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**Simulation of Tropical Cyclone Gonu with RegCM4**

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# Simulation of Tropical Cyclone **Gonu** with RegCM4

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5<sup>th</sup> ICTP RegCM Workshop, 31 May – 11 June 2010

# Introduction

Subject : A tropical cyclone

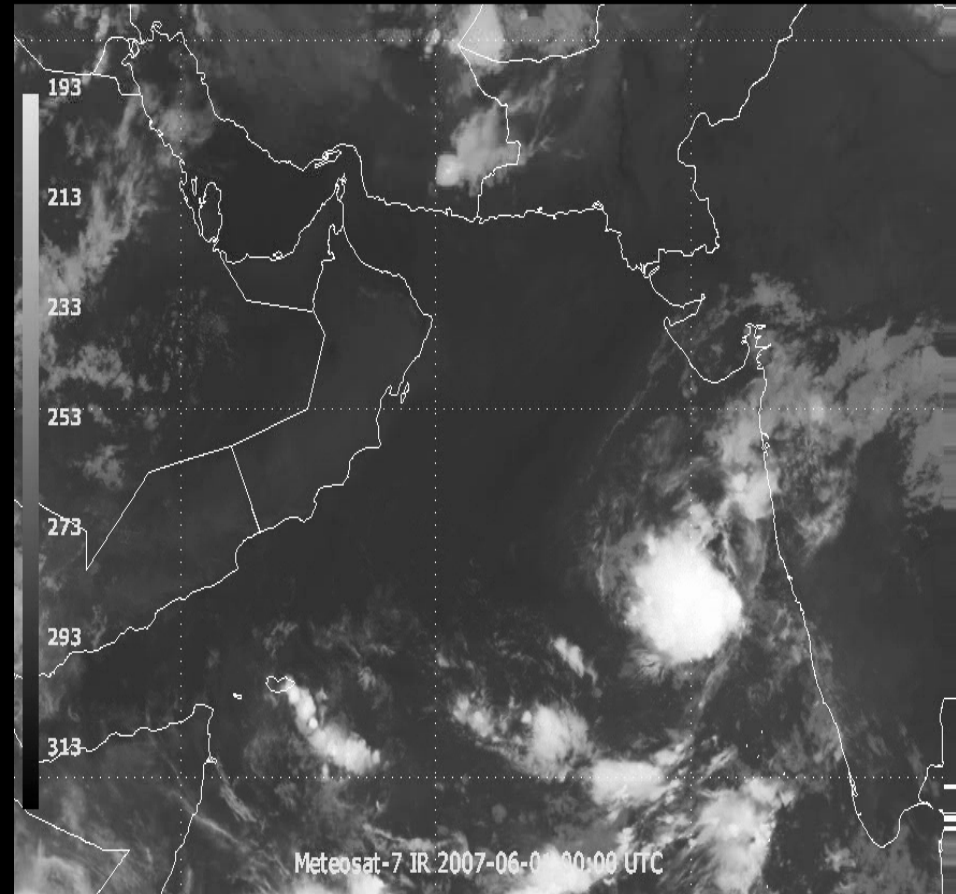
Name : **GONU**

Date of birth : **May 31, 2007**

Place of Birth: **Arabian Sea**

Date of Death : **June 7, 2007**

Place of Death : **Somewhere over Iran  
after hitting Oman**



# Model settings

Dimension :

IY = 60

JX = 88

KZ = 18

Resolution :

ds = 50 KM

Projection :

