

PARANAL TEMPERATURE 2000 – 2007:
 Nighttime Gradient deg/hr at 30 and 2 m above ground. (18PM to 6AM Solar time)

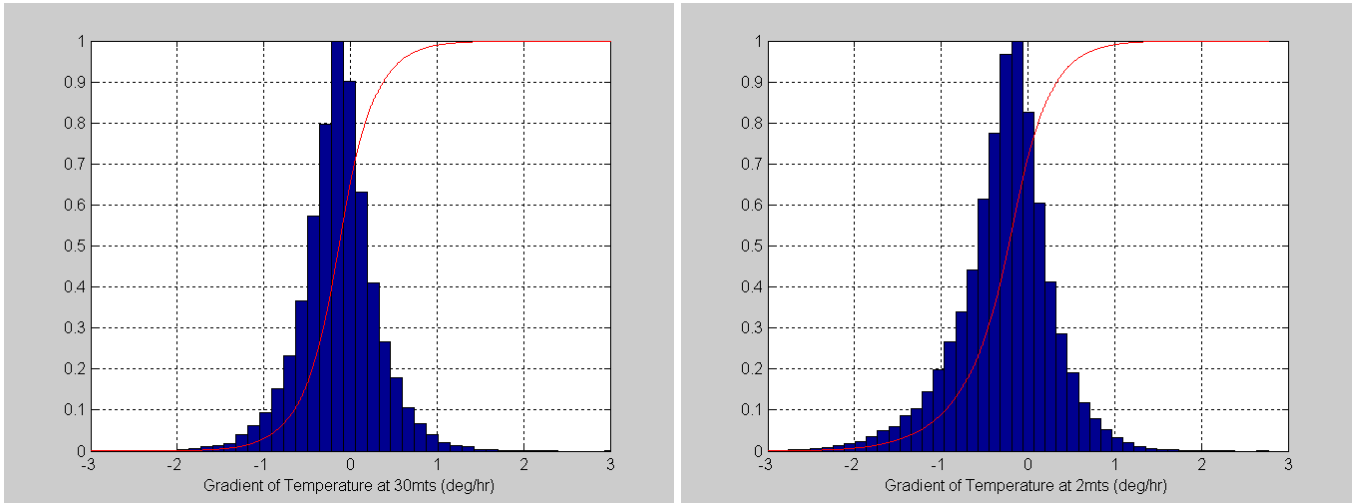


Figure 1: Nighttime gradient of temperature (deg/hr) at Paranal 2000-2007

	Temp30mts	Temp2mts
2000	-1.03 / 0.78	-1.50 / 0.66
2001	-1.01 / 0.76	-1.48 / 0.75
2002	-1.07 / 0.79	-1.55 / 0.72
2003	-1.03 / 0.77	-1.59 / 0.76
2004	-1.04 / 0.78	-1.52 / 0.72
2005	-1.10 / 0.76	-1.60 / 0.72
2006	-1.08 / 0.76	-1.60 / 0.78
2007	-1.06 / 0.79	-1.42 / 0.72
All Data	-1.06 / 0.77	-1.54 / 0.74

Table 1: Nighttime gradient of temperature deg/hr. Lower and upper limits are for the 95% of the data, this mean that Lower limits = 2.5 percentile and Upper limit = 97.5 percentile.

PARANAL TEMPERATURE 2000 - 2007:
 Nighttime excursion (18PM to 6AM Solar time)

