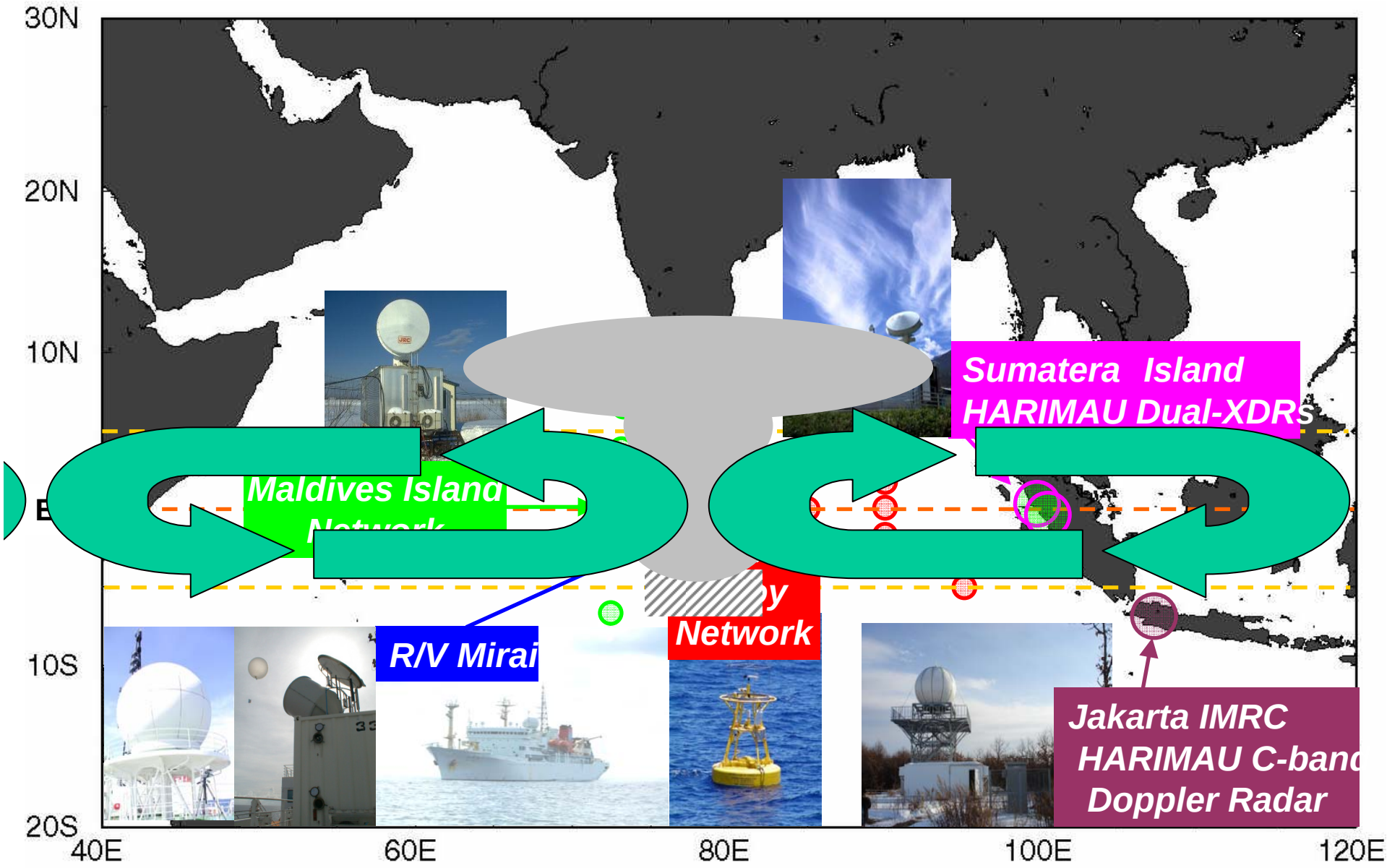


Realtime Display on Web

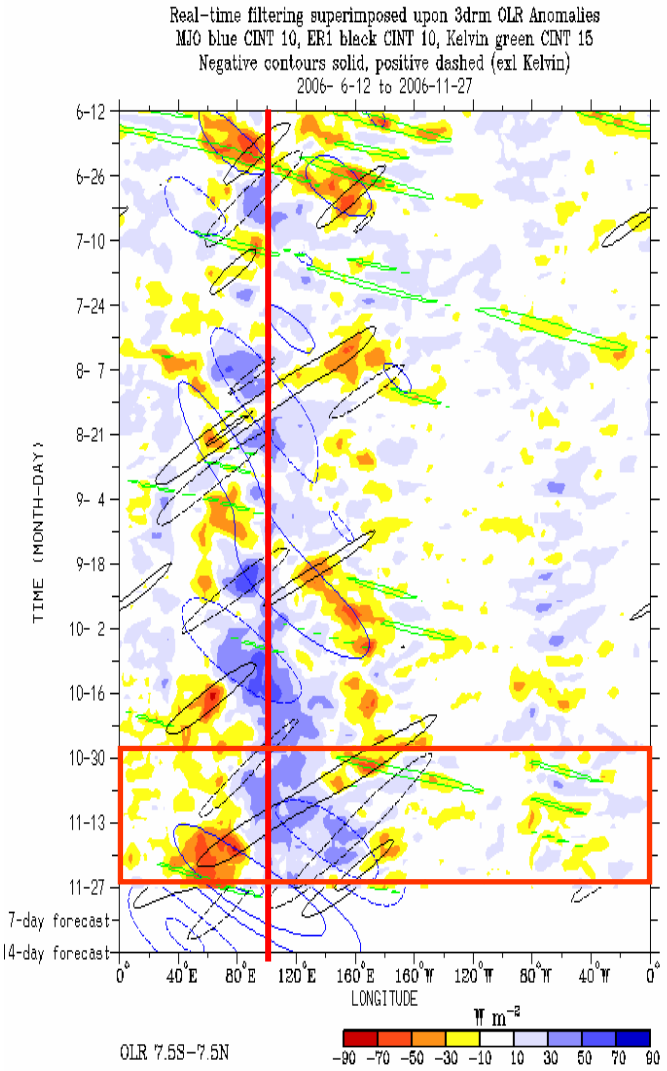
http://203.88.86.149/mia_xdr/index.html

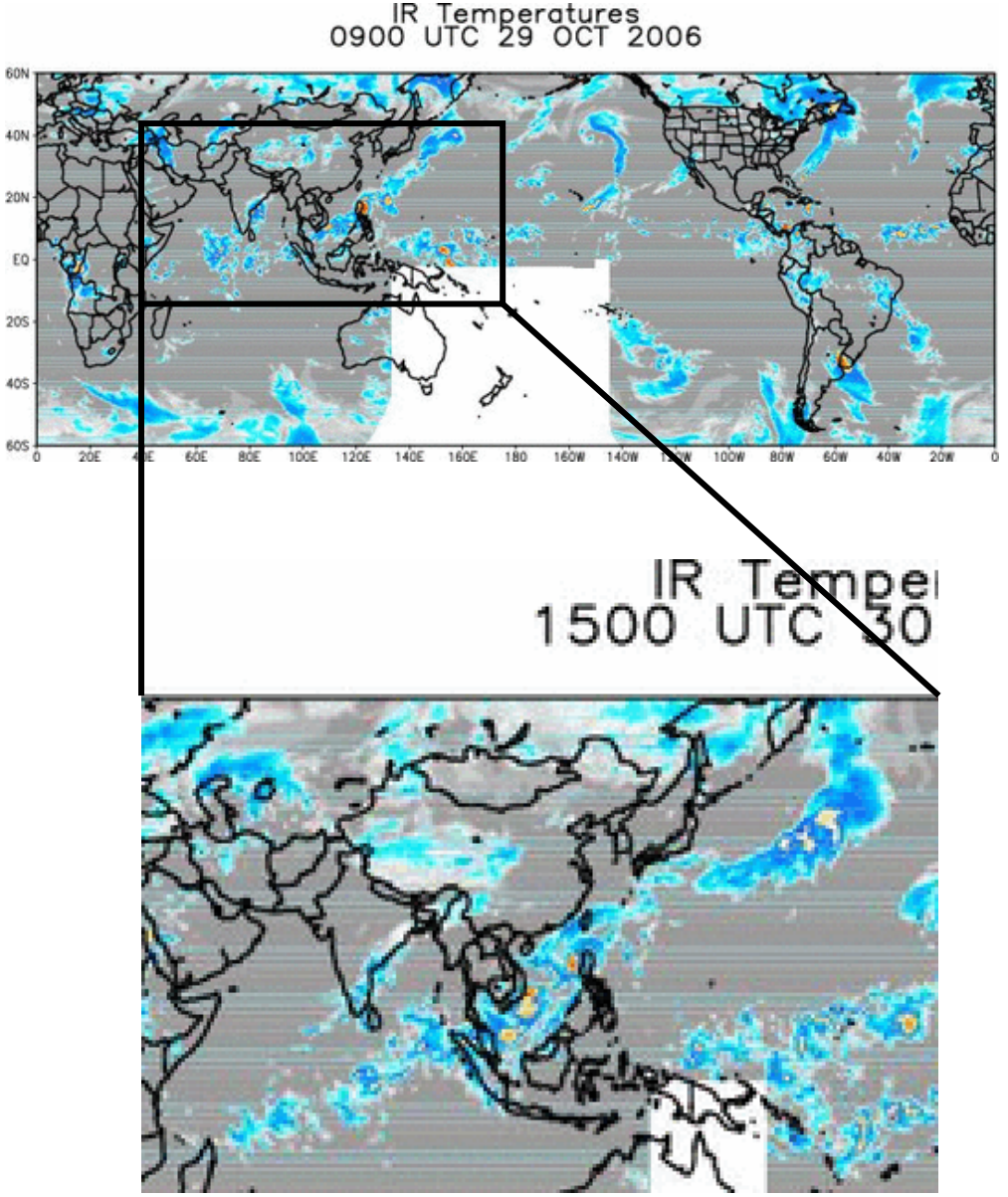
