

**Dataset Control, Numerical Modeling,
Boundary Layer
and Surface Processes**

**Maria Assunção F. da Silva Dias (IAG/USP)
Gilberto Fisch (IAE/DCTA)**

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Data

- Radiosondes
- Surface met data
- Satellite Images/Radiance
- Numerical Modelling Outputs

radiosondes

gered manually or automatically
at specified stages, during and



ANTENNAS

UHF Antenna System (400 MHz)	RB21
Local GPS antenna	GA20 or
Local VLF antenna	CA21



A basic DigiCORA III system configuration includes a workstation computer running the DigiCORA III software, an SPS220 Sounding Processing Subsystem, antennas, and a printer.

Vaisala RS92-SGP Radiosonde



- PTU-sensors
- GPS wind finding
- Telemetry link
 - Narrow band digital transmission fulfilling European Union ETSI EN 302 054-1 standard for digital radiosondes

- ASIC based electronics (Application Specific Integrated Circuits)
- Modular mechanical construction

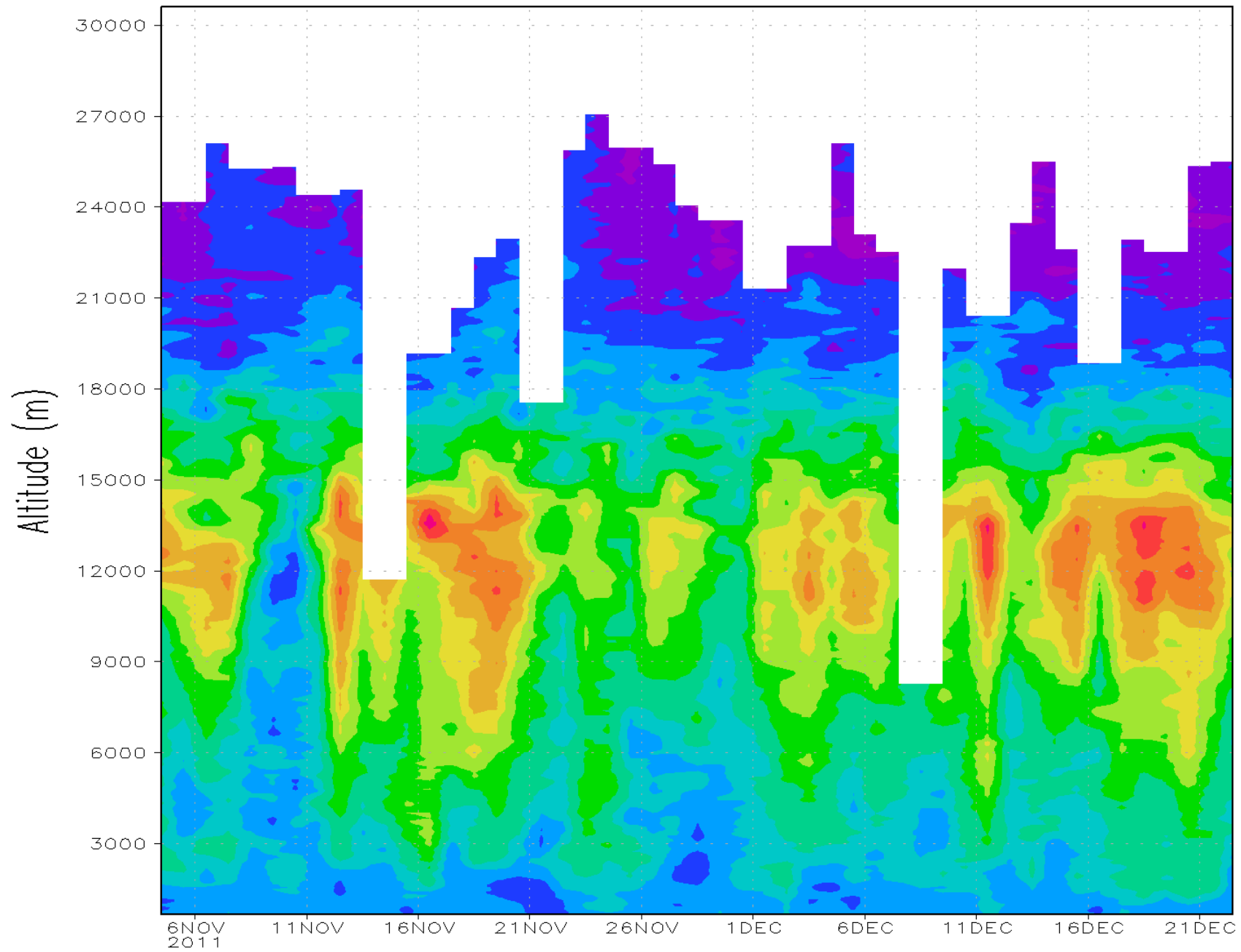
Actual stage

- Data processing (standart + significative levels)

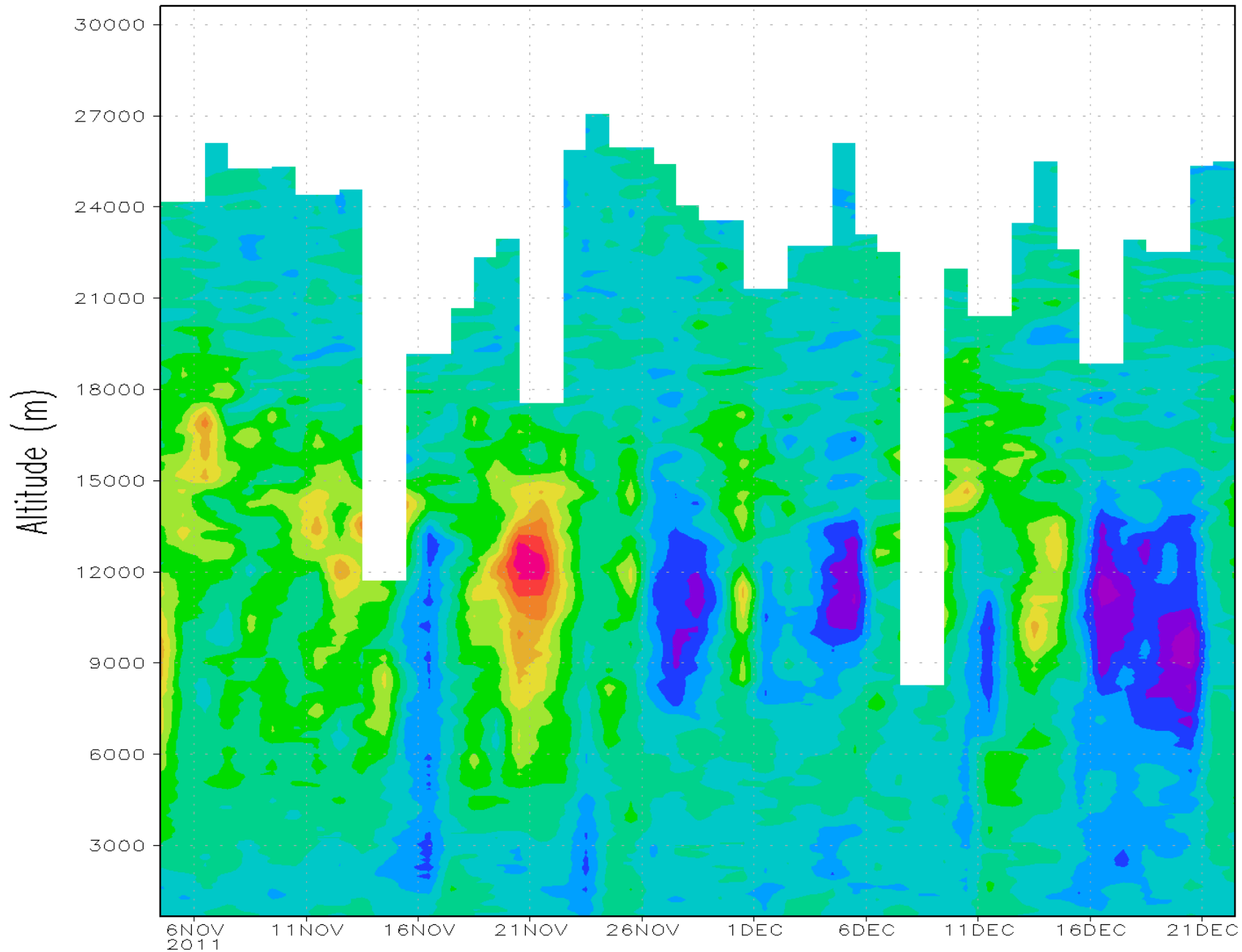
82332 - 11/09/12 - 12:00 Z (Altitude: 84 m)