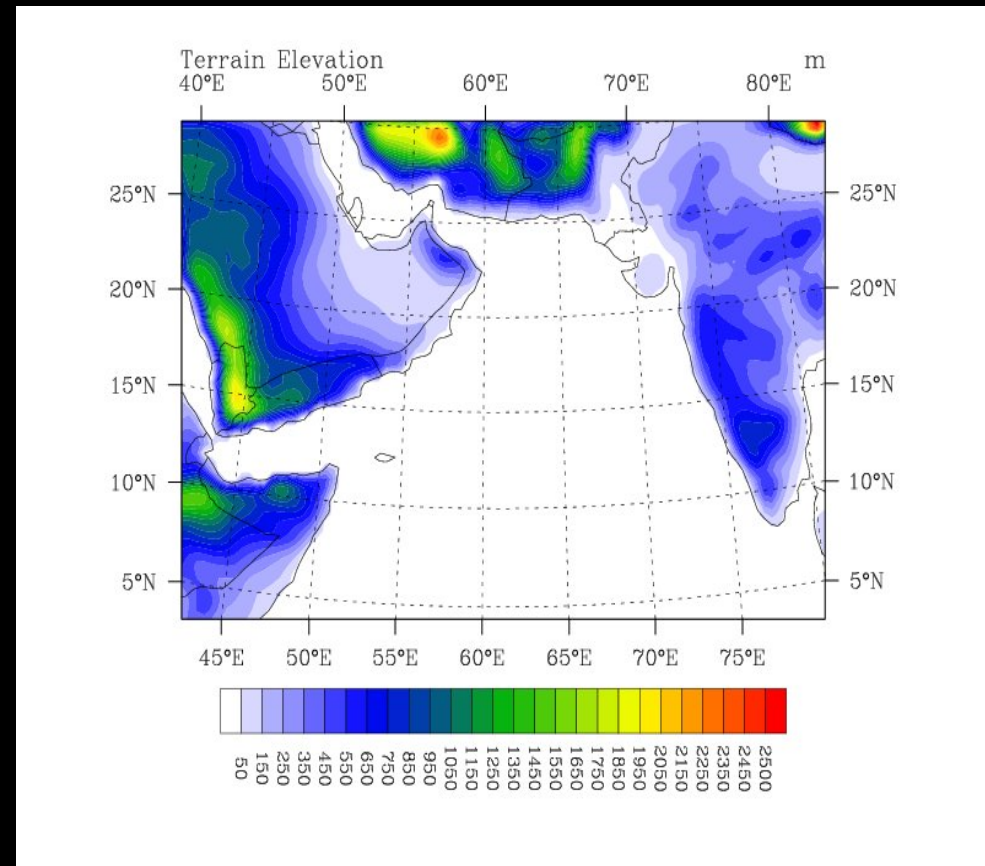
Lamcon

ICBC :

ERA15, NNRP2

SSTTYPE :

