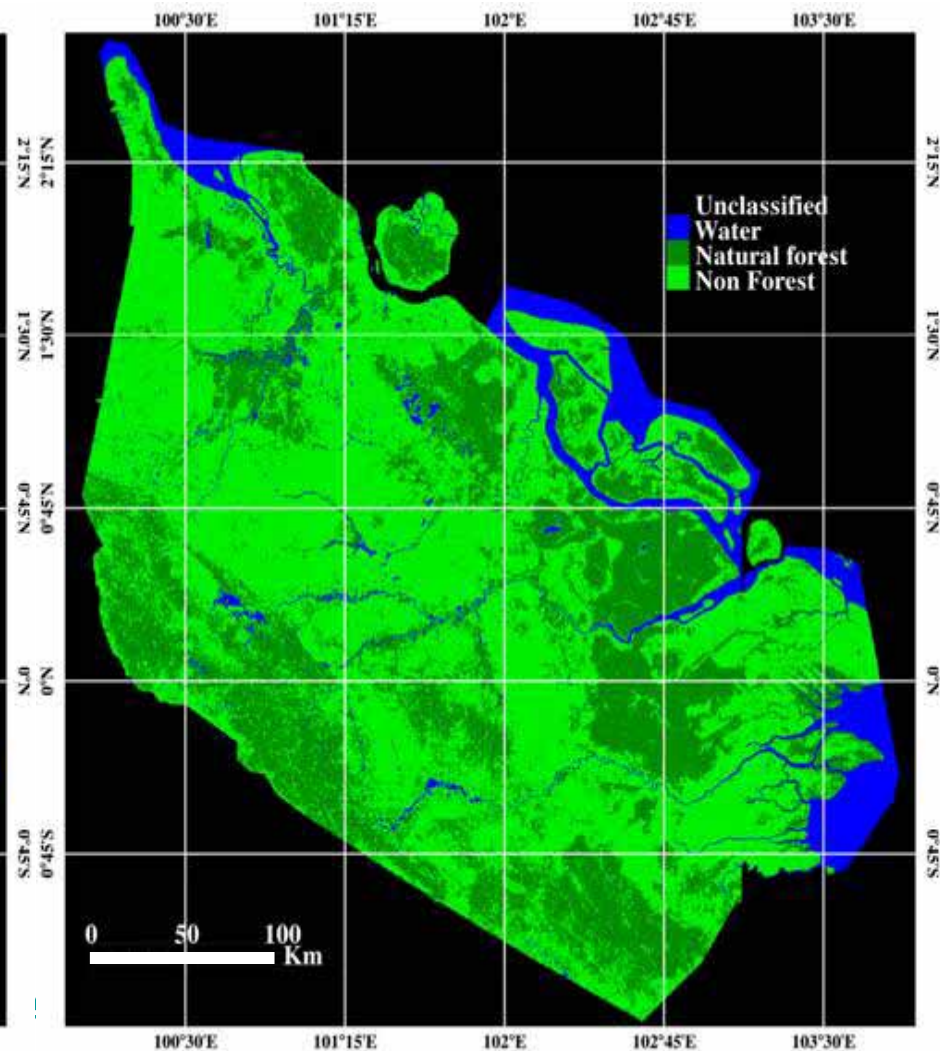
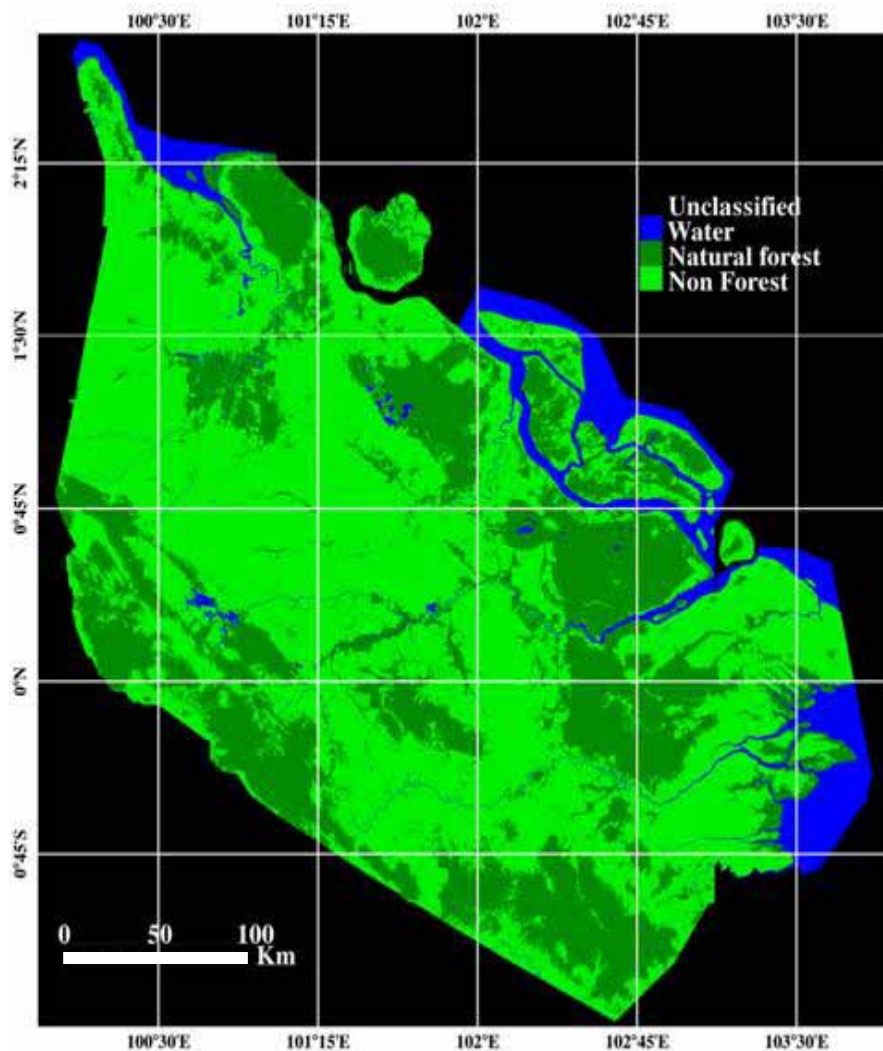


