

プロジェクトー 3

及び関連一般研究

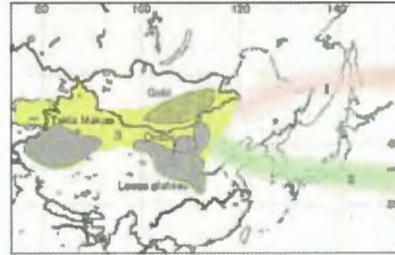
東アジアにおける2006年黄砂の映像定点観測と衛星画像解析

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木下紀正 / 鹿児島大学 産学官連携推進機構
 飯野直子・西町明仁 / 鹿児島大学 工学部
 永松哲郎・菊川浩行 / 鹿児島大学 水産学部

黄砂の主要な移流ルートは？



北回りルート
 南回りルート

地上と衛星からの黄砂共同観測
 中国長春の東北師範大 2003.3～,
 モンゴル気象水文研究所 2004. 3～
 黄砂解析鹿児島グループ・鹿大噴煙研究グループ

Ulaanbaatar



Two cameras at the third floor



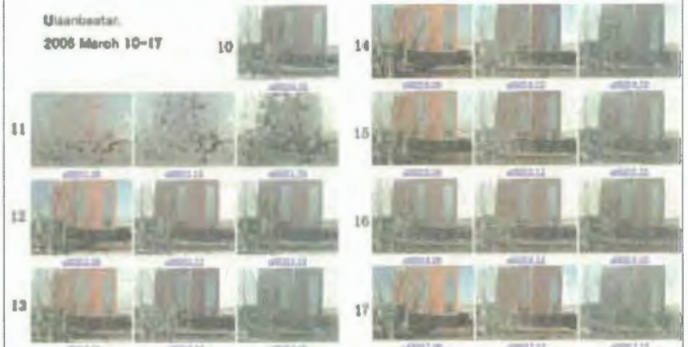
Video:
 Sony DCR-TRV900 with miniDV cassette 120 min. in LP mode. 10 min. interval and 0.5 sec. recording during 10-27 March, and 25 April - 4 June



Institute of Meteorology and Hydrology

Photo:
 Ricoh digital camera Caplio G4wide with 512 MB SD memory, 1 hr. interval
 (Unsuccessful in the spring of 2006)

Video Album at 9, 12, 15 MST



Dust storms in Mongolia on 16-17 March

Changchun 長春

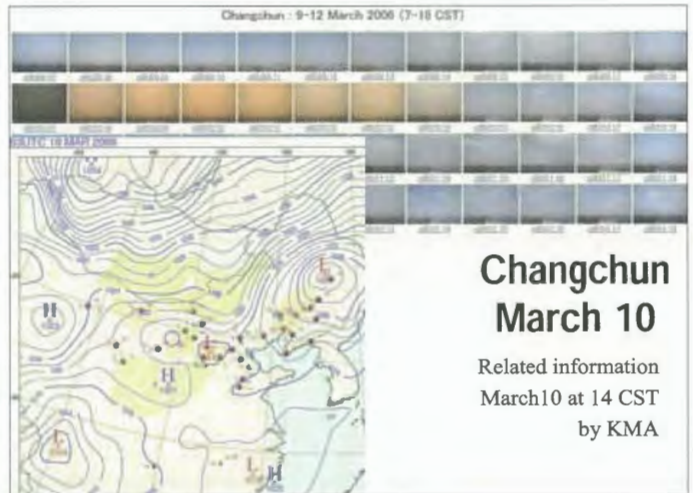


Digital camera. Video camera and digital watch
 Observation station in a building of Environmental Science Department, College of Urban and Environmental Sciences, Northeast Normal University