HARIMAU2006 with MISMO during October 23 – November 21, 2006

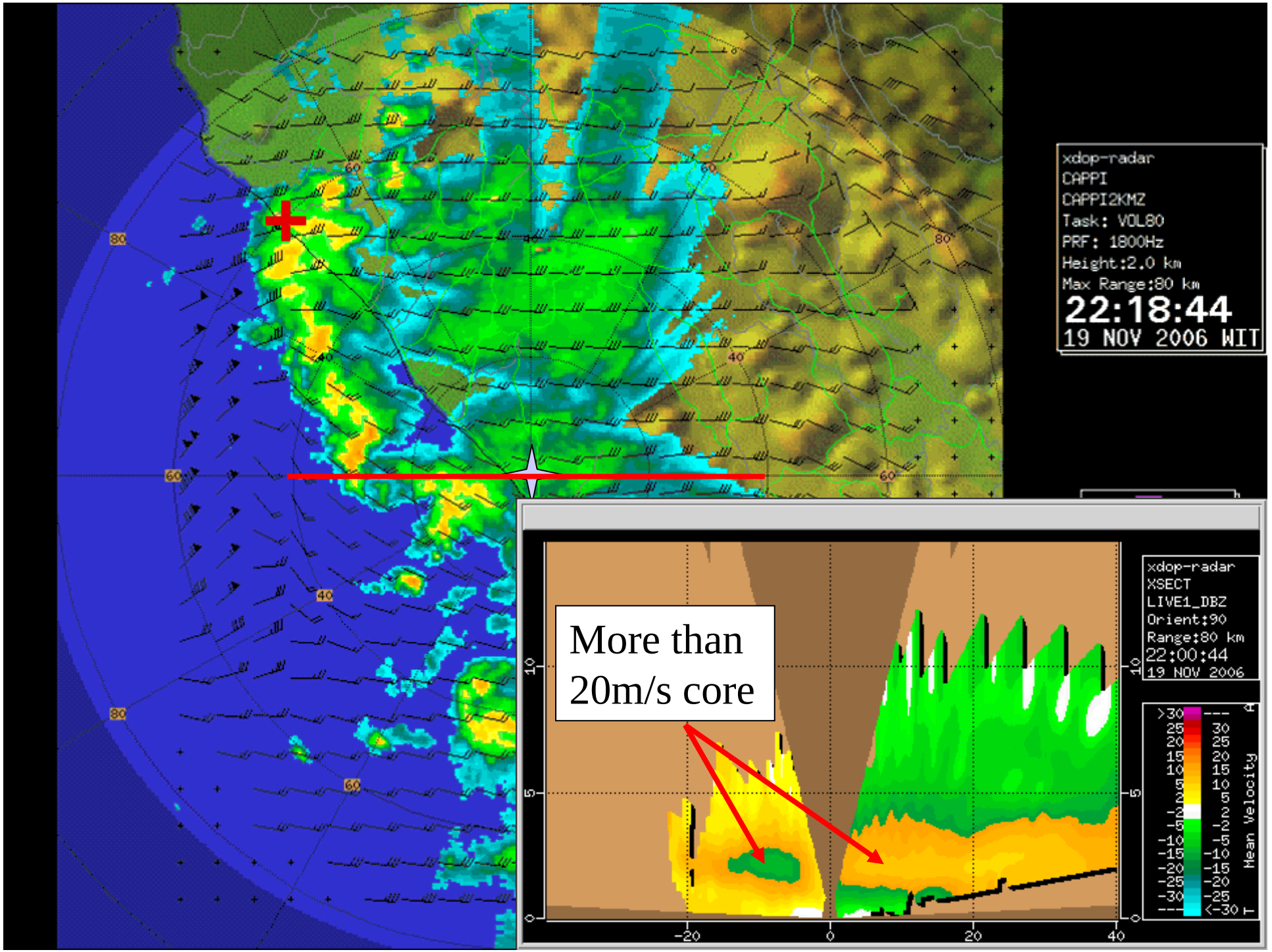
(MIRAI Indian Ocean cruise for the Study on MJO-convections Onset)



