

Consecutive Photographic Observation of The Low-Level Clouds Covering Over Cukurova Plain in Summer

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1. Introduction

The purpose in this study is to emerge the temporal process of low-level clouds in Cukurova plain by the short interval consecutive photographs.

The objective clouds that entirely cover over the former plain sometimes appear in spite of the arid condition under Mediterranean climate. And they seem to be affected by the irrigation in the crops area (Fujiwara, 2004). The clouds were watched by satellites, however their particular temporal process has not been emerged yet for the restriction of capability of temporal resolution.

2. Data and Methods

The consecutive photographic observation was carried out since 6 to 18, Aug, 2004 in selected two points in Cukurova plain, the experimental homestead in Cukurova Univ., in the northern part of plain and The Regional Research Institute for Agriculture in Tuzla, southeastern part of the plain. The distances from the coast are 100 km to Cukurova Univ. and 25 km to Tuzla. Two cameras kept taking photographs by every five minutes.

Satellite images offered from MODIS discerned between the clouds generated from synoptic disturbance and the objective clouds derived from local circulation. And the day that had less influence by the synoptic disturbance was selected for analyzing consecutive photographs.

3. Results

It succeeded to catch the dynamic whole life of the low-level clouds on 7, Aug. by the either instruments. This result will help us to understand the feature and mechanism of clouds in Adana.

From Photographs 1 and 2, the haze existed

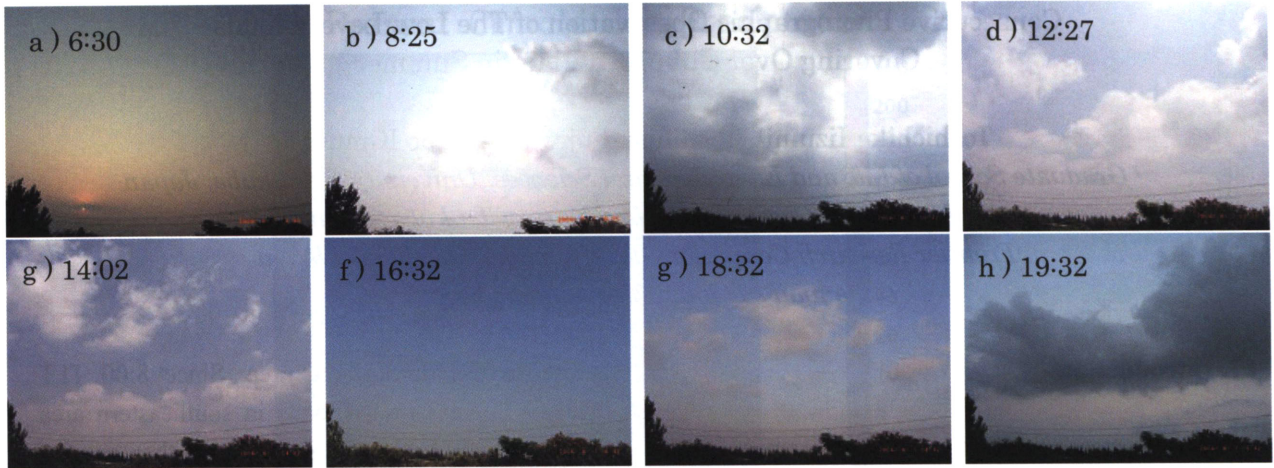
before sunrise in northern area. Since 8:00 TLT (Turkey Local Time), Clouds in southeastern area more distinctly formed its shape rather than ones of northern. While 11:00 TLT to noon, clouds reached its prime of horizontal extent and of height in both area. Afterward, clouds had been declining and completely had disappeared around 16:00 TLT. However, clouds appeared afresh at 18:30 TLT in both area and had retained with declining until several hours after 20:00 TLT. It means that clouds had already reached its mature phase before they observed by Terra/MODIS. Fig. 1 (a) indicates the horizontal expansion by the declining.