Press	Altura	Temp	T D	UR	DIR	VEL	Q	THETA	THETA V
(hPa)	(m)	(C)	(C)	(%)	graus	(m/s)	()	(K)	(K)
1004.0	-999.0	27.4	21.4	70	90	2.0	15.782	300.2	303.1
1000.0	120.0	26.6	21.9	75	30	4.0	16.337	299.8	302.7
984.0	-999.0	999.0	-999.0	-999	30	5.0	-9.999	-99.9	-99.9
925.0	807.0	23.2	19.5	80	60	4.0	15.233	303.0	305.9

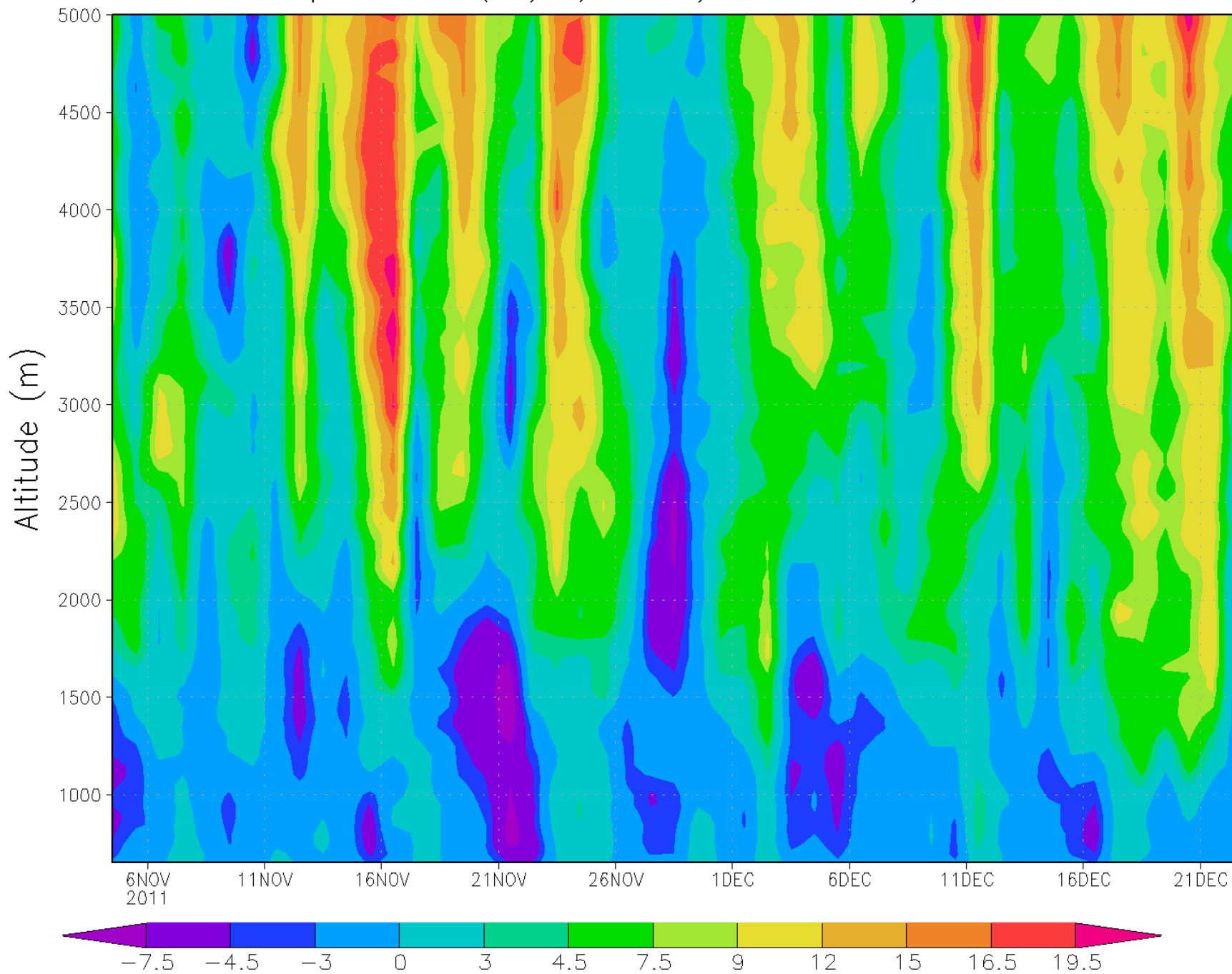
Comp. Zonal(m/s) - 4/nov a 22/dez 2011



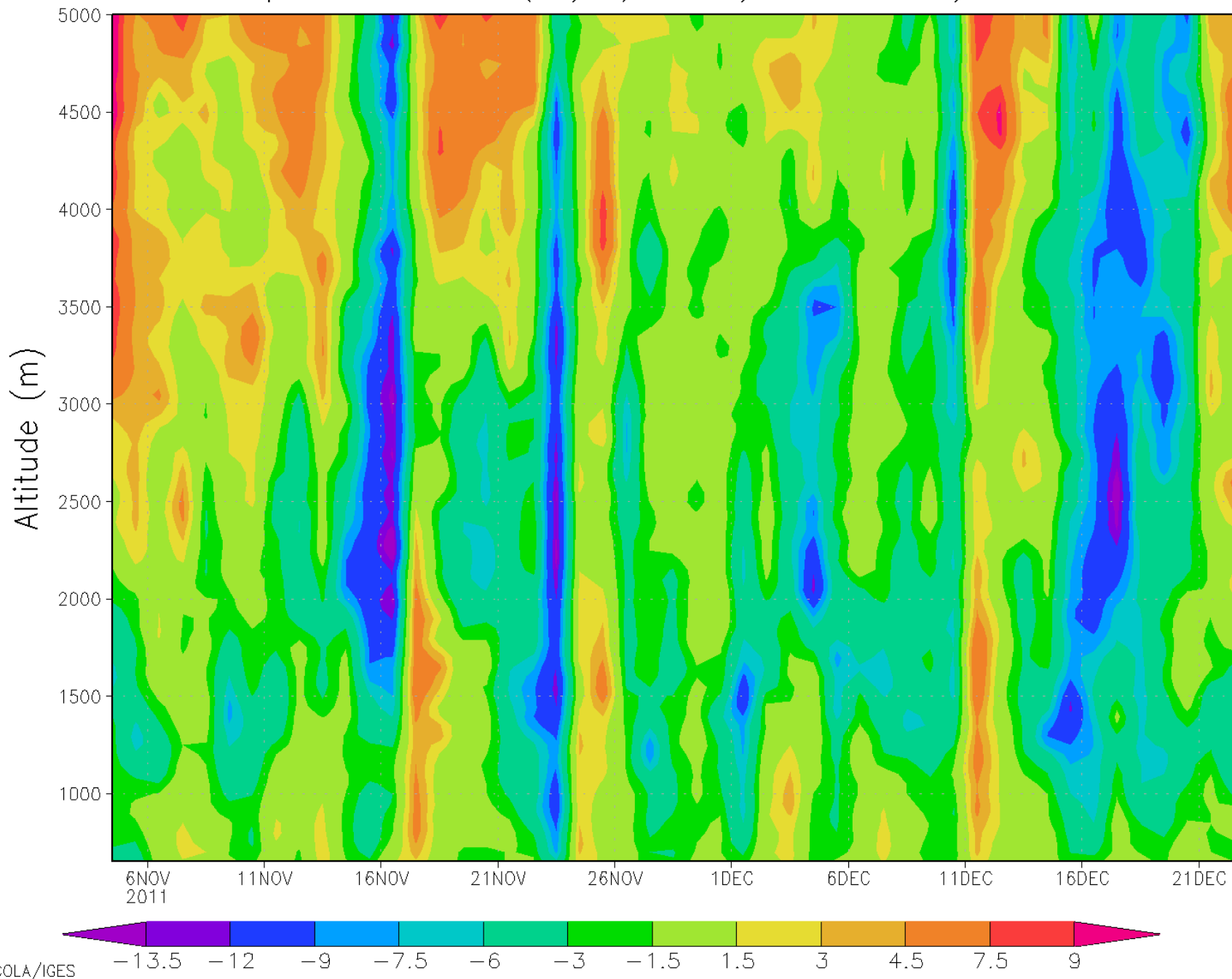
Comp. Meridional(m/s) - 4/nov a 22/dez 201



Comp. Zonal(m/s) = 4/nov a 22/dez 2011



Comp. Meridional(m/s) – 4/nov a 22/dez 2011



README RADIOSSONDA

1 – Formato do nome do arquivo:

AAAYYYMMDDHH.TXT – Ex.: IAE2011110412.TXT

AAA – Siglas dos sítios dos experimentos (Ver tabela 1);