ERSST, OI\_WK



# Experimental Details

Total No. of Experiments: **TOO MANY**

**Results are Only Shown From Following Experiments**

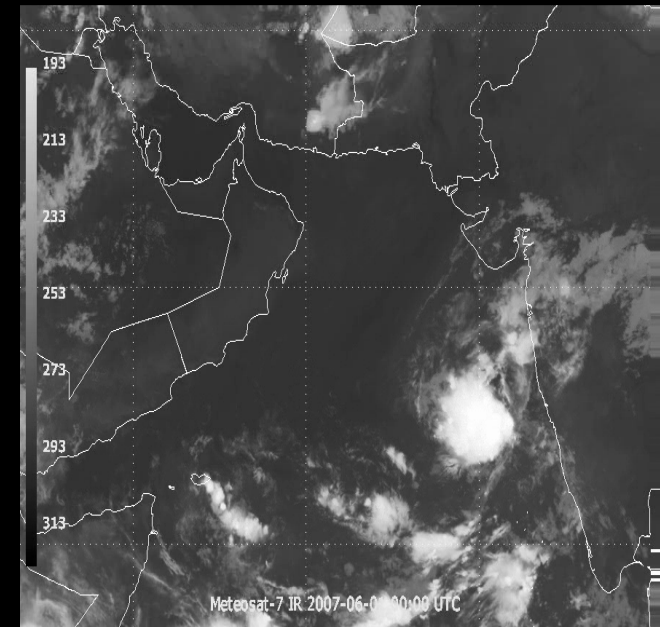
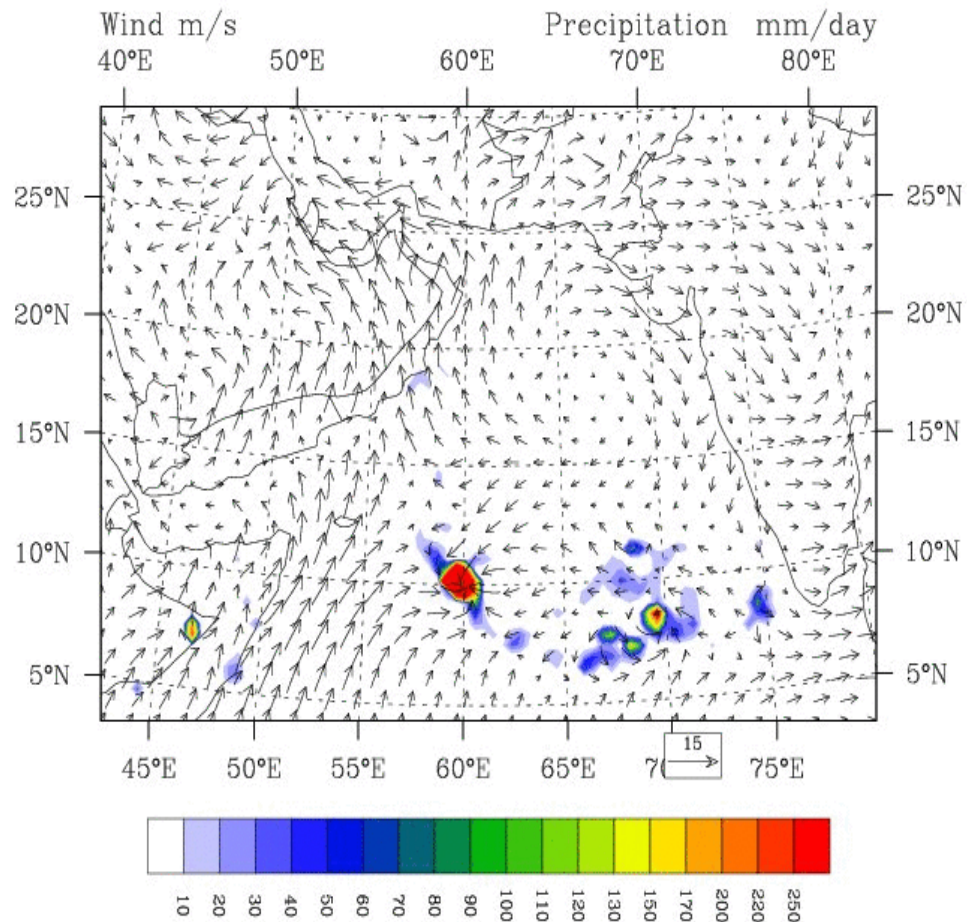
- ERA15 and ERSST

1. GRELL-FC with BATS (no DCSST)
2. GRELL-FC with BATS (with DCSST)
3. EMANUEL with BATS (no DCSST)
4. EMANUEL with BATS (with DCSST)