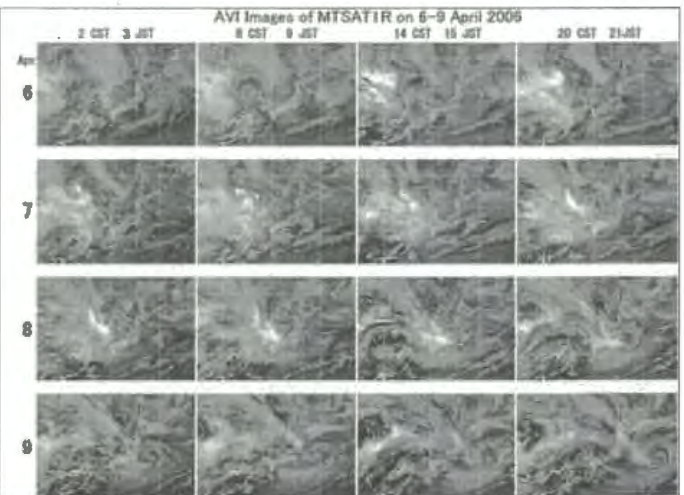
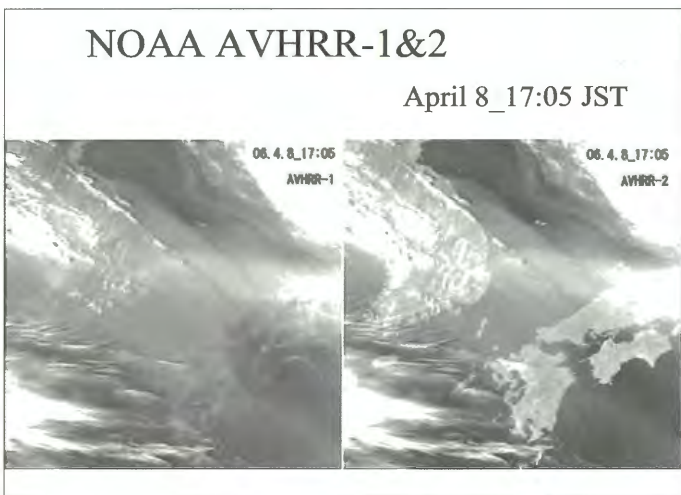
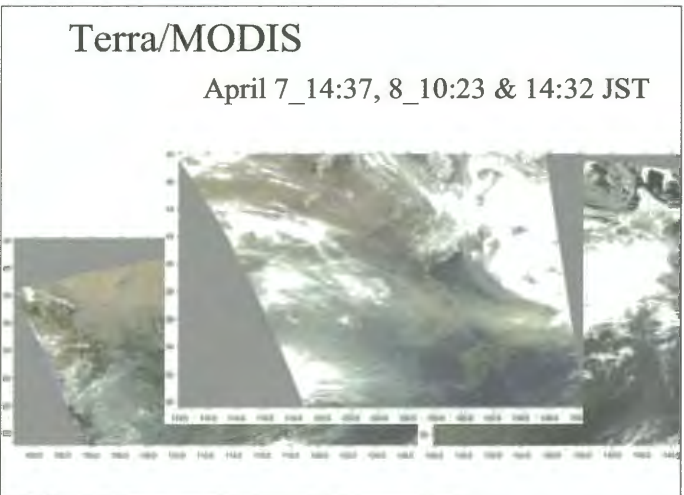
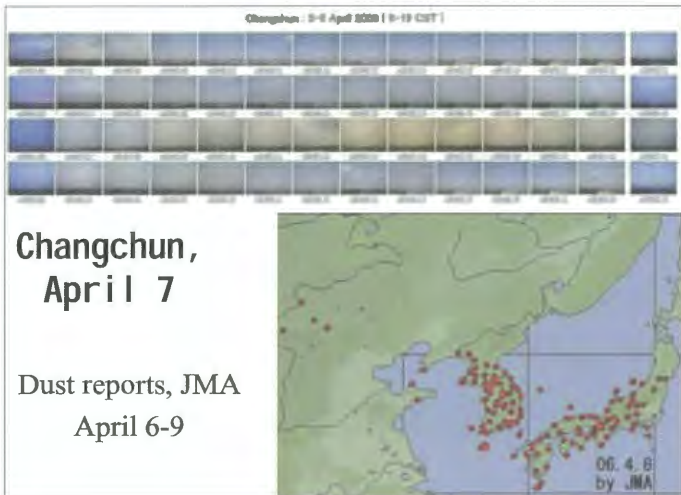
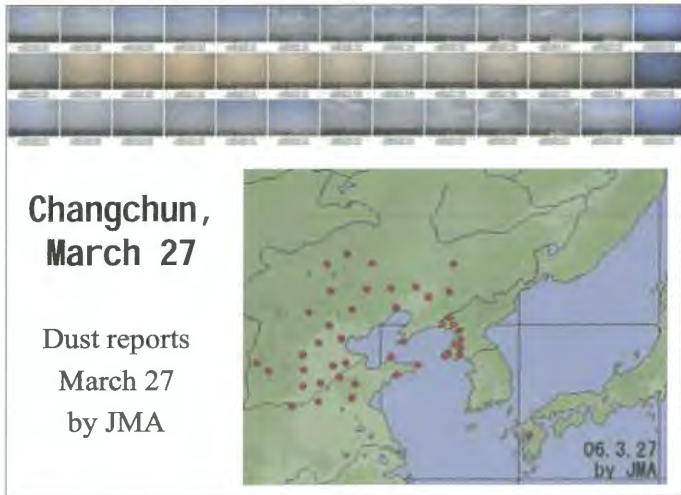
Northeast Normal University