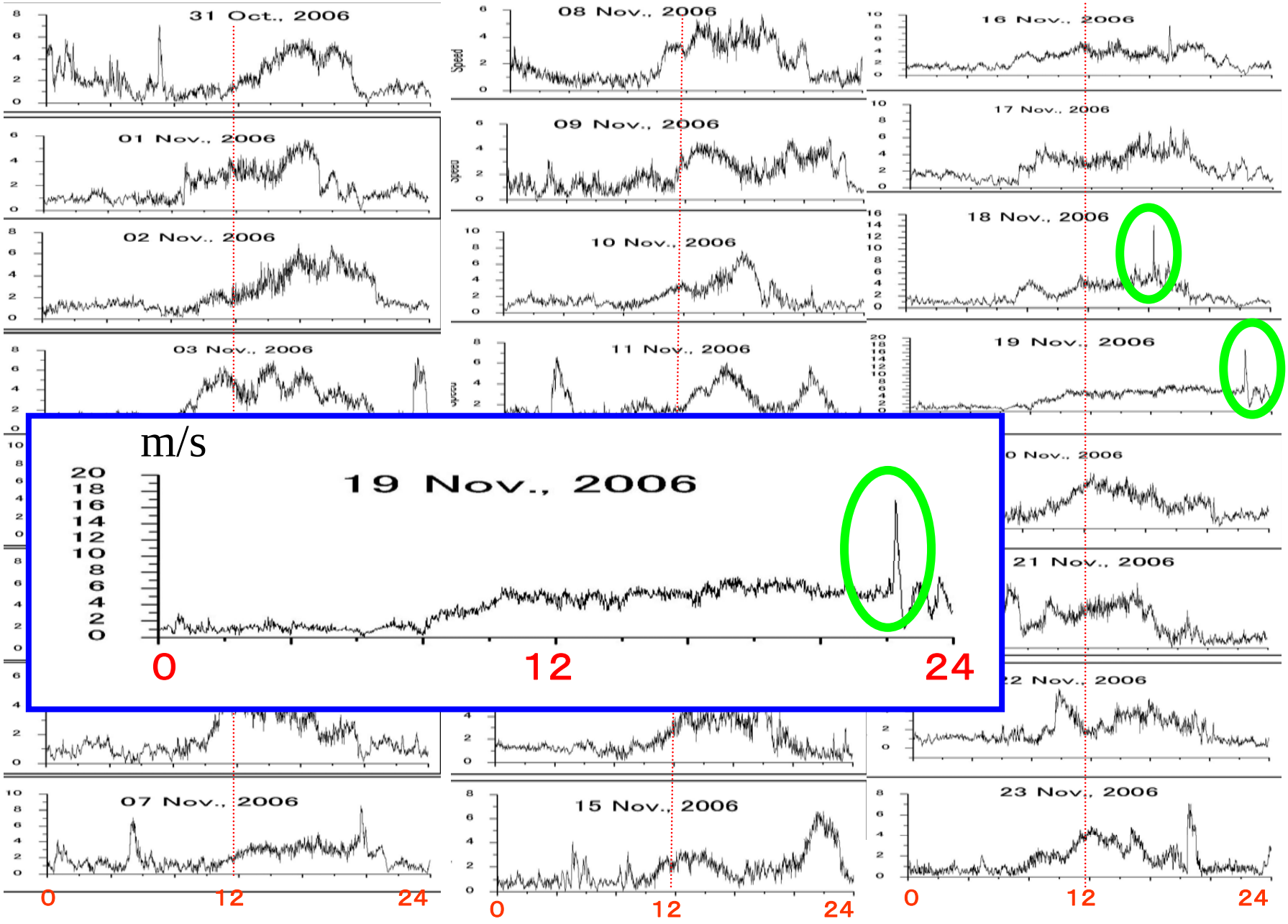
ISVs


Real-time filtering superimposed upon 3drm OLR Anomalies
MJO blue CINT 10, ER1 black CINT 10, Kelvin green CINT 15
Negative contours solid, positive dashed (exl Kelvin)
2006- 6-12 to 2006-11-27
TIME (MONTH-DAY)
6-12
6-26
7-10
7-24
8- 7
8-21
9- 4
9-18
10- 2
10-16
10-30
11-13
11-27
7-day forecast
14-day forecast
0° 40°E 80°E 120°E 160°E 160°W 120°W 80°W 40°W 0°
LONGITUDE
W m-2
-90 -70 -50 -30 -10 10 30 50 70 90
OLR 7.5S-7.5N

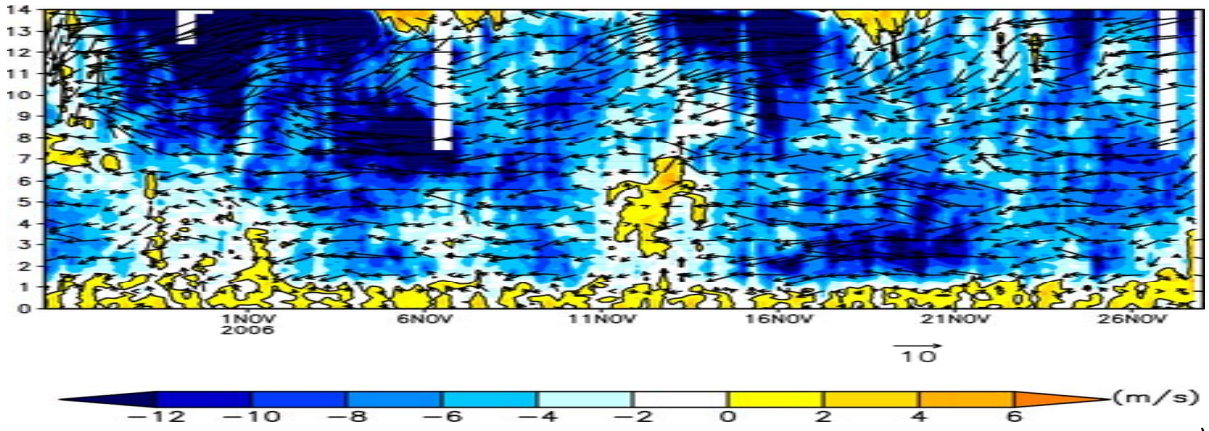

IR Temperatures
0900 UTC 29 OCT 2006
60N
40N
20N
EQ
20S
40S
60S
0 20E 40E 60E 80E 100E 120E 140E 160E 180 160W 140W 120W 100W 80W 60W 40W 20W 0
IR Tempe
1500 UTC 30

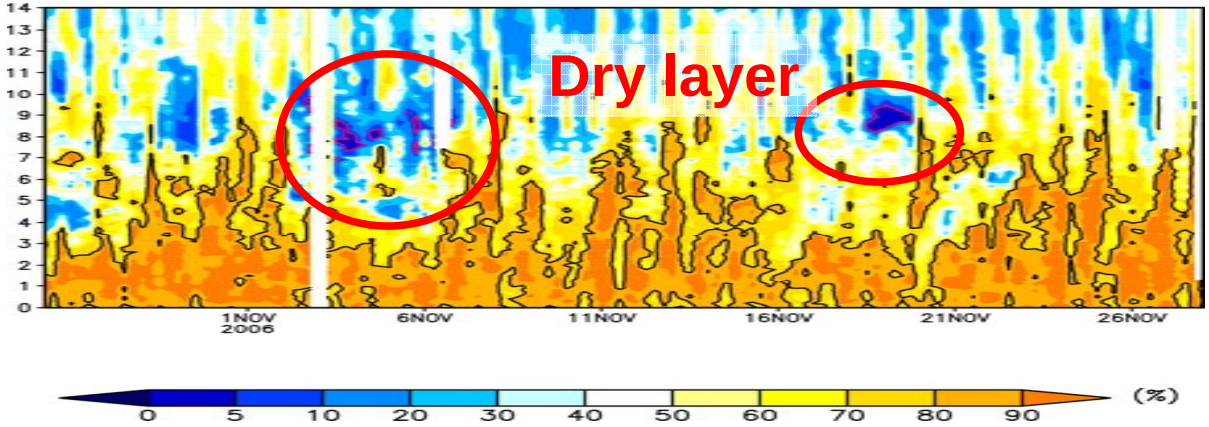

xdop-radar
CAPPI
CAPPI2KMZ
Task: VOL80
PRF: 1800Hz
Height:2.0 km
Max Range:80 km
22:18:44
19 NOV 2006 WIT
More than
20m/s core
xdop-radar
XSECT
LIVE1_DBZ
Orient:90
Range:80 km
22:00:44
19 NOV 2006
Mean Velocity

