

ข้อมูลอากาศประเทศไทยสำหรับงานอนุรักษ์พลังงาน
จังหวัด เชียงราย



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ตารางสรุปรวมผลของข้อมูลทุกประเภทจังหวัดเชียงราย

CLIMATOLOGICAL DATA FOR THE PERIOD 1981-1998											station : CHIANG RAI		
Elevation of station above MSL						394 Meters			Latitude: 19 55 N				
											Longitude: 99 50 E		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
TEMPERATURE (°C)													
Averages													
Daily Maximum	27.9	30.9	33.6	34.2	32.2	30.9	29.8	29.7	29.9	29.1	27.6	26.1	30.2
Monthly Mean	19.3	21.2	24.6	27.1	27.3	27.3	26.6	26.4	26.1	24.8	22.1	19.0	24.3
Daily Minimum	12.9	13.6	17.1	21.2	23.6	24.4	24.2	24.1	23.4	21.7	18.1	13.8	19.8
Dry bulb Standard Diviation	5.6	6.4	6.3	5.4	3.9	3.0	2.7	2.6	2.9	3.3	4.2	5.2	4.3
Extremes													
Highest	32.5	36.0	38.5	40.2	39.2	39.2	36.0	35.2	34.7	33.7	33.7	32.9	40.2
Lowest	6.4	7.5	7.0	15.5	20.0	21.0	21.3	21.8	18.0	13.3	6.1	4.6	4.6
Monthly Dew Point	14.0	13.4	15.0	18.4	21.8	22.9	23.1	23.3	22.9	21.3	18.2	14.5	19.1
Dew Point Standard Diviation	2.7	2.9	3.0	2.8	1.7	1.0	0.9	0.8	1.2	2.0	2.7	3.2	2.1
Monthly Wet bulb Temperature	16.1	16.6	18.8	21.5	23.6	24.3	24.2	24.2	23.9	22.5	19.6	16.3	21.0
DEGREE DAY BASE 18.3 °C													
Heating	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1
Cooling	29.2	84.6	195.5	261.9	278.9	267.6	255.1	250.5	233.3	201.7	133.7	22.5	2,214.5
RELATIVE HUMIDITY (%)													
Averages													
Monthly Mean	75.0	86.0	60.0	63.4	74.3	78.8	82.3	83.9	83.4	82.3	80.6	77.7	75.6
Hour 01:00-06:00	91.0	85.3	77.7	79.0	86.9	89.3	90.9	92.1	92.9	92.8	92.7	91.7	88.5
Hour 07:00-12:00	84.8	77.4	70.9	71.8	78.7	81.4	84.8	86.7	86.8	85.7	85.2	84.9	81.6
Hour 13:00-18:00	46.4	35.6	33.0	40.1	56.6	63.9	69.5	69.5	67.8	64.1	58.4	51.4	54.7
Hour 19:00-24:00	77.8	65.6	58.5	62.7	75.2	80.5	84.1	85.7	86.2	86.5	85.9	82.6	77.6
WIND													
Average Speed (m/s)	0.4	0.6	0.7	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.6	0.5	0.7
Prevailing wind	S	S, SW	SW	SW	S, SW	SW	S, SW	S	NE	NE	NE	NE	S, SW
Maximum Speed (m/s)	5.7	6.2	8.7	10.3	23.6	6.7	6.2	6.2	5.1	5.1	6.2	6.2	23.6
SKY COVER (0-10)													
Average Sky Condition	2.1	1.8	1.9	3.6	6.1	7.5	8.3	8	6.8	5.2	4.1	2.7	4.8
Percentage of Sky cover													
Clear sky (0-3)	74	79	76	53	22	7	4	6	15	35	52	63	41
Partly Cloudy sky (4-7)	18	14	15	29	40	34	23	26	36	31	24	20	26
Cloudy sky (8-10)	7	7	9	19	38	59	72	68	49	34	25	12	33
SUNSHINE DURATION* (hours)													
Average Monthly total	263.1	254.5	245.8	251.7	230.2	153.6	112.9	130.9	165.6	196.8	206.4	230.7	2,442.2
Percentage of Sunshine	70.7	73.1	66.1	69.9	61.9	42.7	30.4	35.2	46.0	52.9	57.3	62.0	55.6
SOLAR RADIATION* (W/m²)													
Average Hourly max	-	-	-	-	-	-	-	-	-	-	-	-	-
Average Hourly mean	-	-	-	-	-	-	-	-	-	-	-	-	-
Average Daily Total	-	-	-	-	-	-	-	-	-	-	-	-	-
RAINFALL (mm)													
Average Monthly total	4.7	10.8	15.7	83.1	183.6	186.8	340.7	372.7	262.4	125.8	74.2	12.8	1,673.3
Daily record high	16.8	53.0	29.4	64.2	90.0	143.5	112.4	148.5	121.9	116.4	81.1	67.4	148.5
Average Number of rainy days (0.1 mm. Or more)	1	1	3	10	18	20	24	23	17	11	6	1	135
EVAPORATION (mm)													
Average Monthly total	83.8	116.8	150.9	164.8	143.3	117.0	99.7	95.1	97.6	92.0	79.5	75.0	1,315.5

remark: 1 m/s = 3.597 km/h, = 2.237 mph, = 196.85 fpm, = 1.9455 knots

(*) data base on 1997 - 1998 recorded period

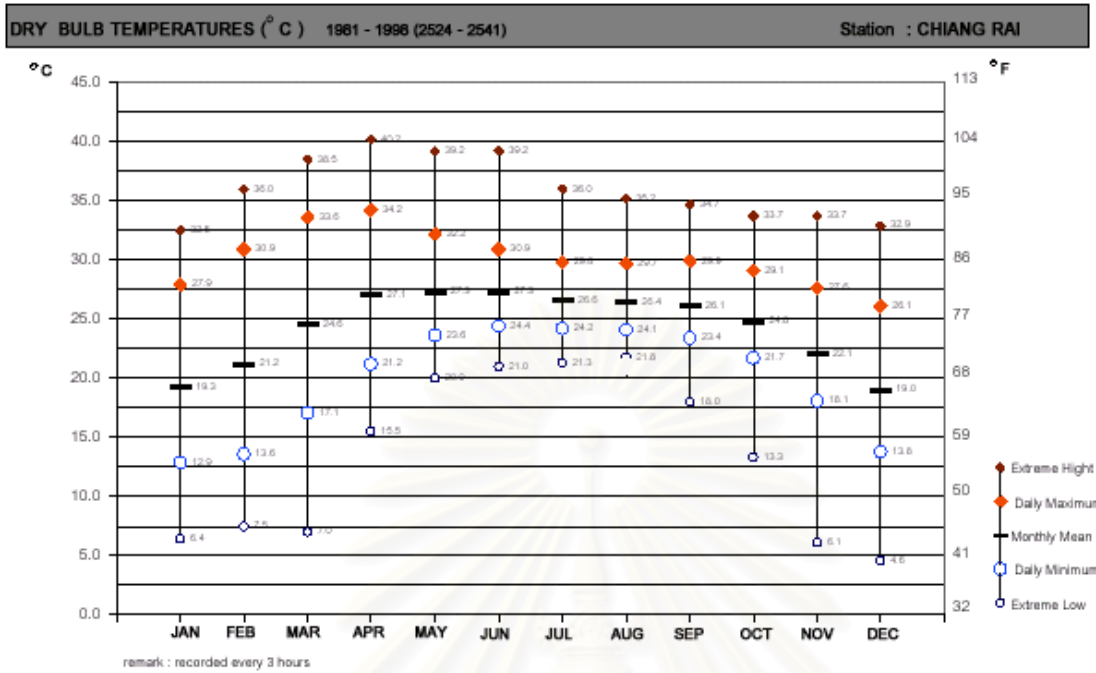
1 W/m2 = 0.317 Btu/h.ft2

(-) missing value or no data report

ตารางแสดงผลข้อมูลอุณหภูมิกระเปาะแห้ง (dry bulb temperatures)

DRY BULB TEMPERATURES (°C) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI																										
MONTH	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL		
DAY	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max
1	12.7	18.5	26.8	13.6	20.4	29.3	15.4	23.1	32.5	19.6	26.7	34.9	22.8	27.5	33.6	24.3	27.1	31.2	24.5	27.4	31.2	24.0	26.2	29.2	23.9	26.2	29.6	22.9	25.6	29.9	19.9	23.3	28.4	16.2	20.2	26.0	20.0	24.4	30.2
2	12.8	18.9	27.2	13.1	20.0	28.9	15.4	22.7	31.4	19.6	26.7	34.8	22.9	27.8	33.5	24.4	27.5	31.3	24.5	27.1	30.5	23.9	26.3	29.5	23.9	26.2	29.5	22.4	25.5	29.7	19.3	23.2	28.2	15.0	19.7	26.0	19.8	24.3	30.0
3	13.4	19.2	27.3	12.6	20.0	29.5	15.2	22.6	31.5	19.1	26.2	34.4	23.2	27.5	32.8	24.3	27.4	31.2	24.5	26.8	30.1	24.1	26.7	30.1	24.0	26.5	29.9	22.6	25.7	29.8	19.6	22.9	27.3	14.3	19.7	26.6	19.7	24.3	30.0
4	13.6	19.3	27.3	12.6	20.0	29.7	15.5	22.7	31.8	19.5	26.5	35.2	23.4	27.5	33.2	24.0	27.2	31.1	24.3	26.7	30.2	24.5	26.6	29.9	24.1	26.4	30.1	22.8	25.5	29.0	19.2	23.0	27.9	14.4	19.7	26.9	19.8	24.3	30.2
5	13.3	19.1	27.0	12.6	20.0	29.5	15.2	23.1	32.3	19.9	26.7	34.8	23.0	27.0	32.3	24.2	26.9	30.8	23.9	26.5	29.9	24.1	26.4	29.7	23.8	26.4	30.2	22.6	25.5	29.3	19.3	23.1	28.1	15.1	20.0	27.0	19.7	24.2	30.1
6	13.5	19.1	26.9	12.2	20.0	30.1	15.9	23.6	32.6	20.0	26.5	34.7	22.8	27.2	32.4	24.2	26.8	29.9	24.2	26.3	29.1	24.1	26.5	29.4	23.6	26.2	29.8	22.8	25.3	28.9	19.1	23.2	29.2	15.3	19.8	26.0	19.8	24.2	29.9
7	12.6	18.9	27.3	12.6	20.1	29.7	16.0	23.8	32.7	19.9	26.1	33.5	23.4	27.7	33.4	24.1	26.7	30.0	24.1	26.4	29.4	24.1	26.4	29.6	23.9	26.2	29.8	22.6	25.5	29.3	18.8	23.1	28.6	14.3	19.4	25.9	19.7	24.2	29.9
8	12.9	18.8	27.1	12.7	20.2	29.6	16.6	23.5	32.6	19.9	26.5	34.6	23.1	27.2	33.0	24.2	26.6	29.7	24.0	26.6	29.6	24.0	26.5	29.5	24.0	26.4	30.0	22.4	25.2	29.1	19.2	22.9	28.0	13.9	18.8	25.7	19.7	24.1	29.9
9	11.9	18.5	27.4	13.1	20.4	29.9	16.1	23.5	32.9	20.2	27.1	35.2	23.1	27.0	32.0	24.0	26.9	30.6	24.4	26.5	29.5	24.2	26.7	30.3	23.6	26.2	29.6	22.7	25.4	29.1	18.9	21.9	26.8	13.3	18.6	25.9	19.6	24.1	29.9
10	11.7	18.2	27.3	12.4	20.3	30.2	16.4	23.9	33.2	21.0	27.6	35.5	23.4	27.4	32.4	24.0	27.0	31.0	24.2	26.3	29.8	24.0	26.5	29.8	23.8	26.2	29.4	22.5	25.5	30.0	18.1	21.9	26.9	13.5	18.9	26.1	19.6	24.1	30.1
11	11.8	18.6	27.6	12.7	20.3	29.8	16.1	24.3	34.3	20.9	27.6	35.5	23.4	27.2	32.3	24.4	27.1	30.3	24.1	26.6	30.0	24.1	26.4	29.4	23.7	26.4	30.6	22.6	25.4	29.4	18.2	22.1	27.6	13.8	19.0	25.8	19.7	24.3	30.2
12	12.3	18.8	27.8	13.1	20.6	30.7	16.2	24.0	33.3	21.0	27.7	35.1	23.6	27.6	32.5	24.5	27.0	30.3	24.3	26.8	30.5	24.0	26.3	29.3	23.6	26.6	30.8	22.8	25.5	29.4	18.0	21.9	27.2	14.4	19.5	26.7	19.8	24.4	30.3
13	12.6	19.3	28.4	12.6	20.7	31.1	16.1	24.2	34.0	21.6	27.5	34.8	23.6	27.3	32.6	24.3	27.2	31.0	24.7	27.0	30.1	24.2	26.5	29.7	23.5	26.5	30.6	22.4	25.4	29.7	17.9	22.1	27.7	14.3	19.6	26.8	19.8	24.4	30.5
14	13.2	19.7	28.2	12.8	21.1	31.6	16.4	24.7	34.6	21.4	27.4	34.7	23.3	27.2	32.1	24.4	27.5	31.2	24.6	27.0	30.4	24.1	26.2	29.2	23.5	26.4	30.4	22.3	25.2	28.8	18.3	22.0	27.1	14.8	19.6	26.6	19.9	24.5	30.4
15	12.9	19.5	28.2	13.0	21.2	31.8	17.6	25.0	34.1	21.4	27.2	34.1	23.8	27.3	31.8	24.5	27.6	31.5	24.0	26.2	29.1	24.1	26.5	30.0	23.5	25.8	29.0	21.7	24.9	29.1	17.9	21.9	27.5	14.3	19.3	26.0	19.9	24.4	30.2
16	13.3	19.5	27.9	13.1	21.5	31.6	17.1	24.8	34.4	21.3	27.5	35.0	23.5	27.4	32.5	24.6	27.7	31.5	24.1	26.5	30.1	24.0	26.4	29.8	23.5	26.3	30.0	21.8	25.1	29.5	17.7	21.8	27.4	14.3	19.5	26.4	19.9	24.5	30.5
17	13.2	19.6	27.9	13.5	21.6	31.8	17.2	24.9	34.6	21.7	27.4	34.1	23.7	27.3	32.1	24.6	27.7	31.9	24.0	26.6	30.3	24.1	26.6	30.0	23.5	26.2	29.8	21.9	24.8	29.2	18.0	22.2	27.8	14.4	19.4	26.1	20.0	24.5	30.5
18	13.0	19.2	27.9	13.4	21.4	31.7	16.8	24.8	34.5	21.9	27.5	34.2	23.4	27.1	31.9	24.4	27.5	31.5	24.1	26.8	30.2	24.2	26.4	29.2	23.6	26.1	29.6	21.3	24.6	28.9	18.8	22.5	27.9	13.7	19.0	26.0	19.9	24.4	30.3
19	12.2	18.9	27.8	14.0	21.7	31.6	17.9	25.4	34.4	22.1	27.6	34.7	23.6	27.3	32.2	24.4	27.5	31.0	24.2	26.9	30.6	24.1	26.3	29.9	23.4	26.1	30.0	21.7	25.0	29.5	18.8	22.5	27.7	13.5	19.0	26.3	20.0	24.5	30.5
20	12.7	19.4	28.4	14.1	21.8	31.5	17.4	25.5	34.6	22.0	27.7	34.8	23.7	27.5	32.5	24.6	27.4	31.2	24.5	27.1	30.8	23.9	26.4	29.9	23.4	26.2	30.0	21.8	24.7	28.9	18.3	22.4	28.1	13.4	19.0	26.6	20.0	24.6	30.6
21	12.6	19.3	28.1	14.3	21.7	30.6	18.7	26.0	34.8	21.5	26.8	32.9	23.8	27.3	31.7	24.6	27.8	32.3	24.4	26.7	30.0	24.1	26.6	29.9	23.2	25.8	29.2	21.3	24.5	28.6	18.3	22.5	28.0	13.4	18.9	26.1	20.0	24.5	30.2
22	12.5	19.5	28.3	14.8	22.3	31.3	18.2	25.9	34.7	21.7	26.9	33.2	24.2	27.7	32.1	24.9	27.6	31.2	24.1	26.5	29.5	24.2	26.6	30.3	22.9	26.0	30.5	21.3	24.4	28.8	18.1	22.0	27.5	13.5	19.0	26.3	20.0	24.5	30.3
23	12.3	19.3	28.3	15.1	22.4	31.2	18.1	25.7	34.8	21.9	27.1	33.2	24.2	27.9	32.3	24.6	27.3	30.9	24.1	26.2	29.3	24.1	26.3	29.5	23.2	25.8	29.9	21.3	24.5	28.9	18.0	21.9	27.6	13.2	18.7	26.0	20.0	24.4	30.2
24	11.9	18.9	28.2	14.7	22.4	31.6	17.7	25.3	34.3	22.0	27.4	34.0	23.9	27.3	31.8	24.5	27.4	31.1	24.1	26.2	29.2	23.8	26.1	29.4	22.8	25.7	29.6	21.0	24.3	29.0	17.8	21.7	27.3	12.4	18.0	25.4	19.7	24.2	30.1
25	12.3	19.2	28.2	14.7	22.3	31.6	17.7	25.5	34.3	22.3	27.3	33.5	23.8	26.9	31.1	24.6	27.4	30.8	24.2	26.1	28.8	24.0	26.2	29.5	22.9	25.6	29.6	20.5	24.1	28.7	16.8	21.3	27.5	11.8	17.8	25.9	19.6	24.1	30.0
26	13.2	19.6	28.0	15.3	22.9	32.1	18.3	25.5	33.5	22.0	26.8	33.3	24.1	27.5	32.2	24.7	27.2	30.6	24.2	26.3	29.5	24.1	26.1	29.4	22.6	25.8	30.5	20.8	24.4	29.4	16.5	20.9	26.9	12.2	17.9	25.7	19.8	24.2	30.1
27	14.0	19.9	27.8	15.3	23.2	32.7	18.6	25.4	33.5	22.3	26.8	32.5	24.2	27.6	31.9	24.6	27.0	30.4	24.1	26.4	29.6	24.0	26.1	29.0	23.0	25.6	29.4	20.5	23.8	28.2	16.3	20.8	26.9	12.7	18.1	25.6	20.0	24.2	29.8
28	14.0	20.1	28.3	15.3	23.0	32.7	19.0	25.6	33.0	22.2	26.7	33.3	24.0	26.8	30.7	24.6	27.1	30.5	24.1	26.4	29.2	24.0	26.7	30.4	22.7	25.8	30.1	20.2	23.8	28.8	16.9	21.0	27.0	12.9	18.3	25.8	20.0	24.3	30.0
29	14.4	20.1	28.4	15.7	22.8	32.1	19.2	26.1	34.7	22.1	26.9	33.1	23.8	26.6	30.1	24.3	27.1	30.9	24.2	26.5	29.4	24.3	26.8	30.2	22.9	25.8	29.8	19.8	23.8	29.2	16.8	20.9	26.9	12.7	18.2	25.9	20.0	24.3	30.1
30	13.7	20.2	29.2				19.4	26.4	34.3	22.7	27.5	33.8	24.2	27.2	31.0	24.4	27.2	30.7	24.3	26.1	28.9	24.3	26.2	29.1	22.9	25.8	30.3	19.9	23.6	28.7	16.0	20.8	27.1	12.9	18.3	26.0	20.4	24.5	29.9
31	13.3	20.3	29.6				19.4	26.3	33.8				24.5	27.3	31.0				24.0	25.9	28.7	23.9	26.1	29.3				20.2	23.7	28.5				12.5	18.1	26.2	19.7	24.0	29.6
Average	12.9	19.3	27.9	13.6	21.2	30.9	17.1	24.6	33.6	21.2	27.1	34.2	23.6	27.3	32.2	24.4	27.3	30.9	24.2	26.6	29.8	24.1	26.4	29.7	23.4	26.1	29.9	21.7	24.8	29.1	18.1	22.1	27.6	13.8	19.0	26.1	19.8	24.3	30.2
Extremes	6.4		32.5	7.5		36.0	7.0		38.5	15.5		40.2	20.0		39.2	21.0		39.2	21.3		36.0	21.8																	

แผนภูมิอุณหภูมิกระเปาะแห้ง (dry bulb temperatures)

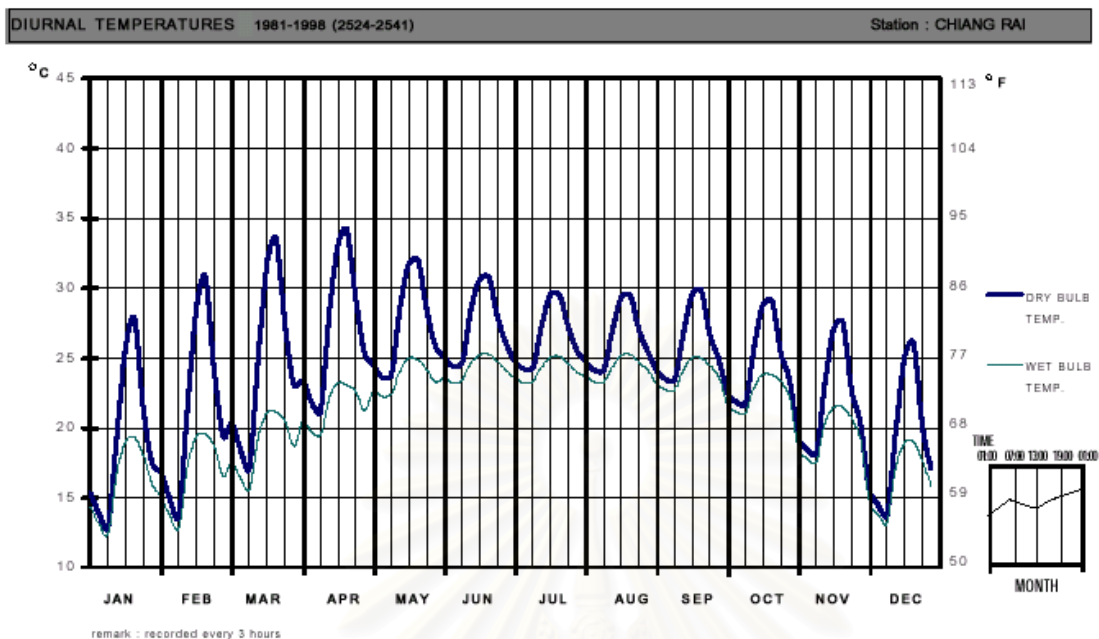


สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลอุณหภูมิกระเปาะเปียก (wet bulb temperatures)