YYYY – Ano com quatro dígitos;

MM - Mês;

DD – dia do mês;

HH – Hora do início da sondagem;

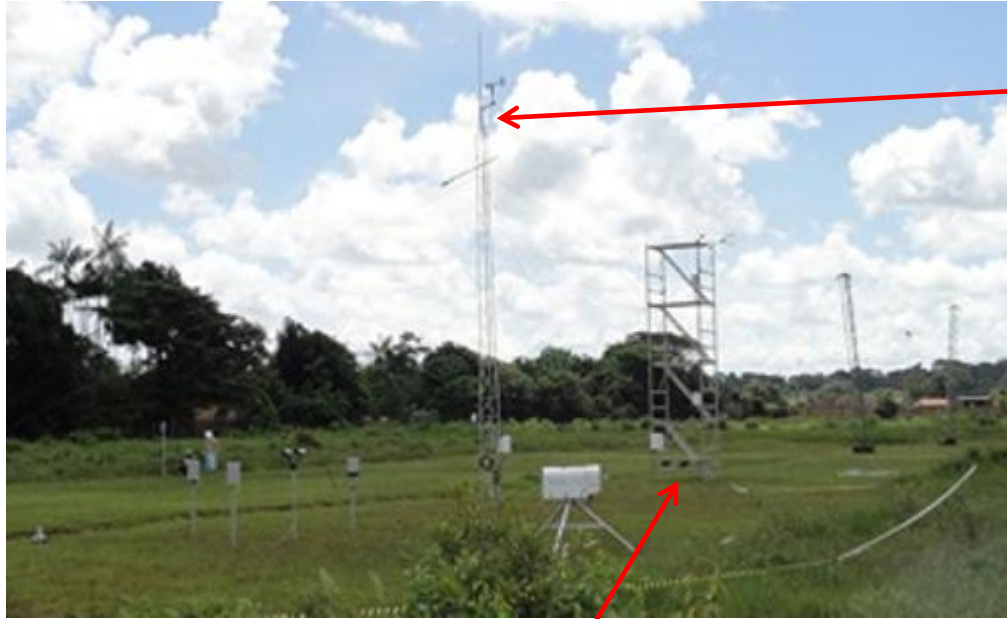
2 – Formato do Arquivo:

O arquivo foi gravado no formato ASCII, com 8 linhas de cabeçalho e 10 colunas de variáveis atmosférica, são elas: minuto, segundo, taxa de ascensão (m/s), altura (m), pressão (hPa), temperatura do ar (°C), umidade relativa (%), Temperatura do ponto de orvalho (°C), Direção (°) e velocidade do vento (m/s).

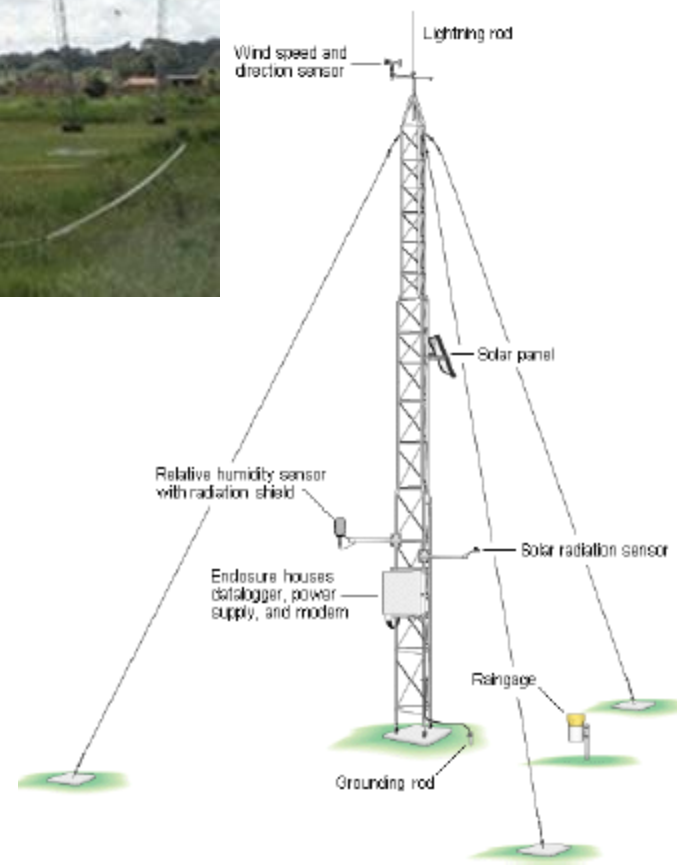
Tabela 1- Siglas dos Sítios de lançamentos de radiossondagens

Vale do Paraíba		Fortaleza		Belém	
Siglas	Sítios	Siglas	Sítios	Siglas	Sítios
IAE	CTA - São José dos campos	INM	INMET	AER	Aeroporto
UBA	Ubatuba	MOS	Mossoró	SMG	São Miguel do Guama
LIM	Cachoeira Paulista	QUI	Quixeramo bim	STO	São Tomé Assu

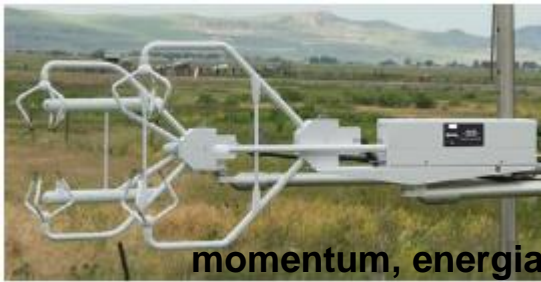
Surface Meteo Data



Torre meteorológica

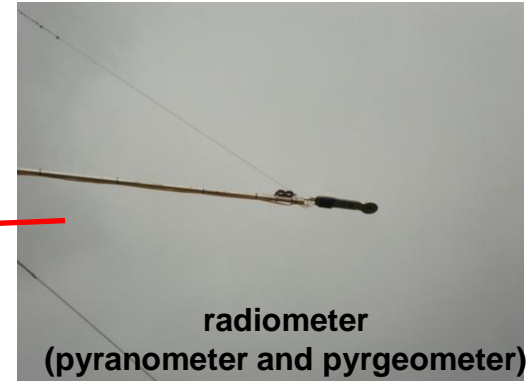
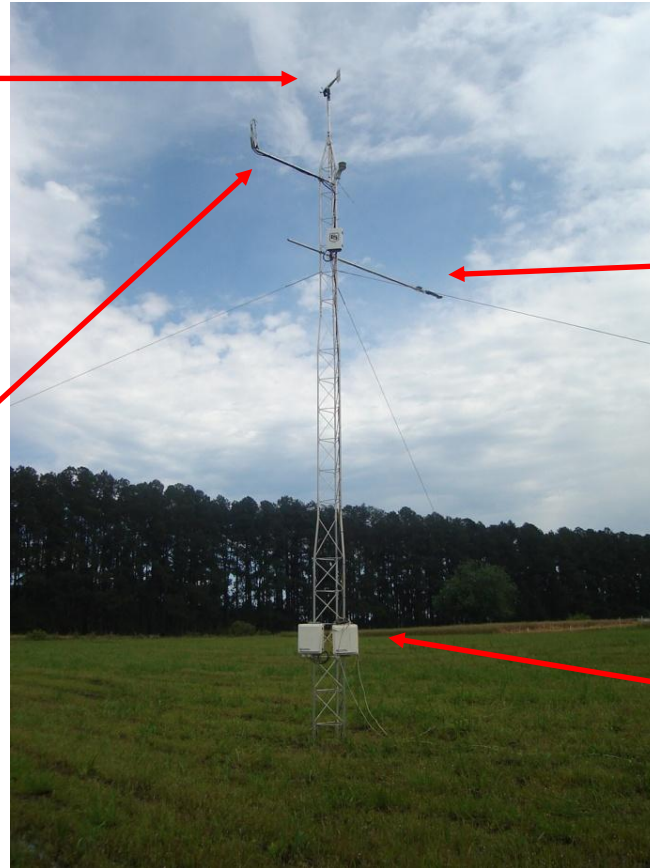


Torre fluxos de superfície

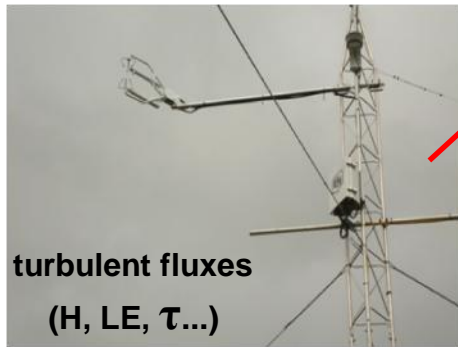


Set of equipment

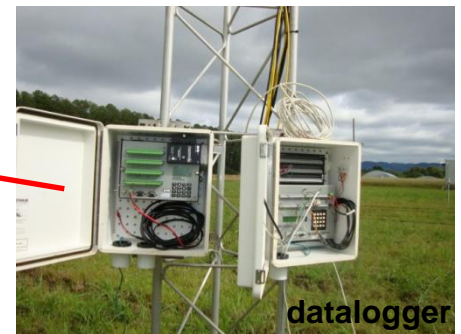
wind speed and direction



radiometer
(pyranometer and pyrgeometer)



turbulent fluxes
(H, LE, τ ...)