Tiku surface wind

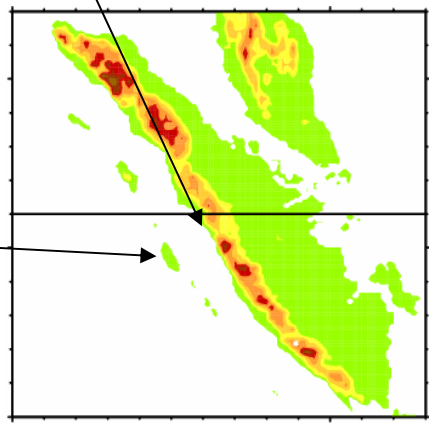


Rawinsonde intense obs. during HARIMAU-MISMO

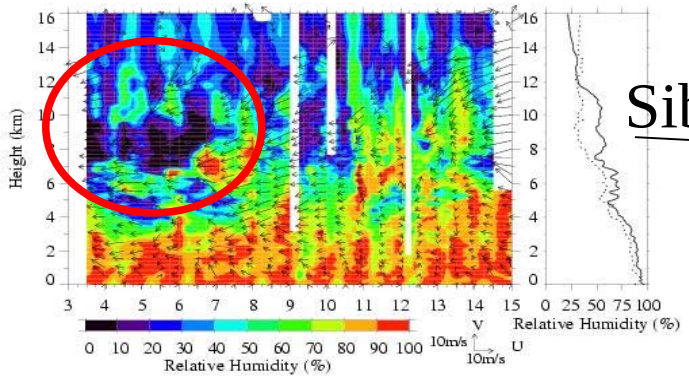




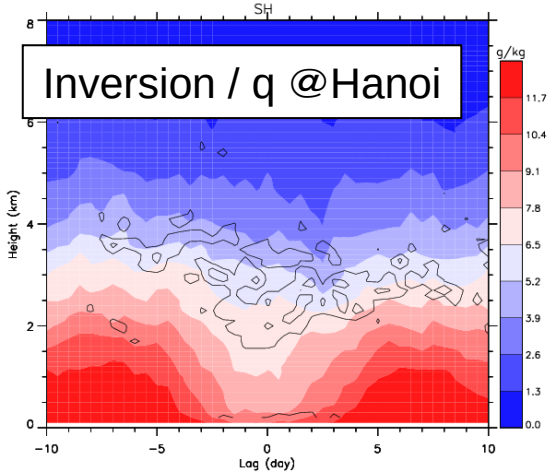
Tabing/Padang

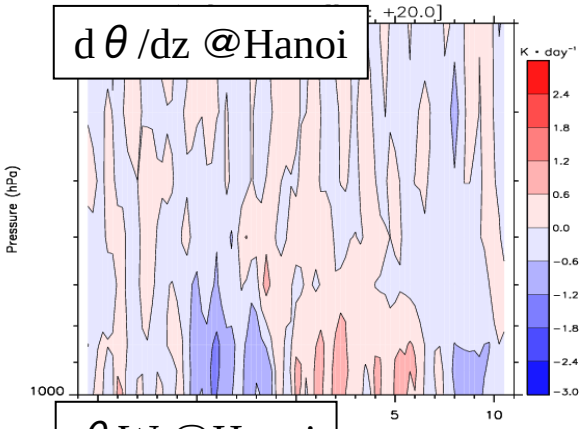


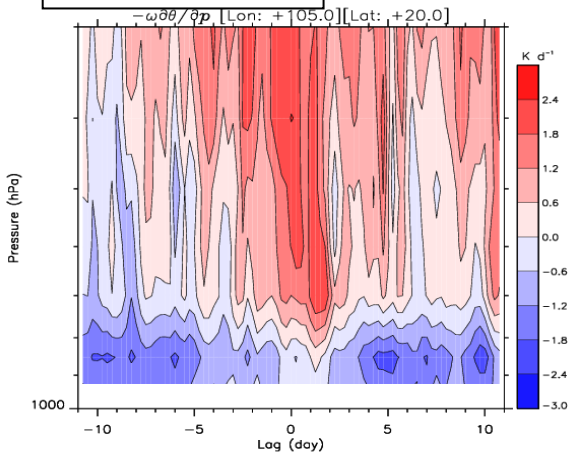
Sibert Island

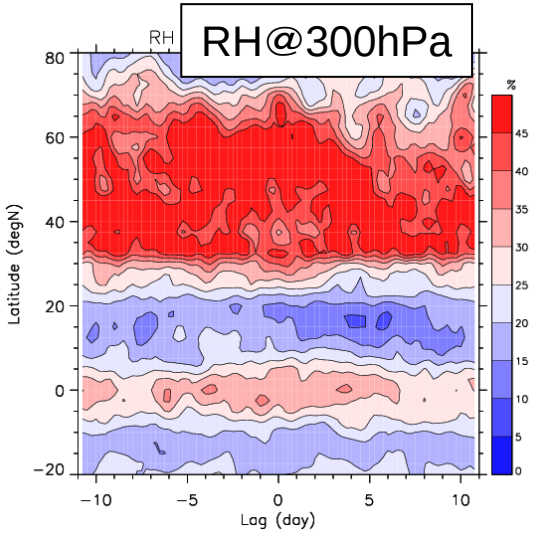


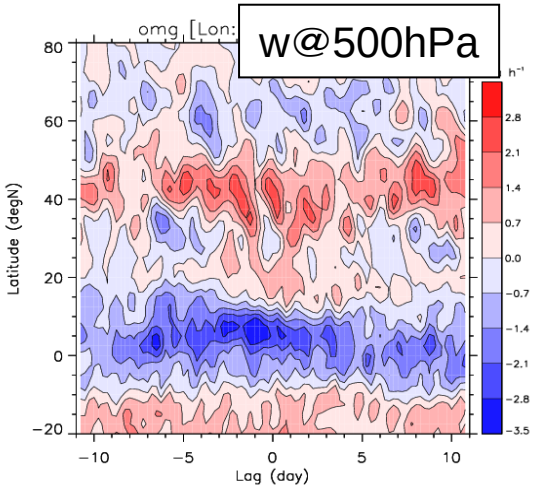
Inversion layer over Indochina (Hanoi, Oct-Nov 2006) and equatorial convection