WET BULB TEMPERATURES (°C) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI																										
MONTH	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL		
DAY	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max
1	12.2	15.8	19.2	13.0	16.6	19.9	14.4	17.8	20.2	18.0	20.7	22.6	20.8	22.6	24.3	23.2	24.2	25.6	23.1	24.2	25.5	23.1	24.1	25.1	23.1	24.2	25.5	22.2	23.3	24.4	19.2	20.8	22.3	15.5	17.7	20.0	19.0	21.0	22.9
2	12.3	16.1	19.3	12.4	16.2	19.1	14.2	17.3	19.6	17.6	20.0	22.0	21.2	22.8	24.2	23.4	24.4	25.5	23.3	24.2	25.3	23.1	24.2	25.3	23.3	24.3	25.2	21.8	23.2	24.6	18.8	20.7	22.3	14.4	17.0	19.2	18.8	20.9	22.6
3	12.9	16.5	19.5	12.0	16.0	19.0	14.0	17.3	20.2	17.3	20.1	22.3	21.4	22.9	24.3	23.2	24.2	25.3	23.2	24.0	25.1	23.2	24.3	25.5	23.2	24.3	25.3	21.9	23.3	24.5	19.0	20.5	22.0	13.8	17.0	19.6	18.7	20.9	22.7
4	13.1	16.5	19.6	11.9	15.9	19.1	14.3	17.6	20.2	17.7	20.6	22.8	21.8	23.1	24.7	22.9	24.1	25.4	23.0	24.0	25.1	23.5	24.3	25.6	23.3	24.2	25.2	22.0	23.2	24.3	18.6	20.5	22.3	13.9	17.0	19.9	18.8	20.9	22.8
5	12.9	16.2	19.3	11.8	15.8	19.0	14.0	17.7	20.4	18.3	20.6	22.6	21.6	22.8	24.3	23.1	24.3	25.5	22.9	24.0	25.2	23.3	24.2	25.3	23.0	24.2	25.5	21.9	23.2	24.4	18.7	20.7	22.4	14.5	17.4	20.0	18.8	20.9	22.8
6	12.9	16.2	19.4	11.6	15.8	19.1	14.7	18.1	20.6	18.2	20.5	22.9	21.4	23.1	24.5	23.0	24.1	25.1	23.2	24.0	24.8	23.3	24.2	25.2	22.9	24.0	25.3	22.0	23.2	24.4	18.5	20.7	22.6	14.8	17.2	19.6	18.9	20.9	22.8
7	12.1	15.9	19.0	11.9	15.9	19.1	14.7	18.2	20.9	18.4	20.7	23.0	21.8	23.2	24.7	22.9	24.1	25.2	23.2	24.0	24.9	23.2	24.2	25.1	23.1	24.2	25.4	22.0	23.3	24.5	18.4	20.5	22.5	13.8	16.6	18.9	18.8	20.9	22.8
8	12.4	15.8	18.9	12.0	16.0	19.0	15.1	18.0	20.2	18.4	20.9	22.8	21.4	23.0	24.9	23.3	24.2	25.2	23.1	24.2	25.3	23.1	24.2	25.1	23.2	24.2	25.3	21.8	23.1	24.4	18.5	20.4	22.3	13.3	16.1	18.5	18.8	20.8	22.7
9	11.5	15.4	18.7	12.4	16.1	19.0	14.8	18.1	20.8	18.6	20.9	22.6	21.6	23.0	24.5	23.0	24.2	25.4	23.4	24.2	25.1	23.4	24.3	25.3	22.9	24.1	25.2	22.1	23.3	24.6	18.3	19.7	21.5	12.8	16.0	19.0	18.7	20.8	22.6
10	11.2	15.3	18.8	11.7	16.0	19.3	15.2	18.5	21.1	19.0	21.1	22.8	22.0	23.3	24.8	23.1	24.3	25.4	23.3	24.2	25.3	23.2	24.3	25.2	23.1	24.1	25.3	21.9	23.3	24.7	17.2	19.3	21.1	12.9	16.1	19.0	18.6	20.8	22.7
11	11.3	15.6	19.4	12.0	16.2	19.7	15.0	18.5	21.1	19.1	21.3	23.1	21.9	23.5	25.1	23.4	24.4	25.3	23.2	24.2	25.3	23.3	24.2	25.3	23.0	24.0	25.2	22.0	23.2	24.3	17.5	19.5	21.4	13.3	16.4	19.1	18.7	20.9	22.9
12	11.7	15.8	19.2	12.5	16.3	19.3	14.8	18.3	20.9	19.1	21.5	23.5	22.3	23.7	25.1	23.3	24.3	25.2	23.2	24.2	25.2	23.2	24.1	25.0	22.8	24.1	25.4	22.0	23.2	24.3	17.4	19.5	21.4	13.9	16.9	19.9	18.8	21.0	22.8
13	12.2	16.3	20.0	12.0	16.1	19.4	14.9	18.3	21.0	19.7	21.5	23.0	22.3	23.6	25.4	23.2	24.3	25.2	23.5	24.3	25.1	23.2	24.2	25.2	22.7	24.0	25.3	21.7	23.1	24.5	17.4	19.6	21.6	13.9	16.9	19.8	18.9	21.0	23.0
14	12.7	16.4	19.4	12.1	16.3	19.4	15.0	18.5	21.2	19.7	21.4	23.5	22.0	23.5	25.3	23.4	24.5	25.4	23.5	24.3	25.3	23.3	24.2	25.2	22.8	24.2	25.5	21.6	22.9	24.0	17.8	19.8	21.8	14.1	16.9	19.6	19.0	21.1	23.0
15	12.4	16.2	19.4	12.2	16.2	19.4	15.9	18.9	21.3	19.6	21.7	23.6	22.3	23.7	25.3	23.4	24.5	25.5	23.1	24.1	25.1	23.4	24.3	25.7	22.8	23.8	24.9	21.1	22.7	24.0	17.3	19.5	21.5	13.6	16.7	19.3	18.9	21.0	22.9
16	12.8	16.5	19.7	12.2	16.4	19.4	15.7	18.9	21.3	19.8	21.7	23.4	22.3	23.7	25.4	23.5	24.5	25.7	23.2	24.1	25.3	23.3	24.2	25.3	22.8	24.0	25.3	21.2	22.8	24.2	17.2	19.5	21.6	13.6	16.7	19.5	19.0	21.1	23.0
17	12.7	16.4	19.7	12.5	16.5	19.6	15.9	19.0	21.5	19.9	21.7	23.4	22.5	23.7	25.3	23.3	24.3	25.5	23.1	24.2	25.5	23.4	24.4	25.7	22.8	24.0	25.1	21.2	22.7	24.2	17.5	19.8	21.9	13.8	16.7	19.3	19.0	21.1	23.1
18	12.4	15.9	19.1	12.7	16.5	19.6	15.4	18.9	21.4	20.1	21.7	23.0	22.1	23.6	24.9	23.1	24.2	25.4	23.2	24.3	25.4	23.3	24.3	25.2	22.9	23.9	25.0	20.8	22.4	23.9	18.2	20.1	22.0	13.1	16.3	19.2	18.9	21.0	22.8
19	11.6	15.7	19.3	13.0	16.9	20.1	16.1	19.1	21.6	20.0	21.8	23.7	22.5	23.8	25.3	23.2	24.3	25.3	23.2	24.2	25.3	23.3	24.2	25.4	22.7	23.8	25.0	21.1	22.6	24.1	18.1	20.1	21.9	12.9	16.3	19.1	19.0	21.1	23.0
20	12.2	16.1	19.4	13.3	17.0	19.8	15.9	19.2	21.5	20.3	22.1	23.6	22.5	23.9	25.2	23.4	24.4	25.6	23.3	24.4	25.5	23.1	24.2	25.6	22.7	23.9	25.0	21.1	22.5	23.9	17.8	20.0	21.9	12.9	16.2	19.0	19.0	21.1	23.0
21	12.1	16.2	19.7	13.5	17.2	20.0	16.7	19.4	21.5	20.1	22.0	23.9	22.6	23.9	25.2	23.5	24.6	25.8	23.4	24.2	25.1	23.2	24.3	25.5	22.5	23.5	24.8	20.5	22.1	23.5	17.7	19.9	21.7	12.9	16.1	18.7	19.0	21.1	22.9
22	12.0	16.1	19.3	13.9	17.4	20.0	16.3	19.5	21.9	20.2	21.9	23.4	23.0	24.0	25.2	23.7	24.5	25.4	23.1	24.2	25.3	23.2	24.3	25.4	22.0	23.5	24.8	20.6	22.1	23.3	17.6	19.6	21.4	13.0	16.1	18.8	19.0	21.1	22.9
23	11.7	15.7	18.7	14.1	17.5	20.1	16.6	19.6	22.1	20.5	22.1	23.7	22.7	24.1	25.4	23.3	24.2	25.1	23.2	24.1	25.1	23.4	24.4	25.6	22.4	23.5	24.8	20.6	22.1	23.4	17.3	19.4	21.4	12.8	16.0	18.7	19.1	21.1	22.8
24	11.3	15.5	18.9	13.7	17.4	20.1	16.2	19.2	21.4	20.5	22.3	23.9	22.7	24.0	25.4	23.1	24.2	25.3	23.2	24.1	25.1	23.1	24.1	25.2	22.0	23.4	24.7	20.4	22.0	23.5	17.2	19.1	20.8	12.0	15.3	18.3	18.8	20.9	22.7
25	11.8	15.9	19.4	13.8	17.5	20.2	16.0	19.1	21.4	20.5	22.4	24.1	22.8	24.0	25.3	23.3	24.3	25.4	23.4	24.1	25.0	23.3	24.2	25.5	22.2	23.4	24.7	19.8	21.5	23.0	16.2	18.6	20.7	11.3	15.1	18.2	18.7	20.8	22.7
26	12.6	16.5	19.7	14.3	17.8	20.4	16.7	19.5	21.9	20.8	22.4	23.9	23.0	24.3	25.8	23.4	24.3	25.2	23.3	24.3	25.4	23.4	24.2	25.4	21.9	23.5	24.9	20.1	21.8	23.4	16.0	18.4	20.6	11.7	15.2	18.4	18.9	21.0	22.9
27	13.4	16.8	19.4	14.4	17.7	20.3	16.8	19.6	21.8	20.9	22.3	24.0	23.0	24.2	25.5	23.3	24.2	25.2	23.2	24.2	25.2	23.3	24.2	25.0	22.4	23.5	24.8	19.8	21.3	22.8	15.8	18.3	20.6	12.1	15.4	18.5	19.0	21.0	22.8
28	13.4	16.9	19.9	14.2	17.7	20.3	17.4	19.9	22.1	20.6	22.2	23.8	22.9	24.1	25.5	23.4	24.3	25.3	23.2	24.2	25.1	23.3	24.4	25.6	22.1	23.5	24.9	19.5	21.2	22.8	16.4	18.6	20.9	12.4	15.6	18.6	19.1	21.0	22.9
29	13.7	16.9	19.8	14.8	18.0	20.8	17.5	20.3	22.6	20.8	22.4	24.2	22.8	24.1	25.2	23.1	24.2	25.4	23.3	24.3	25.2	23.3	24.5	25.6	22.1	23.5	24.7	19.3	21.2	23.0	16.2	18.4	20.4	12.2	15.6	18.8	19.1	21.1	23.0
30	13.2	16.8	19.9				17.6	20.4	22.4	21.1	22.4	23.8	23.1	24.2	25.5	23.1	24.2	25.2	23.4	24.1	24.9	23.5	24.3	25.5	22.2	23.5	25.0	19.3	21.1	22.6	15.6	18.2	20.6	12.4	15.6	18.8	19.5	21.3	23.1
31	12.7	16.6	19.7				17.8	20.5	22.5				23.2	24.3	25.5				23.2	24.0	24.8	23.1	24.0	25.1				19.3	21.0	22.5				12.0	15.4	18.8	18.8	20.8	22.7
Average	12.4	16.1	19.4	12.8	16.6	19.6	15.7	18.8	21.2	19.5	21.5	23.3	22.2	23.6	25.1	23.2	24.3	25.4	23.2	24.2	25.2	23.3	24.2	25.3	22.7	23.9	25.1	21.1	22.5	23.9	17.6	19.6	21.6	13.2	16.3	19.1	18.9	21.0	22.8
Extremes	6.0	24.5		7.0	25.0		6.5	25.3		13.7	27.7		17.2	28.0		20.0	27.6		20.8	27.7		21.0	28.0		17.5	27.7		12.8	26.9		5.8	26.3							

แผนภูมิความแตกต่างระหว่างอุณหภูมิกระเปาะแห้งและอุณหภูมิกระเปาะเปียก (diurnal temperatures)



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลอุณหภูมิจุดน้ำค้าง (dew point temperatures)

DEW POINT TEMPERATURES (°C) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI																													
MONTH	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL					
DAY	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max									
1	11.8	13.9	15.7	12.4	14.0	15.2	11.4	14.0	15.2	14.6	17.1	18.1	19.5	20.2	20.7	22.6	22.9	23.3	22.3	22.7	22.9	22.7	23.2	24.0	22.9	23.3	23.8	21.8	22.2	22.7	18.7	19.4	20.6	15.0	16.0	17.2	18.0	19.1	20.0			
2	11.9	14.3	16.4	11.8	13.4	15.2	10.7	13.5	14.7	12.7	15.9	16.9	18.8	20.3	20.8	22.8	23.1	23.5	22.6	22.9	23.3	22.8	23.2	23.8	22.9	23.4	23.9	21.4	22.1	23.0	18.4	19.3	20.8	14.0	15.2	16.8	17.6	18.9	19.9			
3	12.6	14.6	16.5	11.4	13.1	14.6	12.5	13.7	15.3	14.7	16.4	18.0	19.5	20.5	21.2	22.4	22.8	23.0	22.5	22.8	23.0	22.7	23.2	23.7	22.8	23.3	23.9	21.6	22.1	23.2	18.6	19.3	20.2	13.4	15.2	16.9	17.9	18.9	20.0			
4	12.8	14.6	15.8	11.4	12.9	14.4	12.3	14.0	15.8	15.3	17.0	18.7	20.2	21.0	21.4	22.3	22.7	22.9	22.4	22.7	22.9	23.0	23.3	23.7	22.9	23.2	23.6	21.7	22.2	23.1	18.2	19.2	20.4	13.6	15.3	17.0	18.0	19.0	20.0			
5	12.5	14.3	16.0	11.2	12.8	14.5	12.1	13.9	15.2	14.2	16.9	17.9	19.8	20.8	21.1	22.6	23.0	23.4	22.4	22.8	23.3	22.9	23.2	23.7	22.7	23.3	23.7	21.5	22.1	23.0	18.4	19.4	20.7	14.1	15.6	17.0	17.9	19.0	19.9			
6	12.4	14.3	16.0	10.9	12.7	14.5	12.1	14.5	16.2	16.0	17.1	17.6	20.2	21.1	21.9	22.5	22.8	23.1	22.7	22.9	23.2	22.8	23.2	23.7	22.5	23.0	23.4	21.6	22.2	23.1	18.2	19.3	20.6	14.3	15.5	17.0	18.0	19.1	20.0			
7	11.7	13.9	15.9	11.4	12.8	14.5	13.0	14.5	15.6	16.8	17.6	17.9	20.1	20.9	21.2	22.4	22.9	23.4	22.7	23.0	23.4	22.7	23.0	23.5	22.8	23.2	23.7	22.8	23.2	23.5	21.6	22.2	23.2	18.0	19.1	20.1	12.9	14.2	15.8	17.9	18.9	19.9
8	12.0	13.8	15.2	11.1	12.8	14.5	11.4	14.1	15.1	16.0	17.6	18.9	20.4	20.9	21.6	22.8	23.1	23.3	22.8	23.1	23.7	22.7	23.1	23.7	22.8	23.2	23.5	21.6	22.2	23.2	18.0	19.1	20.1	12.9	14.2	15.8	17.9	18.9	19.9			
9	11.1	13.2	14.9	10.9	13.0	14.7	12.7	14.5	16.1	14.4	17.1	18.1	20.2	21.0	21.4	22.5	22.9	23.4	23.0	23.2	23.5	23.0	23.2	23.8	22.5	23.1	23.8	21.8	22.3	23.1	17.9	18.4	19.2	12.3	14.1	15.7	17.7	18.9	19.8			
10	10.7	13.1	15.2	11.1	12.8	14.9	13.2	15.0	16.3	15.1	17.4	18.3	20.9	21.4	21.6	22.6	23.1	23.7	22.8	23.2	23.5	22.9	23.3	23.8	22.8	23.2	23.7	21.5	22.2	23.1	16.6	17.7	19.1	12.3	14.2	16.0	17.7	18.9	19.9			
11	10.9	13.6	15.8	11.4	13.2	15.6	11.9	14.7	16.0	14.7	17.6	18.6	21.1	21.8	22.3	23.0	23.2	23.6	22.8	23.1	23.5	22.8	23.2	23.6	22.7	23.0	23.4	21.7	22.1	22.9	17.1	17.9	19.4	12.9	14.6	16.1	17.7	19.0	20.1			
12	11.2	13.6	16.0	10.9	13.1	14.9	12.2	14.4	15.6	16.2	18.0	19.0	21.4	21.8	22.3	22.7	23.1	23.7	22.7	23.0	23.5	22.8	23.1	23.5	22.4	22.9	23.5	21.6	22.0	23.0	17.1	18.0	19.0	13.5	15.1	16.8	17.9	19.0	20.1			
13	11.8	14.3	16.2	10.9	12.8	14.3	12.3	14.4	15.6	16.2	18.1	18.8	20.9	21.8	22.1	22.6	22.9	23.4	22.8	23.1	23.5	22.7	23.1	23.5	22.3	22.9	23.4	21.4	22.0	23.0	17.0	18.2	19.7	13.5	15.2	16.9	17.9	19.1	20.0			
14	12.3	14.2	15.6	10.2	12.8	14.5	11.0	14.5	16.2	16.1	18.1	19.1	21.3	21.8	22.4	22.8	23.2	23.6	22.8	23.2	23.5	22.9	23.3	23.7	22.5	23.1	24.2	21.3	21.8	22.5	17.4	18.5	19.6	13.6	15.1	16.4	17.9	19.1	20.1			
15	11.9	14.0	15.9	10.0	12.6	14.0	13.1	15.1	16.4	17.8	18.7	19.3	21.6	22.0	22.4	22.8	23.1	23.6	22.6	23.2	23.6	23.0	23.4	23.8	22.4	22.9	23.4	20.9	21.6	22.3	16.9	18.1	19.5	13.0	14.9	16.6	18.0	19.1	20.1			
16	12.5	14.5	16.2	10.2	12.5	14.1	12.6	15.0	16.0	16.8	18.5	19.0	21.7	22.0	22.2	22.6	23.0	23.3	22.8	23.1	23.3	22.9	23.3	23.7	22.5	23.0	23.5	20.9	21.7	22.7	16.9	18.1	19.4	13.0	14.9	16.3	18.0	19.1	20.0			
17	12.3	14.3	15.5	10.6	12.8	14.9	12.2	15.1	16.8	16.5	18.6	19.6	21.3	22.0	22.4	22.6	22.8	23.5	22.6	23.1	23.6	23.0	23.4	23.8	22.5	23.0	23.7	20.9	21.7	22.4	17.1	18.4	19.9	13.2	14.9	16.0	17.9	19.2	20.2			
18	12.0	13.6	15.1	11.0	13.0	14.4	12.8	15.0	16.7	16.4	18.5	19.1	21.4	21.8	22.4	22.5	22.8	23.0	22.8	23.2	23.8	23.0	23.4	23.9	22.6	22.8	23.5	20.5	21.4	22.3	17.8	18.8	20.0	12.6	14.6	16.3	17.9	19.1	20.0			
19	11.1	13.4	15.7	11.9	13.5	15.4	13.2	15.1	16.5	16.2	18.7	19.6	21.9	22.2	22.7	22.6	22.9	23.5	22.7	23.0	23.4	22.9	23.3	23.7	22.3	22.8	23.4	20.8	21.5	22.5	17.7	18.7	19.8	12.4	14.4	16.0	18.0	19.1	20.2			
20	11.8	13.8	16.0	11.3	13.5	15.0	13.1	15.1	16.5	17.2	19.0	19.8	21.6	22.2	22.7	22.8	23.0	23.3	22.8	23.2	23.8	22.7	23.3	23.9	22.3	22.9	23.6	20.8	21.4	22.0	17.4	18.6	20.0	12.5	14.2	15.8	18.0	19.2	20.2			
21	11.6	14.0	16.6	12.8	14.1	15.9	12.4	15.1	16.5	18.4	19.3	19.8	22.0	22.3	22.9	22.8	23.1	23.5	22.9	23.1	23.4	22.7	23.2	23.9	22.1	22.5	23.0	20.0	20.8	22.2	17.4	18.4	19.8	12.4	14.2	15.7	18.1	19.2	20.3			
22	11.6	13.8	15.6	12.2	14.1	15.6	14.0	15.4	16.3	17.1	19.2	20.4	21.5	22.3	22.9	22.8	23.1	23.4	22.6	23.2	23.6	22.8	23.2	23.7	21.6	22.3	23.3	20.2	20.8	22.1	17.3	18.2	19.3	12.6	14.2	15.8	18.0	19.1	20.2			
23	11.2	13.0	14.7	12.3	14.2	15.9	13.5	15.7	16.7	17.9	19.4	20.0	22.0	22.3	22.8	22.5	22.8	23.1	22.7	23.1	23.5	23.1	23.5	24.0	22.0	22.5	23.4	20.2	20.9	22.0	16.9	18.0	19.3	12.3	14.0	15.3	18.1	19.1	20.1			
24	10.8	13.0	15.1	12.3	14.0	15.4	12.8	15.3	16.7	18.3	19.5	20.4	22.1	22.5	22.9	22.5	22.7	23.0	22.8	23.2	23.5	22.7	23.2	23.5	21.7	22.3	23.2	20.0	20.7	21.8	16.7	17.6	19.0	11.5	13.4	14.8	17.9	19.0	19.9			
25	11.3	13.6	15.8	12.4	14.2	15.9	13.1	15.1	16.8	18.4	19.8	20.5	22.2	22.6	23.3	22.5	22.8	23.4	22.9	23.3	23.8	22.9	23.4	23.7	21.9	22.4	23.4	19.4	20.2	21.7	15.9	17.0	18.5	10.8	13.0	14.9	17.8	19.0	20.1			
26	12.1	14.4	16.5	11.9	14.3	15.5	13.8	15.7	16.6	19.0	20.1	21.1	22.5	22.8	23.4	22.5	22.9	23.4	22.9	23.3	24.0	23.1	23.4	23.7	21.6	22.4	23.4	19.7	20.5	21.7	15.6	16.9	18.4	11.3	13.2	14.7	18.0	19.2	20.2			
27	12.9	14.6	15.9	10.8	13.9	15.4	14.5	16.1	17.2	18.7	20.0	20.8	22.4	22.7	22.9	22.6	22.9	23.2	22.7	23.2	23.8	23.0	23.3	23.7	22.1	22.5	22.8	19.4	19.9	21.0	15.4	16.8	18.4	11.5	13.4	15.3	18.0	19.1	20.0			
28	12.8	14.8	16.7	11.6	14.1	16.2	15.2	16.3	17.2	18.9	19.8	20.7	22.4	22.9	23.2	22.8	23.0	23.4	22.8	23.2	23.8	22.9	23.4	24.0	21.8	22.4	23.1	18.1	19.9	21.3	16.0	17.1	18.5	11.9	13.7	15.3	18.2	19.2	20.3			
29	13.2	14.7	16.2	13.3	14.8	16.0	14.6	16.7	17.4	19.7	20.2	20.8	22.4	22.9	23.4	22.6	22.9	23.3	22.8	23.3	23.8	22.9	23.4	24.1	21.8	22.4	23.4	18.9	19.9	21.3	15.8	16.8	18.2	11.8	13.8	15.2	18.3	19.3	20.2			
30	12.8	14.6	16.2				15.1	16.8	17.9	18.5	19.8	20.3	22.6	23.0	23.2	22.5	22.8	23.2	22.9	23.2	23.4	23.1	23.4	24.0	21.9	22.5	23.1	19.0	19.7	20.9	15.2	16.6	17.7	12.0	13.7	15.2	18.7	19.6	20.5			
31	12.3	14.1	15.7				15.7	17.1	18.5				22.6	23.0	23.2				22.9	23.1	23.4	22.7	23.1	23.4				18.9	19.6	20.8				11.5	13.5	14.9	18.1	19.1	20.0			
Average	11.9	14.0	15.8	11.4	13.4	15.0	12.9	15.0	16.3	16.6	18.4	19.2	21.3	21.8	22.3	22.6	22.9	23.3	22.7	23.1	23.5	22.9	23.3	23.7	22.3	22.9	23.5	20.7	21.3	22.4	17.2	18.2	19.5	12.7	14.5	16.0	17.9	19.1	20.1			
Extremes	2.9	22.3	-1.2	24.0	0.2	22.9	0.6	26.8	10.0	29.3	15.6	26.2	18.1	26.3	20.2	27.3	13.7	26.4	6.6	25.9	3.5	24.5	2.7	22.3	-1.2	29.3																