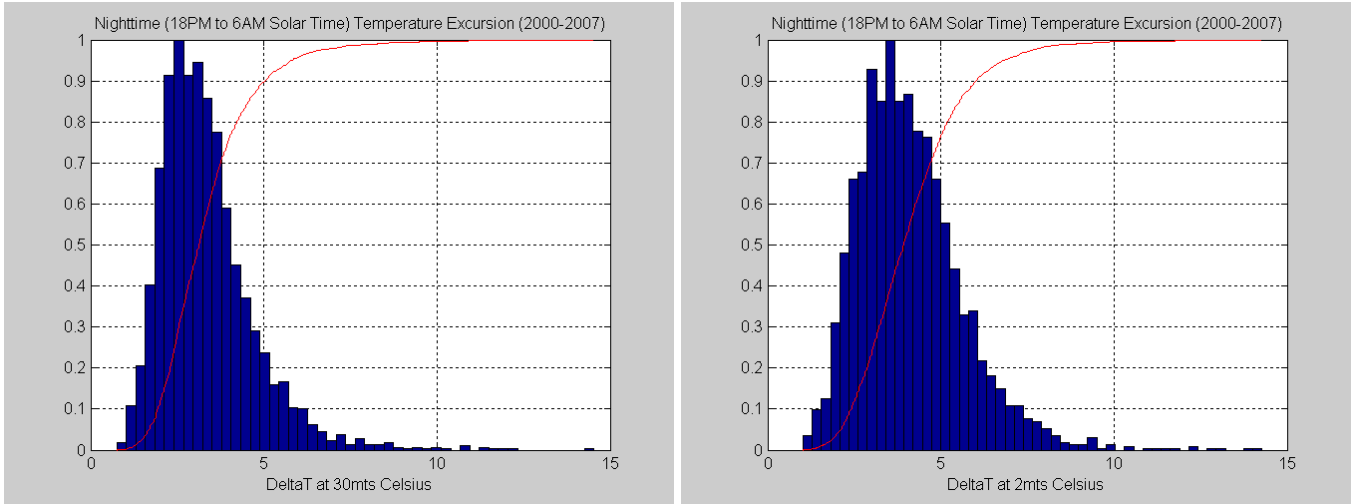


Figure 2: Nighttime temperature excursion at Paranal 2000-2007

	<i>Temp30 mts</i>	<i>Temp2 mts</i>
2000	3.14 / 5.64	3.93 / 6.84
2001	3.09 / 5.84	3.89 / 6.96
2002	3.26 / 5.87	4.09 / 6.85
2003	3.00 / 5.44	3.74 / 6.05
2004	3.20 / 5.79	4.06 / 6.53
2005	3.07 / 6.36	3.94 / 7.35
2006	3.14 / 5.67	3.86 / 6.63
2007	3.17 / 5.95	3.91 / 7.03
All Data	3.13 / 5.83	3.92 / 6.83

Table 2: Nighttime temperature excursion Median / 95%

PARANAL TEMPERATURE 2000 - 2007:
Seasonal statistics (24h)

	Min	5perc.	Median	Average	95perc.	Max	Std. dev	Samples
Jan_March 2000	7.66	9.97	12.67	12.63	15.07	18.70	1.59	118349
April_June 2000	-2.61	4.97	11.80	11.27	16.08	20.08	3.58	124414
July_Sep. 2000	-6.74	-4.79	9.85	7.40	12.48	13.97	5.88	13627
Oct._Dec. 2000	6.70	9.32	13.53	13.22	16.22	19.23	2.05	114406
Jan_March 2001	8.22	10.97	13.48	13.58	16.45	19.45	1.64	120995
April_June 2001	1.66	6.22	12.24	12.00	17.11	19.82	3.18	128056
July_Sep. 2001	2.11	6.25	11.52	11.26	15.74	18.83	2.84	123228
Oct._Dec. 2001	1.92	9.78	13.90	13.55	16.34	19.18	2.15	129940
Jan_March 2002	6.74	11.08	13.80	13.74	16.28	18.80	1.60	125970
April_June 2002	2.08	5.84	11.99	11.89	17.07	20.77	3.47	128280
July_Sep. 2002	-7.23	5.21	11.58	11.21	16.08	21.32	3.82	127976
Oct._Dec. 2002	5.71	9.97	13.83	13.70	16.64	19.14	2.06	130069
Jan_March 2003	6.47	11.97	14.77	14.68	17.14	20.37	1.62	120483
April_June 2003	4.40	8.74	13.84	13.66	16.86	19.91	2.33	126947
July_Sep. 2003	-0.48	5.66	12.26	11.76	16.11	19.67	3.15	127449
Oct._Dec. 2003	7.01	10.36	13.94	13.84	16.79	20.10	1.98	128619
Jan_March 2004	7.60	10.72	14.18	14.18	17.53	21.62	2.09	127369
April_June 2004	1.82	6.60	11.98	11.97	16.80	20.61	3.15	125530
July_Sep. 2004	-0.16	5.79	11.60	11.46	16.33	19.56	3.26	125903
Oct._Dec. 2004	6.07	9.99	13.25	13.14	15.96	19.29	1.77	128536
Jan_March 2005	6.88	10.54	14.33	14.09	16.95	20.72	1.94	128530
April_June 2005	3.84	7.59	13.07	12.70	16.85	20.08	2.86	123505
July_Sep. 2005	-10.30	2.15	11.96	10.85	16.86	20.03	4.76	127458
Oct._Dec. 2005	4.59	8.84	13.12	12.82	16.05	19.35	2.13	130445
Jan_March 2006	8.41	11.06	13.87	13.98	17.16	20.20	1.81	126765
April_June 2006	2.82	8.26	13.31	13.08	16.77	20.47	2.51	128063
July_Sep. 2006	1.84	7.22	12.87	12.63	17.58	24.40	3.26	129232
Oct._Dec. 2006	6.96	10.05	13.99	13.79	16.68	19.34	1.92	129506
Jan_March 2007	6.34	10.61	14.27	14.11	16.98	19.95	1.93	126846
April_June 2007	3.49	6.15	12.02	11.77	16.48	22.32	3.11	126872
July_Sep. 2007	0.14	4.63	10.86	10.43	15.37	19.16	3.13	125996
Oct._Dec. 2007	0.52	8.25	13.08	12.78	16.30	21.57	2.59	130889

