VI-Ts 法を用いたタイにおけるフェノロジーの解析

橋本博文・鈴木雅一・樋口篤志

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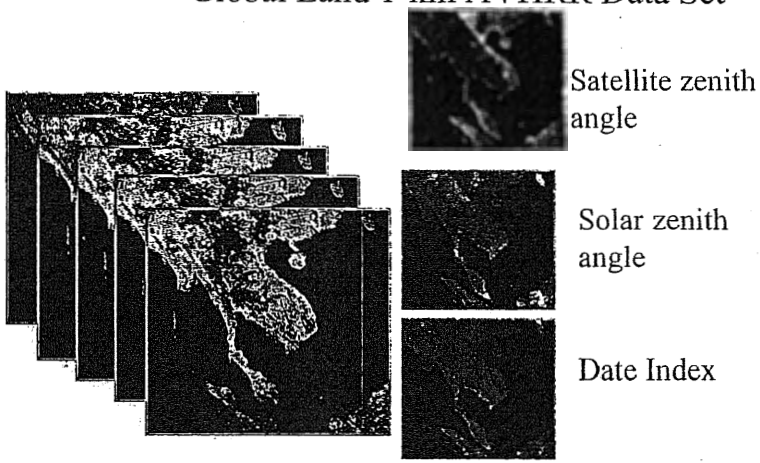
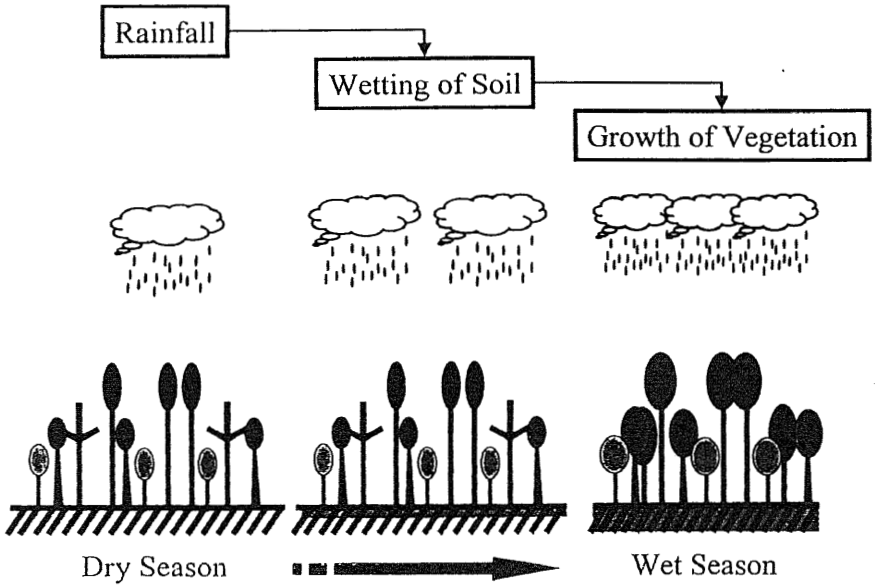
使用データ　Global Land 1-km AVHRR Data Set