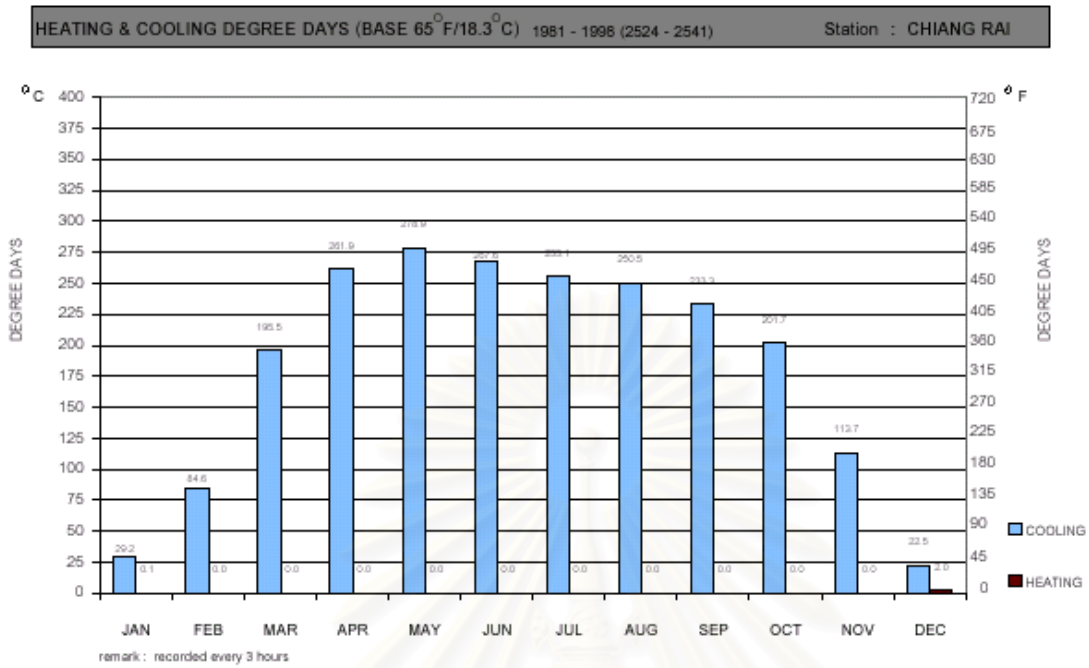
ตารางแสดงผลข้อมูลประมาณองศาวัน การทำความร้อนและการทำความเย็น (heating and cooling degree days)

HEATING & COOLING DEGREE DAYS BASE RANGE 35 - 100 °F (1.7 - 37.8 °C) 1981 - 1998 (2524 - 2541)															Station : CHIANG RAI												
MONTH		JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL	
Degree		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
°F	°C																										
35	1.7	545.7	0.0	567.9	0.0	712.1	0.0	761.9	0.0	795.5	0.0	767.6	0.0	771.7	0.0	767.2	0.0	733.3	0.0	718.4	0.0	613.7	0.0	537.2	0.0	8,292.4	0.0
36	2.2	528.5	0.0	551.8	0.0	694.9	0.0	745.3	0.0	778.3	0.0	750.9	0.0	754.5	0.0	750.0	0.0	716.7	0.0	701.2	0.0	597.0	0.0	520.0	0.0	8,089.1	0.0
37	2.8	511.3	0.0	535.7	0.0	677.7	0.0	728.6	0.0	761.1	0.0	734.3	0.0	737.3	0.0	732.8	0.0	700.0	0.0	684.0	0.0	580.4	0.0	502.8	0.0	7,885.7	0.0
38	3.3	494.0	0.0	519.6	0.0	660.5	0.0	711.9	0.0	743.9	0.0	717.6	0.0	720.1	0.0	715.5	0.0	683.3	0.0	666.7	0.0	563.7	0.0	485.5	0.0	7,682.4	0.0
39	3.9	476.8	0.0	503.4	0.0	643.2	0.0	695.3	0.0	726.7	0.0	700.9	0.0	702.8	0.0	698.3	0.0	666.7	0.0	649.5	0.0	547.0	0.0	468.3	0.0	7,479.1	0.0
40	4.4	459.6	0.0	487.3	0.0	626.0	0.0	678.6	0.0	709.4	0.0	684.3	0.0	685.6	0.0	681.1	0.0	650.0	0.0	632.3	0.0	530.4	0.0	451.1	0.0	7,275.7	0.0
41	5.0	442.4	0.0	471.2	0.0	608.8	0.0	661.9	0.0	692.2	0.0	667.6	0.0	668.4	0.0	663.9	0.0	633.3	0.0	615.1	0.0	513.7	0.0	433.9	0.0	7,072.4	0.0
42	5.6	425.2	0.0	455.1	0.0	591.6	0.0	645.3	0.0	675.0	0.0	650.9	0.0	651.2	0.0	646.7	0.0	616.7	0.0	597.9	0.0	497.0	0.0	416.6	0.0	6,869.1	0.0
43	6.1	407.9	0.0	439.0	0.0	574.3	0.0	628.6	0.0	657.8	0.0	634.3	0.0	633.9	0.0	629.4	0.0	600.0	0.0	580.6	0.0	480.4	0.0	399.4	0.0	6,665.7	0.0
44	6.7	390.7	0.0	422.9	0.0	557.1	0.0	611.9	0.0	640.5	0.0	617.6	0.0	616.7	0.0	612.2	0.0	583.3	0.0	563.4	0.0	463.7	0.0	382.2	0.0	6,462.4	0.0
45	7.2	373.5	0.0	406.8	0.0	539.9	0.0	595.3	0.0	623.3	0.0	600.9	0.0	599.5	0.0	595.0	0.0	566.7	0.0	546.2	0.0	447.0	0.0	365.0	0.0	6,259.1	0.0
46	7.8	356.3	0.0	390.7	0.0	522.7	0.0	578.6	0.0	606.1	0.0	584.3	0.0	582.3	0.0	577.8	0.0	550.0	0.0	529.0	0.0	430.4	0.0	347.8	0.0	6,055.7	0.0
47	8.3	339.0	0.0	374.6	0.0	505.5	0.0	561.9	0.0	588.9	0.0	567.6	0.0	565.1	0.0	560.5	0.0	533.3	0.0	511.7	0.0	413.7	0.0	330.5	0.0	5,852.4	0.0
48	8.9	321.8	0.0	358.4	0.0	488.2	0.0	545.3	0.0	571.7	0.0	550.9	0.0	547.8	0.0	543.3	0.0	516.7	0.0	494.5	0.0	397.0	0.0	313.3	0.0	5,649.1	0.0
49	9.4	304.6	0.0	342.3	0.0	471.0	0.0	528.6	0.0	554.4	0.0	534.3	0.0	530.6	0.0	526.1	0.0	500.0	0.0	477.3	0.0	380.4	0.0	296.1	0.0	5,445.7	0.0
50	10.0	287.4	0.0	326.2	0.0	453.8	0.0	511.9	0.0	537.2	0.0	517.6	0.0	513.4	0.0	508.9	0.0	483.3	0.0	460.1	0.0	363.7	0.0	278.9	0.0	5,242.4	0.0
51	10.6	270.2	0.0	310.1	0.0	436.6	0.0	495.3	0.0	520.0	0.0	500.9	0.0	496.2	0.0	491.7	0.0	466.7	0.0	442.9	0.0	347.0	0.0	261.6	0.0	5,039.1	0.0
52	11.1	252.9	0.0	294.0	0.0	419.3	0.0	478.6	0.0	502.8	0.0	484.3	0.0	478.9	0.0	474.4	0.0	450.0	0.0	425.6	0.0	330.4	0.0	244.4	0.0	4,835.7	0.0
53	11.7	235.7	0.0	277.9	0.0	402.1	0.0	461.9	0.0	485.5	0.0	467.6	0.0	461.7	0.0	457.2	0.0	433.3	0.0	408.4	0.0	313.7	0.0	227.2	0.0	4,632.4	0.0
54	12.2	218.5	0.0	261.8	0.0	384.9	0.0	445.3	0.0	468.3	0.0	450.9	0.0	444.5	0.0	440.0	0.0	416.7	0.0	391.2	0.0	297.0	0.0	210.0	0.0	4,429.1	0.0
55	12.8	201.3	0.0	245.7	0.0	367.7	0.0	428.6	0.0	451.1	0.0	434.3	0.0	427.3	0.0	422.8	0.0	400.0	0.0	374.0	0.0	280.4	0.0	192.8	0.0	4,225.7	0.0
56	13.3	184.0	0.0	229.6	0.0	350.5	0.0	411.9	0.0	433.9	0.0	417.6	0.0	410.1	0.0	405.5	0.0	383.3	0.0	356.7	0.0	263.7	0.0	175.5	0.0	4,022.4	0.0
57	13.9	166.8	0.0	213.4	0.0	333.2	0.0	395.3	0.0	416.7	0.0	400.9	0.0	392.8	0.0	388.3	0.0	366.7	0.0	339.5	0.0	247.0	0.0	158.3	0.0	3,819.1	0.0
58	14.4	149.6	0.0	197.3	0.0	316.0	0.0	378.6	0.0	399.4	0.0	384.3	0.0	375.6	0.0	371.1	0.0	350.0	0.0	322.3	0.0	230.4	0.0	141.1	0.0	3,615.7	0.0
59	15.0	132.4	0.0	181.2	0.0	298.8	0.0	361.9	0.0	382.2	0.0	367.6	0.0	358.4	0.0	353.9	0.0	333.3	0.0	305.1	0.0	213.7	0.0	123.9	0.0	3,412.4	0.0
60	15.6	115.2	0.0	165.1	0.0	281.6	0.0	345.3	0.0	365.0	0.0	350.9	0.0	341.2	0.0	336.7	0.0	316.7	0.0	287.9	0.0	197.0	0.0	106.6	0.0	3,209.1	0.0
61	16.1	97.9	0.0	149.0	0.0	264.3	0.0	328.6	0.0	347.8	0.0	334.3	0.0	323.9	0.0	319.4	0.0	300.0	0.0	270.6	0.0	180.4	0.0	89.4	0.0	3,005.7	0.0
62	16.7	80.7	0.0	132.9	0.0	247.1	0.0	311.9	0.0	330.5	0.0	317.6	0.0	306.7	0.0	302.2	0.0	283.3	0.0	253.4	0.0	163.7	0.0	72.2	0.0	2,802.4	0.0
63	17.2	63.5	0.0	116.8	0.0	229.9	0.0	295.3	0.0	313.3	0.0	300.9	0.0	289.5	0.0	285.0	0.0	266.7	0.0	236.2	0.0	147.0	0.0	55.0	0.0	2,599.1	0.0
64	17.8	46.3	0.0	100.7	0.0	212.7	0.0	278.6	0.0	296.1	0.0	284.3	0.0	272.3	0.0	267.8	0.0	250.0	0.0	219.0	0.0	130.4	0.0	37.8	0.0	2,395.7	0.0
65	18.3	29.2	-0.1	84.6	0.0	195.5	0.0	261.9	0.0	278.9	0.0	267.6	0.0	255.1	0.0	250.5	0.0	233.3	0.0	201.7	0.0	113.7	0.0	22.5	-2.0	2,194.5	-2.1
66	18.9	13.8	-1.9	68.4	0.0	178.2	0.0	245.3	0.0	261.7	0.0	250.9	0.0	237.8	0.0	233.3	0.0	216.7	0.0	184.5	0.0	97.0	0.0	10.3	-7.0	1,998.0	-8.9
67	19.4	4.2	-9.6	52.3	0.0	161.0	0.0	228.6	0.0	244.4	0.0	234.3	0.0	220.6	0.0	216.1	0.0	200.0	0.0	167.3	0.0	80.4	0.0	2.8	-16.8	1,812.1	-26.3
68	20.0	0.8	-23.4	36.3	-0.1	143.8	0.0	211.9	0.0	227.2	0.0	217.6	0.0	203.4	0.0	198.9	0.0	183.3	0.0	150.1	0.0	63.7	0.0	0.3	-31.4	1,637.3	-54.9

HEATING & COOLING DEGREE DAYS BASE RANGE 35 - 100 °F (1.7 - 37.8 °C) 1981 - 1998 (2524 - 2541)																	Station : CHIANG RAI										
MONTH		JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL	
Degree		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
°F	°C																										
69	20.6	0.0	-39.8	24.6	-4.5	126.6	0.0	195.3	0.0	210.0	0.0	200.9	0.0	186.2	0.0	181.7	0.0	166.7	0.0	132.9	0.0	47.0	0.0	0.0	-48.4	1,471.7	-92.7
70	21.1	0.0	-57.1	15.5	-11.5	109.3	0.0	178.6	0.0	192.8	0.0	184.3	0.0	168.9	0.0	164.4	0.0	150.0	0.0	115.6	0.0	31.6	-1.2	0.0	-65.6	1,311.2	-135.4
71	21.7	0.0	-74.3	8.2	-20.3	92.1	0.0	161.9	0.0	175.5	0.0	167.6	0.0	151.7	0.0	147.2	0.0	133.3	0.0	98.4	0.0	18.1	-4.4	0.0	-82.8	1,154.2	-181.8
72	22.2	0.0	-91.5	3.5	-31.7	74.9	0.0	145.3	0.0	158.3	0.0	150.9	0.0	134.5	0.0	130.0	0.0	116.7	0.0	81.2	0.0	7.9	-10.9	0.0	-100.0	1,003.2	-234.1
73	22.8	0.0	-108.7	0.8	-45.1	58.0	-0.4	128.6	0.0	141.1	0.0	134.3	0.0	117.3	0.0	112.8	0.0	100.0	0.0	64.0	0.0	2.4	-22.0	0.0	-117.2	859.2	-293.5
74	23.3	0.0	-126.0	0.0	-60.4	42.9	-2.5	111.9	0.0	123.9	0.0	117.6	0.0	100.1	0.0	95.5	0.0	83.3	0.0	46.7	0.0	0.0	-36.3	0.0	-134.5	722.0	-359.6
75	23.9	0.0	-143.2	0.0	-76.6	29.6	-6.4	95.3	0.0	106.7	0.0	100.9	0.0	82.8	0.0	78.3	0.0	66.7	0.0	30.3	-0.8	0.0	-53.0	0.0	-151.7	590.6	-431.5
76	24.4	0.0	-160.4	0.0	-92.7	18.7	-12.7	78.6	0.0	89.4	0.0	84.3	0.0	65.6	0.0	61.1	0.0	50.0	0.0	16.5	-4.2	0.0	-68.6	0.0	-168.9	464.2	-508.4
77	25.0	0.0	-177.6	0.0	-108.8	9.4	-20.6	61.9	0.0	72.2	0.0	67.6	0.0	48.4	0.0	43.9	0.0	33.3	0.0	6.2	-11.1	0.0	-86.3	0.0	-186.1	343.0	-590.5
78	25.6	0.0	-194.8	0.0	-124.9	3.1	-31.5	45.3	0.0	55.0	0.0	50.9	0.0	31.2	0.0	26.7	0.0	16.7	0.0	0.2	-22.3	0.0	-103.0	0.0	-203.4	229.0	-679.9
79	26.1	0.0	-212.1	0.0	-141.0	0.5	-46.1	28.6	0.0	37.8	0.0	34.3	0.0	14.2	-0.2	9.5	-0.1	3.7	-3.7	0.0	-39.4	0.0	-119.6	0.0	-220.6	128.5	-782.8
80	26.7	0.0	-229.3	0.0	-157.1	0.0	-62.9	13.4	-1.5	20.6	0.0	17.7	-0.1	2.8	-6.1	0.2	-8.0	0.0	-16.7	0.0	-56.6	0.0	-136.3	0.0	-237.8	54.7	-912.3
81	27.2	0.0	-246.5	0.0	-173.2	0.0	-80.1	3.8	-8.6	5.3	-2.0	4.2	-3.3	0.1	-20.6	0.0	-25.0	0.0	-33.3	0.0	-73.8	0.0	-153.0	0.0	-255.0	13.5	-1,074.5
82	27.8	0.0	-263.7	0.0	-189.3	0.0	-97.3	0.0	-21.4	0.1	-14.0	0.0	-15.7	0.0	-37.7	0.0	-42.2	0.0	-50.0	0.0	-91.0	0.0	-168.6	0.0	-272.2	0.1	-1,264.4
83	28.3	0.0	-281.0	0.0	-205.4	0.0	-114.6	0.0	-38.1	0.0	-31.1	0.0	-32.4	0.0	-55.0	0.0	-59.5	0.0	-66.7	0.0	-108.3	0.0	-186.3	0.0	-289.5	0.0	-1,467.6
84	28.9	0.0	-298.2	0.0	-221.6	0.0	-131.8	0.0	-54.7	0.0	-46.3	0.0	-49.1	0.0	-72.2	0.0	-76.7	0.0	-83.3	0.0	-125.5	0.0	-203.0	0.0	-306.7	0.0	-1,670.9
85	29.4	0.0	-315.4	0.0	-237.7	0.0	-149.0	0.0	-71.4	0.0	-65.6	0.0	-65.7	0.0	-89.4	0.0	-93.9	0.0	-100.0	0.0	-142.7	0.0	-219.6	0.0	-323.9	0.0	-1,874.3
86	30.0	0.0	-332.6	0.0	-253.8	0.0	-166.2	0.0	-88.1	0.0	-82.8	0.0	-82.4	0.0	-106.6	0.0	-111.1	0.0	-116.7	0.0	-159.9	0.0	-236.3	0.0	-341.1	0.0	-2,077.6
87	30.6	0.0	-349.8	0.0	-269.9	0.0	-183.4	0.0	-104.7	0.0	-100.0	0.0	-99.1	0.0	-123.8	0.0	-128.3	0.0	-133.3	0.0	-177.1	0.0	-253.0	0.0	-358.4	0.0	-2,280.9
88	31.1	0.0	-367.1	0.0	-286.0	0.0	-200.7	0.0	-121.4	0.0	-117.2	0.0	-115.7	0.0	-141.1	0.0	-145.6	0.0	-150.0	0.0	-194.4	0.0	-268.6	0.0	-375.6	0.0	-2,484.3
89	31.7	0.0	-384.3	0.0	-302.1	0.0	-217.9	0.0	-138.1	0.0	-134.5	0.0	-132.4	0.0	-158.3	0.0	-162.8	0.0	-166.7	0.0	-211.6	0.0	-286.3	0.0	-392.8	0.0	-2,687.6
90	32.2	0.0	-401.5	0.0	-318.2	0.0	-235.1	0.0	-154.7	0.0	-151.7	0.0	-149.1	0.0	-175.5	0.0	-180.0	0.0	-183.3	0.0	-228.8	0.0	-303.0	0.0	-410.0	0.0	-2,890.9
91	32.8	0.0	-418.7	0.0	-334.3	0.0	-252.3	0.0	-171.4	0.0	-168.9	0.0	-165.7	0.0	-192.7	0.0	-197.2	0.0	-200.0	0.0	-246.0	0.0	-319.6	0.0	-427.2	0.0	-3,094.3
92	33.3	0.0	-436.0	0.0	-350.4	0.0	-269.6	0.0	-188.1	0.0	-186.1	0.0	-182.4	0.0	-210.0	0.0	-214.5	0.0	-216.7	0.0	-263.3	0.0	-336.3	0.0	-444.5	0.0	-3,297.6
93	33.9	0.0	-453.2	0.0	-366.6	0.0	-286.8	0.0	-204.7	0.0	-203.3	0.0	-199.1	0.0	-227.2	0.0	-231.7	0.0	-233.3	0.0	-280.5	0.0	-353.0	0.0	-461.7	0.0	-3,500.9
94	34.4	0.0	-470.4	0.0	-382.7	0.0	-304.0	0.0	-221.4	0.0	-220.6	0.0	-215.7	0.0	-244.4	0.0	-248.9	0.0	-250.0	0.0	-297.7	0.0	-368.6	0.0	-478.9	0.0	-3,704.3
95	35.0	0.0	-487.6	0.0	-398.8	0.0	-321.2	0.0	-238.1	0.0	-237.8	0.0	-232.4	0.0	-261.6	0.0	-266.1	0.0	-266.7	0.0	-314.9	0.0	-386.3	0.0	-496.1	0.0	-3,907.6
96	35.6	0.0	-504.8	0.0	-414.9	0.0	-338.4	0.0	-254.7	0.0	-255.0	0.0	-249.1	0.0	-278.8	0.0	-283.3	0.0	-283.3	0.0	-332.1	0.0	-403.0	0.0	-513.4	0.0	-4,110.9
97	36.1	0.0	-522.1	0.0	-431.0	0.0	-355.7	0.0	-271.4	0.0	-272.2	0.0	-265.7	0.0	-296.1	0.0	-300.6	0.0	-300.0	0.0	-349.4	0.0	-419.6	0.0	-530.6	0.0	-4,314.3
98	36.7	0.0	-539.3	0.0	-447.1	0.0	-372.9	0.0	-288.1	0.0	-289.5	0.0	-282.4	0.0	-313.3	0.0	-317.8	0.0	-316.7	0.0	-366.6	0.0	-436.3	0.0	-547.8	0.0	-4,517.6
99	37.2	0.0	-556.5	0.0	-463.2	0.0	-390.1	0.0	-304.7	0.0	-306.7	0.0	-299.1	0.0	-330.5	0.0	-335.0	0.0	-333.3	0.0	-383.8	0.0	-453.0	0.0	-565.0	0.0	-4,720.9
100	37.8	0.0	-573.7	0.0	-479.3	0.0	-407.3	0.0	-321.4	0.0	-323.9	0.0	-315.7	0.0	-347.7	0.0	-352.2	0.0	-350.0	0.0	-401.0	0.0	-468.6	0.0	-582.2	0.0	-4,924.3