Table 3: Air Temperature by Season (24hrs data)

PARANAL TEMPERATURE 2000 - 2007:
Seasonal Statistics (18PM to 6AM Solar time)

	Min	5perc.	Median	Average	95perc.	Max	Std. dev	Samples
Jan_March 2000	7.66	9.58	12.45	12.35	14.62	18.02	1.58	49457
April_June 2000	-2.61	4.77	11.33	10.82	15.62	19.42	3.62	51192
July_Sep. 2000	-6.74	-5.53	9.70	6.94	12.14	12.56	6.26	5913
Oct._Dec. 2000	6.89	8.98	13.26	12.84	15.80	17.32	2.06	47811
Jan_March 2001	8.22	10.63	13.25	13.27	16.10	18.91	1.62	51291
April_June 2001	2.06	5.99	11.84	11.56	16.72	19.27	3.12	53286
July_Sep. 2001	2.54	5.94	11.02	10.83	15.27	17.52	2.76	51605
Oct._Dec. 2001	1.92	9.51	13.67	13.21	15.89	18.64	2.22	54204
Jan_March 2002	6.74	10.80	13.52	13.47	16.04	18.17	1.63	52230
April_June 2002	2.18	5.28	11.27	11.36	16.61	18.09	3.48	53085
July_Sep. 2002	-7.18	5.31	11.23	10.88	15.83	18.28	3.78	52867
Oct._Dec. 2002	5.71	9.45	13.51	13.30	16.46	18.40	2.14	54252
Jan_March 2003	6.47	11.59	14.59	14.43	16.82	20.18	1.67	50362
April_June 2003	4.40	8.14	13.43	13.20	16.51	18.32	2.33	53096
July_Sep. 2003	-0.48	5.44	11.87	11.35	15.30	17.85	3.04	52915
Oct._Dec. 2003	7.01	9.60	13.71	13.54	16.57	18.19	2.06	53535
Jan_March 2004	7.69	10.38	13.94	13.85	17.21	18.98	2.05	53652
April_June 2004	1.82	6.11	11.25	11.44	16.40	17.67	3.12	51781
July_Sep. 2004	0.82	5.68	10.98	10.97	15.95	18.89	3.17	52397
Oct._Dec. 2004	6.32	9.49	12.98	12.86	15.78	19.29	1.84	54164
Jan_March 2005	6.88	10.04	14.06	13.74	16.44	18.24	1.89	53473
April_June 2005	3.84	7.36	12.74	12.26	16.39	18.59	2.83	50943
July_Sep. 2005	-10.30	2.03	11.50	10.34	15.98	18.73	4.66	52592
Oct._Dec. 2005	4.59	8.20	12.88	12.43	15.44	17.74	2.13	53944
Jan_March 2006	8.52	10.66	13.67	13.70	16.53	18.62	1.72	53107
April_June 2006	4.27	7.96	12.95	12.66	16.05	19.28	2.43	53657
July_Sep. 2006	2.41	6.90	12.27	12.13	16.88	23.16	3.23	53460
Oct._Dec. 2006	6.96	9.34	13.64	13.35	15.99	18.79	1.96	54262
Jan_March 2007	6.70	10.33	13.99	13.79	16.63	19.09	1.93	53210
April_June 2007	3.54	5.80	11.62	11.31	16.00	18.91	3.07	52406
July_Sep. 2007	0.14	3.95	10.51	9.93	14.79	16.63	3.04	50633
Oct._Dec. 2007	0.52	7.68	12.63	12.26	15.49	17.25	2.56	54365

Table 4: Air Temperature by Season (Night only 00 to 10 UT)