datalogger

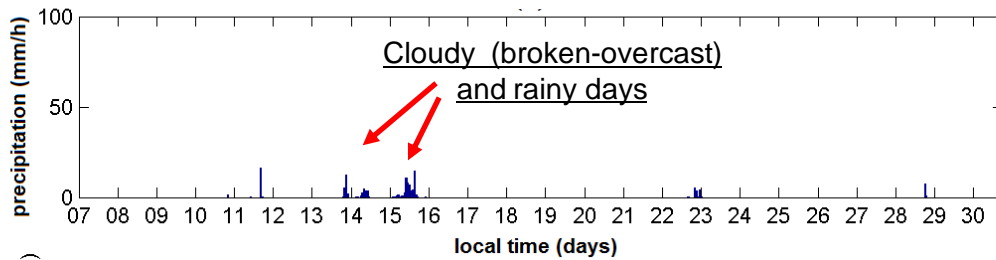
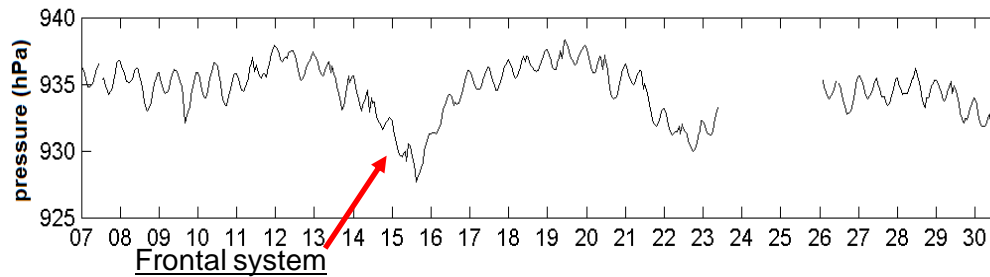
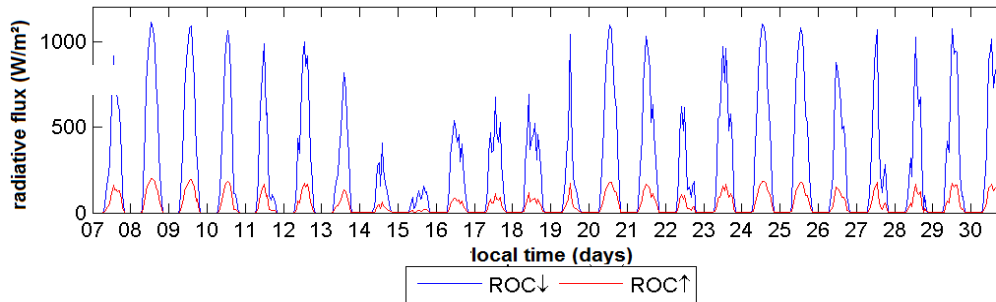


rain
gauges

(images – thanks to LIM / INPE team)

Some preliminary results

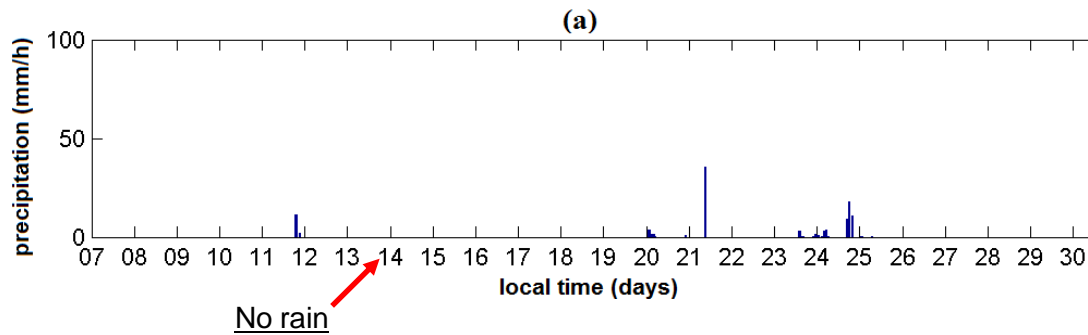
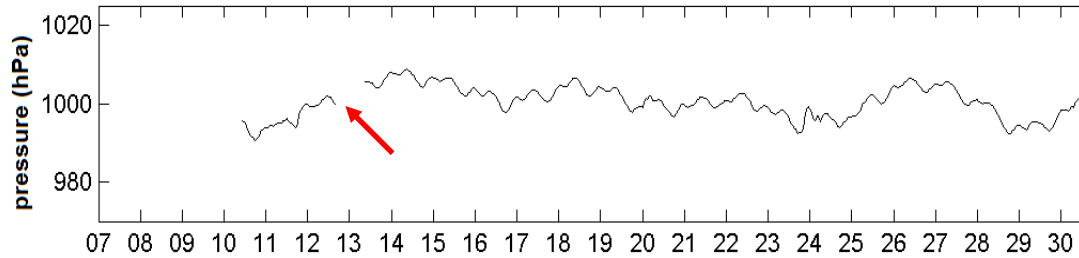
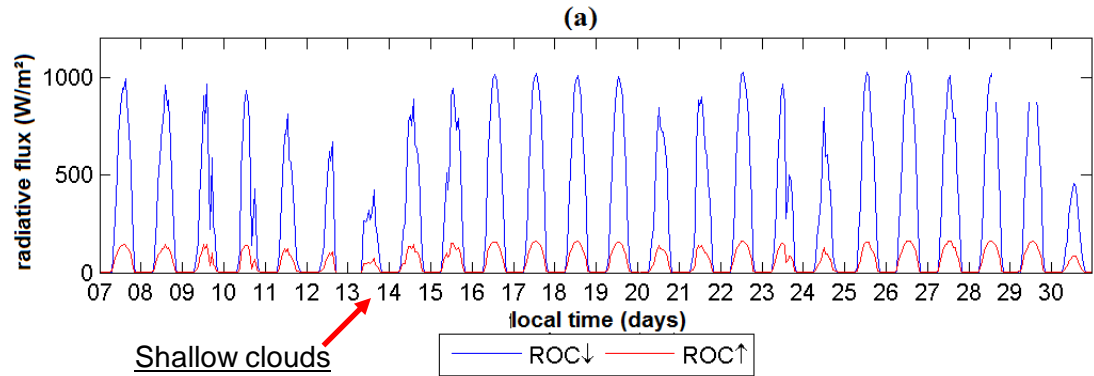
NOV 2011 (VP)



5)