กรมอุตุนิยมวิทยา
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แผนภูมิปริมาณองศาวัน การทำความร้อนและการทำความเย็น (heating and cooling degree days)

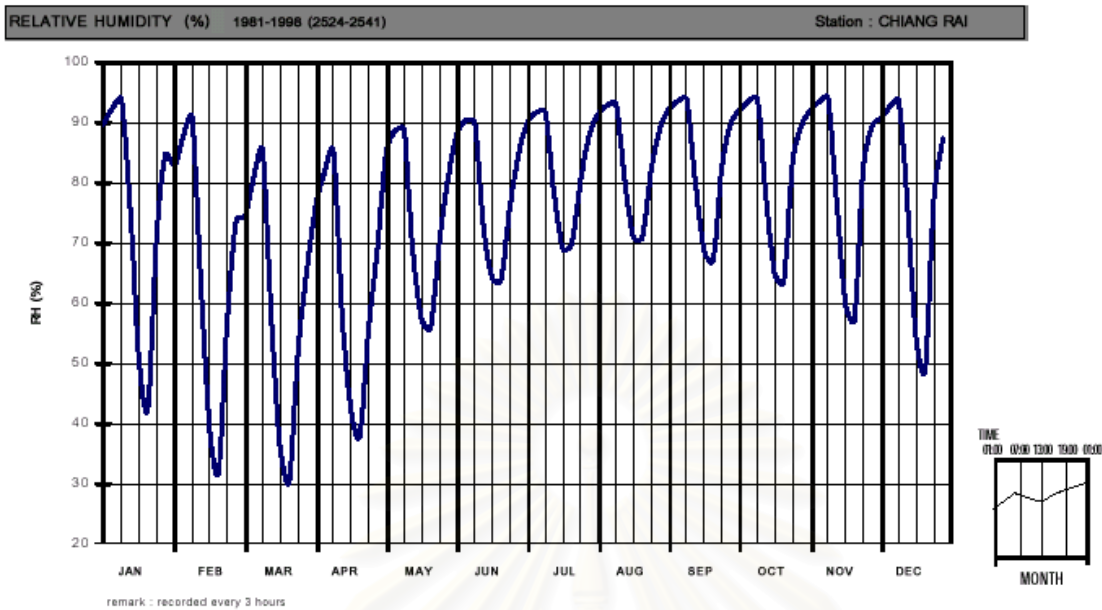


สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลความชื้นสัมพัทธ์ (relative humidity)

RELATIVE HUMIDITY (%) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI																											
MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL															
DAY	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max	min	mean	max										
1	47.0	77.4	94.7	39.2	70.8	92.6	28.6	62.0	89.2	31.1	60.4	85.7	45.2	67.7	86.4	61.9	79.5	90.9	62.0	77.1	89.1	70.9	84.5	92.7	71.8	84.7	93.8	63.1	82.7	94.3	57.6	80.3	92.9	55.6	78.9	93.2	52.8	75.5	91.3	
2	44.8	77.6	94.7	36.8	70.2	91.9	30.4	61.8	87.2	30.6	57.1	81.7	44.2	67.1	87.2	62.9	78.8	91.3	63.7	78.9	89.8	70.1	83.9	93.3	70.2	85.3	94.8	65.2	82.9	94.4	58.0	80.6	94.8	50.6	78.0	93.7	52.3	75.2	91.2	
3	45.9	77.8	94.7	33.6	69.0	93.3	32.8	61.7	86.7	33.8	59.4	82.5	49.3	69.3	85.8	61.8	77.7	90.6	65.8	80.2	89.6	69.1	82.3	92.5	69.1	83.6	93.9	63.3	81.9	93.8	62.0	82.0	94.4	48.9	77.9	94.1	53.0	75.2	91.0	
4	46.2	77.5	94.7	33.2	68.6	92.6	31.6	62.4	86.6	32.0	60.6	83.2	48.9	70.9	87.4	62.4	78.3	90.8	66.7	80.4	89.6	69.9	82.8	91.6	66.6	83.3	93.2	67.7	83.1	93.8	60.4	81.0	94.1	49.8	78.3	94.6	53.0	75.6	91.0	
5	46.2	76.5	94.7	33.8	68.3	91.3	31.2	61.3	87.2	33.0	60.6	85.2	50.4	72.1	88.7	64.8	80.7	92.1	67.2	81.2	91.5	68.6	83.6	93.6	67.4	84.0	93.7	65.5	82.7	93.3	59.8	81.6	94.5	50.4	78.2	93.6	53.2	75.9	91.6	
6	45.9	76.4	93.2	32.2	68.0	91.9	30.4	61.6	86.9	35.1	60.9	82.8	51.0	71.9	88.7	66.2	80.0	90.3	69.9	82.6	91.5	70.1	83.2	93.2	68.5	83.7	93.9	68.6	84.0	93.7	55.1	80.5	94.6	52.9	78.5	93.8	53.8	75.9	91.2	
7	42.7	76.1	94.7	33.6	68.0	92.5	31.6	61.3	86.4	39.7	63.4	85.7	47.7	69.7	87.3	66.2	80.5	90.3	68.5	82.6	92.4	69.1	83.2	92.7	69.3	84.6	94.0	65.9	83.2	94.8	56.5	80.5	95.6	48.5	77.4	94.1	53.3	75.9	91.7	
8	43.4	76.0	94.4	33.6	67.6	91.2	30.1	60.8	85.2	34.8	62.8	86.2	50.3	71.1	87.1	67.4	82.1	92.1	70.6	82.6	93.1	69.8	82.5	92.2	67.8	83.5	93.4	67.2	84.6	95.2	60.5	81.0	92.7	47.7	77.5	93.7	53.6	76.0	91.4	
9	40.0	75.4	94.8	32.2	67.4	91.7	30.8	61.7	86.3	30.5	59.4	85.9	52.9	72.7	89.4	64.7	80.4	91.4	69.6	83.1	92.3	66.3	82.2	93.1	69.6	84.1	94.0	68.4	84.3	94.3	62.4	82.5	94.6	49.6	77.5	93.7	53.1	75.9	91.8	
10	41.5	75.7	93.8	32.4	67.0	92.0	31.3	62.4	88.0	30.9	58.4	82.1	52.6	72.3	87.9	63.4	80.5	92.1	69.5	83.8	92.8	68.4	83.3	93.3	70.2	84.5	94.2	63.5	83.0	94.9	57.1	79.2	92.4	48.4	77.0	92.7	52.4	75.6	91.4	
11	43.7	75.9	94.2	36.2	68.6	91.8	26.4	60.2	88.4	31.9	59.3	83.6	55.2	74.3	88.9	65.7	80.5	91.9	67.9	82.3	92.4	69.9	83.6	92.7	63.7	82.9	94.3	64.7	82.9	94.6	55.5	79.1	93.1	50.9	78.4	93.8	52.6	75.7	91.6	
12	42.1	75.3	93.3	30.2	67.7	92.3	29.7	60.1	86.2	34.0	59.6	82.5	54.3	73.2	88.8	65.2	80.3	90.6	64.4	80.3	91.0	70.2	83.5	93.4	63.4	81.5	93.5	64.6	82.4	93.2	56.7	80.5	94.4	51.1	78.3	94.2	52.1	75.2	91.1	
13	43.7	76.2	94.7	29.2	66.1	92.2	27.7	60.0	87.6	35.1	60.7	83.6	54.7	74.2	89.3	61.7	78.7	91.5	65.6	80.3	90.5	68.8	82.5	91.8	64.8	82.2	93.9	62.6	82.7	94.8	58.0	80.9	94.9	49.8	78.6	94.5	51.8	75.2	91.6	
14	40.7	74.6	93.9	27.2	65.0	91.4	24.4	58.5	85.5	35.3	61.1	84.4	56.6	74.6	89.2	62.1	78.7	91.8	64.5	80.8	91.1	72.1	85.1	93.3	66.5	83.3	94.2	65.2	82.7	93.9	60.7	82.1	94.8	49.1	77.7	93.1	52.0	75.3	91.4	
15	41.0	74.3	93.1	26.9	63.6	90.8	28.8	58.9	83.3	41.2	63.8	84.7	57.1	74.5	88.5	61.1	78.1	91.1	71.6	84.0	92.6	70.4	84.3	94.1	70.9	84.9	94.7	65.0	83.1	95.1	57.8	80.7	93.8	51.6	78.4	92.9	53.6	75.7	91.2	
16	44.2	76.0	94.7	27.6	62.7	90.1	28.3	59.7	86.1	35.7	62.4	86.2	55.6	74.3	89.9	60.3	77.1	90.6	67.0	82.8	93.1	69.2	84.2	93.9	67.2	83.3	94.6	63.9	82.6	94.8	59.3	81.3	95.0	50.2	77.5	92.3	52.4	75.3	91.8	
17	42.5	74.9	94.5	27.6	63.0	88.7	27.1	59.8	86.2	39.1	63.2	84.8	55.4	74.8	89.9	58.9	76.0	88.8	67.3	82.3	92.1	70.3	83.7	93.7	67.4	83.3	94.0	66.3	83.8	94.7	58.6	80.7	94.5	49.3	77.4	92.8	52.5	75.2	91.2	
18	41.4	73.9	93.6	28.4	64.5	91.4	28.4	59.5	86.2	38.4	62.5	84.5	55.1	75.1	88.9	60.3	76.9	89.9	67.4	82.0	92.6	72.4	84.5	93.2	67.6	83.4	94.1	65.4	83.5	94.9	59.1	81.1	94.0	50.6	78.0	93.2	52.9	75.4	91.3	
19	41.9	74.3	93.3	31.1	64.1	89.1	28.6	57.8	82.6	36.2	62.8	82.9	56.5	75.7	90.4	62.2	77.6	89.9	65.1	80.8	91.9	69.5	84.3	93.6	66.3	83.3	93.4	61.9	82.3	94.4	58.7	81.0	93.6	48.5	77.4	93.2	52.2	75.1	90.7	
20	39.9	74.1	93.9	30.6	64.7	90.9	28.3	57.6	84.9	38.1	63.3	85.5	54.7	74.9	90.1	62.8	78.1	90.0	64.5	80.4	90.5	71.0	84.0	93.1	66.4	83.2	93.8	64.9	82.8	94.4	56.6	80.8	94.8	44.9	76.9	94.0	51.9	75.1	91.3	
21	43.8	75.3	93.5	37.1	67.0	90.7	26.5	56.7	81.7	45.2	67.2	87.4	59.4	76.1	90.2	58.4	77.4	91.1	66.4	81.9	92.2	69.4	83.0	92.4	66.7	83.4	94.1	63.2	81.4	92.3	55.2	79.6	94.6	46.2	76.5	93.8	53.1	75.4	91.2	
22	40.5	73.4	94.1	33.4	65.2	90.2	29.4	57.0	81.5	41.9	67.4	88.1	56.6	74.9	90.1	62.3	77.8	89.9	69.9	83.0	91.9	67.3	82.7	91.9	61.7	81.2	93.8	62.6	82.1	94.2	55.5	80.7	95.1	46.1	76.6	94.1	52.3	75.2	91.2	
23	36.7	71.2	93.1	34.1	64.7	89.3	29.1	59.0	85.1	44.1	67.0	87.7	56.9	74.0	88.6	62.7	78.1	89.5	70.9	84.3	92.3	72.9	85.6	93.9	65.0	83.0	93.9	61.7	81.8	94.1	55.9	80.3	93.8	47.1	77.2	94.6	53.1	75.5	91.3	
24	38.6	72.5	93.3	32.0	64.0	89.3	29.7	59.2	84.8	41.2	66.1	87.0	58.9	77.1	90.2	61.7	77.0	89.4	71.5	84.4	92.7	71.5	84.9	94.3	65.4	82.7	93.6	61.7	82.1	94.3	53.8	79.7	93.3	48.6	77.7	94.8	52.9	75.6	91.4	
25	41.3	73.9	93.4	32.6	65.2	90.1	29.6	57.4	84.0	42.2	66.8	86.6	61.4	79.0	91.2	63.1	77.5	89.1	72.6	85.1	93.2	71.3	85.5	94.3	66.1	83.6	94.2	60.4	80.9	93.5	50.9	79.0	94.4	44.1	76.7	93.9	53.0	75.9	91.5	
26	44.2	75.0	93.5	32.2	64.1	89.9	33.9	59.6	84.1	44.2	69.8	89.1	59.2	77.3	91.0	62.6	78.9	89.7	71.6	84.5	93.4	70.7	85.9	94.2	62.6	83.0	94.7	58.8	80.5	93.3	55.1	80.5	94.8	45.3	77.0	94.3	53.4	76.3	91.8	
27	43.4	74.8	93.4	27.1	61.6	89.6	34.8	61.0	82.6	46.9	69.7	87.8	58.7	76.6	90.6	64.7	79.5	89.4	69.4	83.5	92.4	72.3	85.2	94.6	68.3	84.1	94.6	61.4	80.8	93.2	54.9	80.4	94.7	47.8	76.8	92.6	54.2	76.2	91.3	
28	43.7	74.5	92.6	28.5	62.4	88.4	38.6	61.4	84.3	43.9	69.6	87.8	64.9	80.2	91.3	64.4	79.5	90.4	70.4	83.3	92.8	67.1	83.2	93.8	63.6	83.2	94.3	58.3	80.3	93.8	56.4	80.4	94.7	48.1	77.7	93.5	54.0	76.3	91.5	
29	42.4	74.5	92.2	32.3	65.0	89.8	31.5	60.6	84.1	48.1	70.2	88.6	66.1	81.2	92.0	63.5	79.2	90.2	70.7	83.4	92.4	68.8	82.7	92.7	65.3	82.7	93.8	57.5	80.4	94.6	53.2	79.9	93.7	48.6	78.3	94.6	54.0	76.5	91.5	
30	39.2	73.5	94.1				33.8	59.5	83.1	43.4	66.6	86.4	63.7	79.2	91.0	63.1	78.3	89.7	71.9	84.6	93.1	74.3	85.4	93.0	64.1	83.3	94.6	58.0	80.4	94.6	53.1	79.2	94.9	47.6	77.4	94.5	55.7	77.0	91.7	
31	36.6	71.5	93.7				36.5	61.4	84.7				64.5	78.6	89.1				72.2	85.4	93.6	70.7	84.8	93.3				58.3	79.5	92.2				46.8	77.5	93.8	55.1	77.0	91.5	
Average	42.4	75.0	93.9	31.9	66.0	90.9	30.3	60.0	85.4	37.9	63.4	85.3	55.4	74.3	89.2	63.0	78.8	90.9	68.3	82.3	91.9	70.1	83.9	93.2	66.9	83.4	94.0	63.4	82.3	94.1	57.1	80.6	94.2	49.9	77.7	93.7	53.0	75.6	91.4	
Extremes	18	98	13	100	12	96	14	98	18	98	25	97	40	100	45	99	37	99	34	98	28	99	26	98	12	100														
StdD.	19.3		22.5		21.5		20.9																																	

แผนภูมิความชื้นสัมพัทธ์ (relative humidity)



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลจำแนกความถี่ของลม ในแต่ละความเร็วและทิศทาง ที่เกิดลมรายเดือน (monthly frequency distribution of wind in each speed and direction)

MONTHLY FREQUENCY DISTRIBUTION OF WIND IN EACH SPEED AND DIRECTION 1981 - 1998 (2524 - 2541) Station : CHIANG RAI

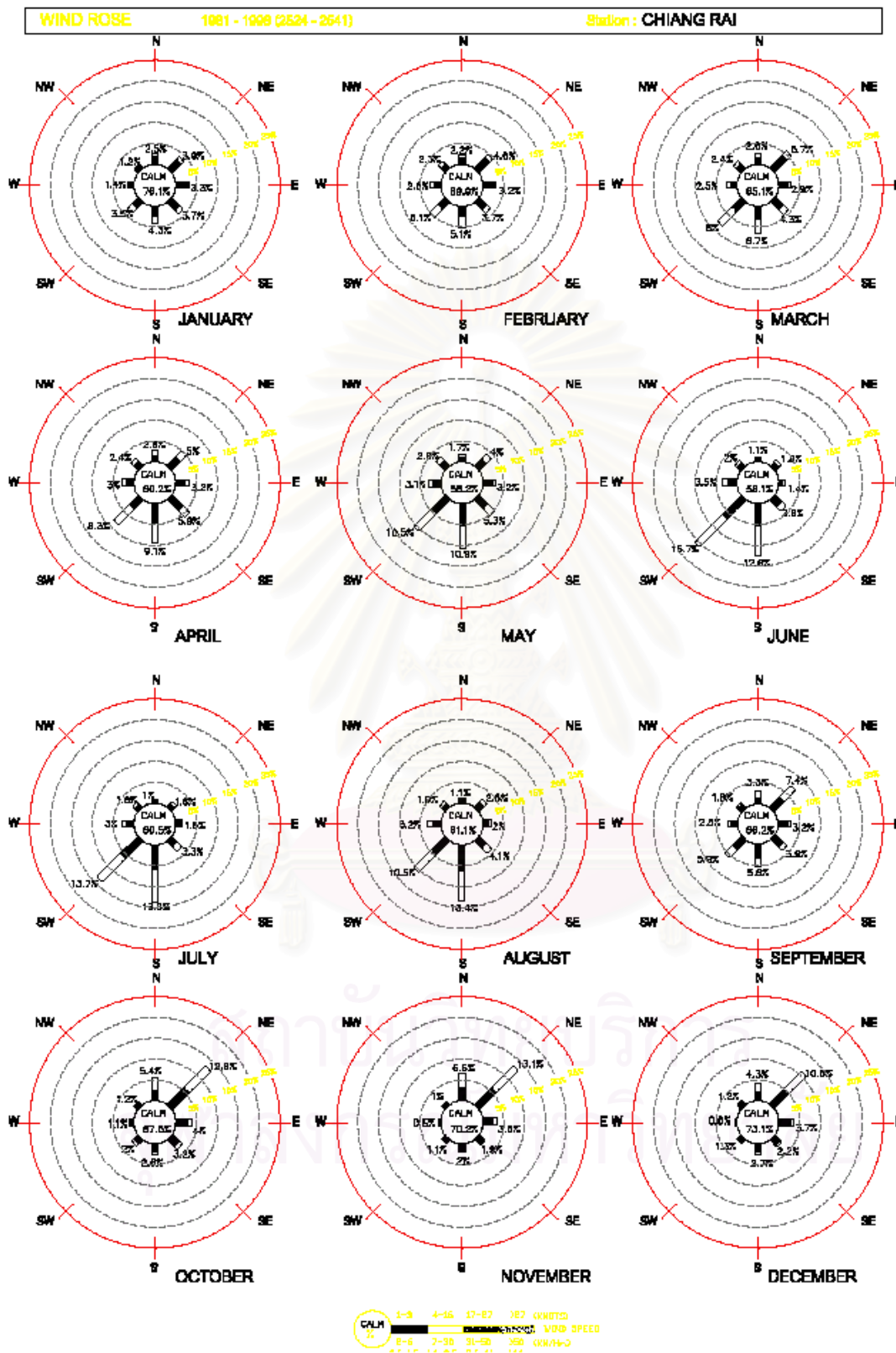
January											February											March																					
ks	km/h	mts	N	NE	E	SE	S	SW	W	NW	Calm	Total	ks	km/h	mts	N	NE	E	SE	S	SW	W	NW	Calm	Total	ks	km/h	mts	N	NE	E	SE	S	SW	W	NW	Calm	Total					
											78.1 78.1											69.9 69.9											65.1 65.1										
1-3	2-6	0.6-1.5	1.9	2.9	2.6	2.6	2.6	1.8	1.3	1	16.9		1.7	3.4	2.6	2.5	2.4	2.2	1.7	1.4	1.4	17.9		1.3	2.6	1.6-1.5	1.6	4.1	2.2	2.5	3.2	3	1.5	1.6	19.7								
4-16	7-30	1.6-4.2	0.8	1	0.5	1.1	1.7	1.7	0.1	0.2	8.9		0.5	1.2	0.6	1.2	2.7	3.9	0.9	0.9	11.9		4-16	7-30	1.6-4.2	1	1.6	0.7	1.8	3.5	5	1	0.8	15.4									
17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0								
>27	>50	>14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		>27	>50	>14	0	0	0	0	0	0	0	0	0								
Total											2.2 4.6 3.2 3.7 5.1 6.1 2.8 2.3 69.9 100											2.6 5.7 2.9 4.3 6.7 8 2.5 2.4 65.1 100																					
April											May											June																					
											60.2 60.2											58.2 58.2											58.1 58.1										
1-3	2-6	0.6-1.5	1.8	2.8	2.2	3.6	4.6	2.9	1.7	1.3	20.7		1	2.5	2.3	2.9	5.4	4.8	2	1.7	22.2		1-3	2-6	0.6-1.5	0.6	1.2	1	2.1	5.3	6.3	2.1	1.2	19.8									
4-16	7-30	1.6-4.2	1.2	2.2	1	2.3	4.5	5.4	1.3	1.1	19		0.7	1.7	0.9	2.4	5.5	5.9	1.1	1.2	19.4		4-16	7-30	1.6-4.2	0.5	0.6	0.4	1.5	7.3	9.4	1.4	0.8	21.9									
17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0								
>27	>50	>14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		>27	>50	>14	0	0	0	0	0	0	0	0	0								
Total											1.7 4 3.2 5.3 10.9 10.5 3.1 2.9 58.2 100											1.1 1.8 1.4 3.6 12.8 15.7 3.5 2 58.1 100																					
July											August											September																					
											60.5 60.5											61.1 61.1											66.2 66.2										
1-3	2-6	0.6-1.5	0.5	1	1.2	1.7	5.8	5.7	2	0.9	18.8		0.7	1.6	1.6	2.3	6.2	4.6	2	1.1	20.1		1-3	2-6	0.6-1.5	1.6	3.5	2.4	2.6	3.4	3.2	1.9	1.2	19.8									
4-16	7-30	1.6-4.2	0.5	0.6	0.4	1.6	7.8	8	1	0.7	20.6		0.4	1	0.4	1.8	7.2	5.9	1.2	0.8	18.7		4-16	7-30	1.6-4.2	1.7	3.9	0.8	1.3	2.2	2.7	0.6	0.6	13.8									
17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0								
>27	>50	>14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		>27	>50	>14	0	0	0	0	0	0	0	0	0								
Total											1.1 2.6 2 4.1 13.4 10.5 3.2 1.9 61.1 100											3.3 7.4 3.2 3.9 5.8 5.9 2.5 1.8 66.2 100																					
October											November											December																					
											67.5 67.5											70.2 70.2											73.1 73.1										
1-3	2-6	0.6-1.5	2.8	5.6	2.7	2.3	1.9	1.2	0.9	1	18.2		3.3	5.6	2.4	1.6	1.5	0.8	0.8	0.9	16.7		1-3	2-6	0.6-1.5	2.2	4.7	2.9	1.8	1.8	1.1	0.8	1.1	16.2									
4-16	7-30	1.6-4.2	2.8	7.3	1.3	0.9	0.7	0.8	0.2	0.2	14.2		3.3	7.5	1.1	0.3	0.5	0.3	0	0.1	13.1		4-16	7-30	1.6-4.2	2.1	6.1	0.8	0.4	0.9	0.2	0	0.1	10.6									
17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		17-27	31-50	5.6-14	0	0	0	0	0	0	0	0	0								
>27	>50	>14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		>27	>50	>14	0	0	0	0	0	0	0	0	0								
Total											6.6 13.1 3.5 1.9 2 1.1 0.8 1 70.2 100											4.3 10.8 3.7 2.2 2.7 1.3 0.8 1.2 73.1 100																					