PARANAL TEMPERATURE 2000 - 2007:
Yearly Statistics (24h)

	Min	5perc.	Median	Average	95perc.	Max	Std. dev	Samples
2000	-6.74	6.72	12.64	12.16	15.82	20.08	3.03	370796
2001	1.66	7.57	12.96	12.60	16.44	19.82	2.72	502219
2002	-7.23	7.10	13.12	12.63	16.58	21.32	3.10	512295
2003	-0.48	8.21	13.87	13.47	16.81	20.37	2.58	503498
2004	-0.16	7.68	13.00	12.70	16.81	21.62	2.84	507338
2005	-10.30	6.45	13.26	12.62	16.73	20.72	3.33	509938
2006	1.84	8.81	13.61	13.37	16.99	24.40	2.51	513566
2007	0.14	6.48	12.66	12.28	16.49	22.32	3.04	510603
TOTAL	-10.03	6.45	13.06	12.73	16.66	24.40	2.89	3930253

Table 5: Air Temperature by year (24hrs data)

PARANAL TEMPERATURE 2000 - 2007:
Yearly Statistics (18PM to 6AM Solar time)

	Min	5perc.	Median	Average	95perc.	Max	Std. dev	Samples
2000	-6.74	6.22	12.27	11.79	15.38	19.42	3.10	154373
2001	1.92	7.12	12.67	12.22	15.97	19.27	2.71	210386
2002	-7.18	6.74	12.77	12.25	16.32	18.40	3.12	212434
2003	-0.48	7.74	13.54	13.11	16.47	20.18	2.59	209908
2004	0.82	7.37	12.61	12.30	16.46	19.29	2.84	211994
2005	-10.30	5.82	12.94	12.20	16.07	18.73	3.30	210952
2006	2.41	8.27	13.31	12.96	16.32	23.16	2.48	214486
2007	0.14	6.04	12.18	11.85	16.00	19.09	3.03	210614
TOTAL	-10.30	5.82	12.72	12.33	16.20	23.16	2.90	1635147

Table 6: Air Temperature by year (Night only 00 to 10 UT)