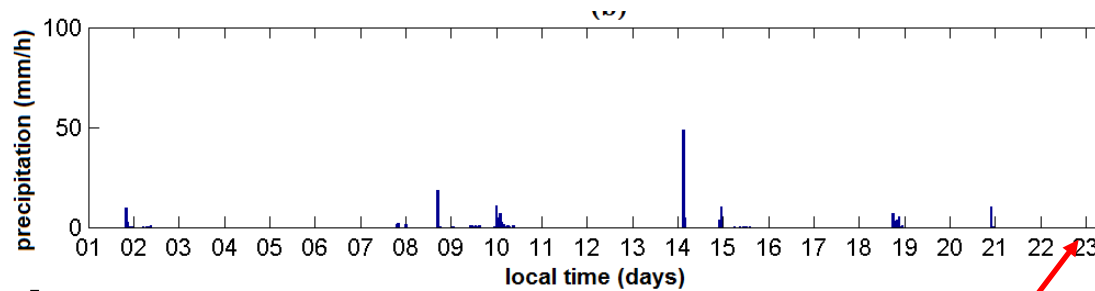
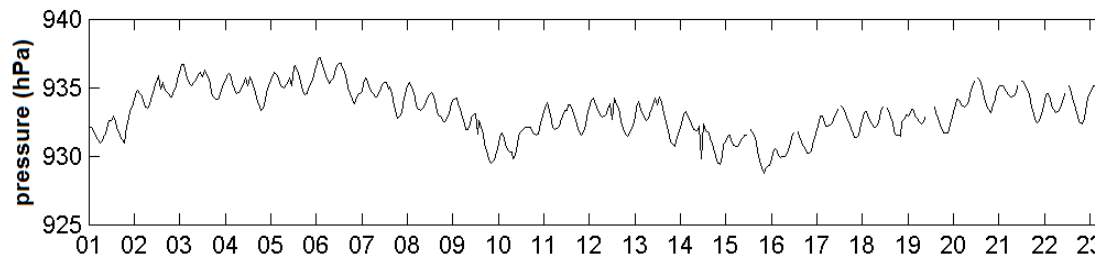
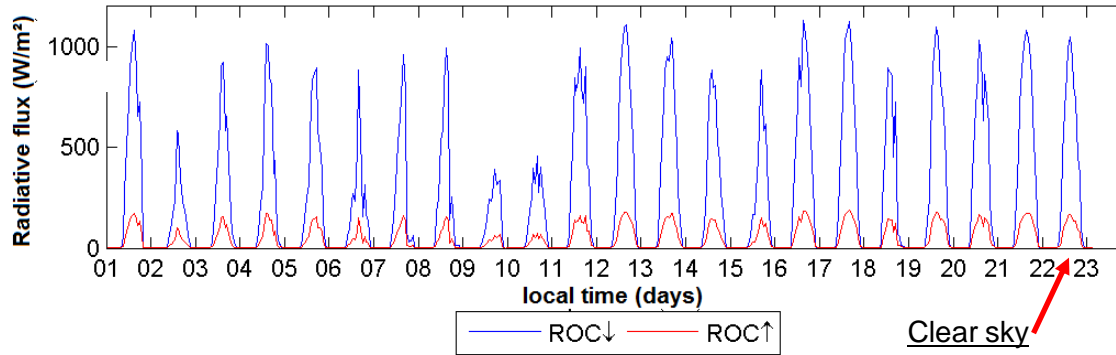
Some preliminary results

NOV 2012 (SM)



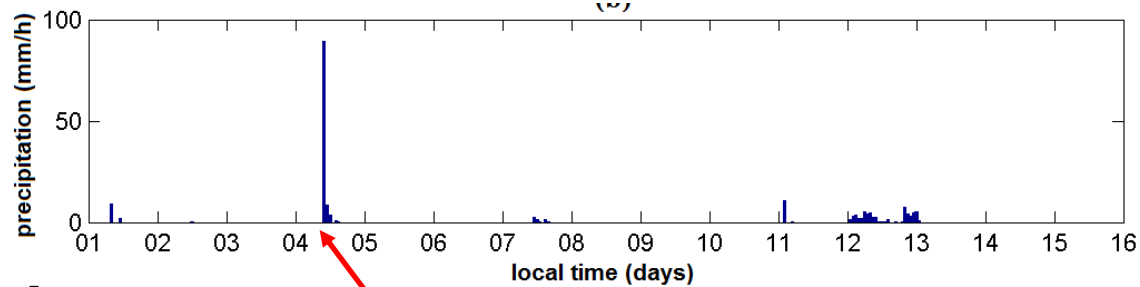
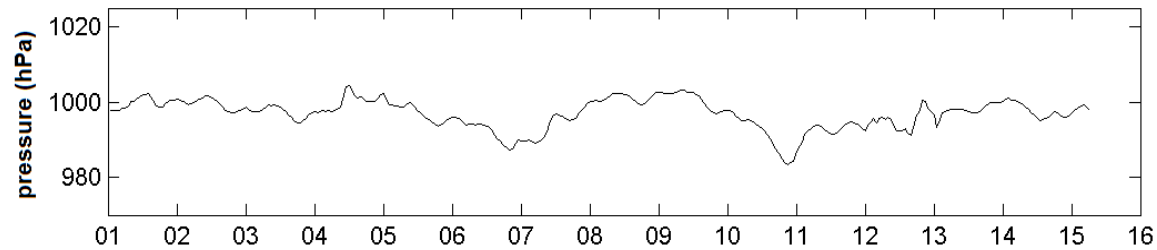
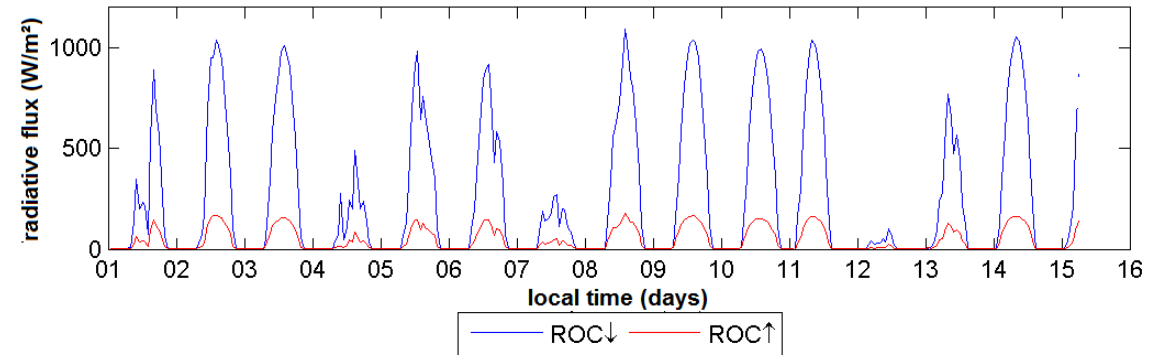
Some preliminary results

DEC 2011 (VP)



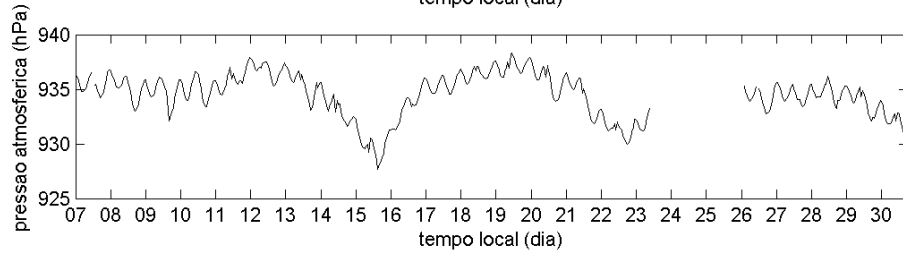
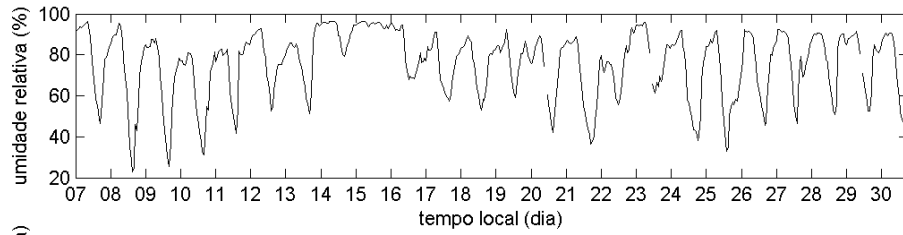
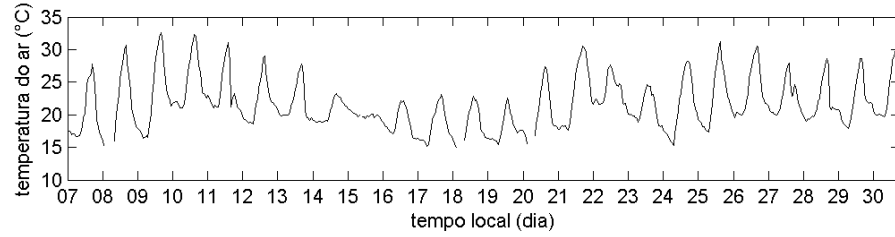
Some preliminary results

DEC 2012 (SM)

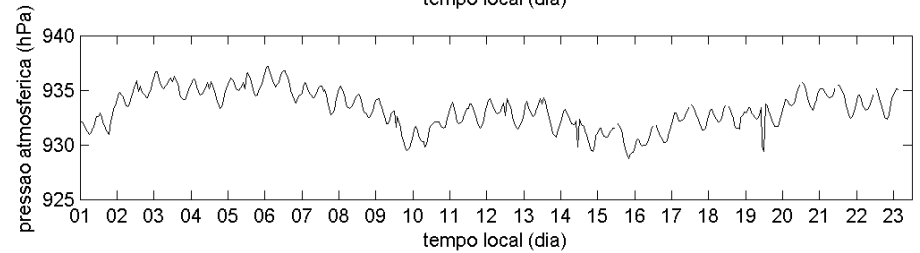
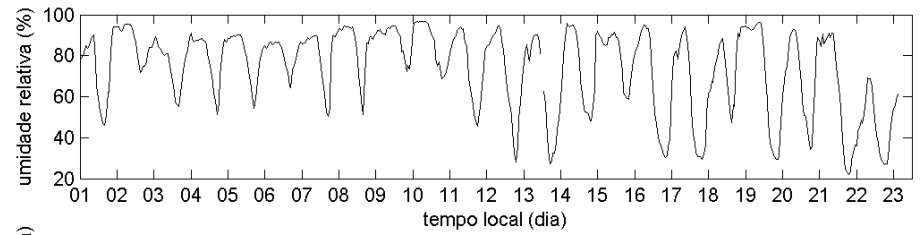
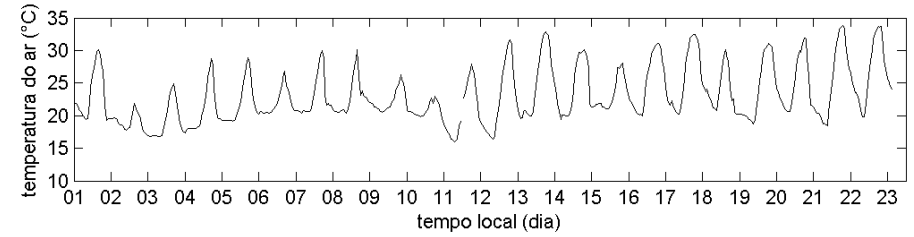