Remark : ks = KNOTS

1 ks = 1.852 km/h = 0.514 mts

* This table shows the frequency of wind speed & direction in percent

แผนภูมิจำแนกความถี่ของลม ในแต่ละความเร็วและทิศทาง ที่เกิดลมรายเดือน (wind rose)



ตารางแสดงผลข้อมูลสภาพท้องฟ้าและสัดส่วนเปอร์เซ็นต์สภาพท้องฟ้า (sky cover and percentage of sky condition)

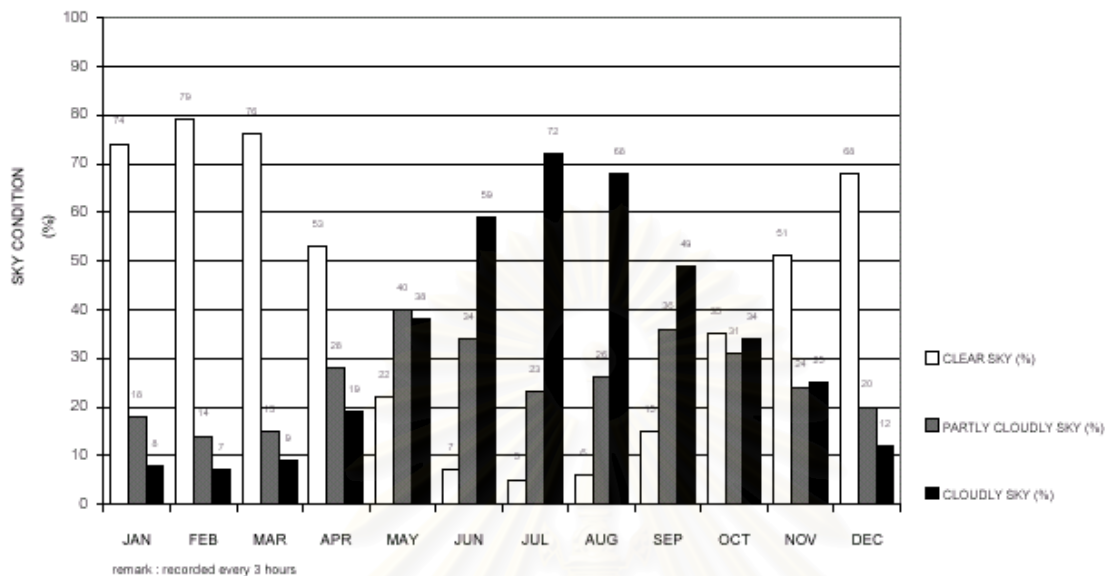
SKY COVER (%) & SKY CONDITION 1981 - 1998 (2524 - 2541)														Station : CHIANG RAI																												
MONTH	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL					
DAY	Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition			Sky Condition								
	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld	Clr	Part	Cld			
1	76%	15%	9%	77%	17%	6%	75%	18%	7%	71%	22%	7%	36%	42%	22%	8%	38%	54%	7%	30%	63%	4%	19%	77%	1%	28%	71%	22%	32%	46%	55%	24%	21%	51%	27%	21%	40%	26%	34%			
2	73%	19%	8%	71%	15%	14%	76%	13%	10%	74%	17%	9%	32%	46%	22%	7%	41%	51%	5%	23%	72%	7%	27%	66%	5%	30%	65%	21%	40%	39%	54%	24%	23%	58%	23%	19%	40%	27%	33%			
3	62%	29%	10%	76%	18%	5%	78%	11%	11%	71%	16%	13%	36%	40%	24%	7%	37%	57%	4%	26%	70%	6%	24%	70%	7%	26%	67%	20%	47%	33%	35%	31%	35%	71%	20%	9%	39%	27%	33%			
4	65%	24%	11%	80%	13%	7%	76%	14%	10%	68%	23%	10%	35%	40%	25%	12%	35%	54%	5%	26%	69%	3%	28%	69%	4%	41%	55%	15%	43%	42%	38%	24%	38%	79%	13%	8%	40%	27%	33%			
5	65%	27%	7%	78%	13%	9%	80%	10%	10%	62%	27%	11%	32%	30%	38%	8%	22%	70%	4%	21%	75%	4%	26%	71%	8%	31%	61%	18%	42%	40%	44%	26%	29%	66%	21%	13%	39%	25%	36%			
6	60%	30%	10%	83%	12%	5%	78%	13%	9%	63%	22%	15%	29%	40%	31%	5%	37%	58%	4%	18%	77%	9%	29%	63%	12%	38%	50%	10%	45%	45%	55%	27%	18%	55%	28%	17%	39%	28%	33%			
7	74%	21%	5%	81%	13%	6%	76%	17%	7%	65%	18%	17%	24%	48%	28%	8%	33%	59%	4%	24%	73%	5%	30%	65%	4%	47%	49%	18%	37%	46%	68%	15%	16%	64%	26%	10%	41%	27%	32%			
8	75%	14%	11%	74%	15%	11%	79%	7%	14%	68%	23%	10%	29%	36%	35%	4%	30%	60%	8%	25%	67%	5%	31%	64%	7%	34%	59%	26%	35%	39%	52%	27%	21%	68%	18%	14%	41%	25%	34%			
9	80%	13%	7%	74%	15%	11%	79%	7%	15%	68%	21%	10%	23%	43%	35%	9%	31%	60%	6%	17%	77%	4%	31%	65%	13%	34%	53%	25%	37%	38%	45%	18%	37%	64%	18%	18%	41%	24%	35%			
10	76%	15%	9%	83%	13%	4%	80%	13%	7%	69%	18%	13%	26%	35%	38%	4%	35%	60%	4%	24%	71%	1%	29%	70%	9%	39%	52%	29%	42%	29%	51%	20%	29%	63%	19%	18%	41%	25%	33%			
11	93%	3%	4%	88%	12%	0%	87%	10%	3%	71%	21%	7%	23%	40%	37%	10%	35%	54%	3%	29%	68%	2%	20%	78%	10%	40%	49%	24%	32%	43%	49%	26%	25%	57%	24%	18%	43%	25%	32%			
12	83%	13%	4%	82%	14%	4%	69%	16%	15%	54%	35%	12%	23%	47%	30%	9%	35%	56%	4%	26%	70%	7%	29%	65%	11%	51%	38%	24%	32%	44%	52%	24%	24%	71%	20%	10%	41%	28%	31%			
13	71%	22%	7%	91%	4%	4%	71%	21%	8%	54%	32%	14%	27%	38%	35%	10%	36%	54%	4%	29%	68%	4%	18%	78%	15%	46%	40%	29%	40%	30%	49%	26%	25%	76%	18%	7%	42%	28%	31%			
14	77%	18%	4%	86%	13%	1%	78%	14%	8%	55%	28%	17%	19%	44%	37%	9%	43%	48%	3%	24%	74%	6%	17%	77%	13%	45%	42%	32%	31%	37%	43%	22%	35%	74%	22%	4%	41%	27%	32%			
15	78%	15%	7%	82%	15%	3%	81%	13%	6%	50%	26%	24%	16%	46%	36%	7%	37%	57%	5%	21%	74%	5%	20%	75%	13%	24%	64%	45%	28%	27%	48%	21%	32%	66%	17%	17%	41%	23%	35%			
16	69%	25%	6%	77%	18%	5%	79%	14%	7%	56%	27%	17%	20%	42%	32%	9%	39%	52%	6%	27%	67%	6%	26%	68%	11%	49%	40%	49%	29%	23%	59%	17%	24%	65%	29%	7%	43%	28%	29%			
17	61%	36%	3%	82%	15%	3%	78%	14%	8%	53%	34%	13%	21%	41%	38%	10%	39%	51%	4%	21%	76%	9%	26%	65%	11%	39%	50%	46%	16%	38%	53%	25%	22%	63%	26%	10%	41%	28%	31%			
18	74%	15%	11%	86%	10%	4%	85%	11%	4%	50%	25%	25%	15%	38%	48%	6%	29%	65%	9%	26%	65%	10%	24%	66%	11%	40%	49%	42%	23%	35%	48%	33%	19%	67%	24%	10%	42%	25%	33%			
19	80%	13%	7%	80%	14%	6%	82%	14%	4%	44%	33%	23%	17%	42%	41%	12%	37%	51%	7%	36%	57%	11%	26%	63%	15%	37%	49%	35%	32%	33%	49%	25%	26%	63%	18%	18%	41%	27%	31%			
20	82%	14%	4%	77%	14%	9%	83%	15%	2%	46%	31%	24%	20%	40%	40%	8%	38%	54%	4%	36%	60%	6%	25%	69%	14%	36%	50%	35%	25%	40%	54%	21%	25%	71%	18%	11%	42%	26%	32%			
21	82%	10%	8%	77%	13%	10%	84%	15%	1%	45%	36%	19%	26%	29%	45%	7%	38%	56%	7%	28%	65%	7%	28%	65%	7%	28%	65%	17%	32%	51%	39%	26%	35%	45%	38%	18%	74%	19%	7%	42%	26%	32%
22	80%	15%	4%	73%	16%	11%	77%	17%	6%	50%	22%	28%	26%	36%	38%	4%	29%	68%	1%	15%	83%	9%	31%	60%	24%	44%	32%	46%	21%	33%	51%	26%	23%	66%	24%	10%	42%	25%	33%			
23	80%	15%	4%	72%	15%	13%	76%	14%	10%	39%	35%	26%	24%	42%	35%	6%	38%	56%	2%	21%	77%	5%	24%	71%	21%	32%	46%	40%	26%	35%	56%	19%	25%	69%	22%	9%	41%	25%	34%			
24	79%	15%	6%	72%	18%	10%	81%	12%	7%	35%	43%	22%	16%	40%	43%	4%	36%	60%	1%	24%	75%	3%	21%	76%	17%	36%	47%	48%	27%	25%	50%	23%	27%	77%	13%	10%	40%	26%	34%			
25	79%	15%	6%	76%	13%	12%	77%	15%	8%	45%	33%	22%	11%	38%	51%	7%	36%	57%	1%	18%	80%	1%	25%	74%	21%	29%	50%	52%	20%	28%	61%	19%	20%	80%	18%	2%	43%	23%	34%			
26	71%	15%	13%	78%	11%	11%	76%	11%	13%	40%	32%	28%	12%	48%	40%	3%	28%	69%	1%	17%	82%	3%	26%	71%	26%	30%	43%	40%	29%	31%	49%	33%	18%	74%	15%	12%	39%	25%	36%			
27	65%	19%	18%	82%	13%	5%	65%	20%	15%	38%	29%	32%	13%	42%	46%	2%	18%	80%	1%	24%	76%	7%	31%	63%	28%	26%	46%	42%	26%	32%	60%	19%	21%	68%	18%	15%	39%	24%	37%			
28	71%	21%	8%	75%	23%	2%	63%	21%	15%	26%	43%	31%	7%	36%	57%	1%	24%	75%	7%	18%	75%	8%	40%	52%	26%	39%	35%	54%	26%	20%	56%	21%	24%	71%	15%	14%	39%	27%	34%			
29	64%	24%	12%	81%	19%	0%	64%	26%	10%	27%	43%	30%	9%	28%	63%	3%	28%	69%	3%	24%	74%	7%	42%	51%	33%	25%	42%	57%	21%	21%	53%	22%	25%	62%	21%	17%	39%	27%	34%			
30	71%	19%	10%				63%	27%	10%	34%	40%	26%	8%	38%	54%	4%	37%	59%	3%	15%	82%	6%	24%	71%	30%	31%	39%	54%	22%	24%	68%	18%	14%	66%	21%	13%	37%	27%	37%			
31	85%	14%	1%				71%	18%	11%				9%	42%	49%							4%	24%	72%				49%	30%	21%				78%	11%	11%	43%	22%	35%			
Avg %	74%	18%	7%	79%	14%	7%	76%	15%	9%	53%	29%	19%	22%	40%	38%	7%	34%	59%	4%	23%	72%	6%	26%	68%	15%	36%	49%	35%	31%	34%	52%	24%	25%	68%	20%	12%	41%	26%	33%			
condition	2.1			1.8			1.9			3.6			6.1			7.5			8.3			8.0			6.8			5.2			4.1			2.7			4.8					

Remark : condition (Sky Condition) 0-3 = Clear Sky, 4-7 = Partly Cloudy Sky, 8-10 = Cloudy Sky, Avg % = AVERAGE PERCENTAGE OF SKY CONDITION



แผนภูมิสภาพท้องฟ้าและสัดส่วนเปอร์เซ็นต์สภาพท้องฟ้า (sky cover and percentage of sky condition)

SKY CONDITION (%) 1981 - 1998 (2524-2541) Station : CHIANG RAI



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

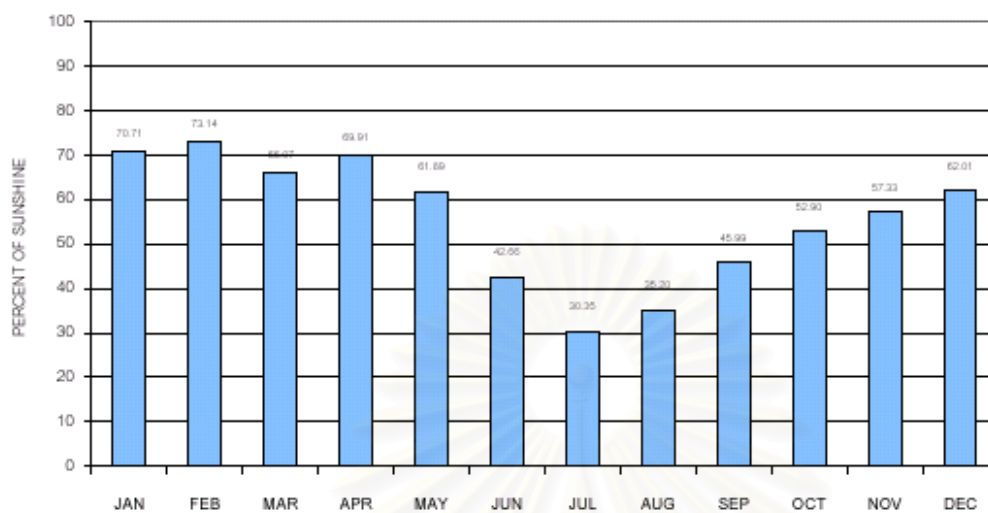
ตารางแสดงผลข้อมูลระยะเวลาของแสงแดด (duration of sunshine)

DURATION OF SUNSHINE (hours) 1981 - 1998 (2524 - 2541)														Station : CHIANG RAI														
MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL			
DAY	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %	hours	avg %
1	8.9	74.0%	8.5	70.8%	8.5	70.9%	7.9	65.6%	8.5	70.4%	5.9	48.8%	4.7	39.5%	2.9	23.8%	3.5	29.3%	6.7	55.5%	7.7	64.2%	6.4	53.5%	6.7	55.5%		
2	8.6	71.5%	8.3	69.1%	8.1	67.8%	8.3	69.5%	8.7	72.2%	5.3	43.8%	3.1	26.1%	4.1	34.5%	4.1	33.8%	6.6	54.9%	7.4	61.6%	7.0	58.5%	6.6	55.3%		
3	8.1	67.3%	8.8	73.7%	8.4	70.2%	7.8	64.9%	7.7	64.2%	6.4	53.3%	2.7	22.6%	3.5	29.0%	6.0	50.1%	7.1	59.2%	5.6	46.7%	8.2	68.3%	6.7	55.8%		
4	8.5	70.7%	8.5	71.1%	8.3	69.2%	8.6	71.4%	8.6	71.9%	5.6	47.0%	2.8	23.0%	3.8	31.3%	6.0	49.7%	5.6	46.7%	5.5	46.0%	7.5	62.8%	6.6	55.1%		
5	8.2	68.5%	8.7	72.8%	7.9	65.6%	7.9	65.8%	7.9	65.8%	4.9	40.4%	2.5	21.1%	5.4	45.3%	4.8	39.6%	4.9	40.6%	6.1	51.0%	8.2	68.1%	6.4	53.7%		
6	7.9	65.8%	8.9	74.4%	8.8	73.5%	7.9	65.4%	8.0	66.5%	5.5	46.0%	2.7	22.7%	4.3	35.4%	5.3	43.8%	3.9	32.9%	7.7	64.2%	6.5	54.3%	6.5	53.8%		
7	8.5	70.7%	9.6	79.9%	8.8	73.7%	7.8	65.3%	9.0	74.7%	5.2	43.5%	3.2	26.4%	4.6	38.3%	7.2	59.9%	5.8	48.3%	7.1	59.5%	7.5	62.8%	7.0	58.6%		
8	8.1	67.7%	9.1	76.1%	7.4	61.8%	8.8	73.3%	8.2	68.4%	4.7	39.0%	4.4	36.5%	3.5	29.4%	4.9	40.9%	5.4	45.3%	6.6	54.8%	7.4	61.9%	6.6	54.6%		
9	8.7	72.2%	8.7	72.1%	7.6	63.5%	9.3	77.2%	7.7	64.3%	5.5	46.2%	4.2	34.9%	4.5	37.6%	5.8	48.5%	4.8	40.2%	5.7	47.7%	7.0	58.1%	6.6	55.2%		
10	8.5	70.8%	9.3	77.2%	7.8	65.1%	8.9	74.5%	8.2	68.5%	4.1	33.8%	4.5	37.4%	3.5	29.4%	5.2	43.0%	5.3	43.9%	6.4	53.0%	7.5	62.6%	6.6	54.9%		
11	9.1	75.6%	9.3	77.4%	8.5	71.1%	8.7	72.5%	5.5	45.8%	5.1	42.7%	4.0	33.3%	3.1	25.6%	5.8	48.3%	5.4	45.4%	8.6	71.8%	6.4	53.1%	6.6	55.2%		
12	8.9	74.1%	8.8	73.5%	7.3	60.8%	8.4	69.8%	7.2	59.8%	4.9	41.2%	4.1	33.9%	4.6	38.4%	7.4	61.3%	5.1	42.2%	8.3	69.2%	7.7	64.3%	6.9	57.4%		
13	8.7	72.2%	9.3	77.4%	7.8	64.7%	9.0	75.2%	8.5	70.6%	5.2	43.0%	3.9	32.8%	3.8	31.3%	6.8	56.5%	6.9	57.9%	7.9	65.4%	7.9	65.9%	7.1	59.4%		
14	8.7	72.1%	9.6	80.1%	7.8	65.1%	8.7	72.2%	7.7	64.2%	5.4	44.9%	4.2	34.7%	3.7	30.6%	6.5	53.8%	5.8	48.0%	6.4	53.3%	7.5	62.2%	6.8	56.8%		
15	8.2	68.5%	9.7	80.8%	8.1	67.6%	8.2	68.5%	7.3	61.0%	6.0	49.6%	2.9	24.5%	4.2	34.7%	4.4	36.5%	6.5	54.5%	7.0	58.2%	6.6	54.7%	6.6	54.9%		
16	8.8	73.5%	9.1	76.0%	8.6	71.9%	9.2	76.7%	7.3	60.4%	5.9	48.8%	3.4	28.2%	4.6	38.1%	6.6	54.6%	7.1	59.3%	7.2	60.1%	7.7	63.8%	7.1	59.3%		
17	8.8	72.9%	9.5	79.2%	8.5	71.1%	9.3	77.6%	7.8	64.7%	5.2	43.3%	3.7	30.6%	4.9	41.2%	5.7	47.4%	6.3	52.6%	7.8	65.3%	6.3	52.7%	7.0	58.2%		
18	8.7	72.8%	9.2	76.9%	8.1	67.2%	8.2	68.5%	6.2	51.9%	5.7	47.7%	4.1	34.2%	4.4	36.8%	6.1	50.5%	6.4	53.3%	7.3	60.5%	6.9	57.2%	6.8	56.4%		
19	8.8	73.3%	8.8	73.1%	8.1	67.4%	7.9	65.8%	6.9	57.8%	5.6	46.5%	5.6	46.5%	4.9	40.6%	5.3	44.0%	6.5	54.5%	6.3	52.8%	6.8	56.9%	6.8	56.6%		
20	8.8	73.0%	8.3	68.8%	8.5	70.8%	9.0	75.1%	7.1	59.4%	4.9	41.2%	5.6	46.3%	5.0	41.9%	5.5	45.9%	6.7	56.2%	7.1	59.2%	7.2	60.3%	7.0	58.2%		
21	8.5	71.0%	7.7	63.8%	8.5	70.7%	8.6	71.9%	6.8	56.5%	6.6	54.7%	3.7	31.1%	5.5	46.1%	4.8	39.7%	6.5	54.2%	7.5	62.8%	7.5	62.5%	6.8	57.1%		
22	9.1	76.0%	8.0	66.8%	8.0	66.4%	7.8	65.0%	8.7	72.5%	4.8	40.0%	3.8	31.9%	5.0	42.0%	6.1	51.2%	7.0	58.4%	6.6	55.1%	8.1	67.6%	6.9	57.7%		
23	9.0	75.0%	7.6	63.5%	7.9	66.2%	7.7	64.5%	8.8	72.9%	5.4	44.8%	3.0	25.4%	4.6	38.4%	4.9	40.8%	6.9	57.4%	6.2	52.0%	7.5	62.4%	6.6	55.3%		
24	8.9	74.4%	7.9	65.6%	7.2	60.3%	8.2	68.1%	8.1	67.7%	4.8	40.1%	3.9	32.4%	3.8	31.3%	4.7	38.8%	7.8	65.2%	5.9	49.5%	7.4	62.0%	6.6	54.6%		
25	8.8	72.9%	7.7	64.4%	7.0	58.1%	8.6	71.3%	6.0	49.8%	4.3	36.2%	2.8	23.0%	3.9	32.4%	5.4	44.7%	6.7	56.0%	7.2	60.3%	8.5	71.2%	6.4	53.4%		
26	7.4	61.9%	8.0	66.7%	6.7	55.8%	8.4	69.7%	7.1	59.3%	4.3	35.9%	3.6	30.2%	3.6	30.3%	5.5	45.8%	7.0	58.0%	5.8	48.1%	7.3	61.2%	6.2	51.9%		
27	7.3	61.0%	8.9	74.5%	6.9	57.3%	7.6	63.5%	8.0	66.6%	4.0	33.0%	4.1	34.0%	5.1	42.1%	4.0	33.3%	6.1	50.6%	6.3	52.6%	7.8	64.7%	6.3	52.8%		
28	7.8	65.3%	9.3	77.4%	6.4	53.2%	7.8	65.3%	5.6	46.7%	3.6	29.6%	3.8	31.8%	5.9	49.2%	6.1	50.6%	7.6	63.2%	6.8	56.9%	7.9	65.9%	6.6	54.6%		
29	7.1	58.5%	9.4	78.1%	8.1	67.6%	8.8	73.0%	5.1	42.8%	3.9	32.7%	3.6	29.7%	4.7	39.1%	5.7	47.8%	8.0	66.7%	6.4	53.0%	7.3	61.2%	6.5	54.3%		
30	8.6	71.7%			8.1	67.2%	8.4	70.1%	5.8	48.7%	5.1	42.2%	2.5	21.1%	2.3	18.9%	6.0	49.8%	7.2	60.0%	7.8	64.9%	8.2	68.1%	6.4	53.0%		
31	9.1	75.8%			8.0	66.5%			6.3	52.5%			1.8	15.0%	3.4	28.4%			7.0	58.1%			8.8	73.6%	6.4	52.9%		
Average	8.5	70.7%	8.8	73.1%	7.9	66.1%	8.4	69.9%	7.4	61.9%	5.1	42.7%	3.6	30.4%	4.2	35.2%	5.5	46.0%	6.3	52.9%	6.9	57.3%	7.4	62.0%	6.7	55.6%		
Total	263.1		254.5		245.8		251.7		230.2		153.6		112.9		130.9		165.6		196.8		206.4		230.7		2,442.1			