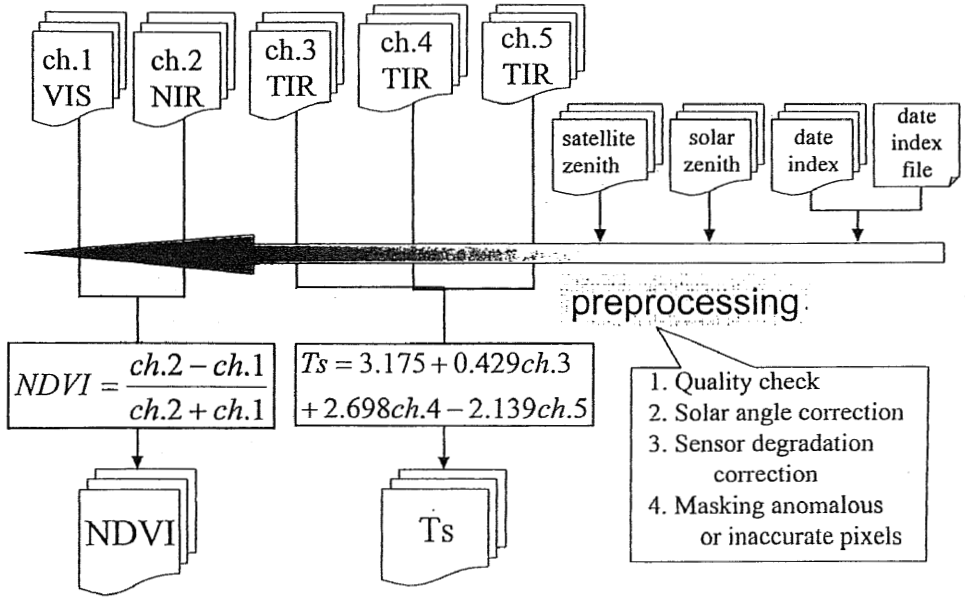


Channel 1～5　　1995年33シーン

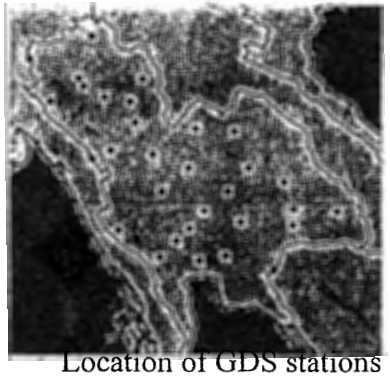
Start of the Wet Season



The 1-km AVHRR Global Land Data Set



使用データ　Global Daily Summary Data (GDS) by NCDC



Location of GDS stations

1995年の
日単位の気象データを
41ステーションで取得

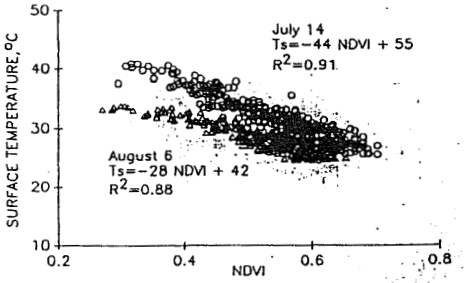


FIG. 2. Relation between surface temperature and Normalized Difference Vegetation Index, a measure of leaf area index, from the NOAA/AVHRR on 6 August and 14 July corresponding to the hypothetical cases shown in Fig. 1 for a 20 × 25 pixel area of conifer forest in Montana. Surface temperature was derived from split window technique using thermal AVHRR data (channels 4 & 5). NDVI was computed from RED and NIR data (channels 1 & 2). The change in slope from 6 August compared to 14 July indicates a change in canopy energy partitioning between the days.