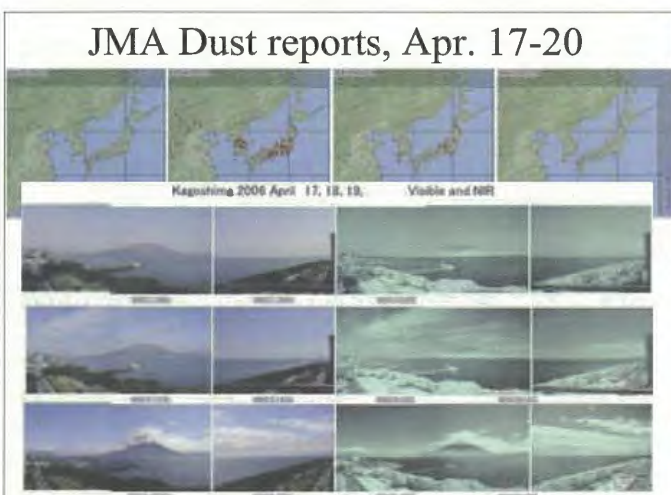
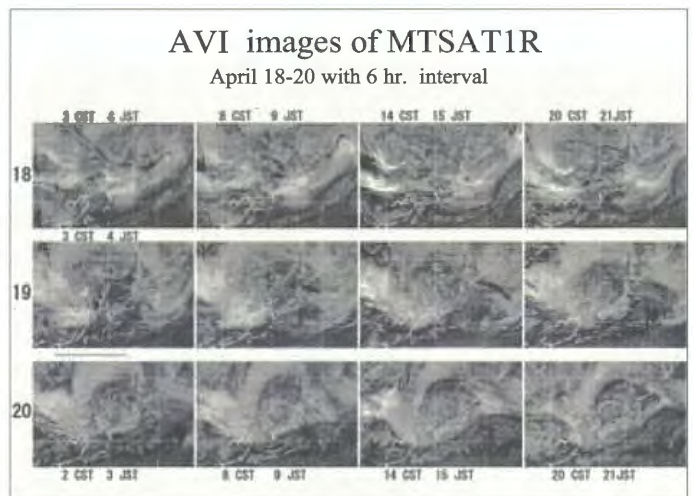
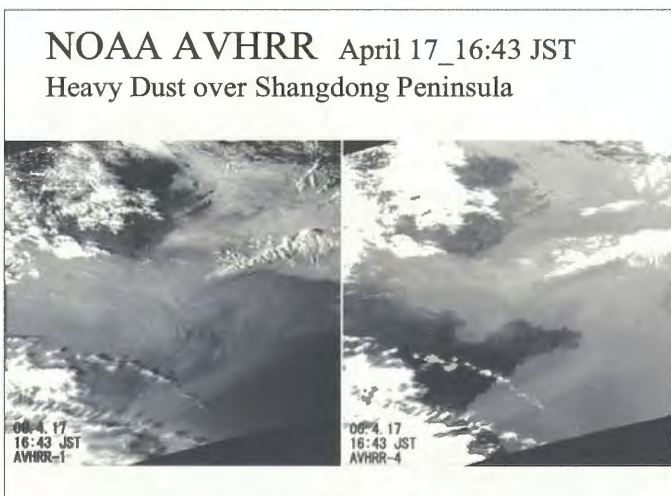
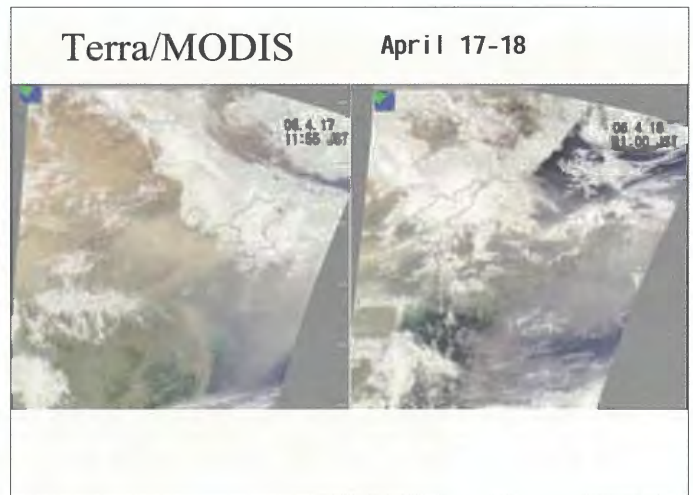
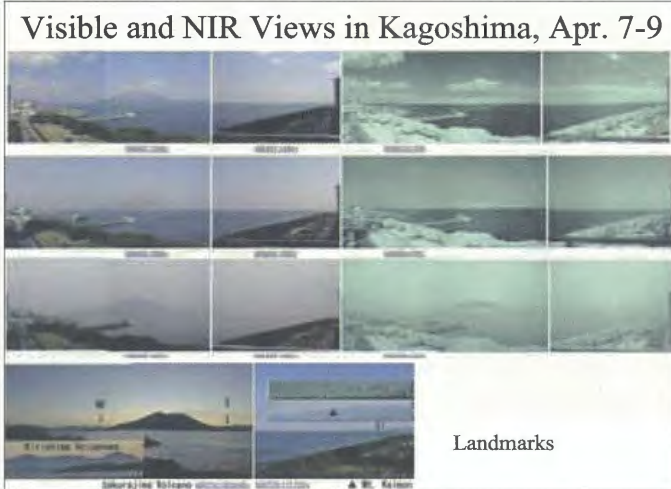
Photo:
 Casio digital camera QV-R4 with 512 MB SD memory,
 1 hr. interval during Feb. 27 - June 20
Video:
 SONY DCR-TRV40E, 10 min. interval and 0.5 sec. recording