Convective rain
at noon

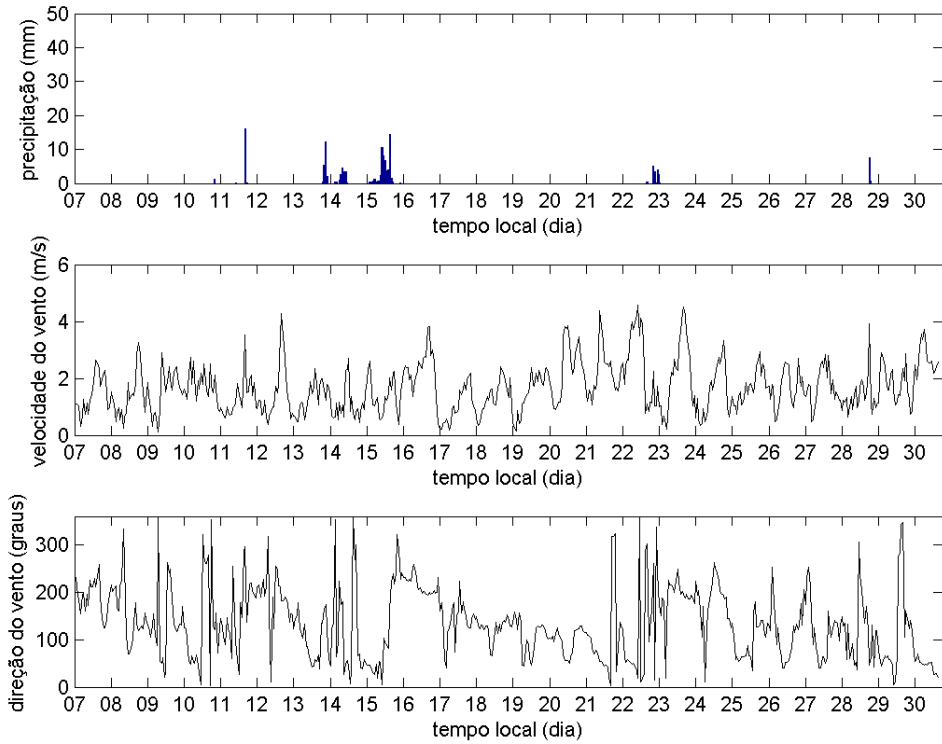
Nov 2011



Dez 2011

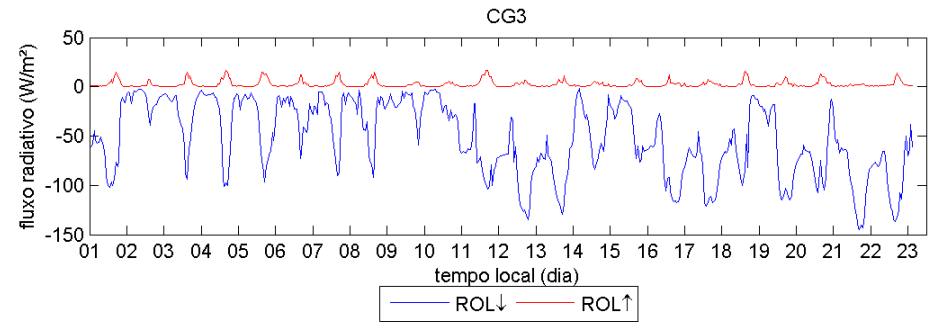
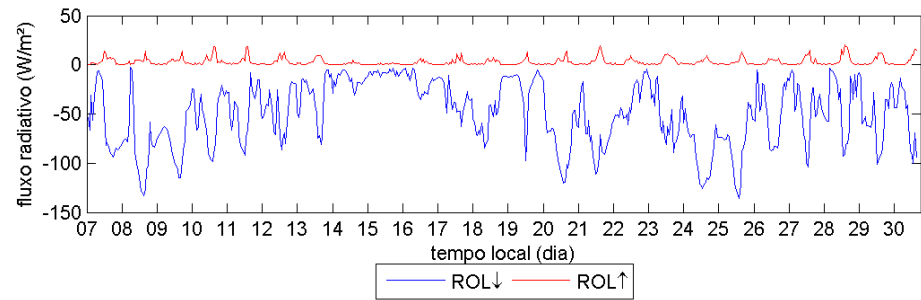
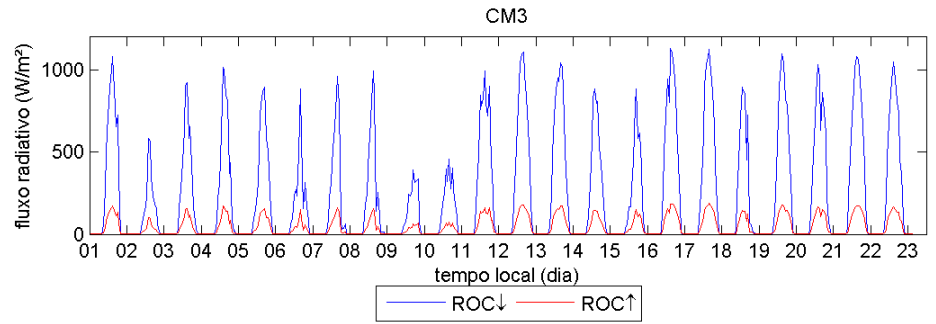
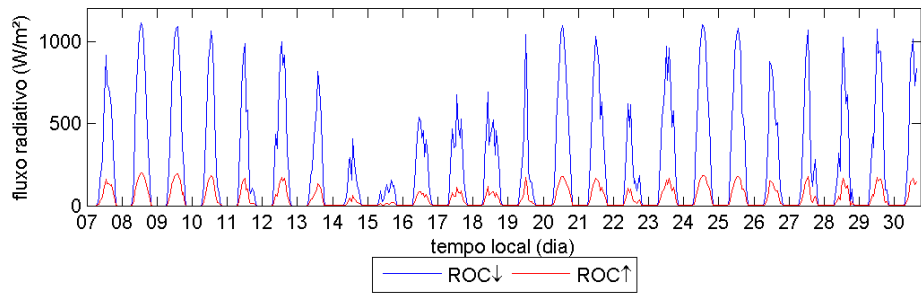


Nov 2011

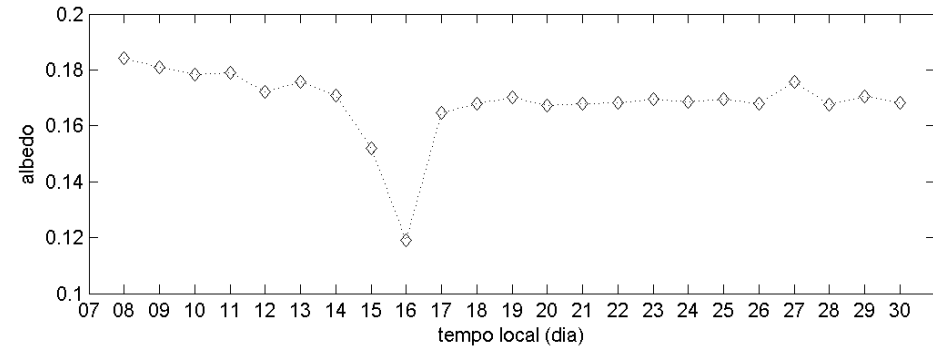
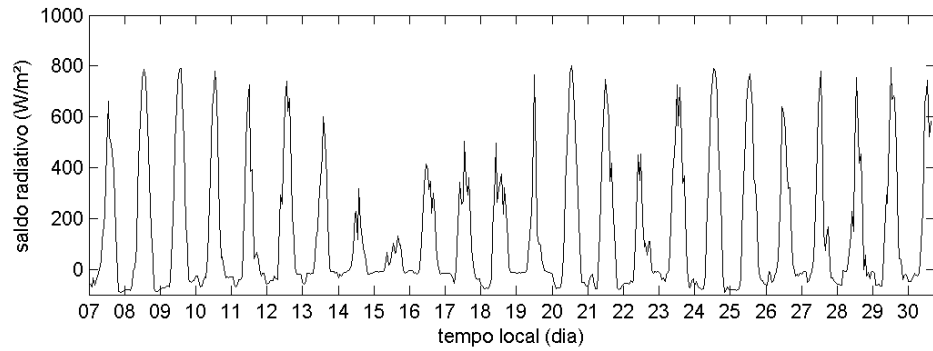