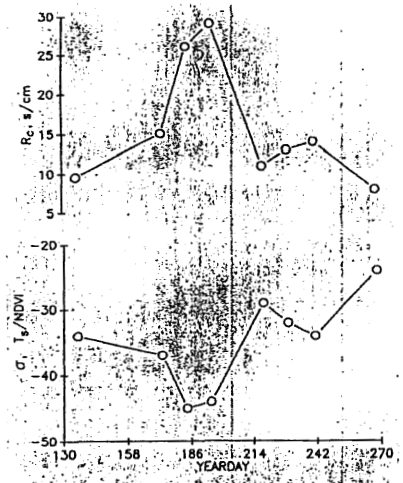
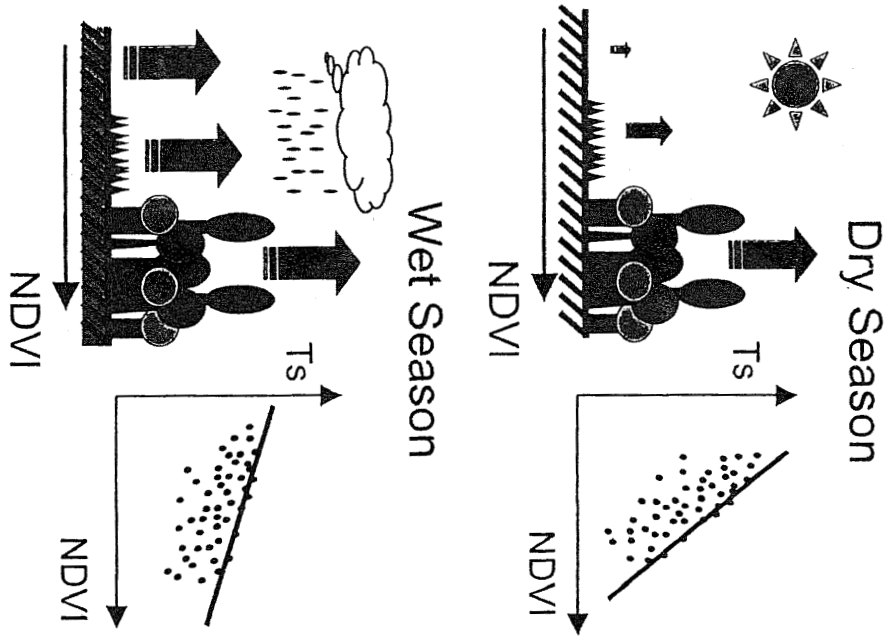
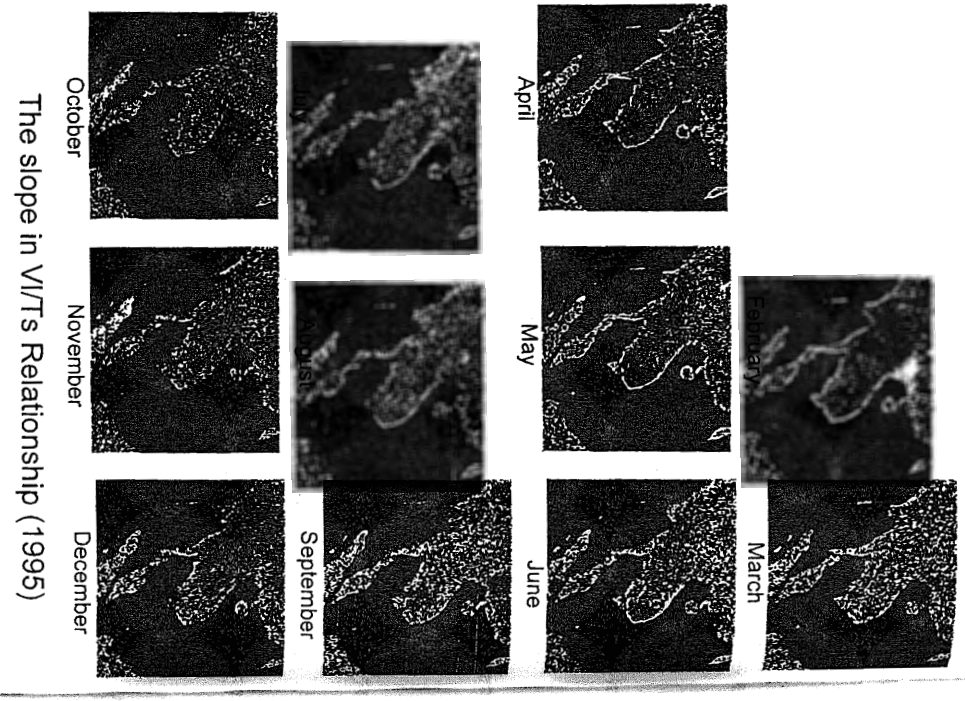