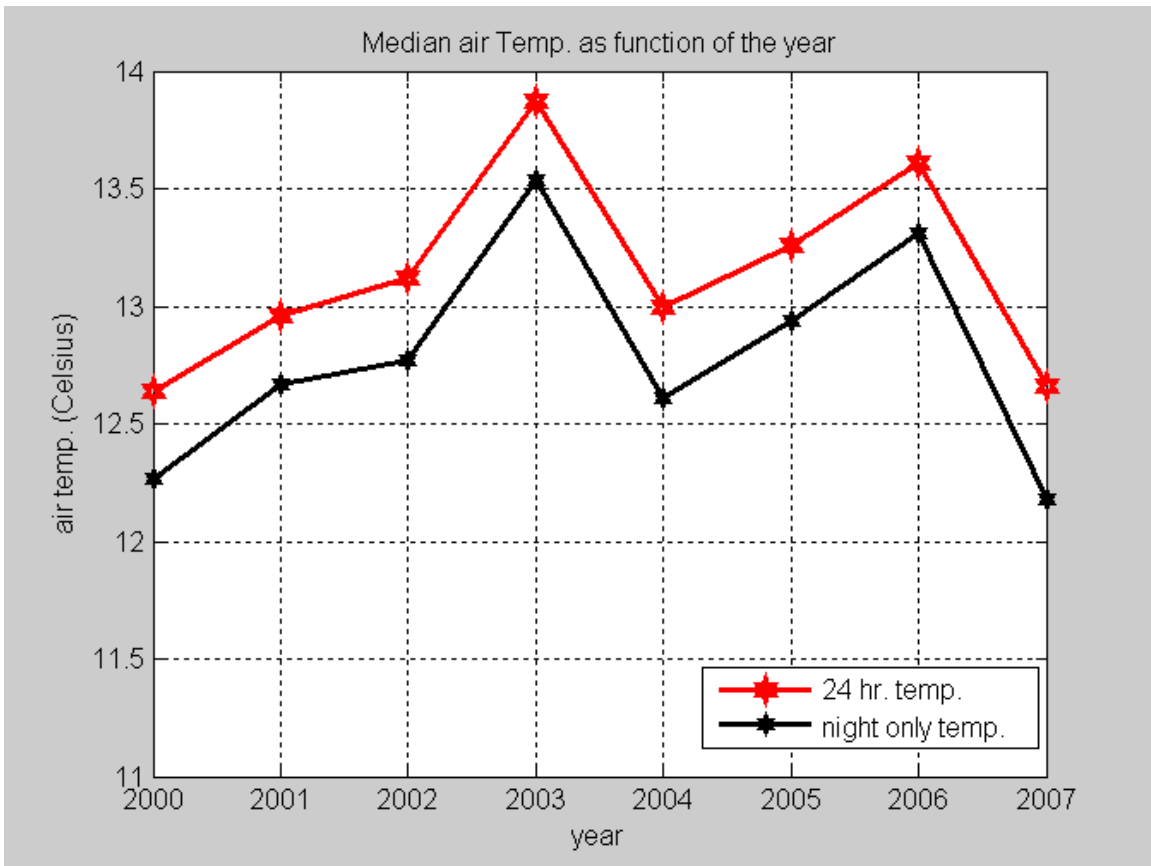
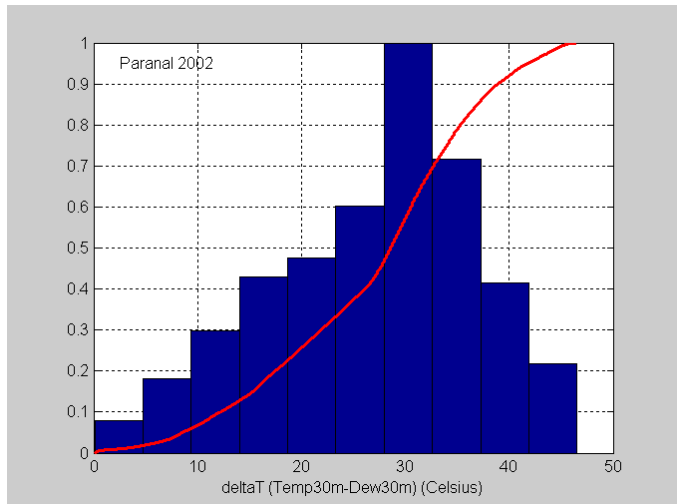
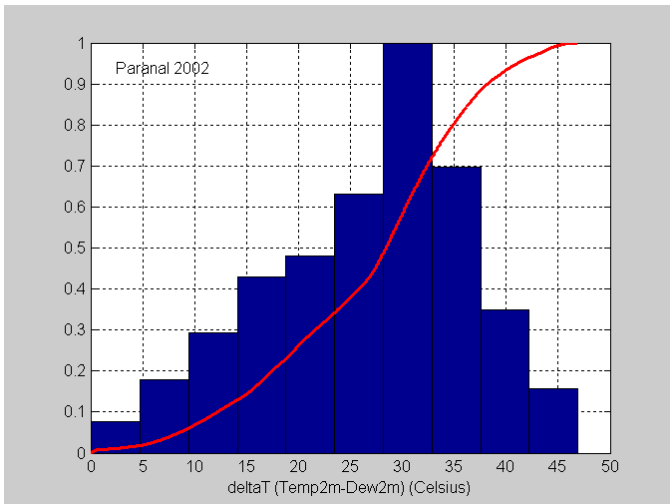
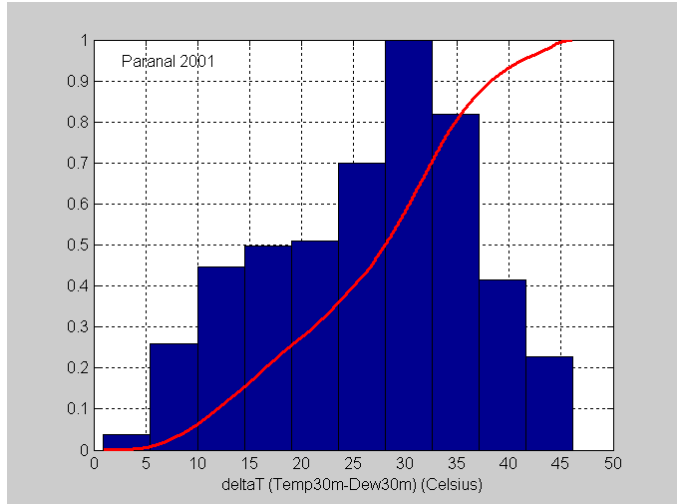
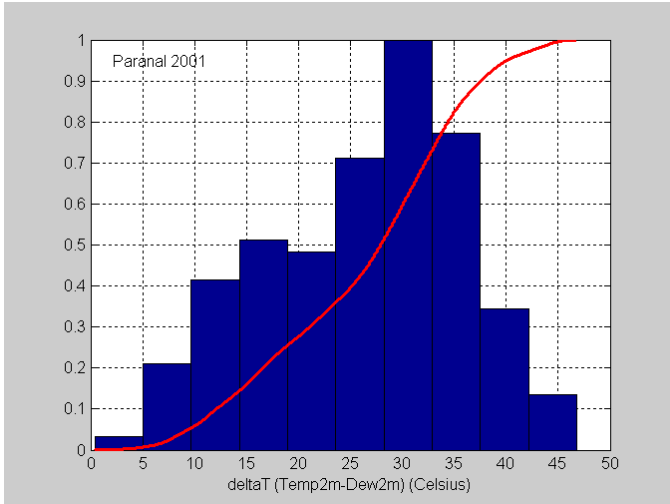
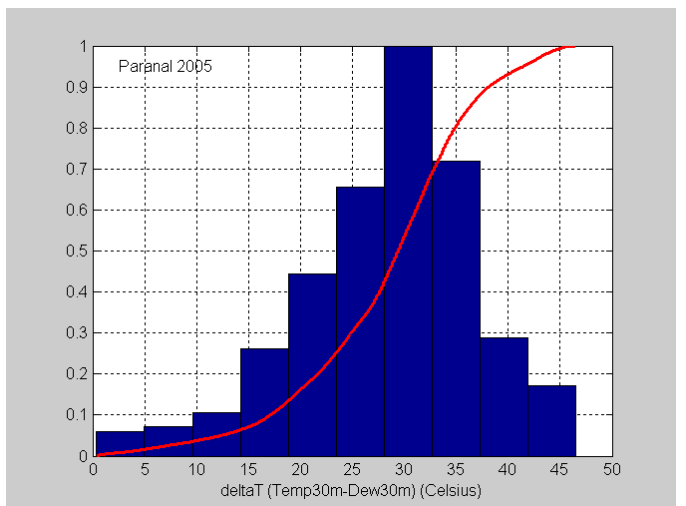
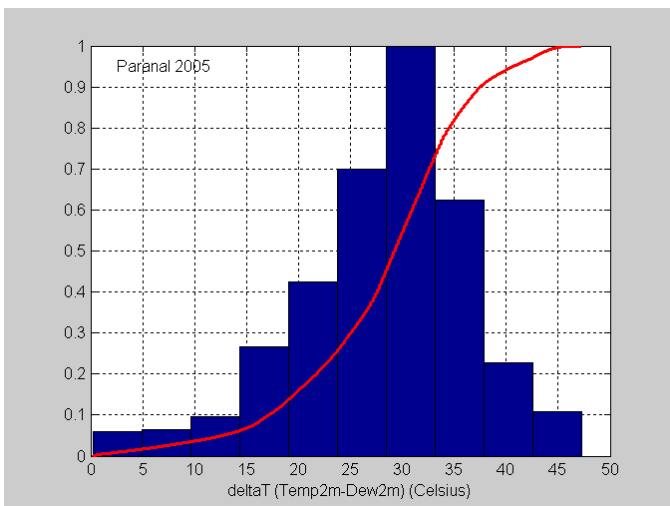