- Additional Experiments

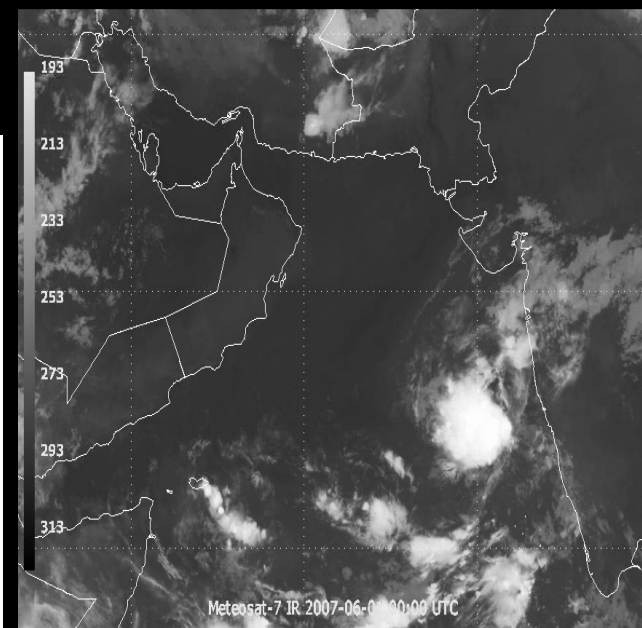
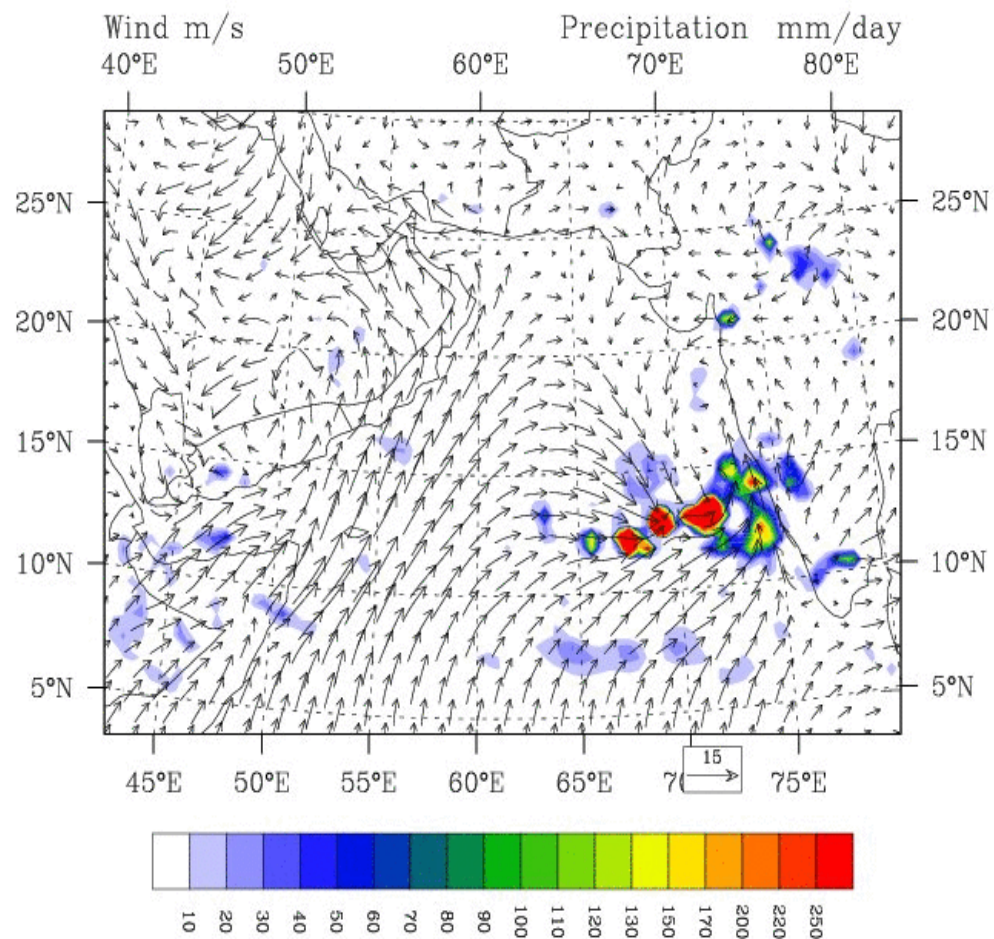
1. ERA15 GRELL-FC with CLM and ERSST (with DCSST)
2. ERA15 GRELL-FC with BATS and OI\_WK (with DCSST)
3. NNRP2 MIT with BATS and OI\_WK (with DCSST)