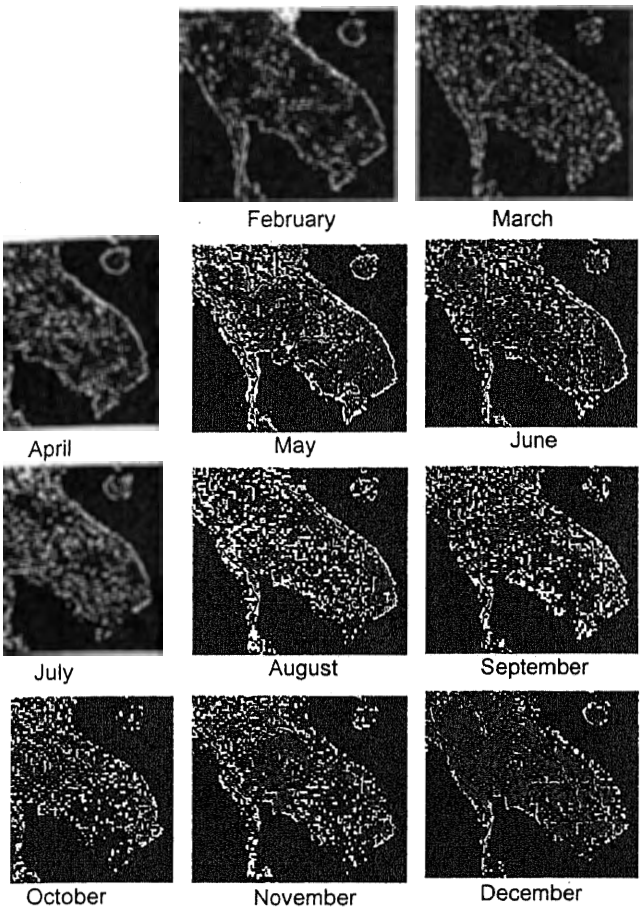
FIG. 4. Relation between simulated 1430 h canopy resistance from FOREST-BGC and the slope of surface temperature and NDVI, σ, derived from the NOAA/AVHRR on eight days during the summer of 1985. Each point describes the slope, as in Fig. 3, of a scattergram of the 20 × 25 pixel study area.

Nemani and Running (1989)