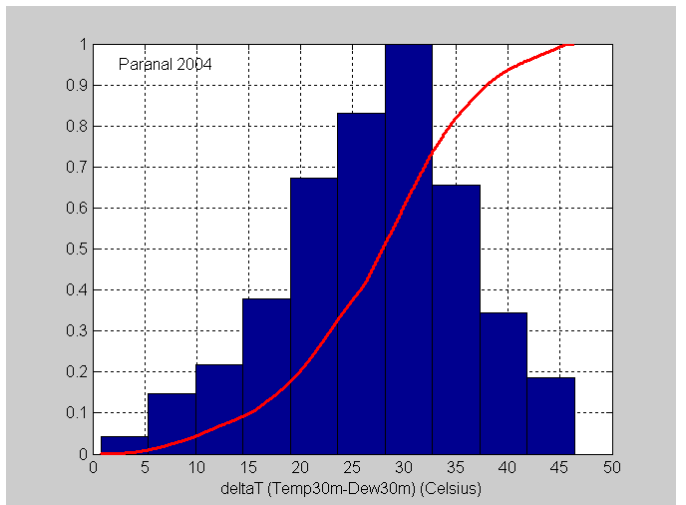
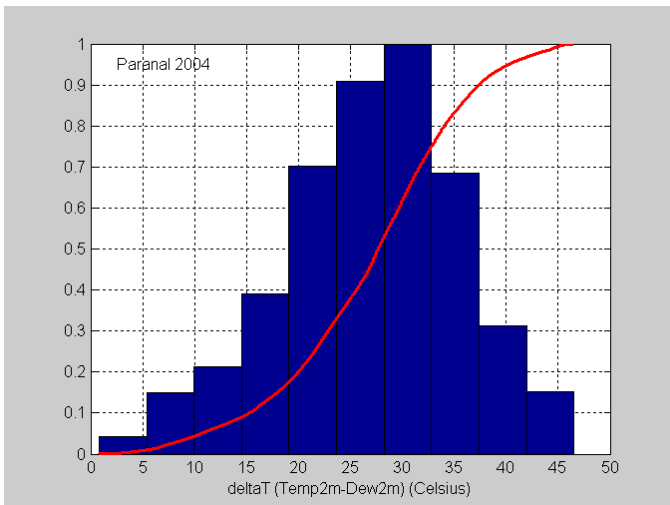
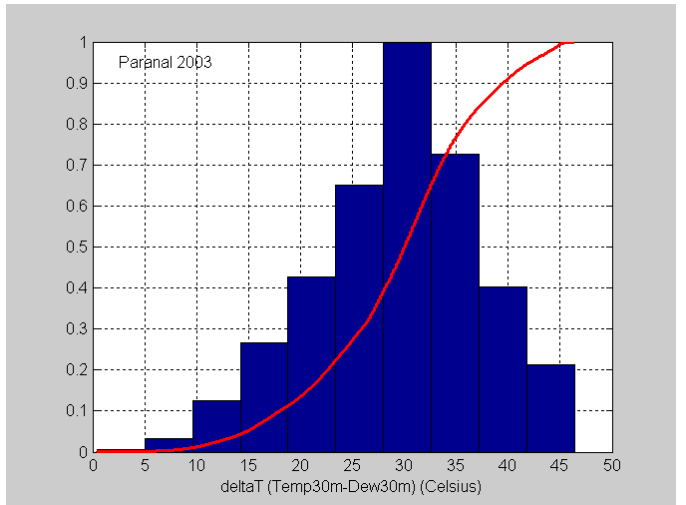
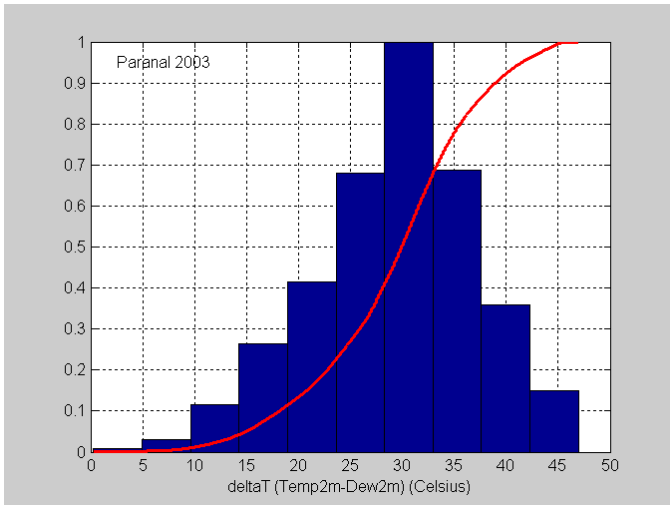
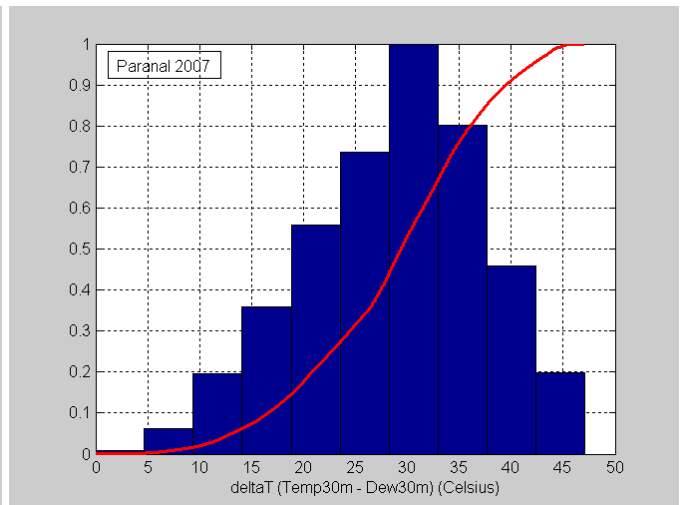
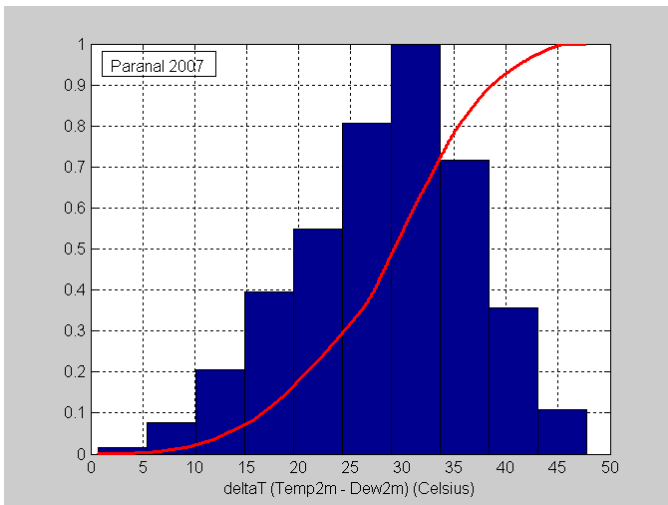
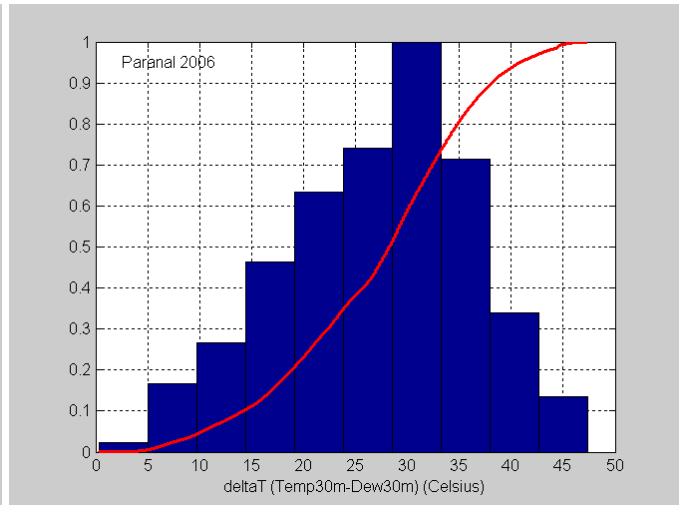