# GRELL-FC without DCSST

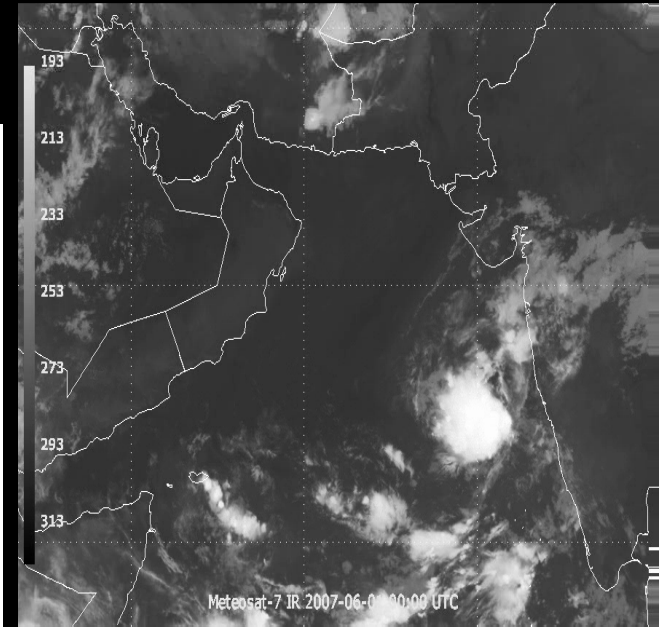
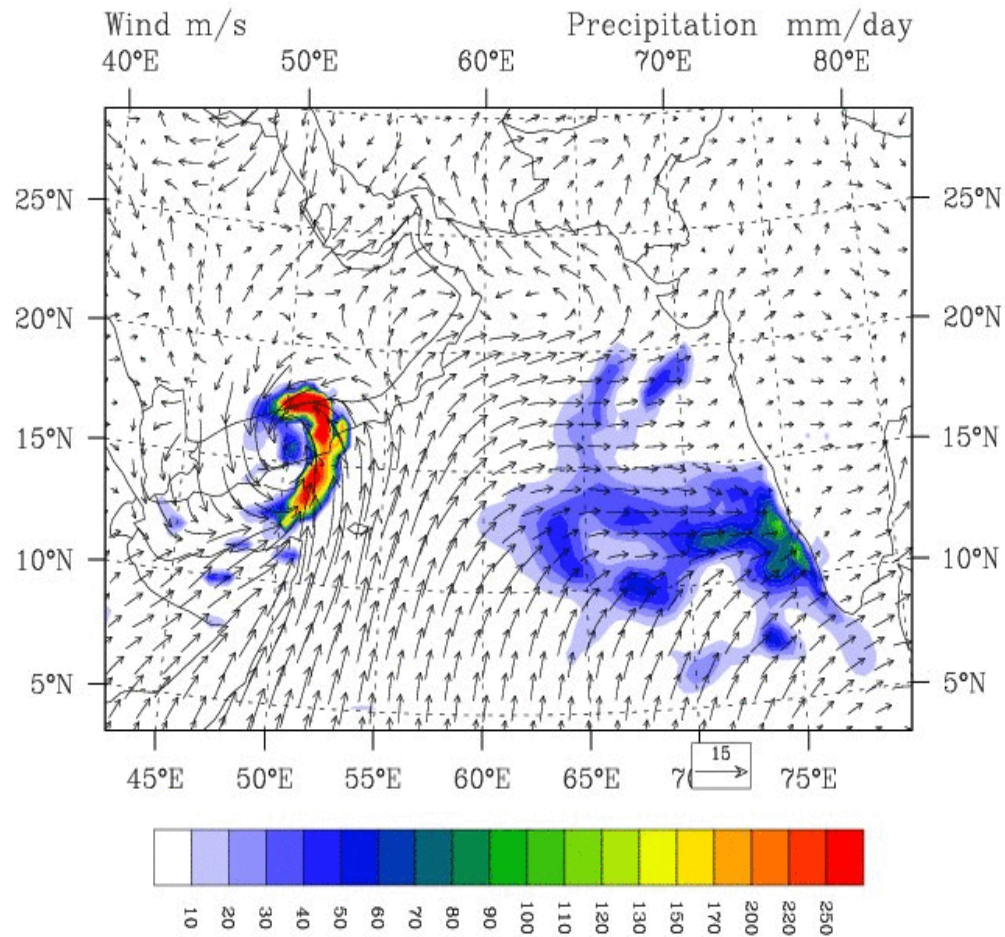