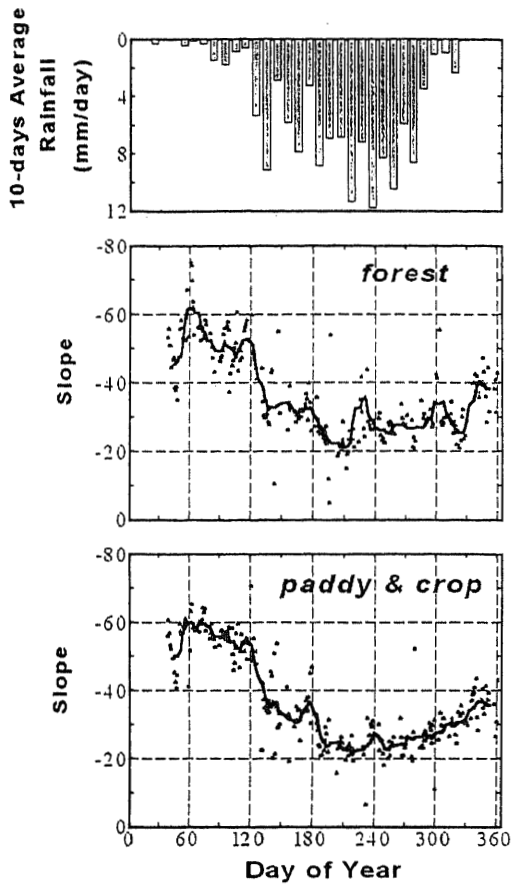


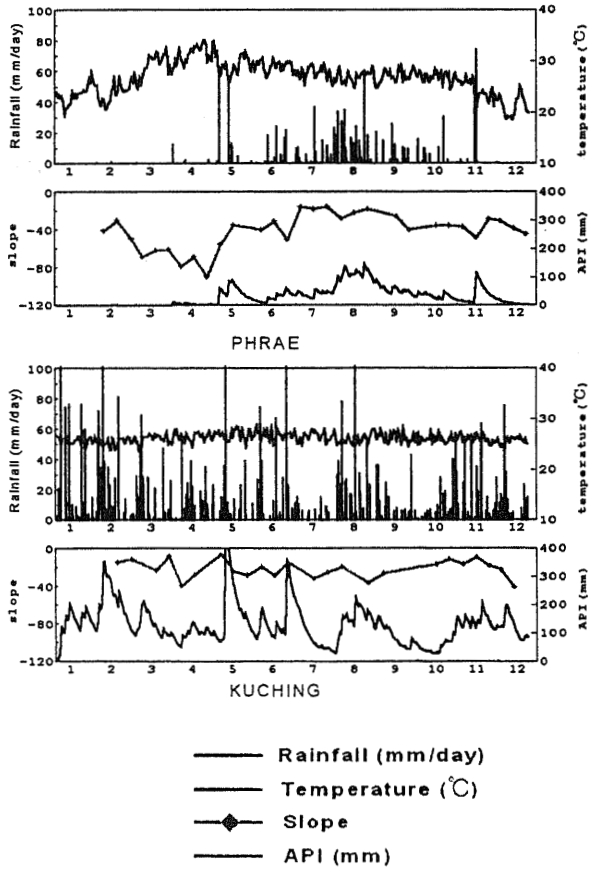


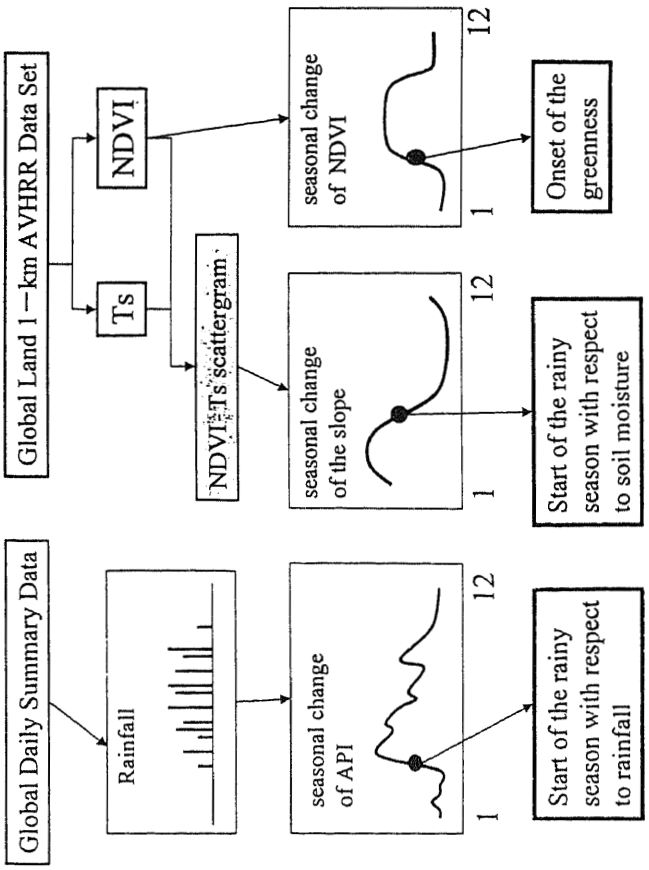
The slope in VI/Ts Relationship (1995)