– Forest classification at 50m resolution over Riau province, Indonesia

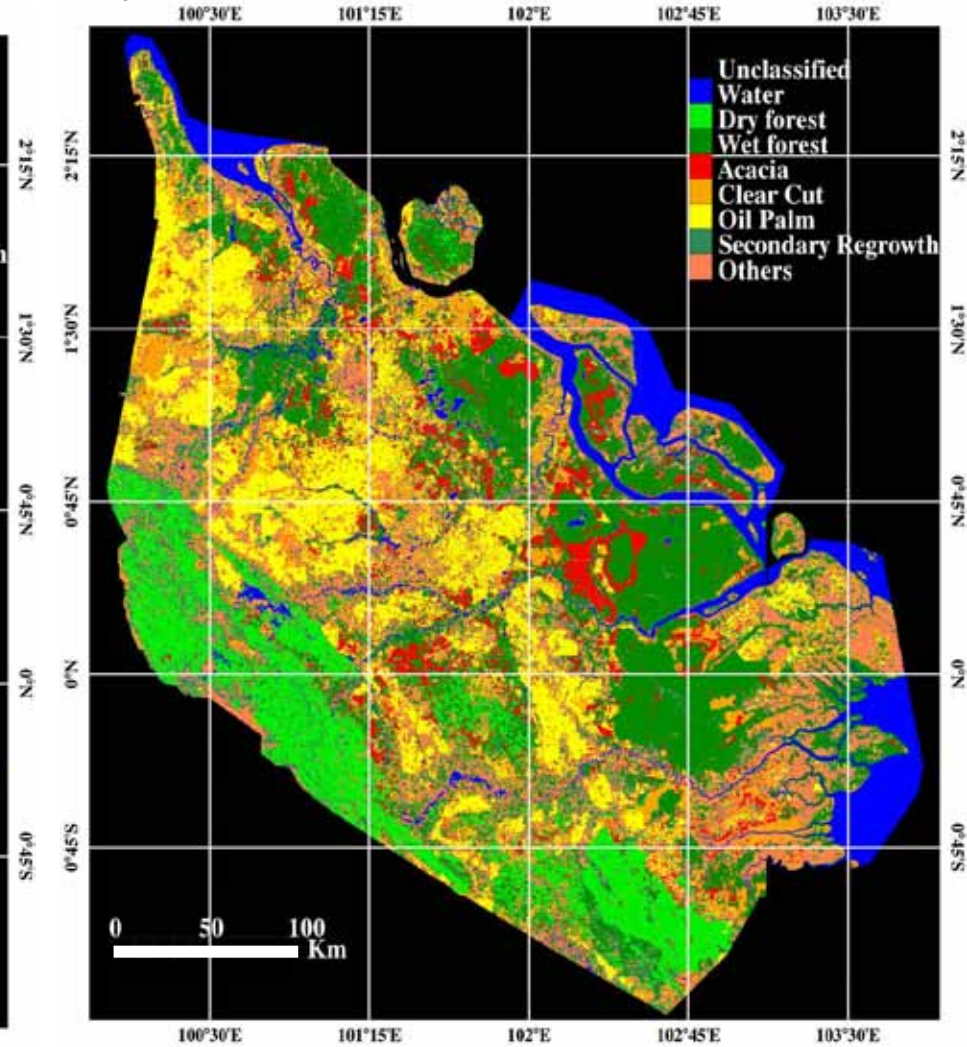
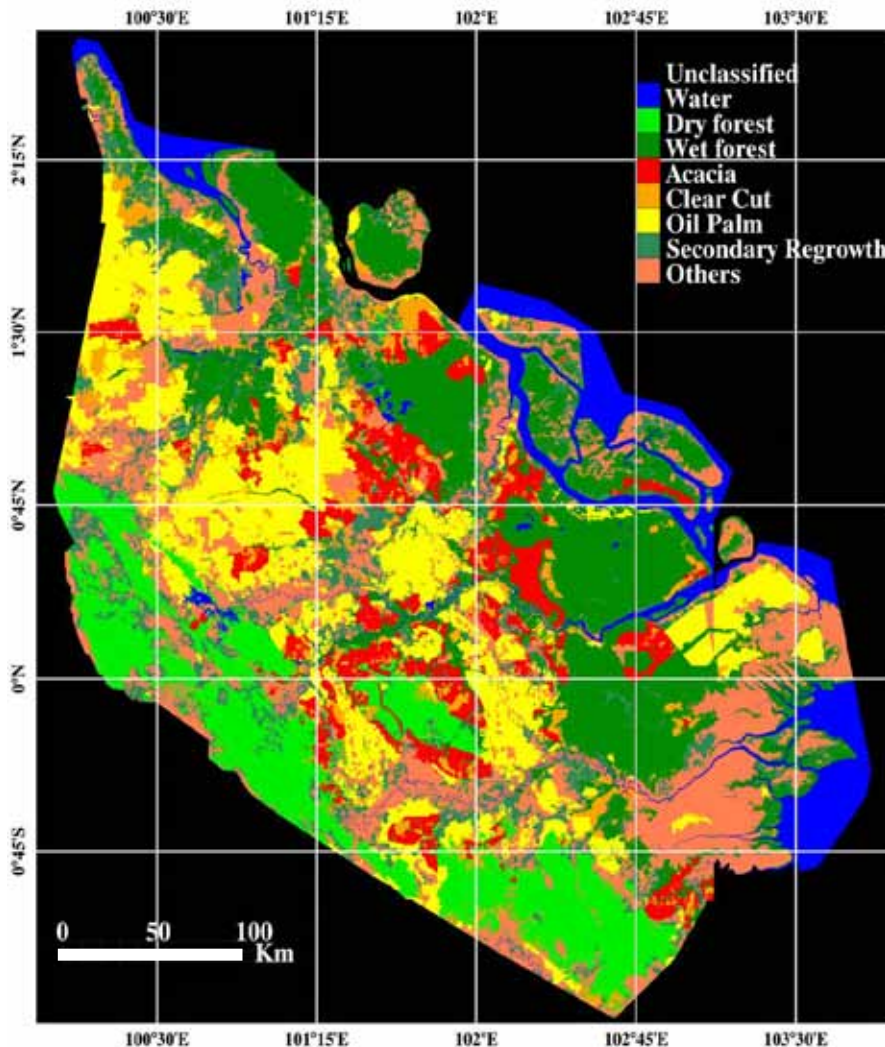
– Size: 111 186,5 km²