remark : observation hour = 12 hours (from 06:00 - 07:00 to 17:00 - 18:00)

แผนภูมิระยะเวลาของแสงแดด (average percent of sunshine per month)

AVERAGE PERCENT OF SUNSHINE PER MONTH 1987 - 1996 (2530 - 2541) Station : CHIANG RAI



remark : observation hour = 12 hours (from 05:00 - 18:00)

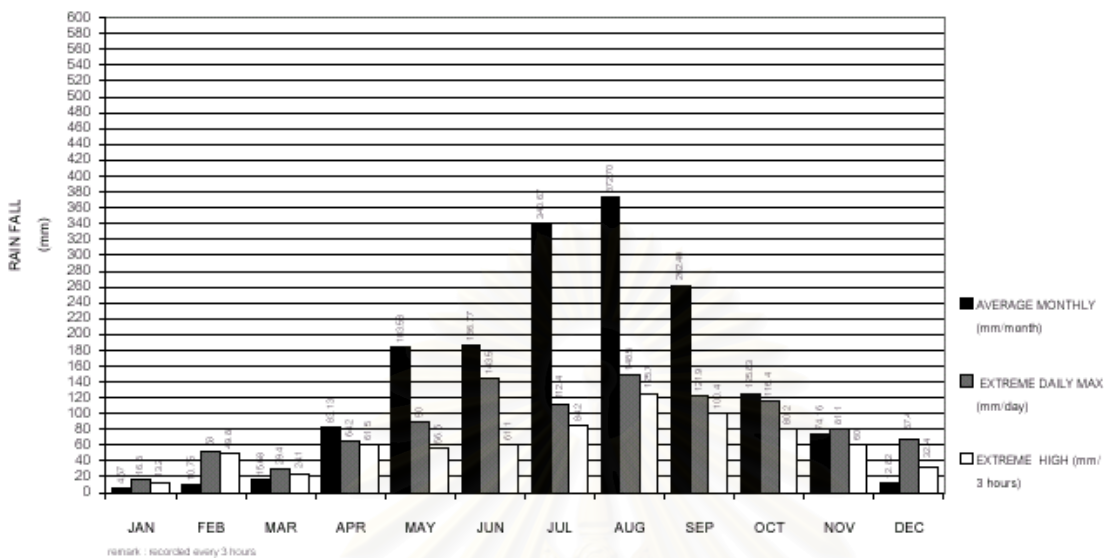
สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลปริมาณน้ำฝน (rain fall)

RAIN FALL (mm) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	ANNUAL
DAY	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
1	0.9	0.0	0.0	1.3	4.6	7.1	9.6	13.7	17.3	4.2	2.5	0.1	61.3
2	0.0	0.0	0.5	2.9	2.0	5.5	5.4	8.3	14.6	8.0	1.0	0.1	48.2
3	0.1	0.0	0.0	4.0	8.9	3.1	9.8	4.6	10.1	1.8	3.6	0.0	46.1
4	1.0	0.1	0.6	2.1	7.9	14.8	9.1	4.9	9.7	5.5	2.2	0.2	58.1
5	0.0	0.1	0.0	1.6	5.4	9.3	12.1	13.0	7.8	6.1	1.4	0.0	56.9
6	0.0	0.0	0.3	3.2	3.9	6.6	14.4	17.1	12.3	6.5	2.0	0.4	66.7
7	0.0	0.0	0.0	1.7	6.8	9.7	6.0	19.2	15.5	7.2	1.1	0.8	68.1
8	0.0	0.0	0.1	1.1	6.1	7.6	10.5	10.2	6.0	8.9	4.0	0.1	54.5
9	0.0	0.0	0.0	0.1	4.8	3.1	7.8	11.5	17.1	2.7	7.9	0.1	55.0
10	0.0	0.0	0.0	1.0	3.3	7.4	11.0	11.1	9.8	3.8	2.6	0.0	50.1
11	0.0	0.1	0.0	0.2	7.2	2.7	6.9	11.5	7.0	3.4	6.2	0.0	45.3
12	0.0	0.0	0.0	0.6	2.5	10.1	8.3	13.8	4.5	6.4	8.9	0.0	55.3
13	0.0	0.0	0.0	3.4	11.4	11.3	5.9	6.7	4.3	3.5	5.2	0.0	51.9
14	0.0	0.0	0.0	2.0	5.6	2.5	11.4	10.3	11.9	1.0	4.0	0.0	48.6
15	0.0	1.0	1.2	1.0	7.3	2.3	8.6	13.7	11.6	1.7	3.6	0.0	51.9
16	0.0	0.0	0.3	3.2	2.6	6.6	12.5	12.0	6.3	1.7	3.0	0.0	48.1
17	0.0	0.0	0.4	2.8	4.6	3.7	13.5	6.9	6.7	6.5	0.3	0.0	45.5
18	0.0	0.1	1.5	2.8	6.4	3.4	7.0	10.6	7.5	4.7	2.2	0.0	46.2
19	0.1	3.7	0.0	3.3	4.8	4.3	8.2	16.6	6.6	3.1	2.0	0.0	52.7
20	0.0	0.3	0.0	3.6	4.0	3.6	13.6	13.1	6.2	6.7	2.5	0.0	53.6
21	0.6	1.1	0.0	2.2	6.9	3.5	6.6	6.2	11.7	3.3	0.4	0.0	42.5
22	0.9	1.5	0.3	1.0	8.1	8.7	9.4	10.1	3.3	3.1	1.4	0.0	47.7
23	0.0	0.5	1.3	2.1	5.2	6.4	20.4	20.9	6.1	1.1	0.0	1.9	65.9
24	0.0	0.6	0.6	0.8	5.7	7.7	12.4	15.9	8.1	10.4	0.0	3.4	65.8
25	0.1	0.2	0.0	8.2	10.4	3.1	11.6	18.6	5.6	1.2	0.5	0.0	59.4
26	0.0	0.9	1.8	2.4	1.9	5.1	14.6	11.7	10.9	0.0	0.9	0.0	50.3
27	0.0	0.5	3.2	9.0	6.7	6.7	11.6	14.3	8.1	6.0	1.4	0.5	67.9
28	0.2	0.0	0.9	5.0	10.4	8.0	10.1	6.2	3.0	4.0	0.4	1.2	49.2
29	0.0	0.0	0.0	6.0	7.0	5.1	18.0	12.3	8.8	0.7	1.3	0.1	59.6
30	0.7		0.5	4.4	5.8	7.6	17.6	8.3	4.1	1.8	1.5	0.1	52.4
31	0.0		2.3		5.7		16.9	19.2		0.8		3.7	48.6
Monthly	4.7	10.8	15.7	83.1	183.6	196.8	340.7	372.7	262.4	125.8	74.2	12.8	1,673.2
Daily record high	16.8	53.0	29.4	64.2	90.0	143.5	112.4	148.5	121.9	116.4	81.1	67.4	148.5
3 hr. Extremes	13.2	49.8	24.1	61.5	56.6	61.1	84.2	125.7	100.4	80.2	60.0	32.4	125.7
No. of rainy days	1	2	2	5	15	16	17	20	22	17	6	1	125

แผนภูมิปริมาณน้ำฝน (rain fall)

RAIN FALL (mm) 1981 - 1998 (2524 - 2541) Station : CHIANG RAI



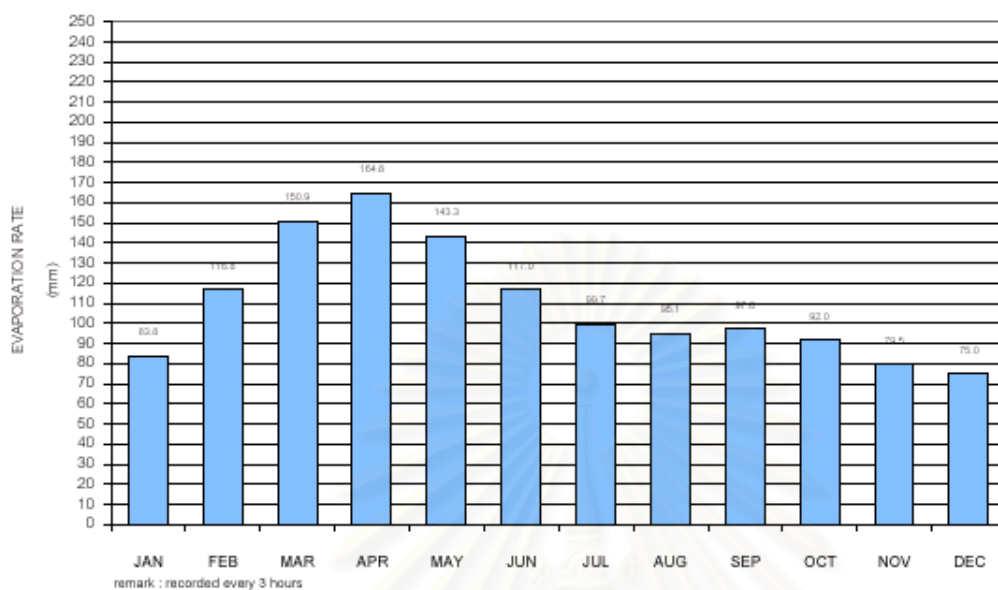
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ตารางแสดงผลข้อมูลค่าเฉลี่ยอัตราการระเหยของน้ำรายวัน (evaporation)

EVAPORATION (mm) 1981 - 1998 (2524 - 2541)													Station : CHIANG RAI
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	ANNUAL
DAY	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
1	2.5	3.3	4.6	5.8	5.1	3.9	4.4	2.7	3.1	3.0	3.0	2.6	44.1
2	2.2	3.1	4.2	5.9	5.3	4.1	3.6	3.6	3.0	3.1	2.8	2.5	43.4
3	2.3	3.4	4.6	4.8	5.0	4.5	3.8	3.2	3.2	3.3	2.8	2.5	43.4
4	2.6	3.6	4.4	5.5	5.4	4.9	3.2	2.9	3.2	3.3	2.9	2.4	44.1
5	2.7	3.7	4.6	5.5	4.9	3.8	3.1	3.4	3.5	2.9	2.7	2.4	43.0
6	2.5	3.8	4.6	5.8	4.3	4.4	3.1	2.9	3.1	2.6	2.4	2.3	41.8
7	2.7	3.6	4.6	5.2	5.6	3.2	3.1	3.5	3.7	2.8	2.8	2.7	43.5
8	2.5	3.5	4.2	5.4	5.8	3.6	2.6	3.2	3.0	2.6	2.6	2.5	41.4
9	2.9	3.7	4.5	6.2	4.6	4.1	2.8	3.1	3.6	2.7	2.7	2.4	43.4
10	2.5	3.5	4.6	6.1	4.7	3.9	3.0	3.1	3.2	2.7	2.7	2.4	42.3
11	2.7	3.4	4.6	5.8	4.3	3.6	3.5	2.7	3.1	3.2	3.0	2.3	42.2
12	2.7	3.8	4.5	5.6	4.6	4.0	3.4	3.1	3.7	3.3	2.6	2.1	43.3
13	2.5	3.9	4.6	5.4	4.9	3.8	3.5	3.1	3.6	3.1	2.8	2.5	43.7
14	2.8	4.2	5.9	5.8	4.2	3.7	3.3	2.9	3.2	3.2	2.8	2.5	44.4
15	2.8	4.1	5.2	5.3	4.5	3.8	2.8	3.5	3.0	3.1	2.3	2.3	42.6
16	2.6	4.8	4.7	5.7	4.3	4.2	3.2	2.8	3.1	2.8	2.4	2.3	42.8
17	3.1	4.0	5.1	5.1	4.7	4.3	3.2	3.5	3.4	2.9	2.6	2.7	44.6
18	2.8	4.3	5.1	5.2	4.2	3.7	3.5	3.1	2.9	2.9	2.6	2.6	42.9
19	2.7	4.2	5.3	5.9	4.4	3.9	4.1	3.5	3.6	3.1	3.0	2.5	46.2
20	2.8	4.3	4.9	5.5	5.2	4.1	3.7	2.9	3.2	2.9	2.5	2.4	44.1
21	2.5	4.3	5.3	5.3	4.6	4.0	3.4	3.1	3.3	2.6	2.7	2.4	43.6
22	2.9	4.9	5.1	5.2	4.4	4.0	2.8	3.0	3.4	3.1	2.4	2.3	43.4
23	3.1	4.5	5.1	5.2	5.0	3.8	2.8	2.9	3.0	3.1	2.7	2.5	43.6
24	3.0	4.6	4.8	5.1	4.8	3.8	3.0	2.4	3.3	2.9	2.5	2.2	42.4
25	2.7	4.0	5.0	5.8	4.1	4.0	2.8	2.7	3.5	3.0	2.6	2.4	42.5
26	2.5	4.9	5.0	5.3	4.2	3.8	3.3	2.5	3.3	3.0	2.3	2.5	42.6
27	2.9	4.8	5.0	5.1	4.5	3.4	2.7	2.9	3.0	2.9	2.4	2.2	41.8
28	2.9	5.0	4.9	5.5	4.1	3.9	3.1	3.2	2.9	2.9	2.7	2.6	43.6
29	2.6	3.8	5.4	4.9	3.7	3.5	3.0	3.6	3.5	3.2	2.8	2.1	42.1
30	2.9		4.9	5.9	4.0	3.4	3.0	3.0	3.0	3.0	2.6	2.3	38.1
31	3.3		5.6		4.1		2.9	2.9		3.1		2.4	24.2
AVG Monthly	83.8	116.8	150.9	164.8	143.3	117.0	99.7	95.1	97.6	92.0	79.5	75.0	1,315.4
Daily Mean	2.7	4.0	4.9	5.5	4.6	3.9	3.2	3.1	3.3	3.0	2.7	2.4	3.6
Extremes	6.5	11.0	17.0	15.0	13.4	8.8	8.7	12.5	8.8	7.7	8.3	4.5	17.0

แผนภูมิค่าเฉลี่ยอัตราการระเหยของน้ำรายเดือน (average monthly evaporation from U.S. class "A" pan)

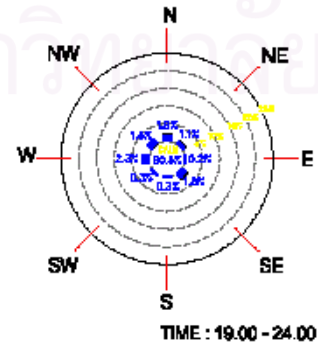
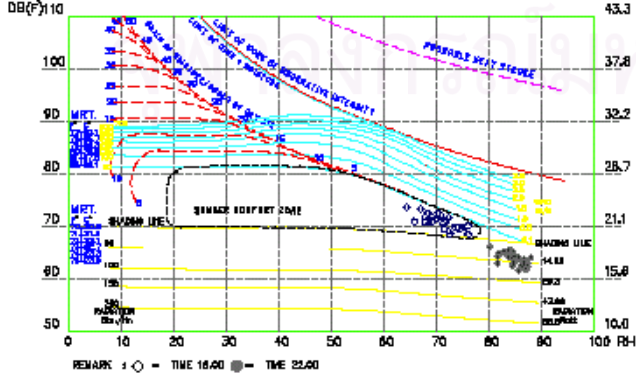
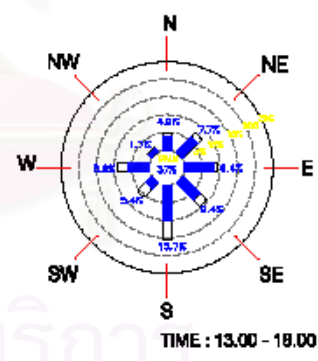
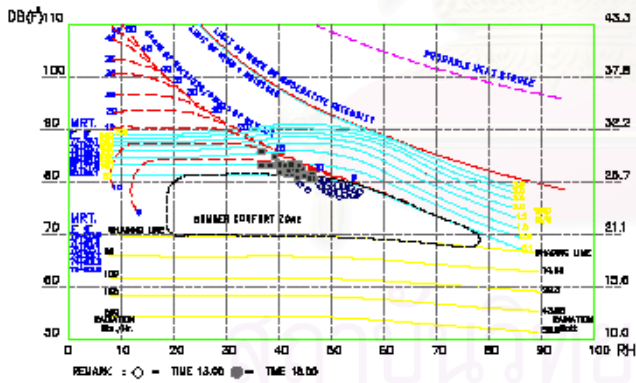
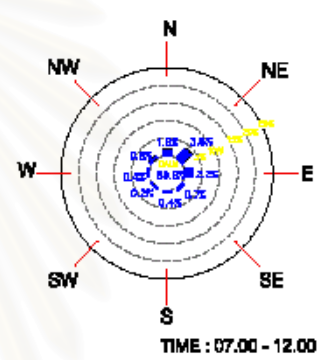
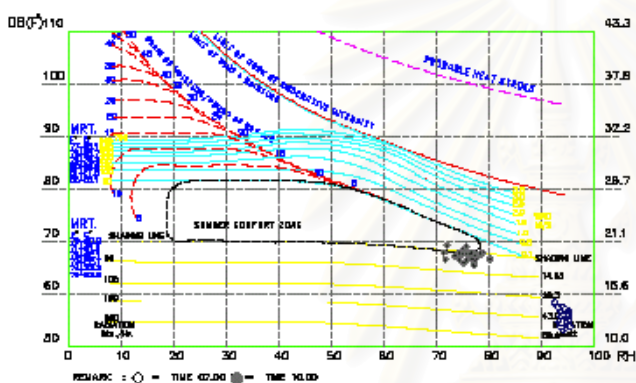
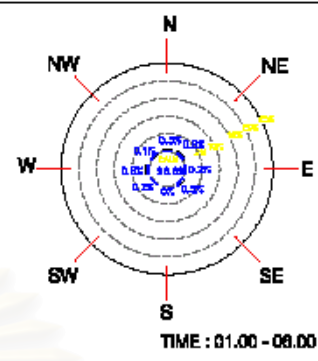
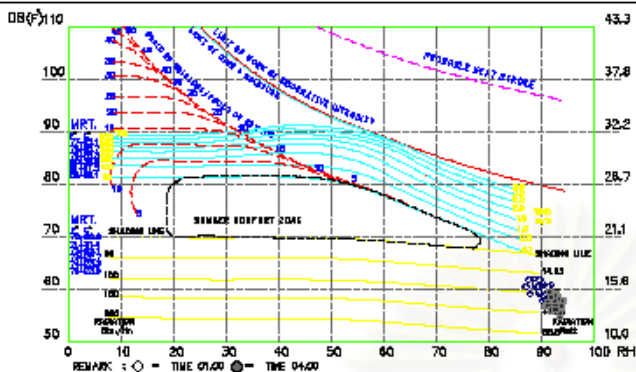
AVERAGE MONTHLY EVAPORATION (mm) from U.S. class "A" pan 1961 - 1998 (2524 - 2541) Station : CHIANG RAI



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แผนภูมิความสัมพันธ์ระหว่างข้อมูลสภาวะอากาศในแผนภูมิไบโอคลิเมตริก (bioclimatic chart) กับแผนภูมิแสดงความเร็วของลมในแต่ละความเร็วและทิศทางที่เกิดลมรายเดือน (wind rose) แยกตามช่วงเวลา