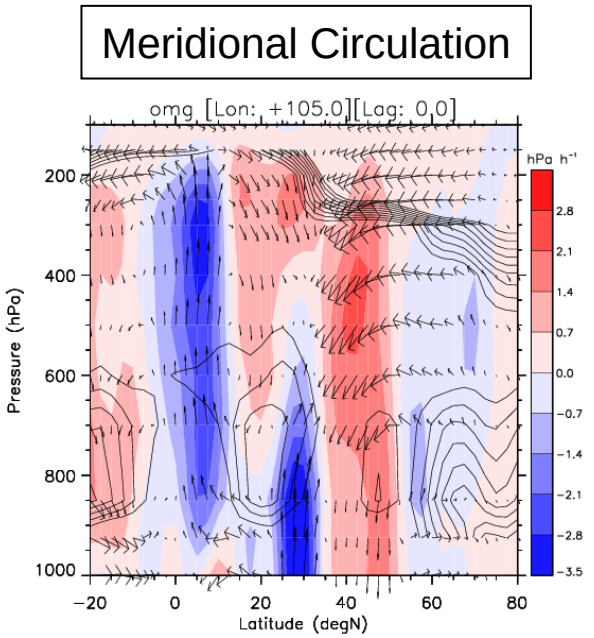




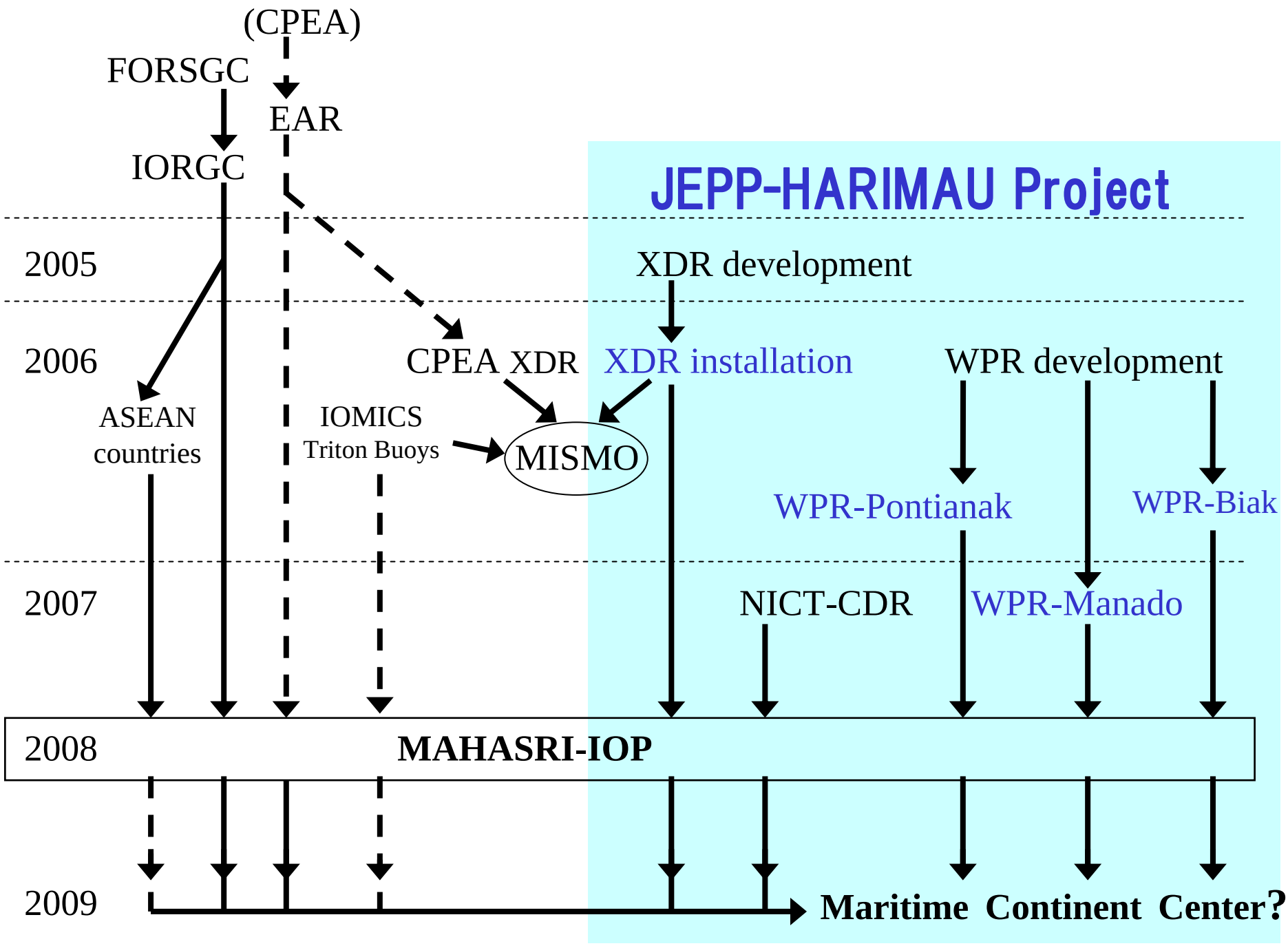








Ogino, Tachibana, Nguyen et al. (in preparation)

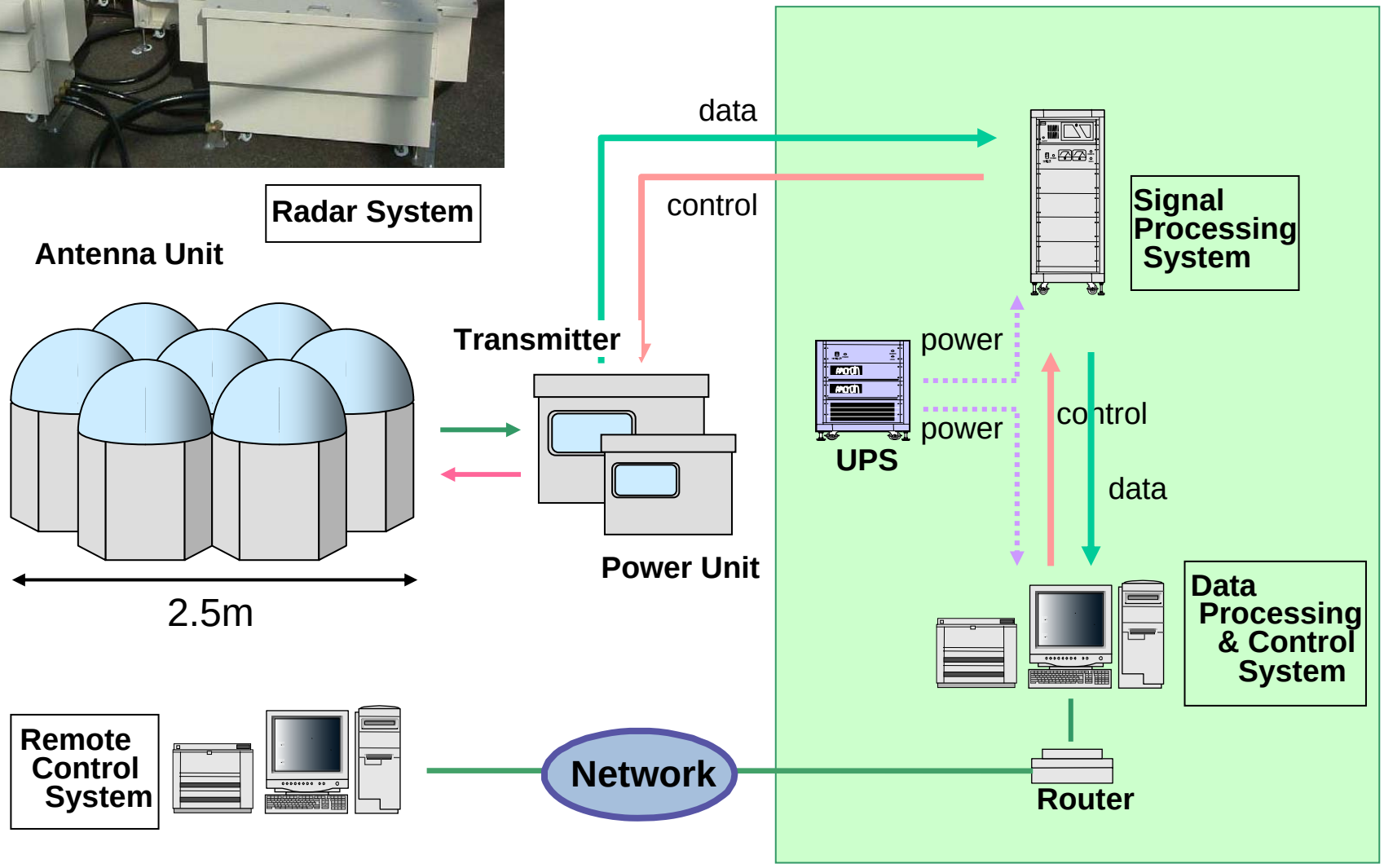

(CPEA)
FORSGC
EAR
IORGC
JEPP-HARIMAU Project
2005
XDR development
2006
CPEA XDR
XDR installation
WPR development
ASEAN
countries
IOMICS
Triton Buoys
MISMO
WPR-Pontianak
WPR-Biak
2007
NICT-CDR
WPR-Manado
2008
MAHASRI-IOP
2009
Maritime Continent Center?