Accuracy 37.816.387 /
44.474.591 (85 %)

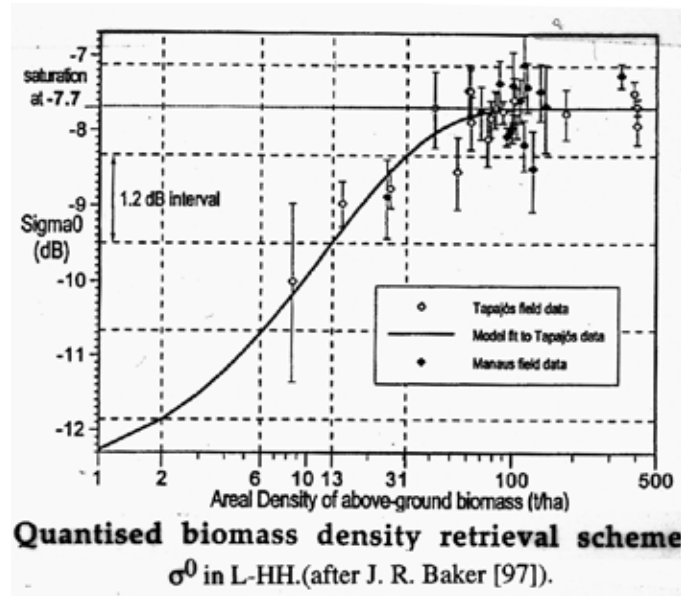
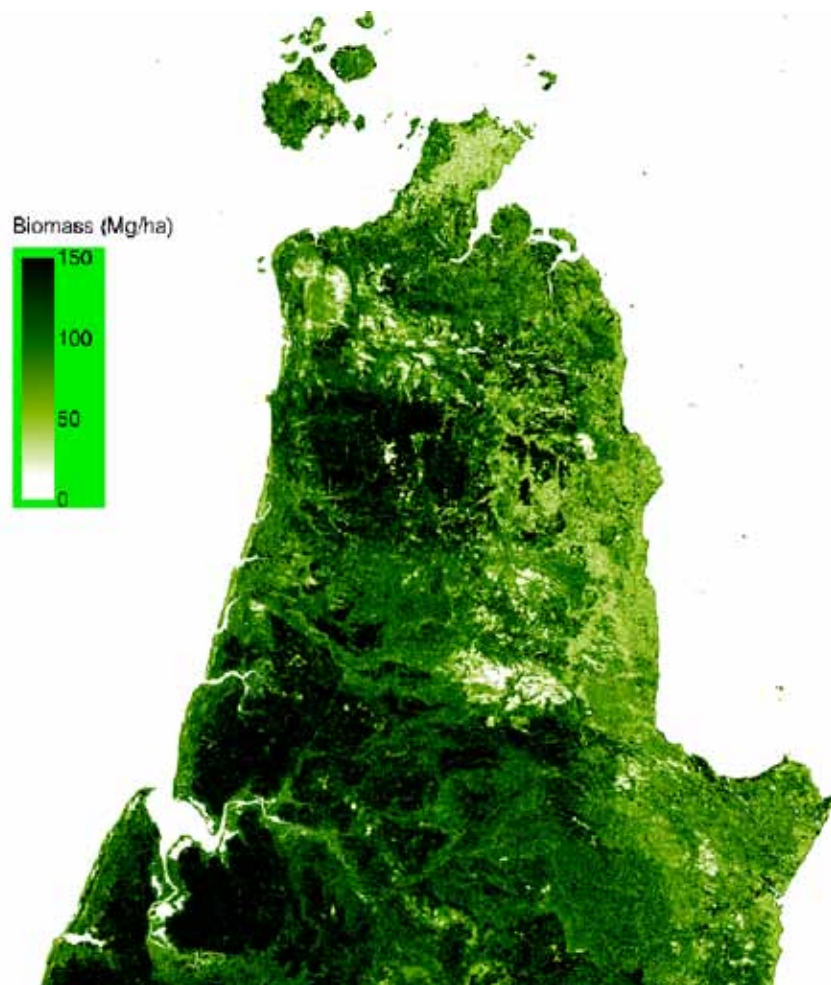


