

## Vertical Structures of Land and Sea Breezes in the Nohbi Plain during a Passage of an Anticyclone over the Central Japan

Hiroaki Mori<sup>\*1</sup>, Toshihiro Kitada<sup>\*2</sup> and Kenji Iyoda<sup>\*3</sup>

<sup>\*1</sup> (Corresponding author) *Techno Chubu Co. Ltd., Nagoya, 455-8512, Japan*

<sup>\*2</sup> *Toyohashi University of Technology.*

<sup>\*3</sup> *Japan Weather Association.*

(Received 17 January 1997 ; Accepted 20 March 1998)

### Abstract

Characteristic diurnal variations of vertical structure of land and sea breezes in the Nohbi Plain were investigated using rawinsonde and pilot balloon soundings when a traveling anticyclone passed over the Central Japan on 21-23 April 1991.

The major findings are as follows: i) a "plain-plateau wind", the southeasterly toward the Suzuka Mountains nearby the Nohbi Plain, blows early at the altitudes of 700-1100 m at 1000 LST prior to the beginning of the "Ise Bay sea breeze" over the Nohbi Plain; ii) the sea breezes show their different vertical depths depending on the horizontal scale of topography, i. e., the depth of the smaller-scale "Ise Bay sea breeze" is at most 400 m, while large-scale "Enshu-nada sea breeze", caused by the Pacific Ocean, reaches 700 m high; iii) the large-scale "plain-plateau wind", ranging from southerly to southwesterly induced by the "thermal low" formed over the high Japan Alps, continues from 1500 to 2300 LST while clear large-scale return flow is found in the upper layers over Central Japan; iv) the large-scale topographic features of the Japan Alps and the Pacific Ocean dominate local winds over the Nohbi Plain.

### 第48回科学講演会のご案内

主 催：東レ科学振興会

後 援：朝日新聞社・日本海洋学会・日本気象学会

と き：平成10年9月18日（金）

開演 18時00分 終演 20時45分

ところ：有楽町朝日ホール（有楽町マリオン11階）

東京都千代田区有楽町2-5-1（JR 有楽町駅前）

テーマ：“海洋循環と気候変動”

I. 地球温暖化と海

東京大学海洋研究所・教授 野崎義行

II. エルニーニョの科学

東京大学大学院理学系研究科・教授 山形俊男

その他：★入場無料、予約の必要はありません。

定員638名（当日会場先着順・開場：17時30分）

★ご来聴の方には、後日講演記録を進呈いたします。

問い合わせ先：財団法人 東レ科学振興会

〒279-0011 千葉県浦安市美浜1-8-1（東レビル）

Tel：047-350-6103