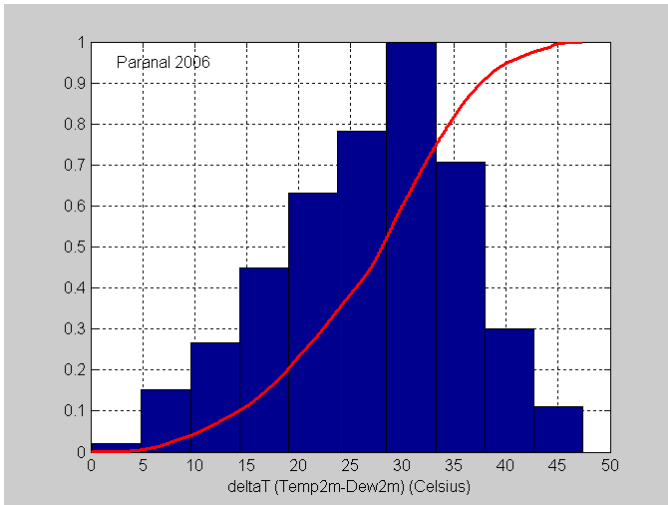


Figure 3: Yearly median temperature at Paranál (30m above ground)

PARANAL TEMPERATURE 2000 - 2007:
Difference of 30 m air temperature to Dew Point
Yearly Statistics (24 hours)







	deltaT at 2mt < 5 °C (%)	deltaT at 2mt < 10 °C (%)	deltaT at 30mt < 5 °C (%)	deltaT at 30mt < 10 °C (%)	samples
2001	0.7	5.7	0.5	6.0	507770
2002	1.9	6.7	1.9	6.6	517071
2003	0.2	1.1	0.2	1.2	516172
2004	0.8	4.2	0.8	4.3	514333
2005	1.7	3.6	1.6	3.7	514842
2006	0.5	4.3	0.5	4.5	518745
2007	0.3	2.0	0.2	1.9	520564