– Land cover classification at 50m resolution over Riau province, Indonesia

- Important criteria: time consumption for the learning phase
 - Small training dataset ($\approx 22\ 000$ pixels) compared to data to process ($\approx 44\ 000\ 000$ pixels)



Estimation of the forest biomass under the KC initiatives



Courtesy to R. Lucas

Biomass estimation was expanded to 200t/ha using the HV polarizations.

JERS-1 SAR Kalimantan

50km

JERS-1 SAR Kalimantan

50km

JERS-1 SAR Kalimantan

50km

19900820

ALOS/PALSAR Kalimantan

50km

20080912

20080820

20080809

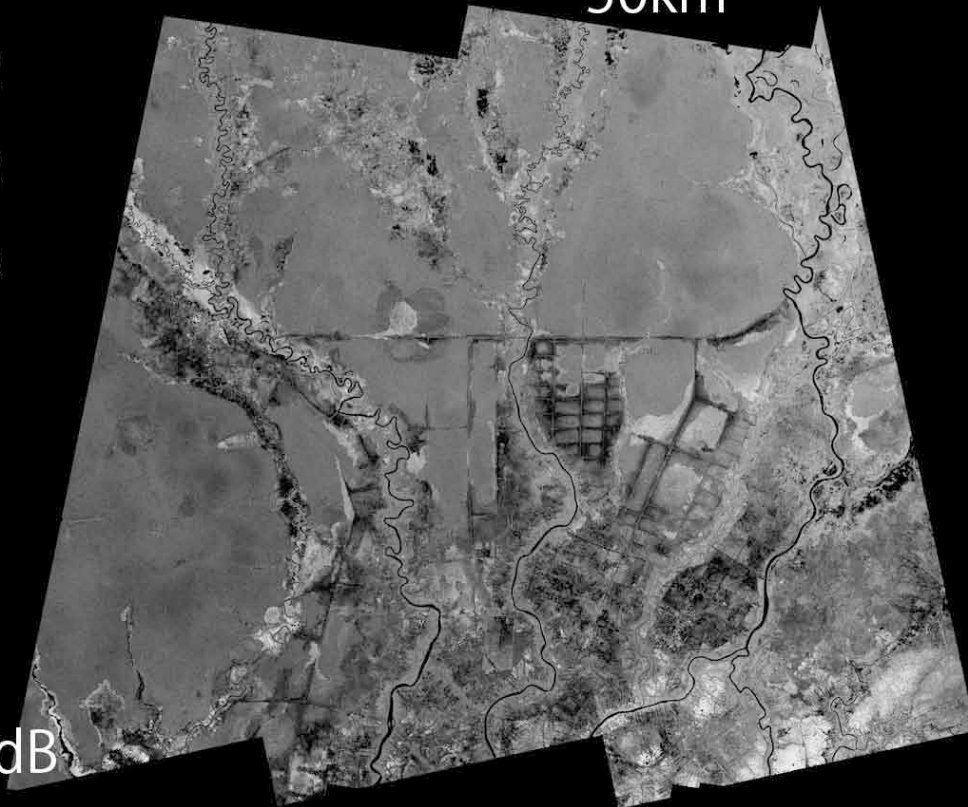
-1

-10

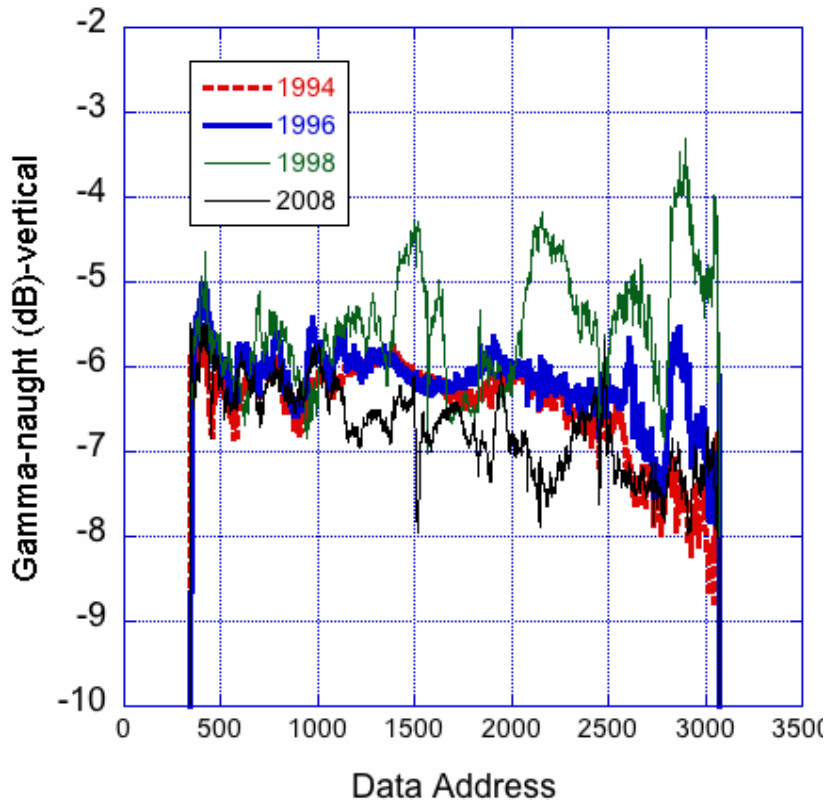
-10

-10

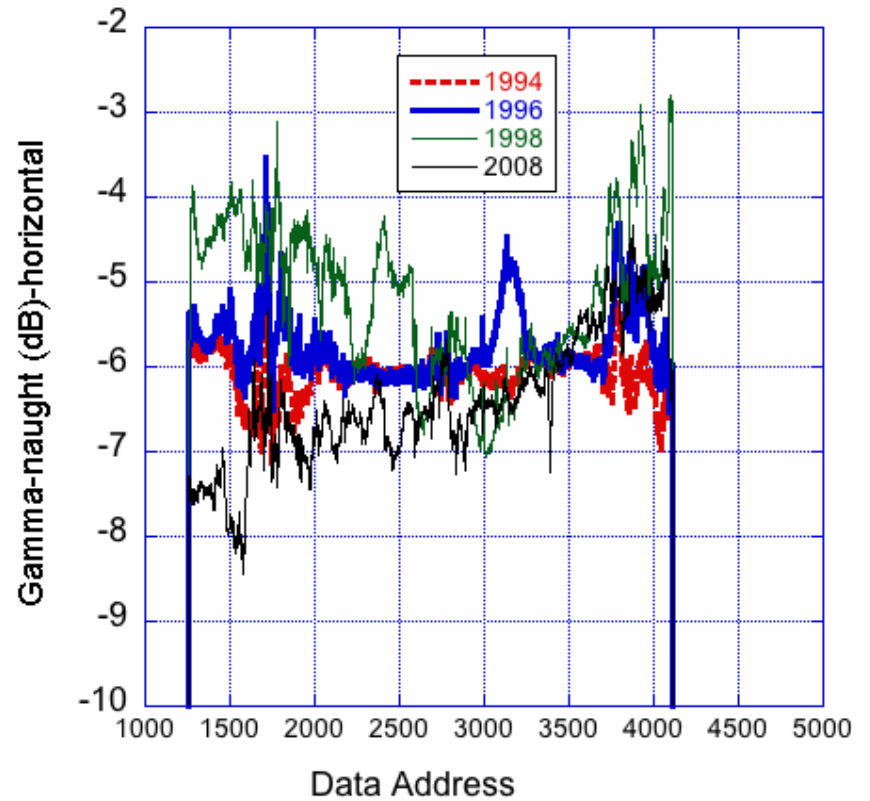
0dB



10 years variation of gamma-naught at Kalimantan

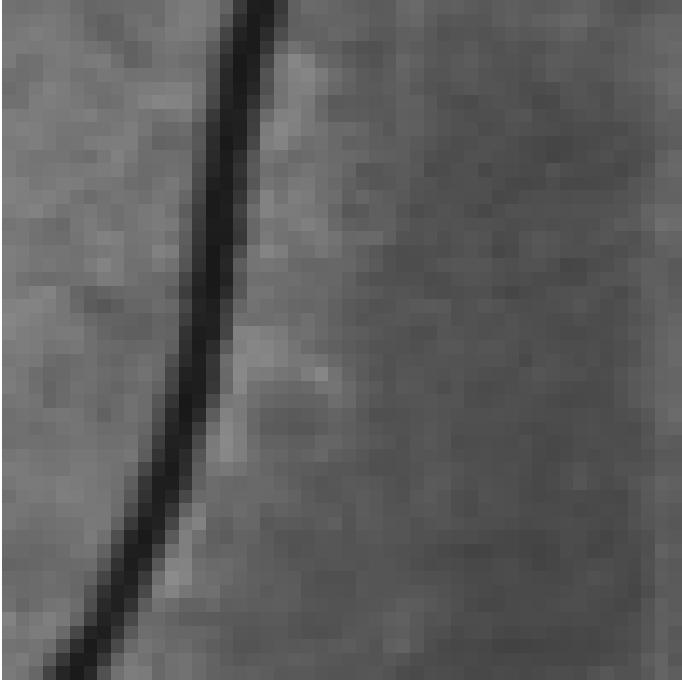


Vertical