L-band Wind Profilers

(1357.5 MHz, 2 kW)

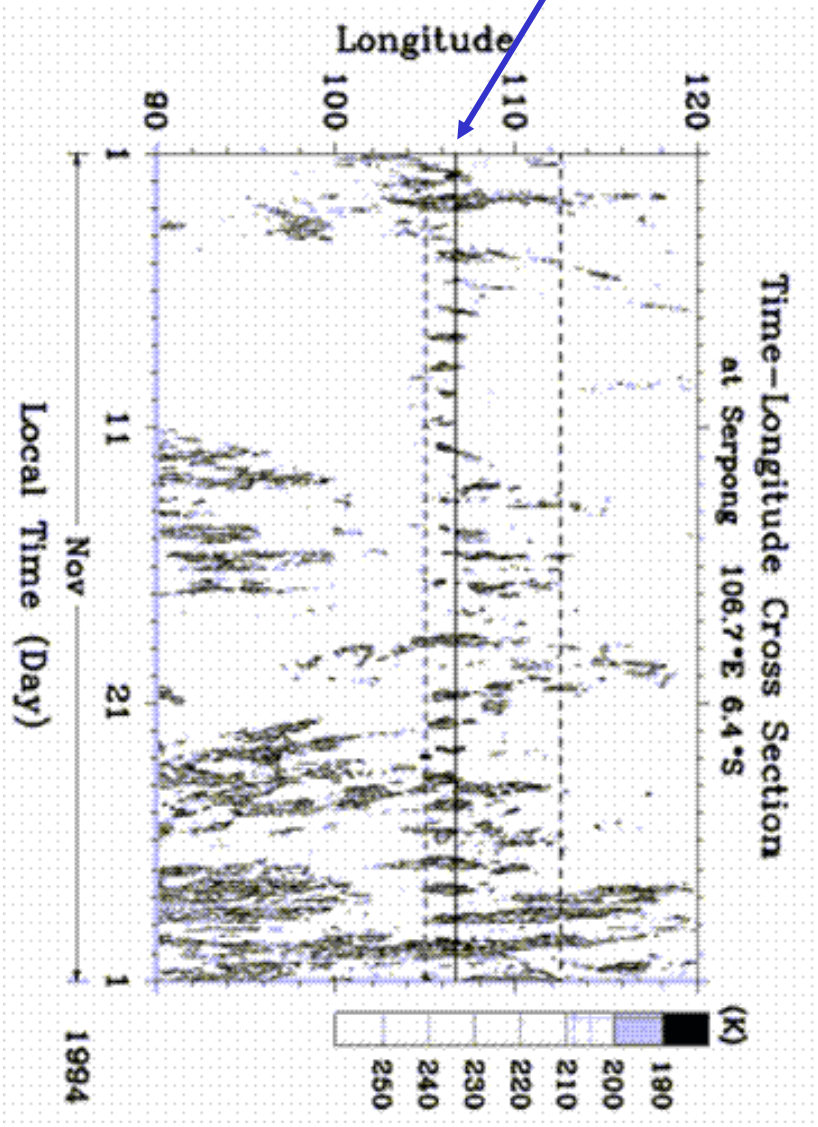
Hashiguchi, Yamamoto et al./RISH-Kyoto University

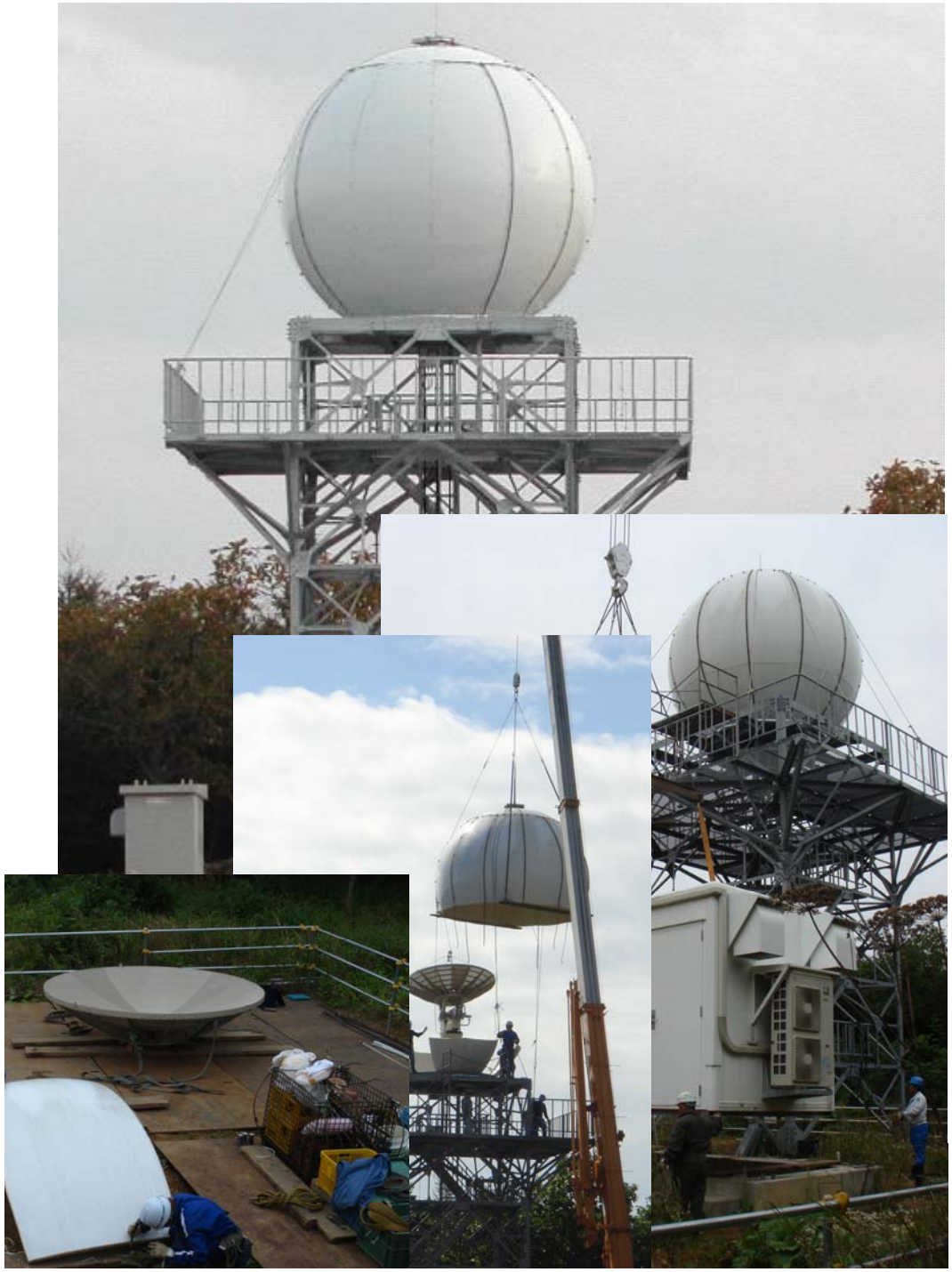
To be installed at Pontianak, Biak and Manado