BIOCLIMATIC CHART & WIND ROSE : JANUARY 1981-1989 (2524-2541) Station : CHIANG RAI

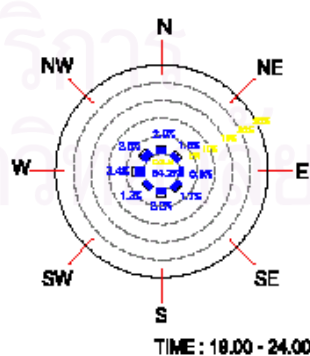
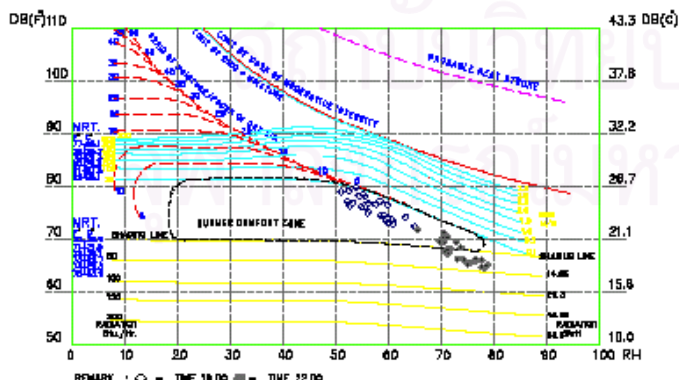
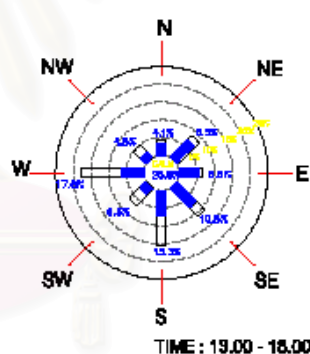
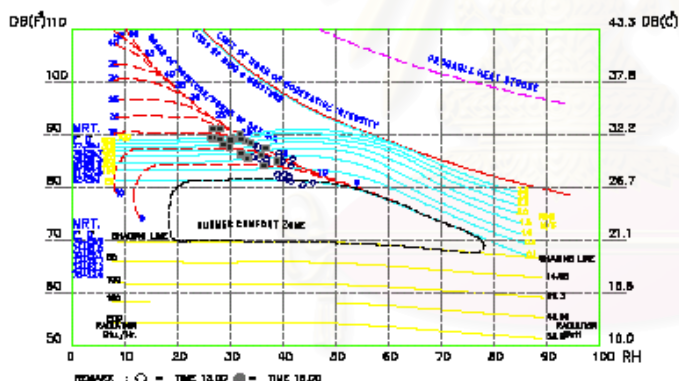
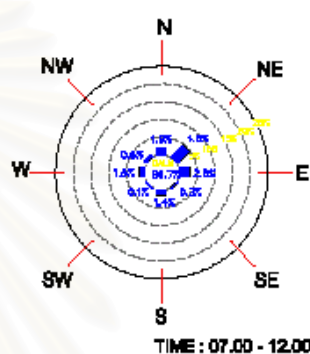
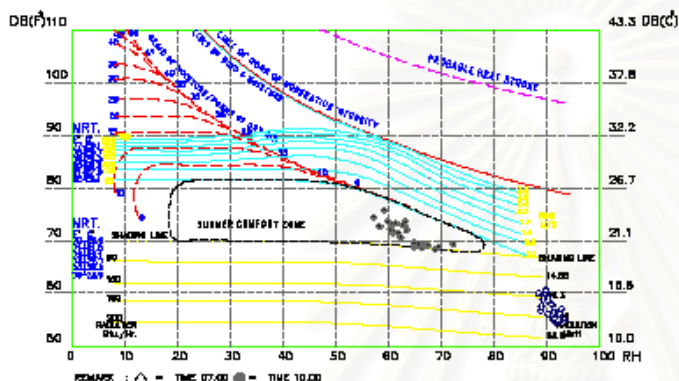
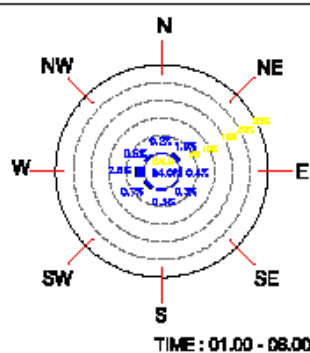
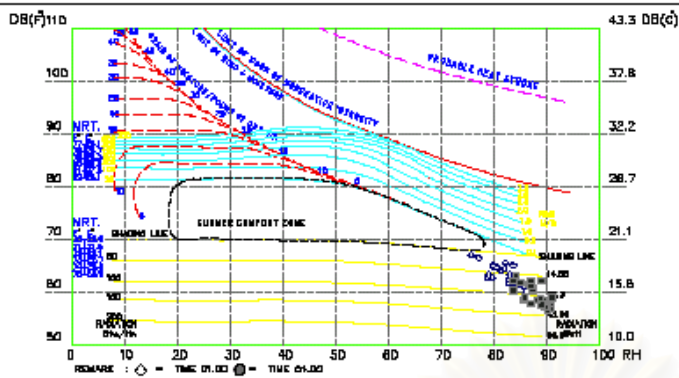


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : FEBRUARY 1981-1986 (2524-2541) Station : CHIANG RAI

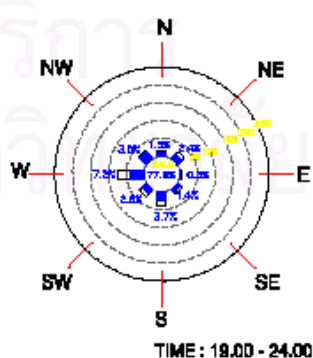
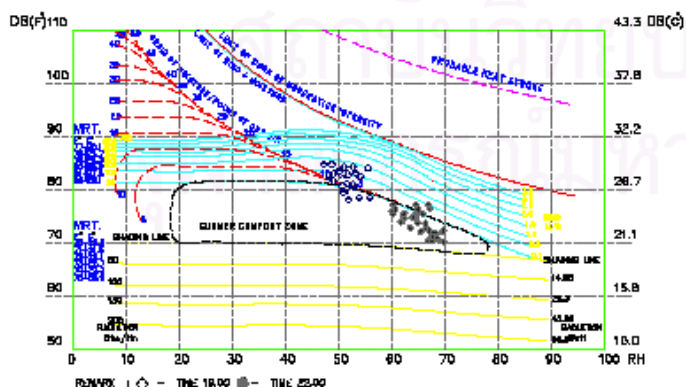
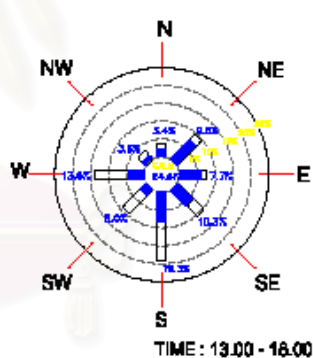
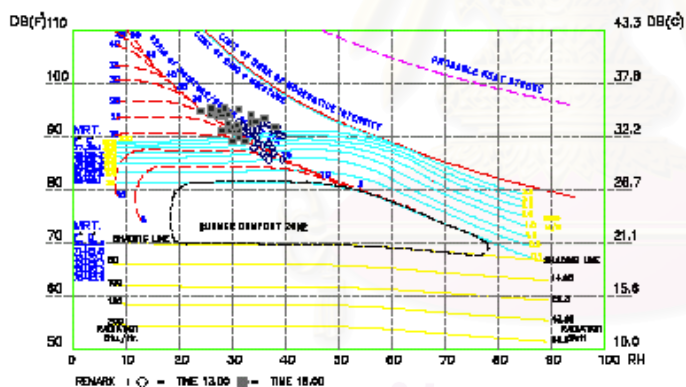
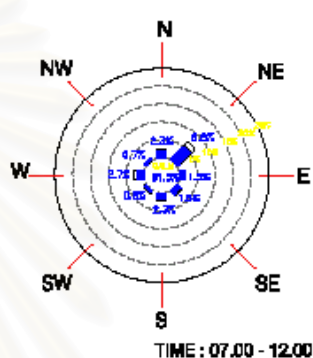
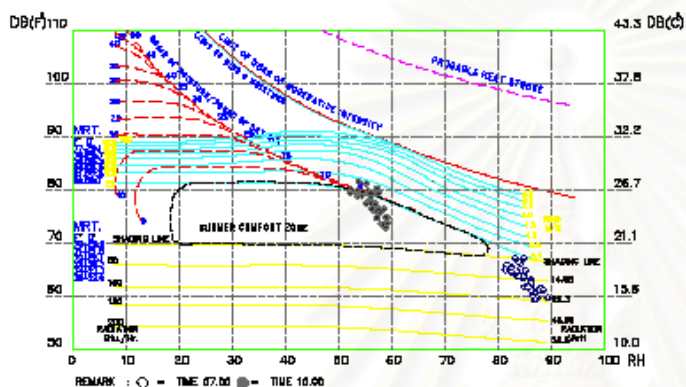
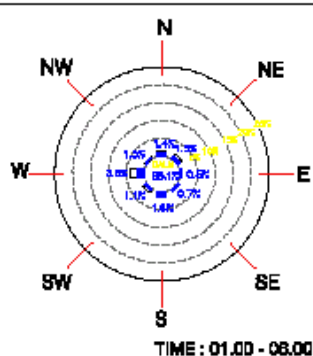
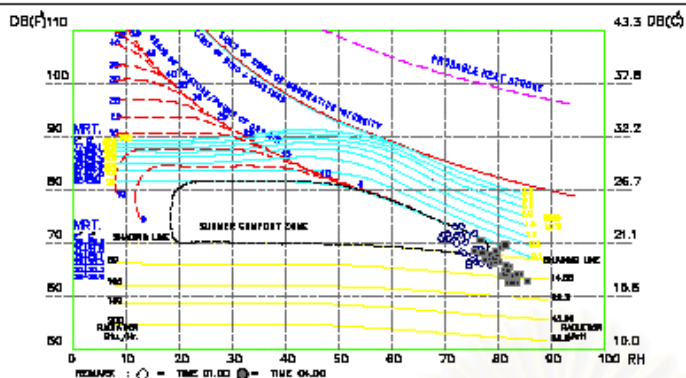


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : MARCH 1961-1999 (2524-2541) Station : CHIANG RAI

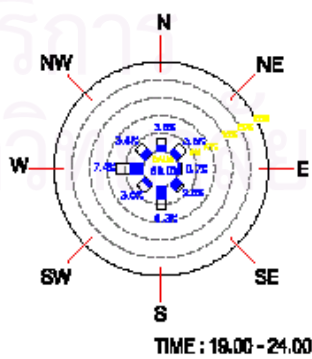
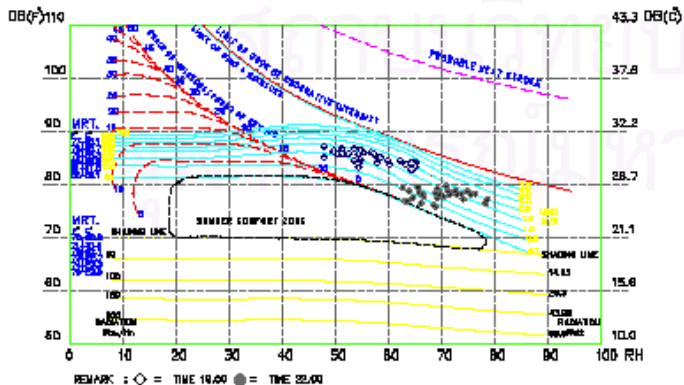
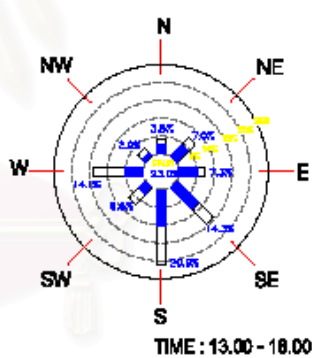
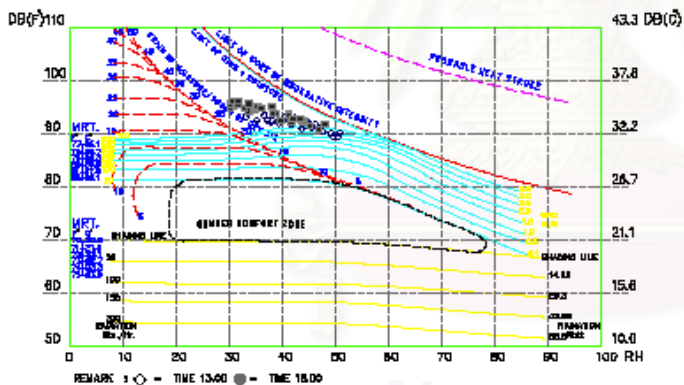
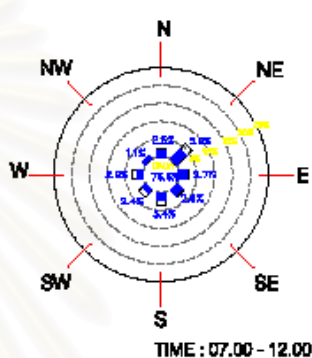
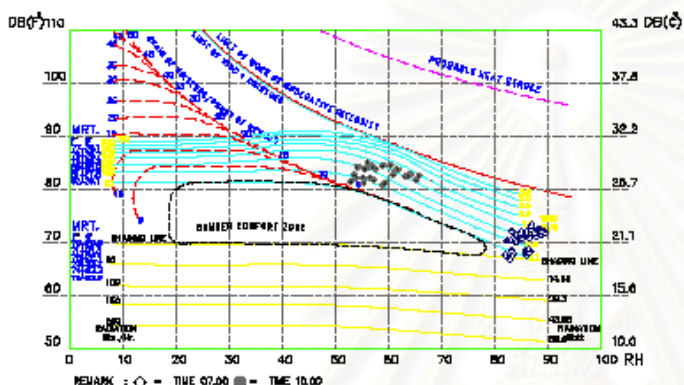
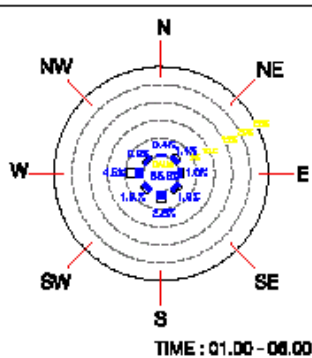
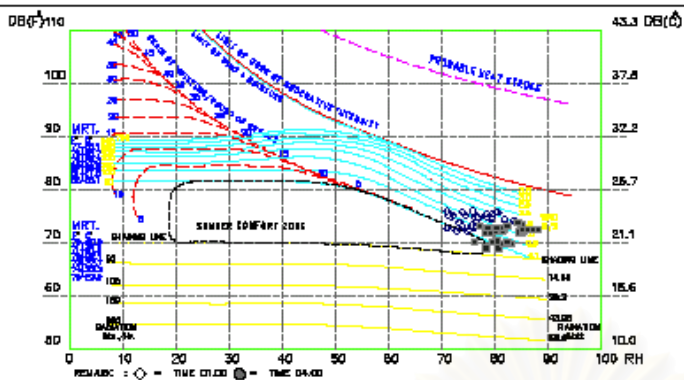


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : APRIL 1981-1998 (2624-2641) Station : CHIANG RAI

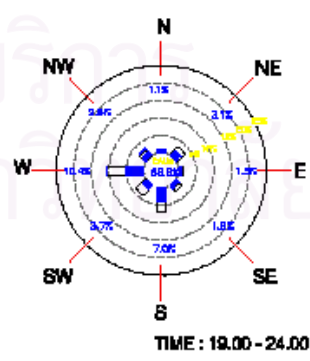
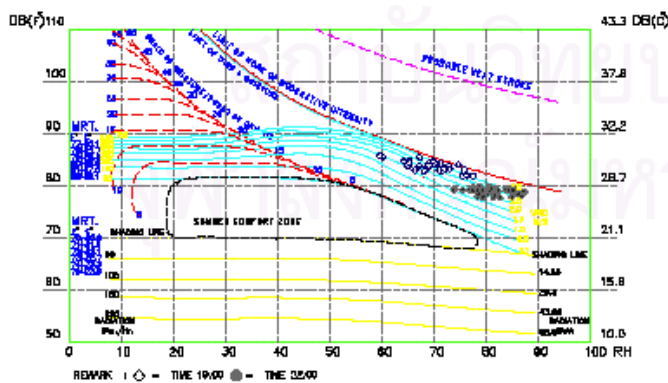
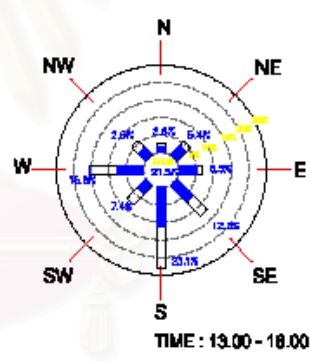
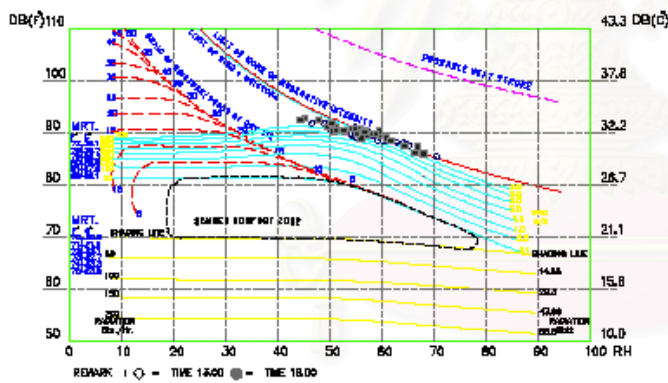
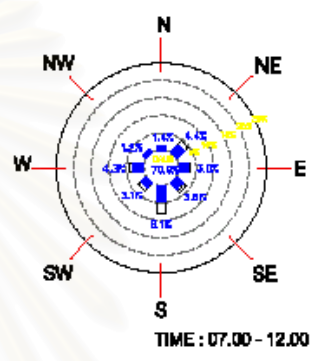
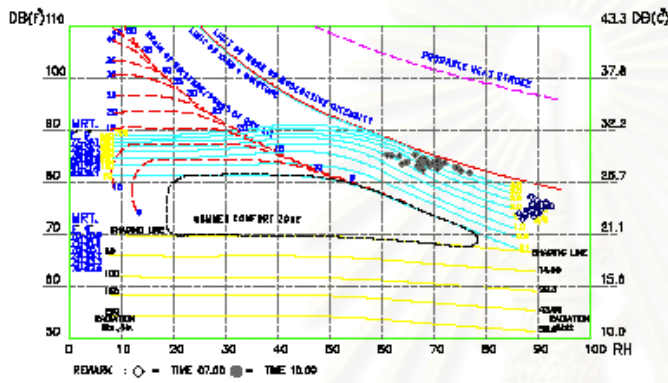
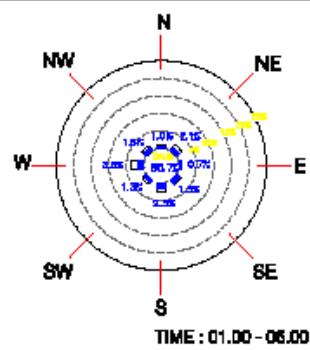
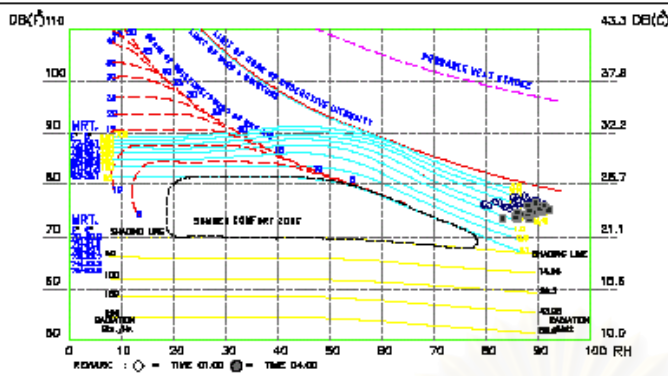


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : MAY 1981-1998 (2624-2641) Station : CHIANG RAI

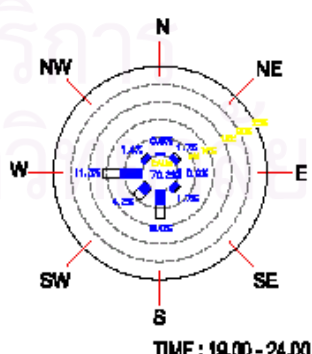
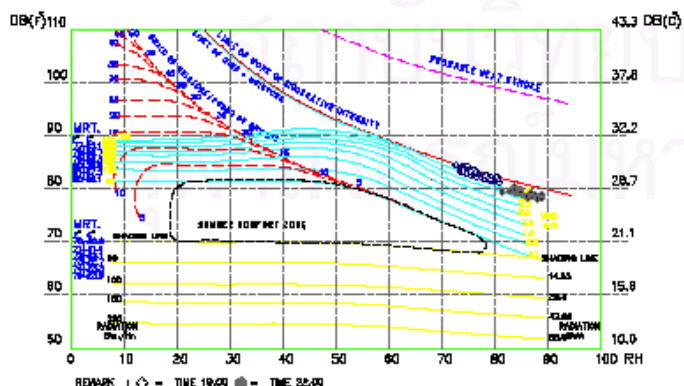
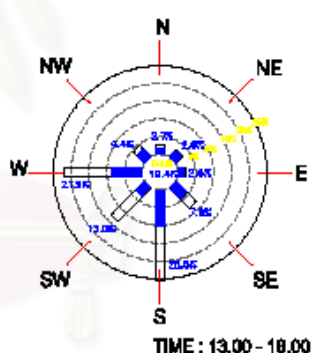
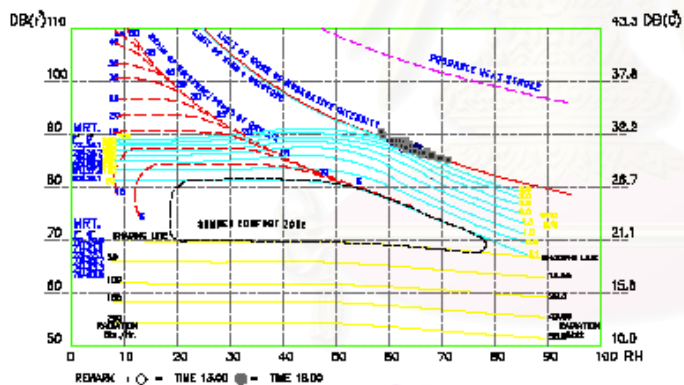
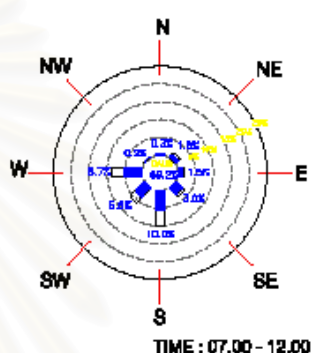
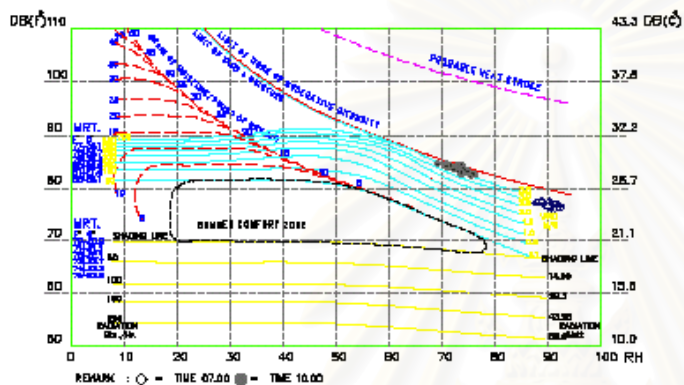
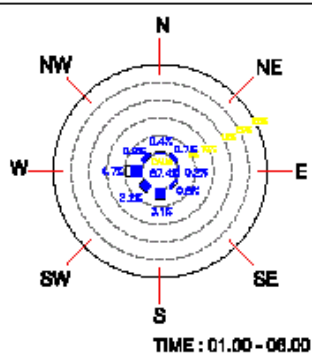
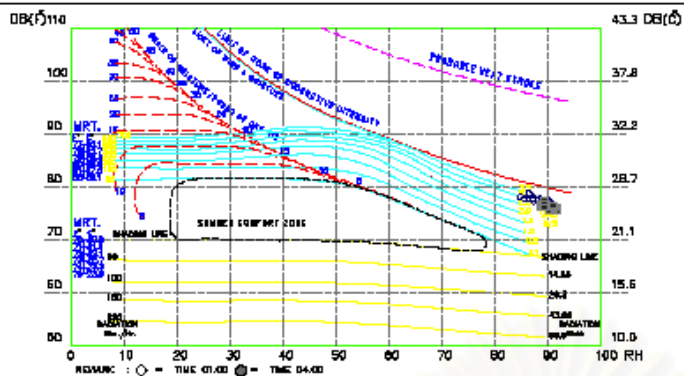