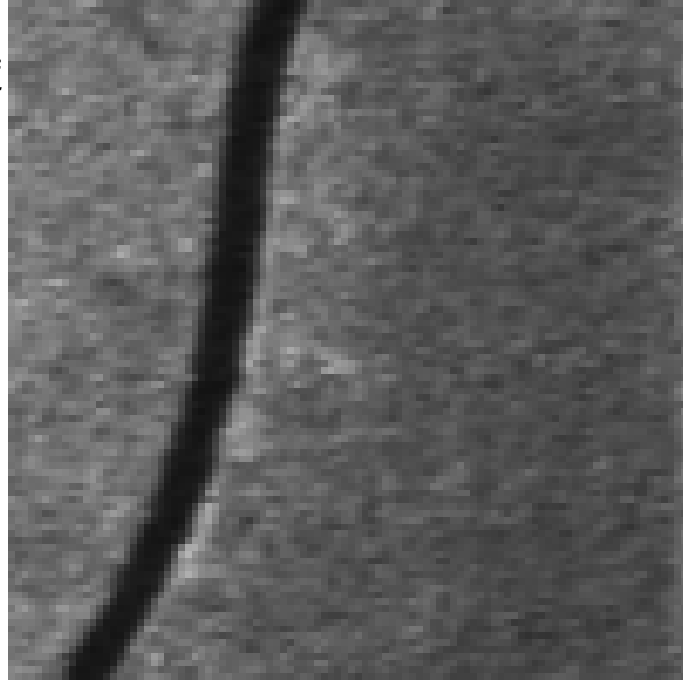


Horizon

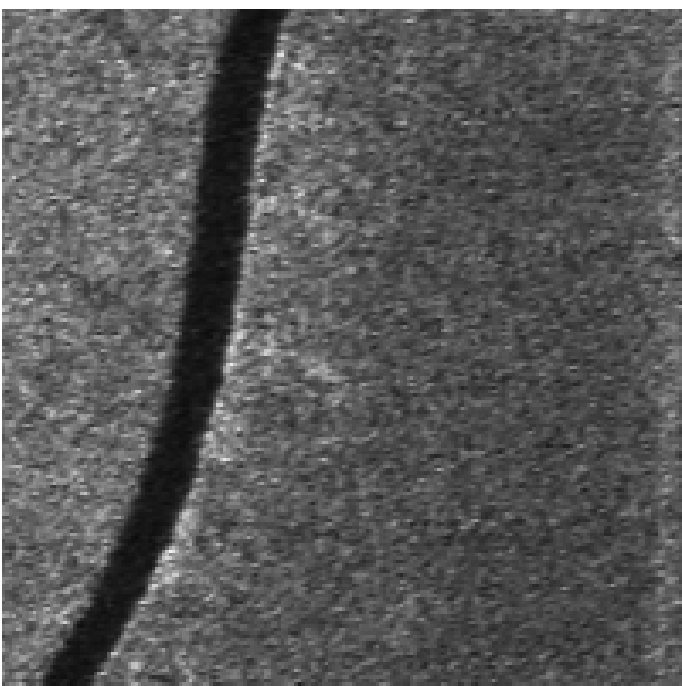
50m
解像度



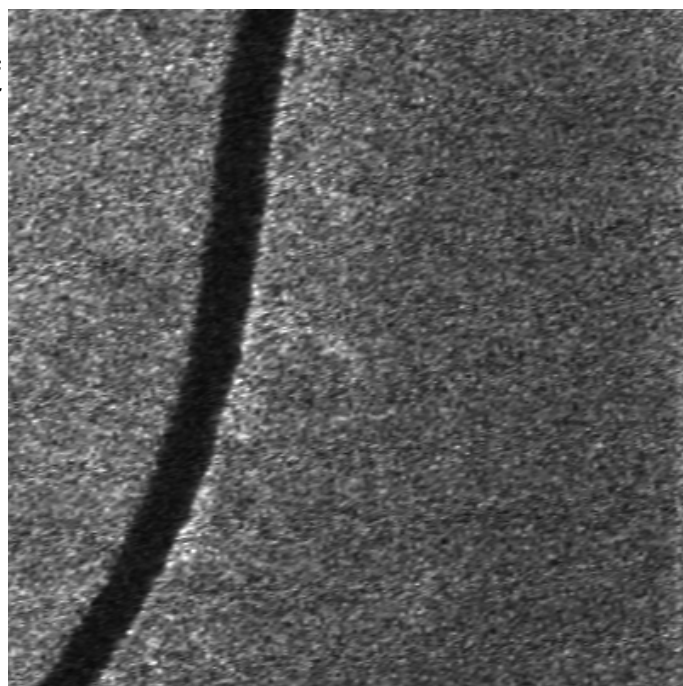
25m
解像度



12.5m
解像度



6.25m
解像度



画像は2.5km四方

Publications

IEEE TGRS of ALOS Special Issue is prepared for publication of Nov. E, 2009.

It contains 17 papers.

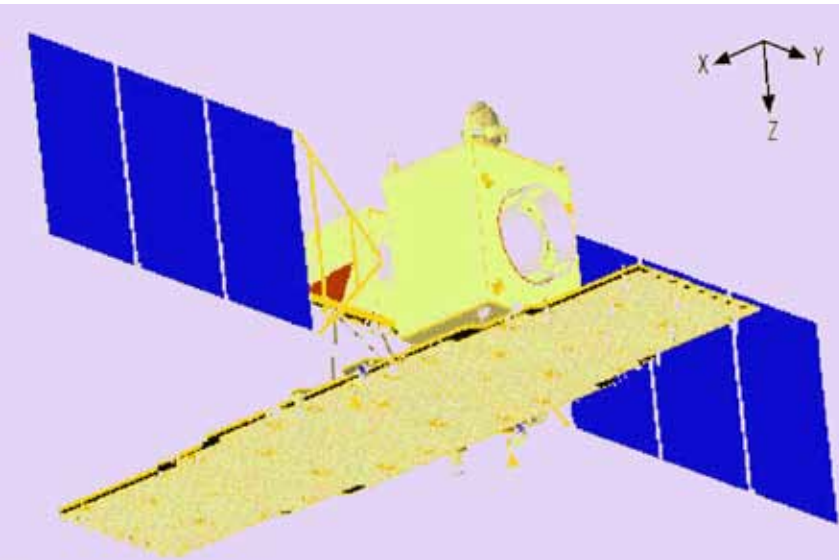
QuickTimeý Ç²
êLíËÉvÉçÉOËâÉÄ
Ç™Ç±ÇÃÉsÉNE`ÉÉÇ¾å©ÇÉÇžÇ½Ç...ÇÖiKóvÇ-ÇÄB