Nov 2011

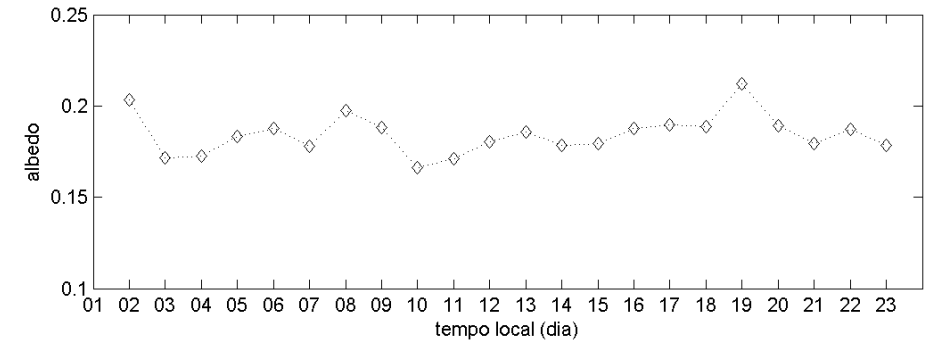
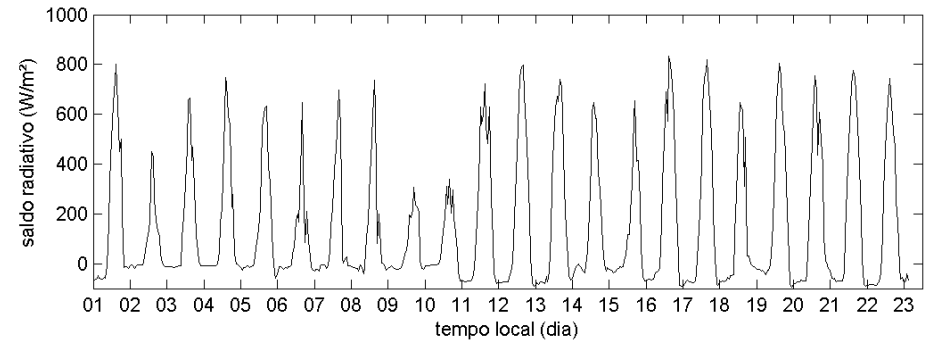
Dez 2011



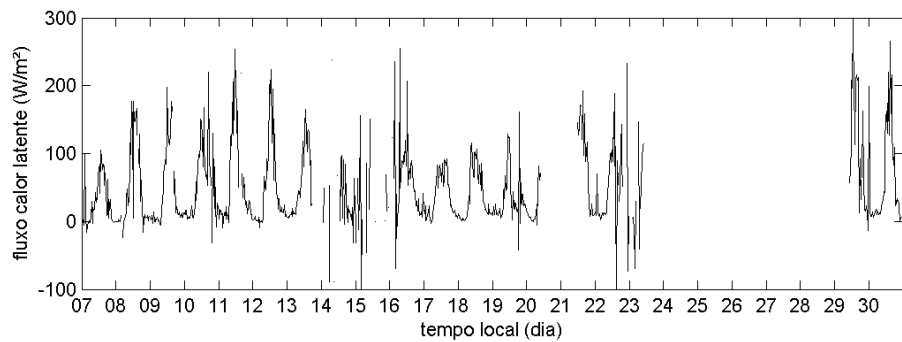
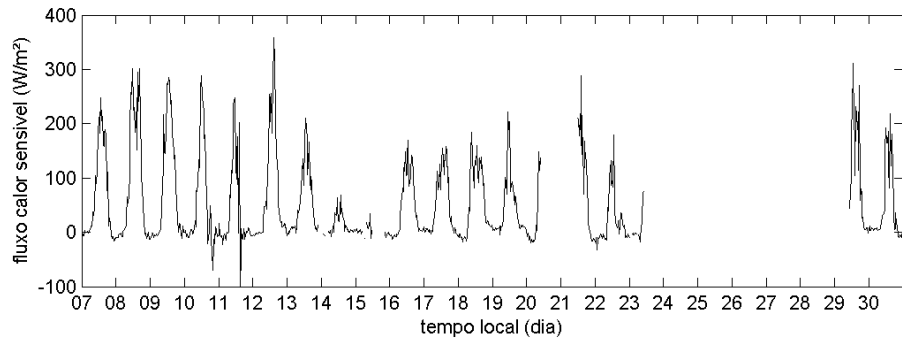
Nov 2011



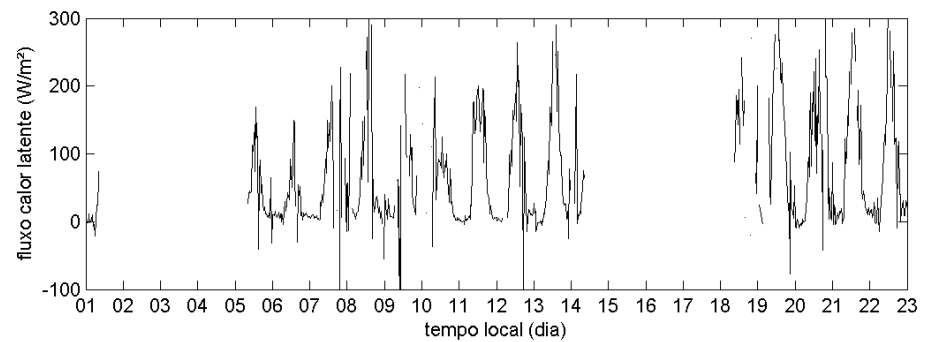
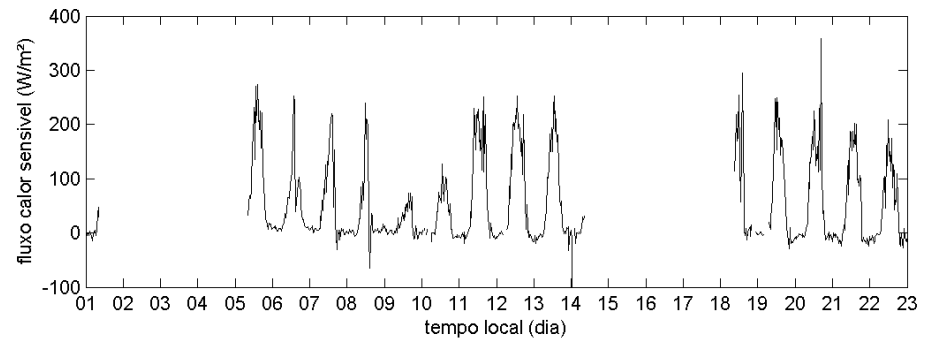
Dez 2011



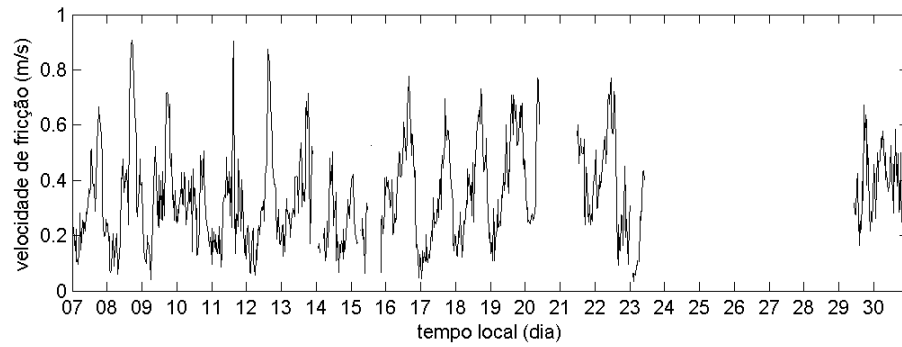
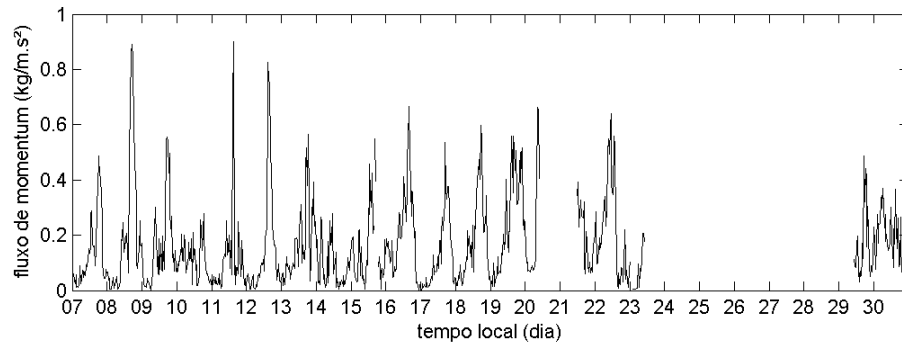
Nov 2011