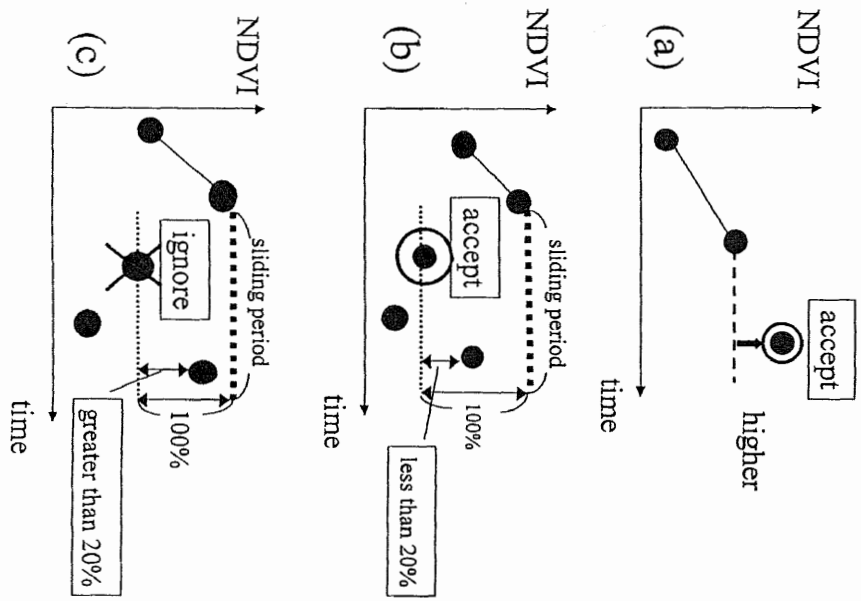


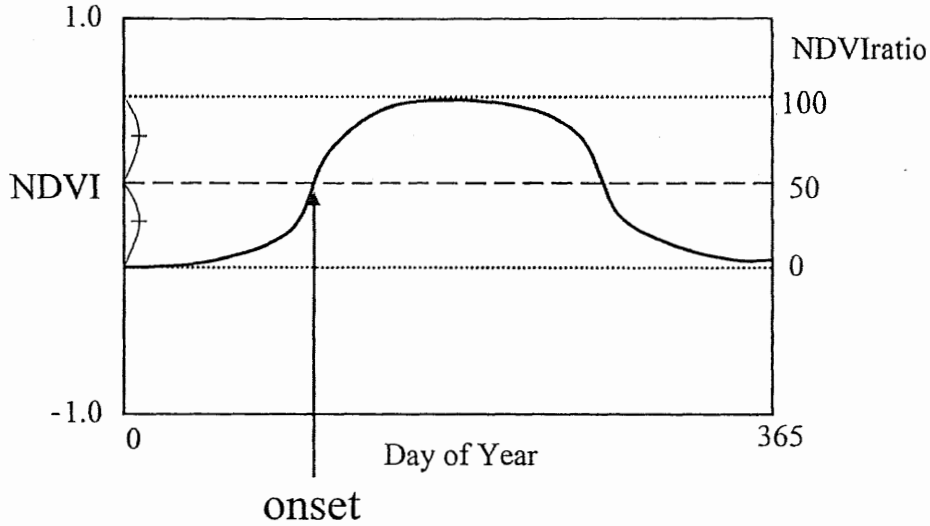
The slope in VI/Ts Relationship (1995)