ALOS-2

JAXA's future planning

2009.01
JAXA/ALOS-



Moving direction

Artistic view

orbit	type	sun synchronous
	height	~630km
	LST	12:00 (local noon) descending
Designed life		Five years
Launch	time	Winter, JFY2012
	Launcher	H-2A
satellite	mass	2 ton type
	paddle	2 paddles
Mission data		Direct transmission and Ka band DRTS
SAR frequency		Lband (1.2 GHz)
Main observation modes	High resol.	1 ~ 3m, swath: 25km
	Basic obs.	3m, swath: 50km
	Wide obs.	100m, swath: 350km
Main target areas		Deformation, volcano, change detection, resource finding.
		Forest, Sea ice, river, rice field monitoring

Comparison of Pi-SAR image and optical image

While Pi-SAR(2x5m:HV)image is affected by the sidelobes, the image interpretation is almost the same with the high resolution optical image.



HV image for Harumi, Tokyo © JAXA

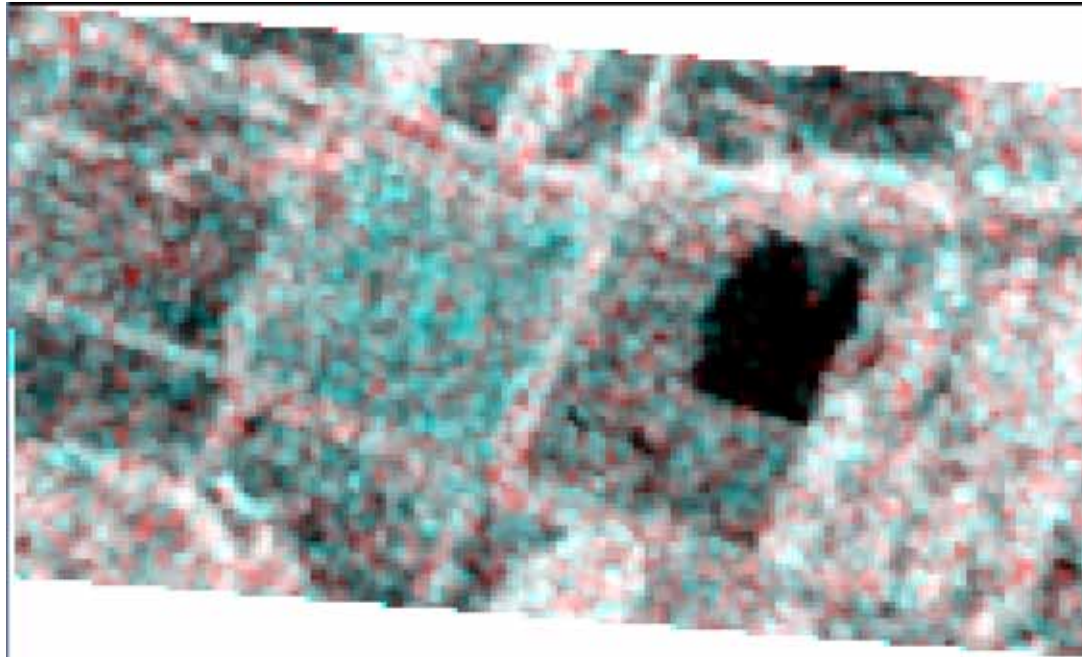


Google Map

Forest/Nonforest

Comparison of the two seasons data

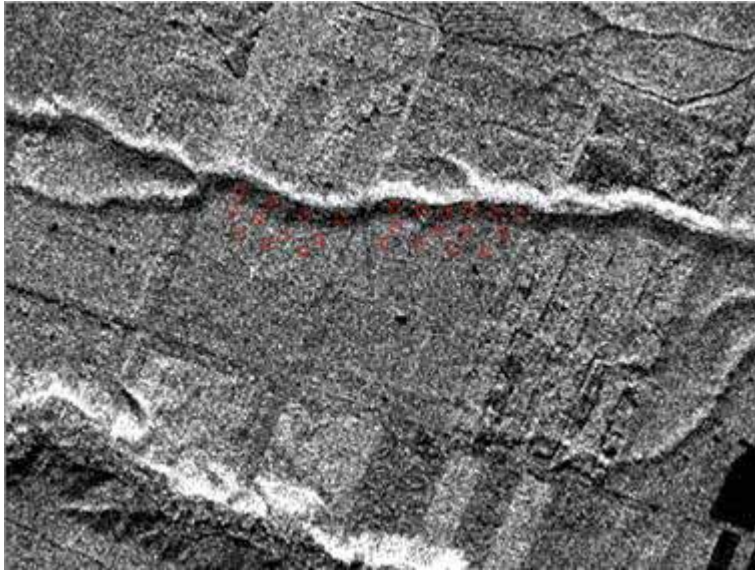
- HV偏波画像より、斜面勾配補正ありのデータを用いて、2時期の変化をカラー合成により確認した(下図)
- R:2009年、GB:2007年のHV偏波であることから、97林班に関して、2007年の後方散乱係数のほうが大きいことが分かった