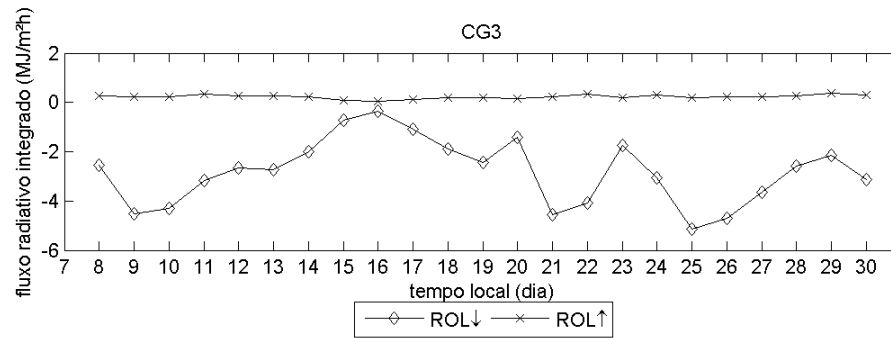
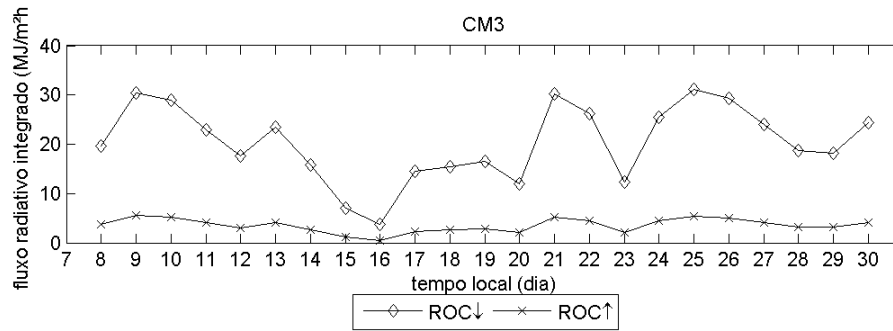
Dez 2011



Nov 2011



Nov 2011



Satellite Images / Radiance

Wagner Flaubert (CPTEC/INPE)

Informação dos dados de Satélites para os Golden Days

Status:

1- Todos os dados estão armazenados na máquina Pararaca.

2- O acesso desse dados não estão ainda disponíveis pelo APLICATIVO da página Chuva.

3- Os dados estão sendo cadastrados no Banco de Dados, e só após desse cadastro que será possível acessar os dados pelo Aplicativo.

4- Para obter os dados será necessário enviar um email para wagner@cptec.inpe.br solicitando os mesmo.

5 - Os dados sem informação do MSG para Fortaleza e Vale serão reprocessados

Formato:

GOES	Binario
MSG	Binario
NOAA	Ascii
DMSP	Ascii
TRMM	ASCII

Alcântara

	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	PR/TMI
10/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
11/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
12/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
13/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
19/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
20/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
21/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
22/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
23/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
24/03/10	ch1/ch2/ch3/ch4/ch5	Sem informação	Sem informação	Sem informação	Sem informação	Sem informação	1B11/2A25
Volume (Gbytes)	0,5	0	0	0	0	0	3,7

Belém

	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	PR/TMI
08/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
09/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
10/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
11/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
12/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N17/N18/N19	N17/N18/N19	f16/f17/f18	1B11/2A25
13/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
14/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
19/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
20/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
21/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
22/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
23/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
24/06/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
Volume (Gbytes)	2,2	5,5	2,4	0,14	0,14	0,1	5,5

Vale do Paraíba

	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	PR/TMI
11/11/11	ch1/ch2/ch3/ch4/ch5	Sem informação	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
12/11/11	ch1/ch2/ch3/ch4/ch5	Sem informação	N15/N16/N18/N19	N16/N18/N19	N16/N18/N19	f16/f17/f18	1B11/2A25
13/11/11	ch1/ch2/ch3/ch4/ch5	Sem informação	N15/N16/N18/N19	N16/N18/N19	N16/N18/N19	f16/f17/f18	1B11/2A25
14/11/11	ch1/ch2/ch3/ch4/ch5	Sem informação	N15/N16/N18/N19	N17/N18/N19	N17/N18/N19	f16/f17/f18	1B11/2A25
15/11/11	ch1/ch2/ch3/ch4/ch5	Sem informação	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
22/11/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
23/11/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
28/11/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
29/11/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N18/N19	N16/N18/N19	f16/f17/f18	1B11/2A25
30/11/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
01/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N17/N18/N19	N17/N18/N19	f16/f17/f18	1B11/2A25
02/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
14/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
15/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
18/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	Sem informação	1B11/2A25
19/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	Sem informação	1B11/2A25
20/12/11	ch1/ch2/ch3/ch4/ch5	All-Channels	N15/N16/N19	N16/N17/N18/N19	N16/N17/N18/N19	Sem informação	1B11/2A25
Volume (Gbytes)	5,8	12	11	0,15	0,15	0,4	1,1

Fortaleza

	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	PR/TMI
08/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	Sem informação	Sem informação	f16/f17/f18	1B11/2A25
09/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N18/N19	N16/N18/N19	f16/f17/f18	1B11/2A25
10/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
11/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
12/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
13/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
14/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
15/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
18/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
19/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
20/04/11	ch1/ch2/ch3/ch4/ch5	Ch11	N15/N16/N18/N19	N16/N17/N18/N19	N16/N17/N18/N19	f16/f17/f18	1B11/2A25
Volume (Gbytes)	2	0,6	2,4	0,2	0,2	0,1	4,6

Numerical Modelling Outputs

Renato Galante Negri
(CPTEC/INPE)

Até o momento, existem apenas as simulações para os golden days dos experimentos de Fortaleza e Vale do Paraíba.

As saídas (arquivos .vfm) e as simulações das radiâncias ainda não estão no banco de dados

Pretendo colocar as simulações das radiâncias no BD por volta de agosto (final do projeto de pós doutorado)

As simulações das radiâncias do infravermelho foram concluídas, agora estou simulando as radiâncias do micro-ondas

Fortaleza								
	BRAMS	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Steps (n°)	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	TMI
08/04/11	37	ok	ok	ok				
09/04/11	37	ok	ok	ok				
10/04/11	37	ok	ok	ok				
11/04/11	37	ok	ok	ok				
12/04/11	37	ok	ok	ok				
13/04/11	37	ok	ok	ok				
14/04/11	31	ok	ok	ok				
15/04/11	7	ok	ok	ok				
18/04/11	37	ok	ok	ok				
19/04/11	31	ok	ok	ok				
20/04/11	7	ok	ok	ok				

Vale do Paraíba

	BRAMS	GOES12	MSG	NOAA			DMSP	TRMM
Golden Days	Steps (n°)	Imager	SEVIRI	AVHRR	AMSU/A	AMSU/B	SSM/I/S	TMI
11/11/11	37	ok	ok	ok	ok			
12/11/11	37	ok	ok	ok	ok			
13/11/11	37	ok	ok	ok	ok			
14/11/11	31	ok	ok	ok	ok			
15/11/11	7	ok	ok	ok	ok			
22/11/11	31	ok	ok	ok	ok			
23/11/11	7	ok	ok	ok	ok			
28/11/11	37	ok	ok	ok	ok			
29/11/11	37	ok	ok	ok	ok			
30/11/11	37	ok	ok	ok	ok			
01/12/11	31	ok	ok	ok	ok			
02/12/11	7	ok	ok	ok	ok			
14/12/11	31	ok	ok	ok	ok			
15/12/11	7	ok	ok	ok	ok			
18/12/11	37	ok	ok	ok	ok			
19/12/11	31	ok	ok	ok	ok			
20/12/11	7	ok	ok	ok	ok			

Future Actions

- Another field experiment (GoAmazon 2014)
- Data-Base Management
- Verification of the Data (there are erroneous data)
- ??