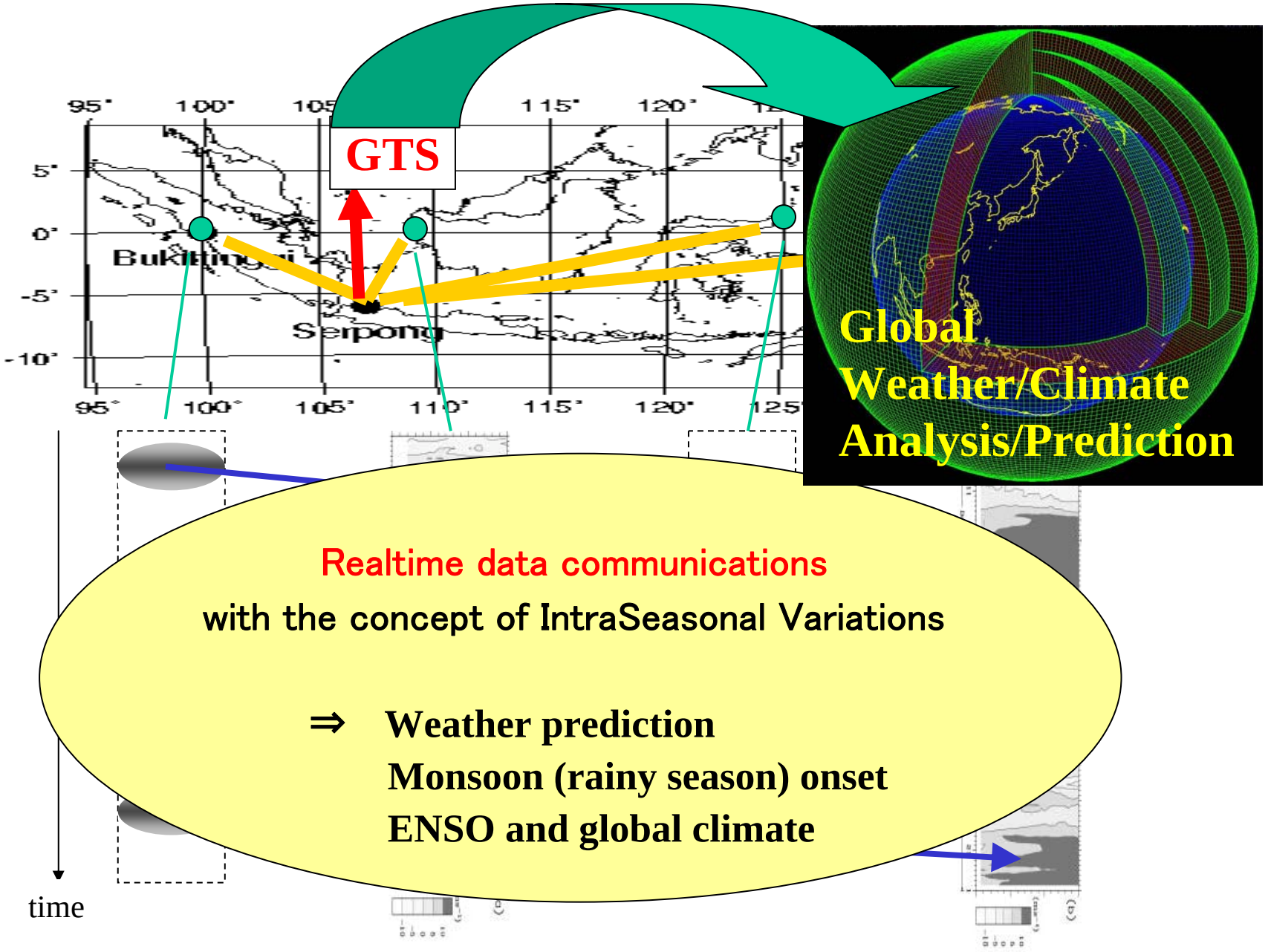
CDR transferred from NICT

To be re-installed near Jakarta,
an area of most dominant
ISV-diurnal cycle interactions