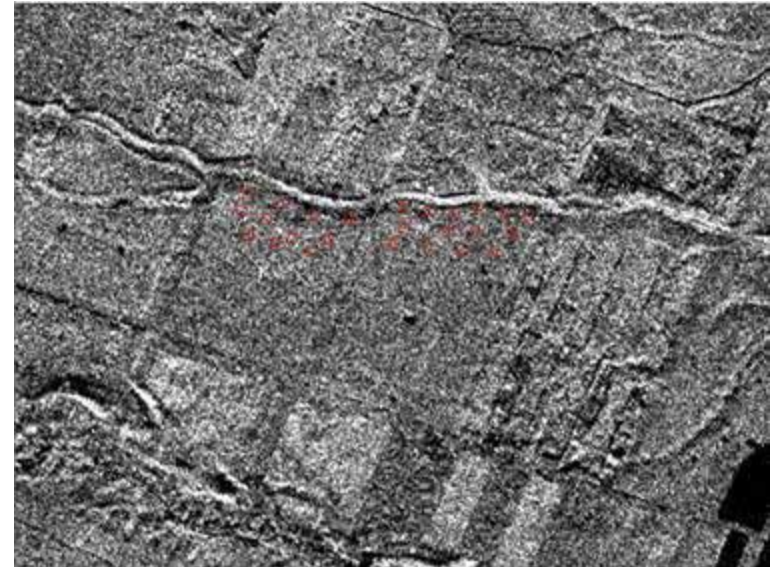
R:2009/9/16、GB:2007/9/21
両画像とも斜面勾配補正有のHV偏波

Biomass vs. gamma-naught at Tomakomai

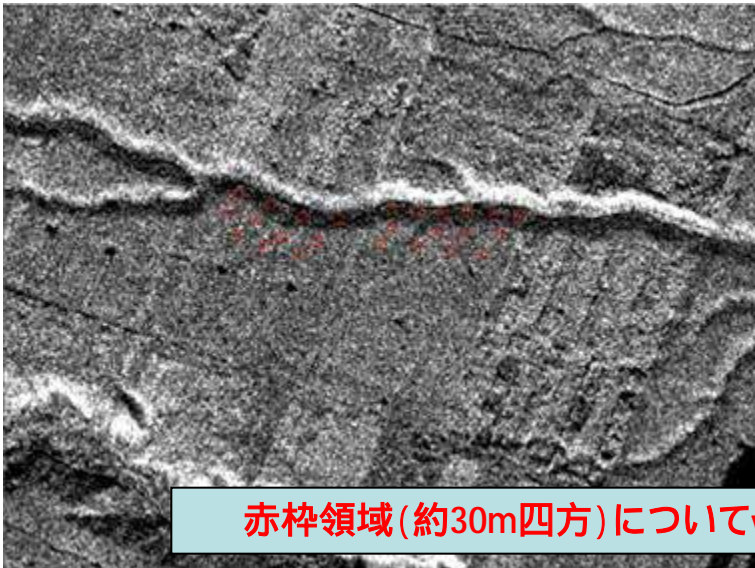
- 傾斜地 / 平坦地における後方散乱係数(γ_0)の比較



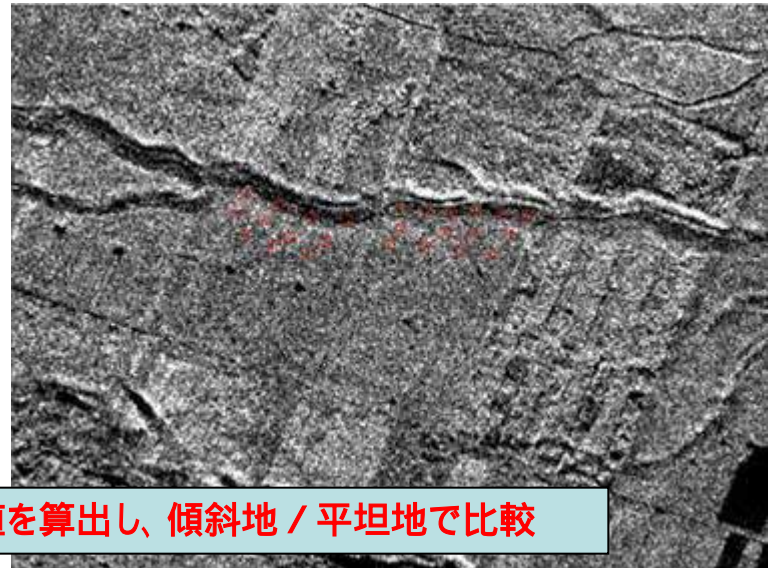
L06910(2003年8月20日観測) 斜面勾配補正なし(HV偏波)



L06910(2003年8月20日観測) 斜面勾配補正あり(HV偏波)



L07906(2004年8月3日観測) 斜面勾配補正なし(HV偏波)



L07906(2004年8月3日観測) 斜面勾配補正あり(HV偏波)

赤枠領域(約30m四方)について γ_0 の平均値を算出し、傾斜地 / 平坦地で比較

Summary

ALOS condition is OK.

Deforestation monitoring in Brazil is in progress

Mosaic generation is in progress

Gamma-naught characteristics at Kalimantan

Forest classification