Acknowledges

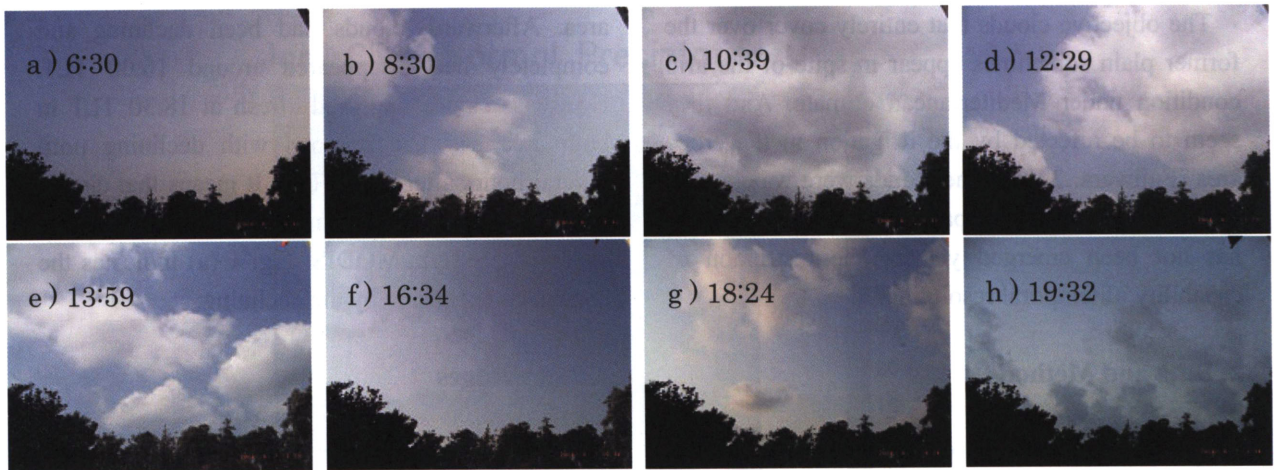
The MODIS satellite images were offered from NASA / GES Distributed Active Archive Center.

Reference

T, Fujiwara (2004): Influence of Large-scale Irrigation on Low-level Clouds over Cukurova Plain in Turkey, *M. thesis of Graduate School of Life and Environmental Sciences, University of Tsukuba.*



Photographs. 1 (a) - (h) The low-level clouds in 7, Aug, 2004, Cukurova Univ..



Photographs. 2 (a) - (h) The low-level clouds in 7, Aug, 2004, Tuzla.

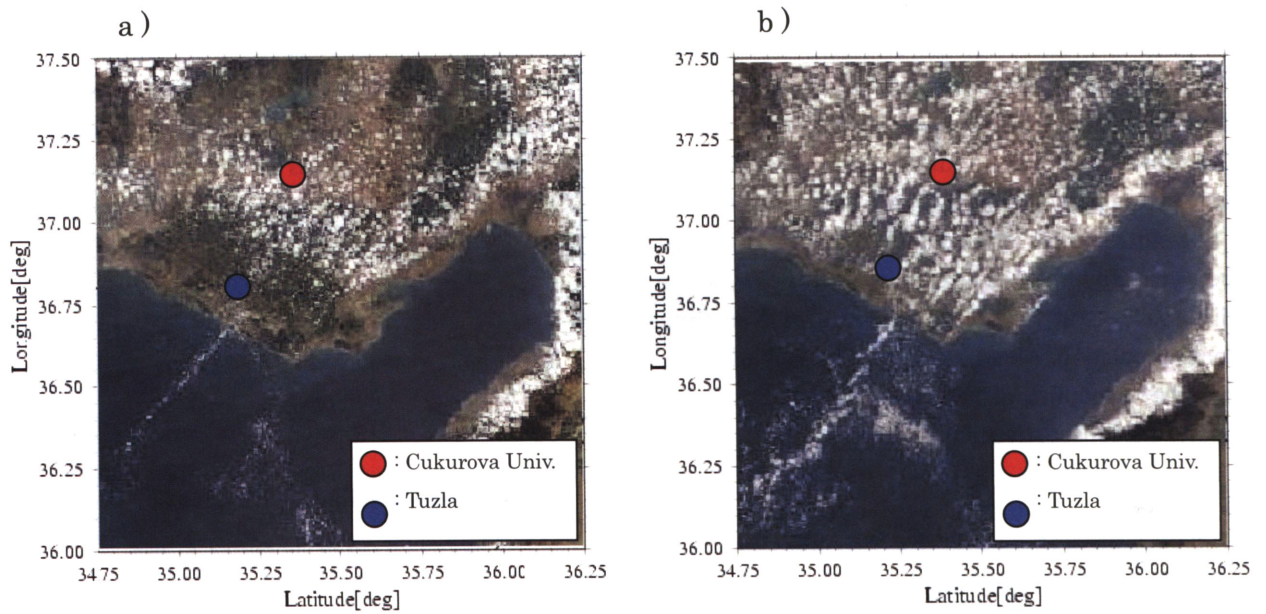


Fig. 1 (a) The satellite images of Terra/MODIS (7, Aug, 2004 08:55 UTC; 12:25 TLT) and **(b)** Aqua/MODIS (same day 10:30 UTC; 14:00 TLT).