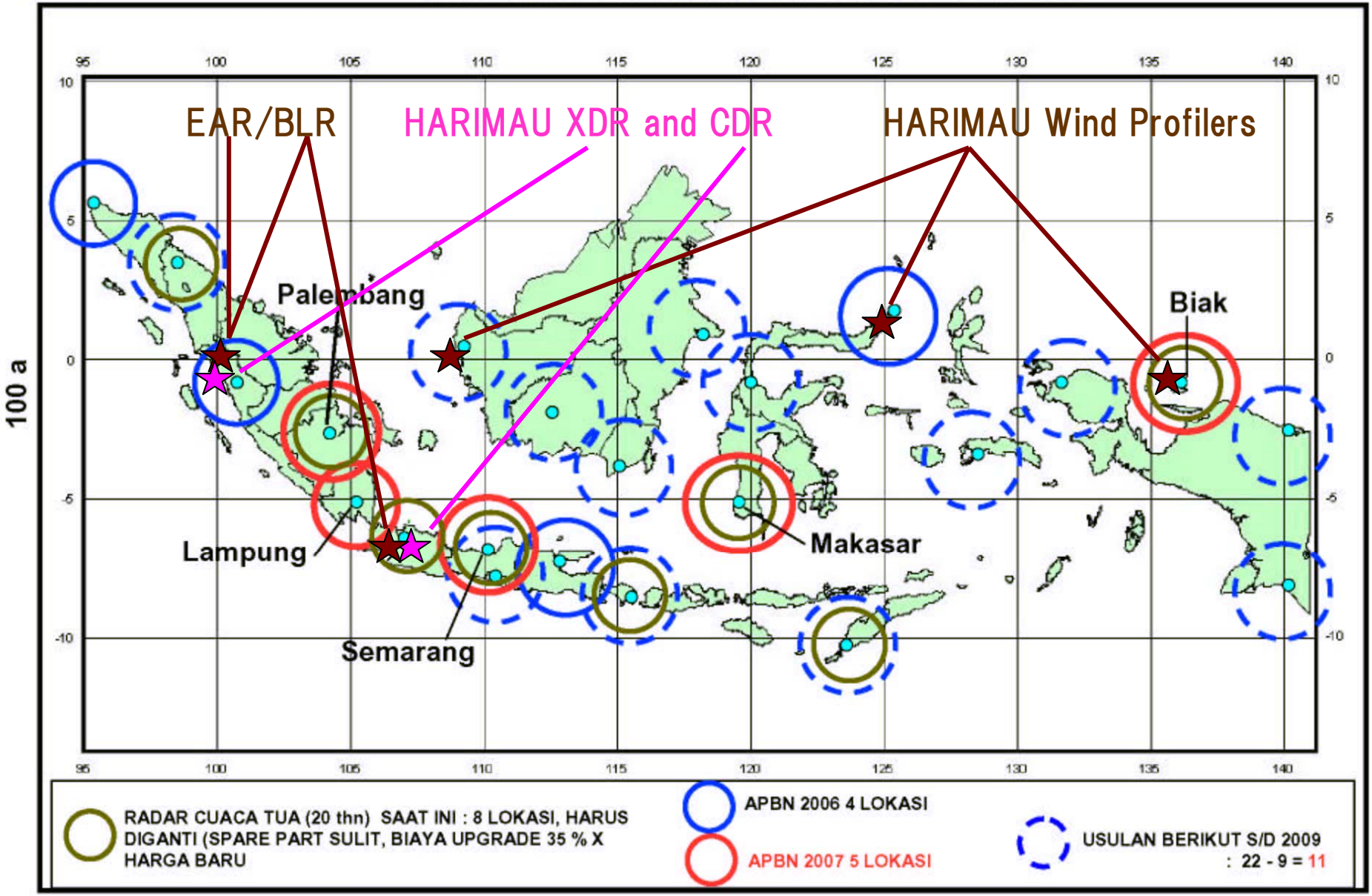
Expected Social Applications



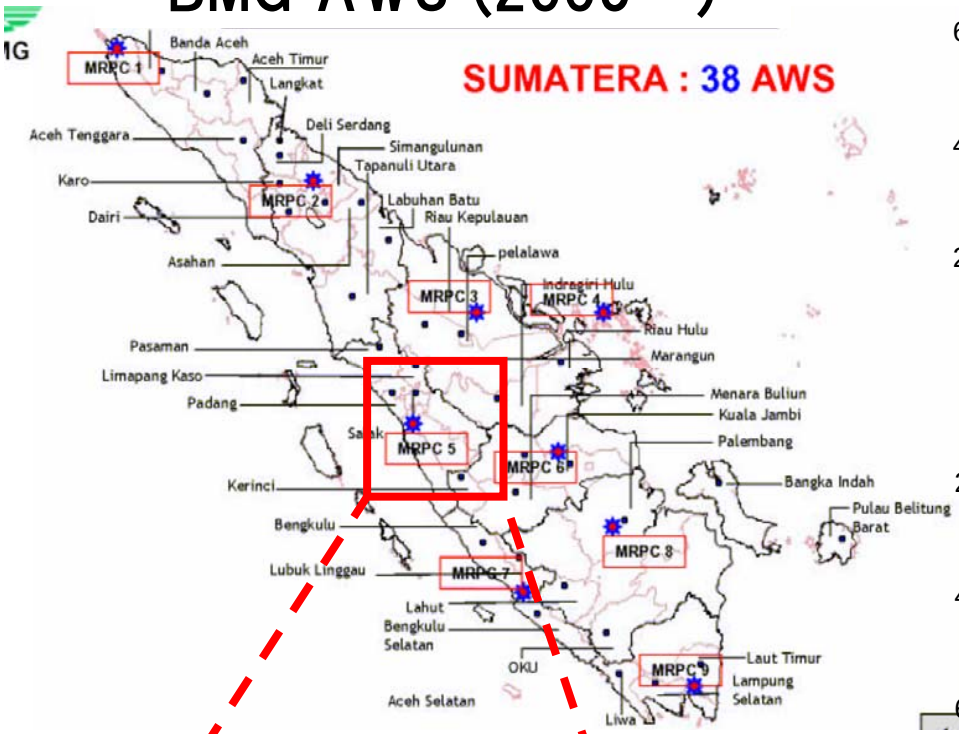
BMG

RADAR CUACA C - BAND - NETWORK

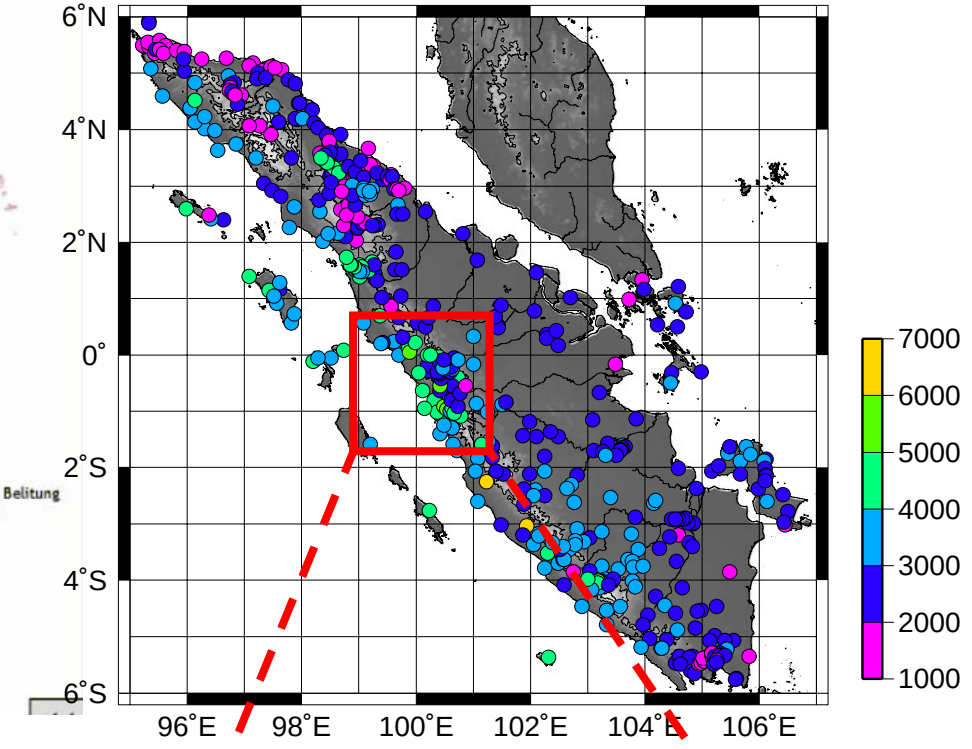
JUMLAH IDEAL RADAR CUACA : 22 LOKASI

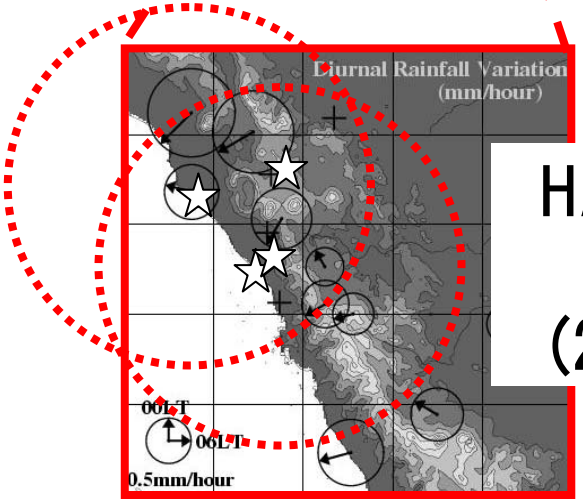


BMG AWS (2006～)

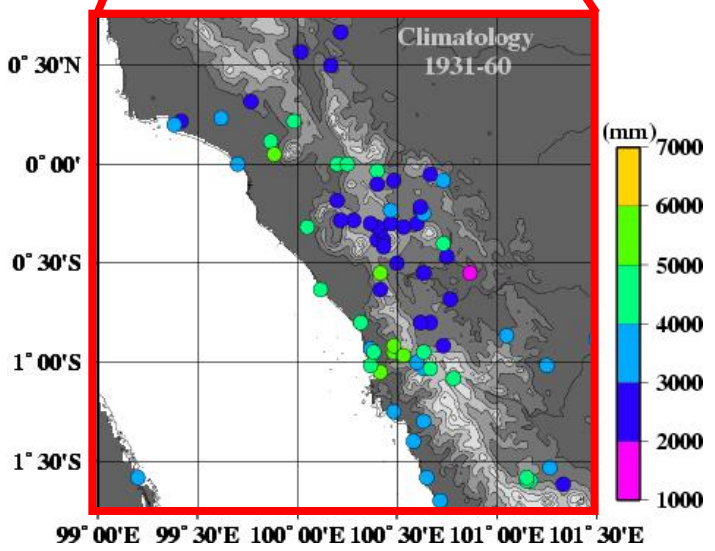


Annual Rainfall(1930～60)





HARIMAU Radars (2006～)



(Hamada et al,)

Hydrometeorological Array for ISV-Monsoon Automonitoring_(HARIMAU)