Changchun
 March 10

Related information
 March 10 at 14 CST
 by KMA





Summary on dust events in Mar.-Apr. 2006

- 3.10 Heavy dust in Changchun -> 3.11-13 Korea, Not much to Japan
- 3.27 Dust in Changchun -> 3.28 S. Korea & Kyushu, Kagoshima
- 4.7 Dust in Changchun -> 4.8-9 Korea & Japan, Kagoshima
- 4.17 Heavy dust over Shangdong -> 4.18-19 Korea & Japan
(Changchun: cloudy or rainy, Kagoshima : rather clear)
- 4.23 Dusty in Changchun -> 4.23-25 Korea, 24-25 Japan, Kagoshima
(4.28-29 Not so dusty in Changchun) 4.30 Korea, W-Japan

Correlation between dusty sky in Ulaanbaatar and dust storms in Mongolia

参考URL・文献

黄砂の衛星画像と地上観測 SiNG-Kagoshima-K 英語版
<http://arist.edu.kagoshima-u.ac.jp/adust/kosa-e/kosa-e.htm>

Asian Dust in 2006
<http://ese.mech.kagoshima-u.ac.jp/adust/ad2006/ad06top.htm>

西町明仁・飯野直子・福原稔・片野田洋・木下紀正・後藤あずみ,
2006年春の黄砂輸送の静止気象衛星による解析,
日本リモートセンシング学会第41回学術講演会論文集, pp.103-104, 2006

木下紀正, 中国長春とモンゴルにおける黄砂の地上映像観測と衛星画像解析, モンゴル植生変遷域ワークショップ, 筑波大学, 2007.1.26-27

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