# GRELL-FC with DCSST

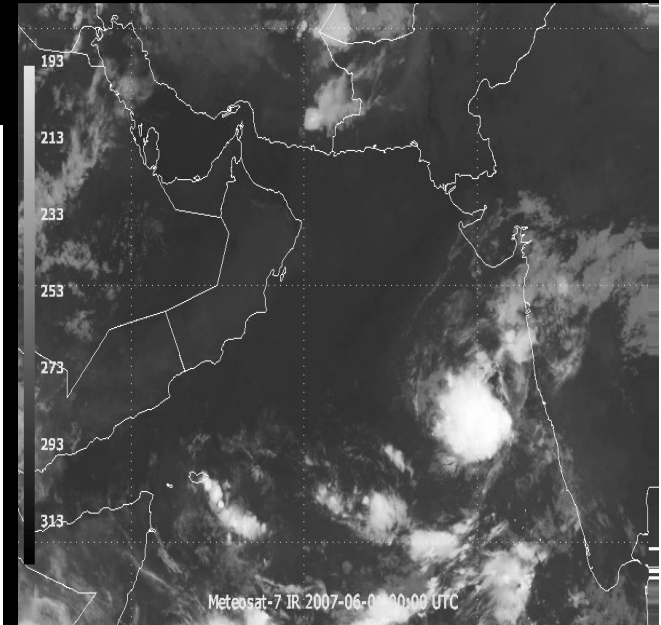
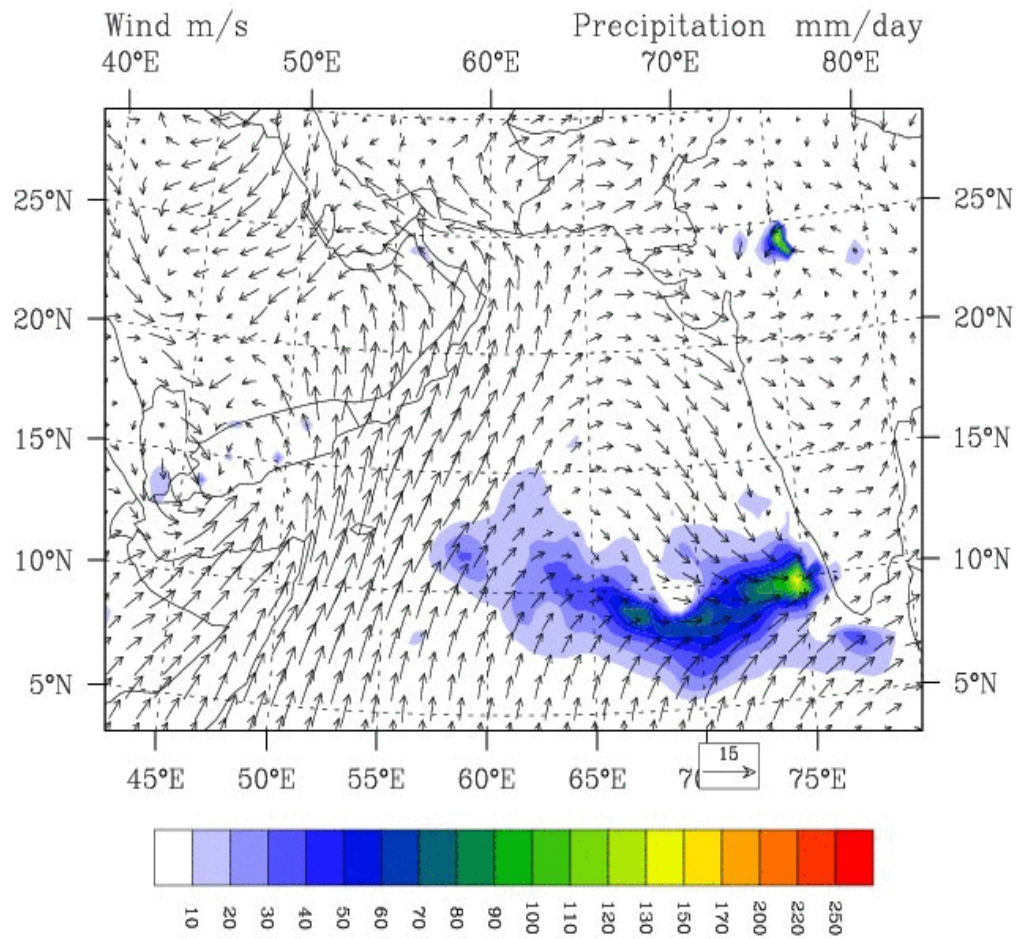