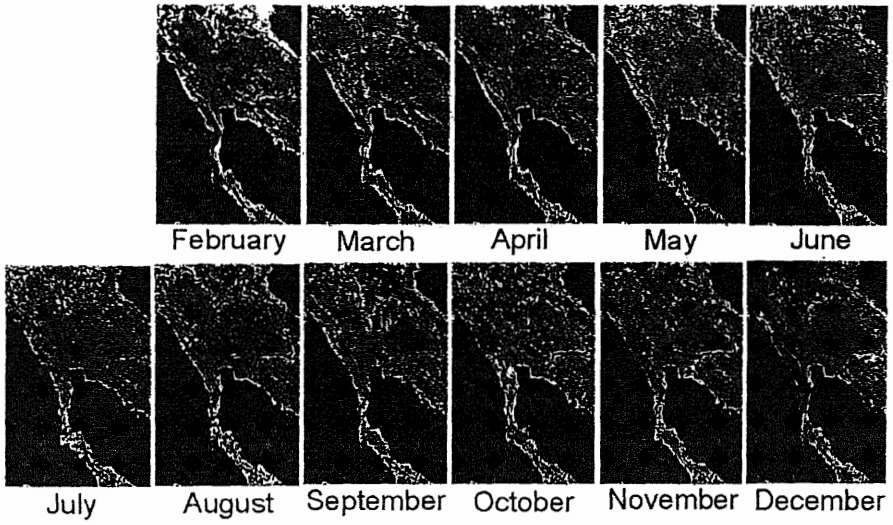




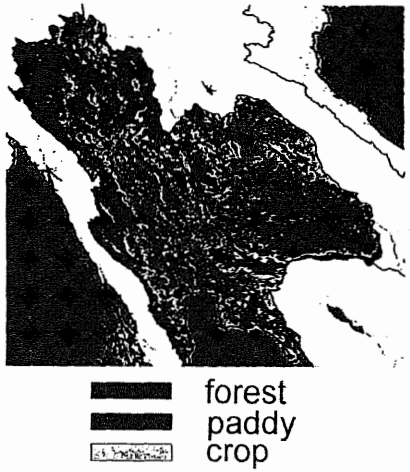




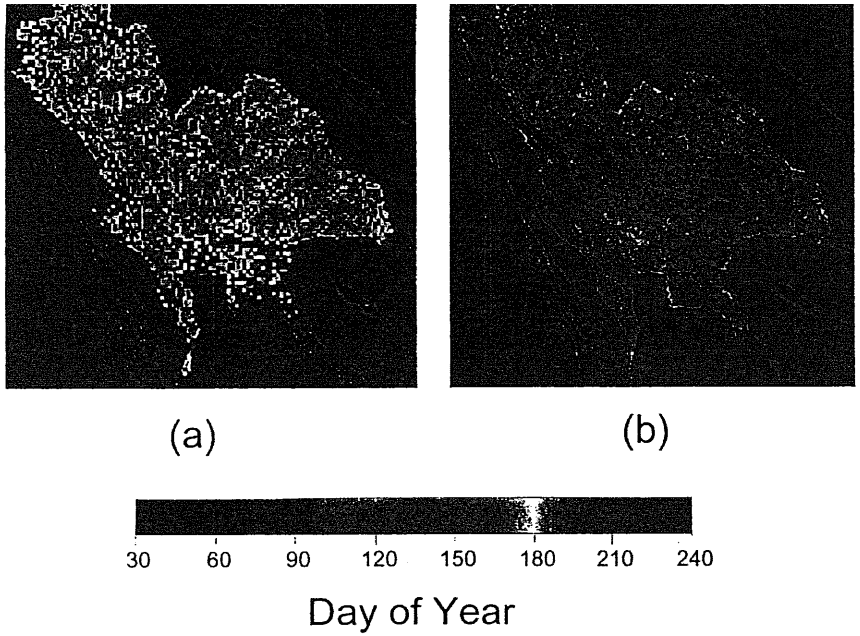


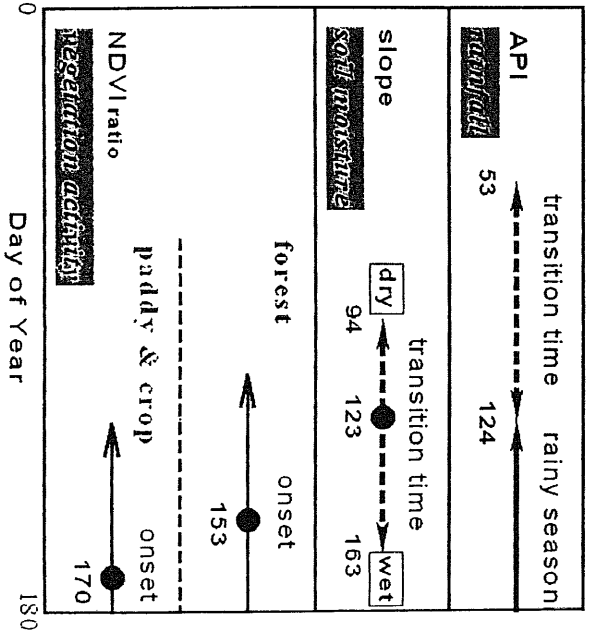


NDVI Time Series in Thailand (1995)



Land cover classification





結論

1. VI/Ts法を用いて地表面湿潤度を表すことができた.

2. 雨季の始まりが降雨・地表面の湿潤度・植生それぞれから見た時点での時間差が見られた. また, 森林よりも農地のほうがonsetが遅く表れた.