# MIT without DCSST

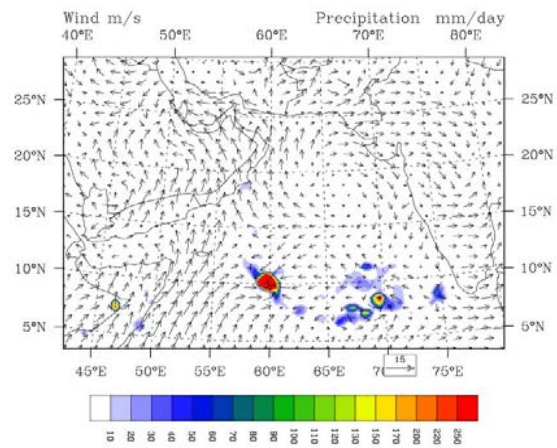




# MIT with DCSST

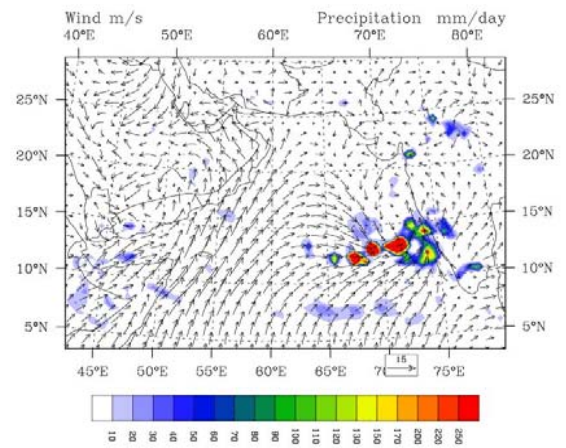


# Summary



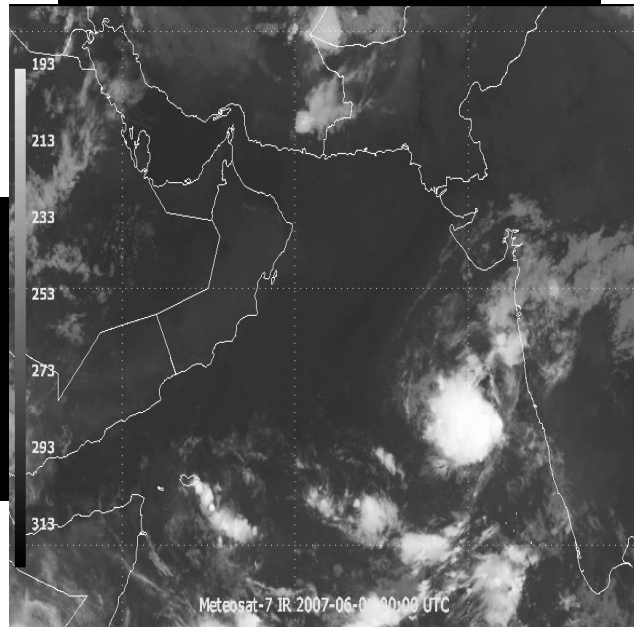
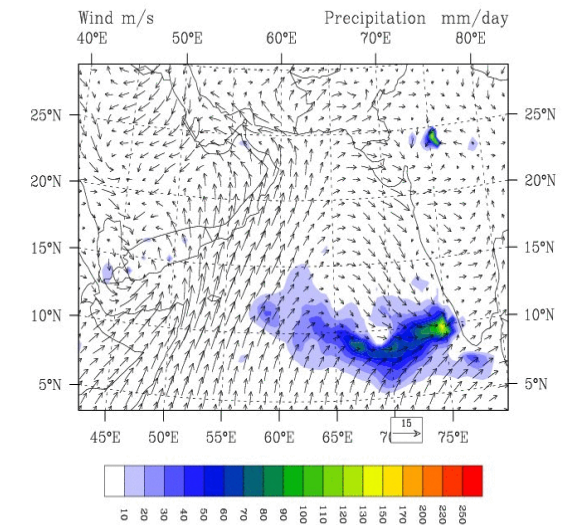
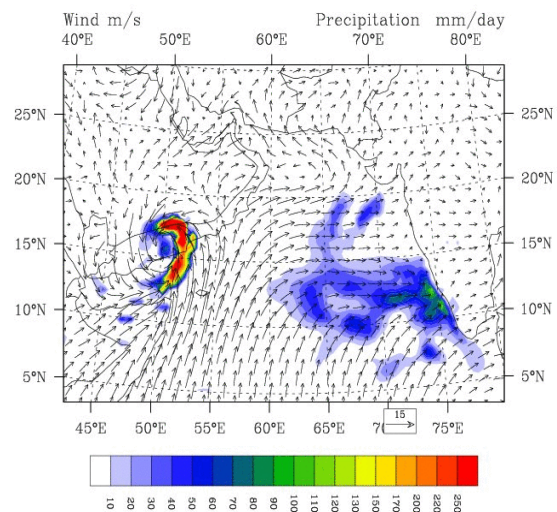
**GRELL-FC without DCSST**

**MIT without DCSST**



**GRELL-FC without DCSST**

**MIT with DCSST**





# Future Work

## Tropical Cyclones History



# Acknowledgements

Thanks to RegCM team and all ICTP staff for continuous support during the workshop. Special thanks to M. Ashfaq for special help.



Thanks