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : JUNE 1981-1986 (2524-2541) Station : CHIANG RAI

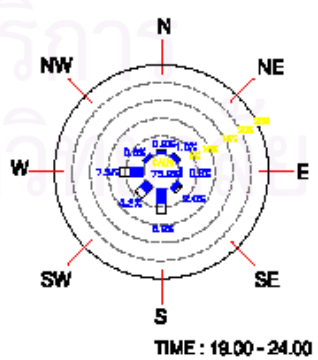
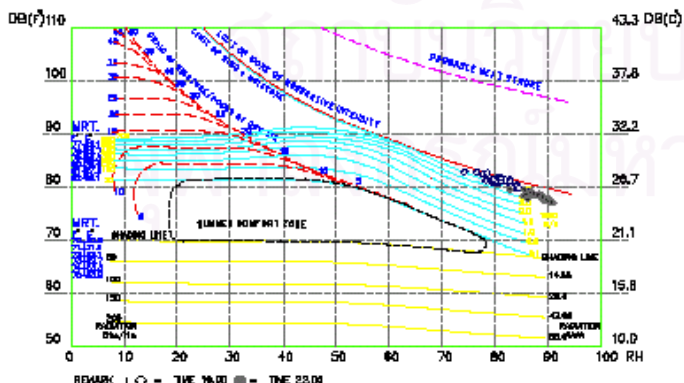
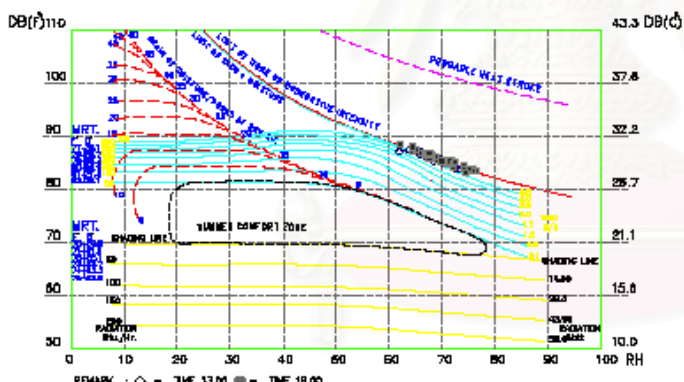
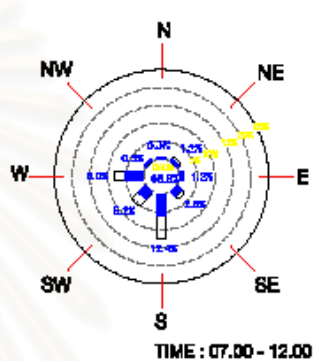
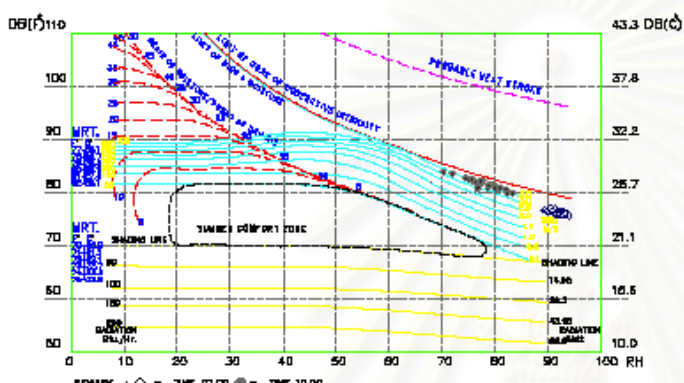
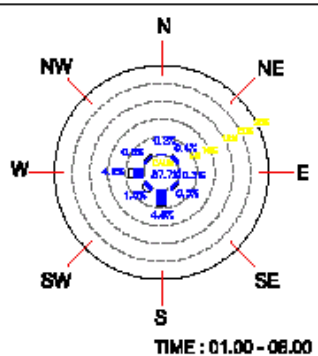
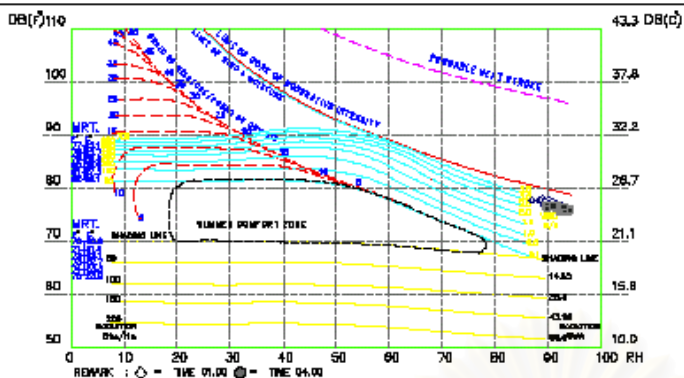


BIOCLIMATIC CHART

WIND ROSE

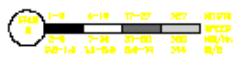


BIOCLIMATIC CHART & WIND ROSE : JULY 1981-1998 (2524-2541) Station : CHIANG RAI

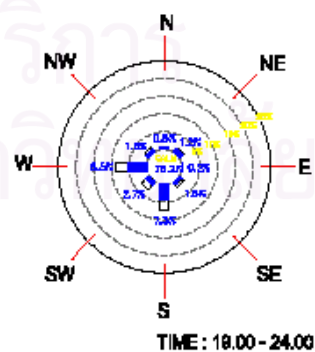
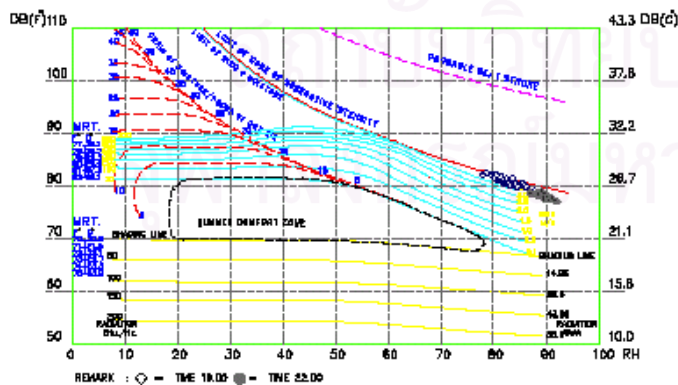
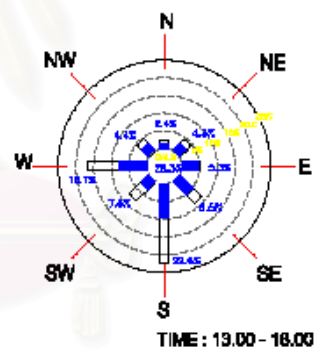
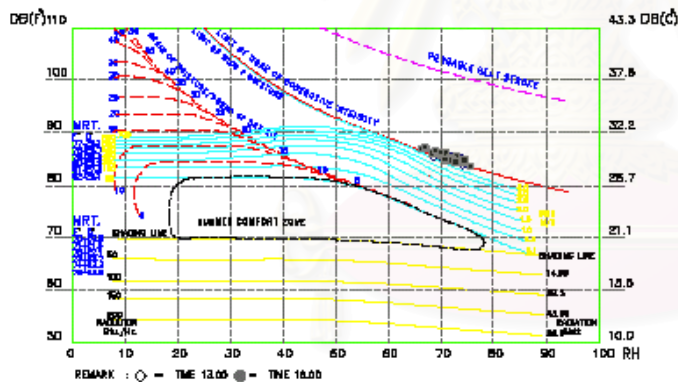
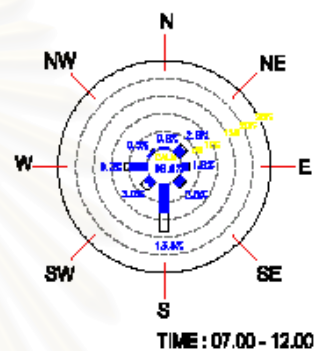
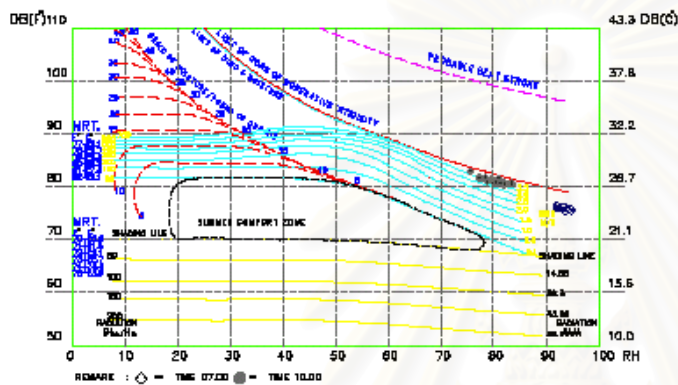
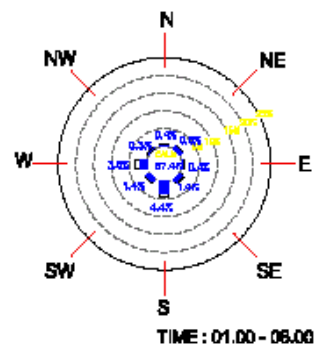
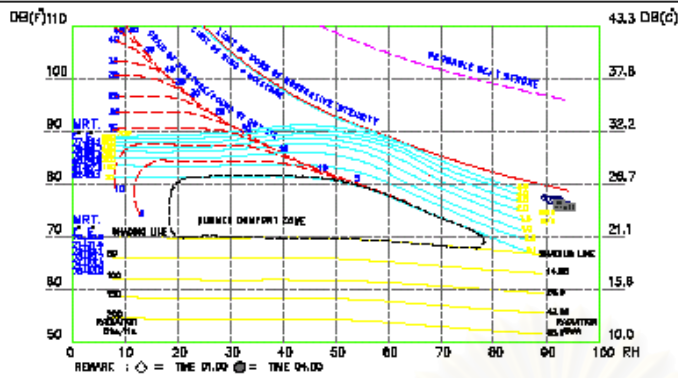


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : AUGUST 1981-1996 (2524-2541) Station : CHIANG RAI

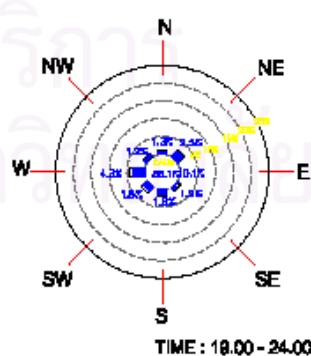
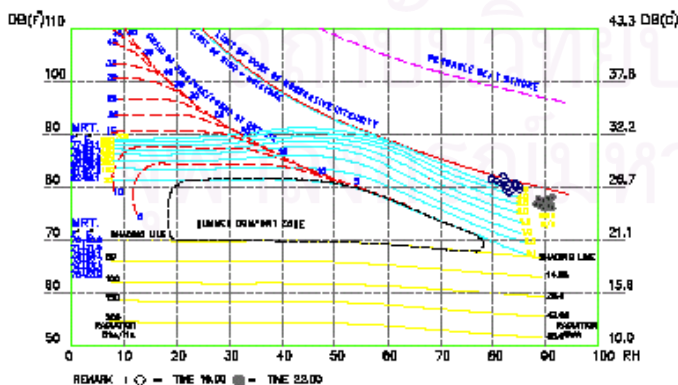
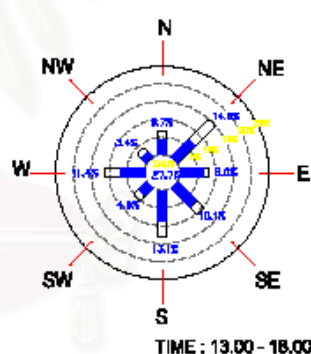
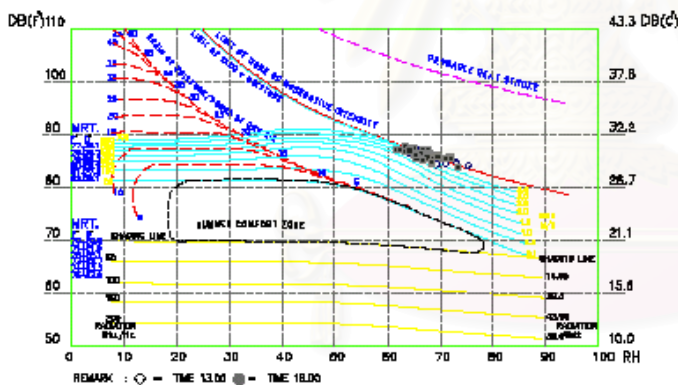
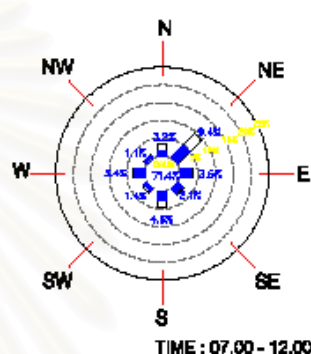
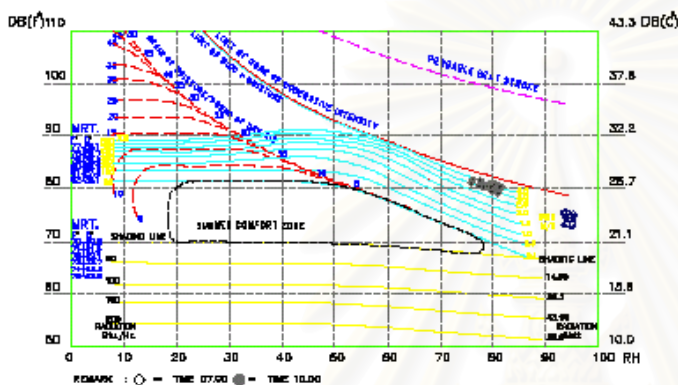
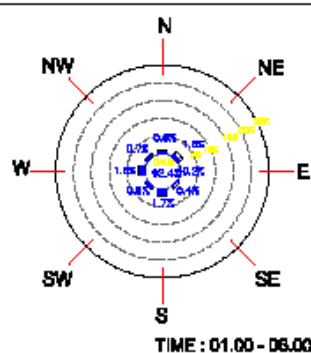
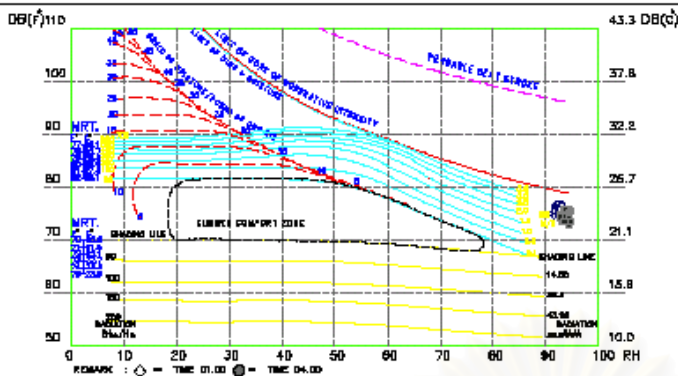


BIOCLIMATIC CHART

WIND ROSE



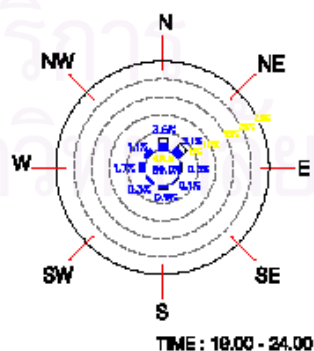
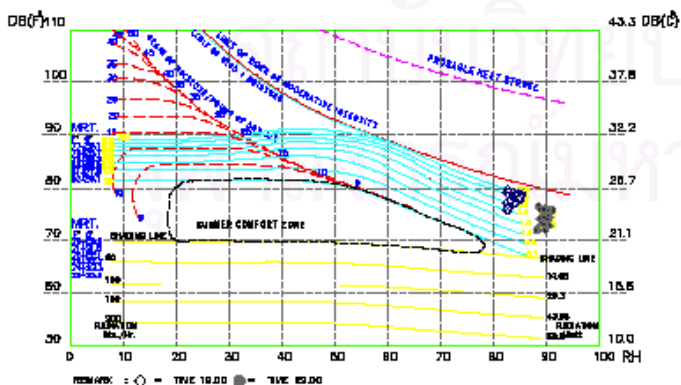
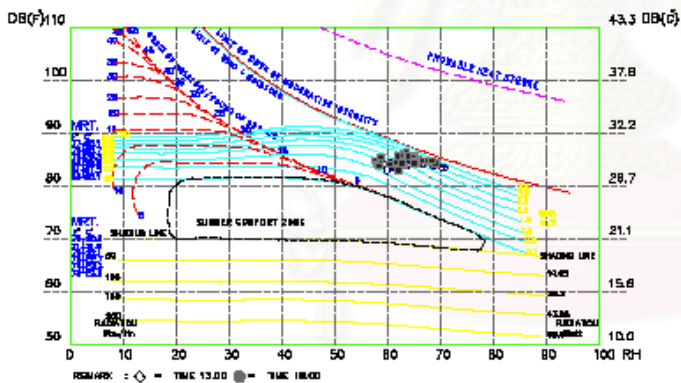
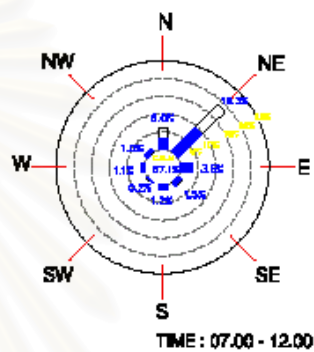
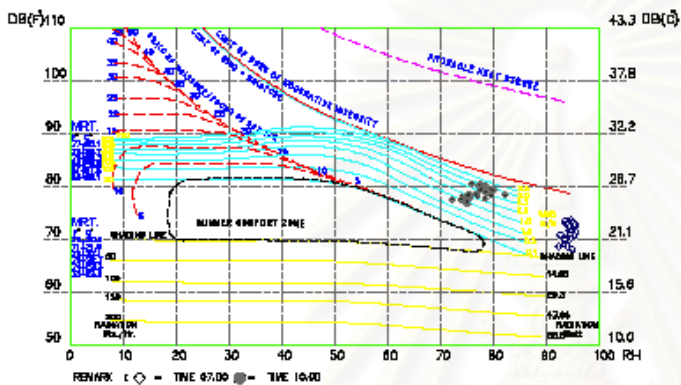
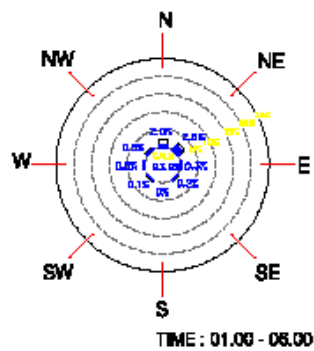
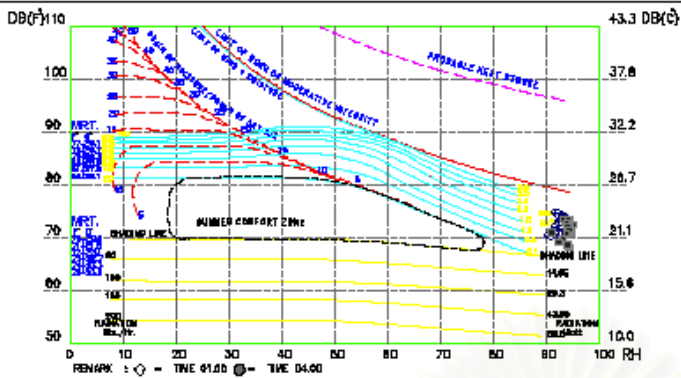
BIOCLIMATIC CHART & WIND ROSE : SEPTEMBER 1981-1998 (2534-2541) Station : CHIANG RAI



BIOCLIMATIC CHART

WIND ROSE

BIOCLIMATIC CHART & WIND ROSE : OCTOBER 1981-1998 (2524-2541) Station : CHIANG RAI

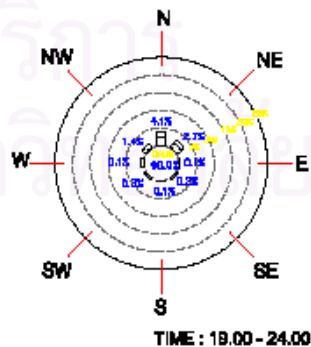
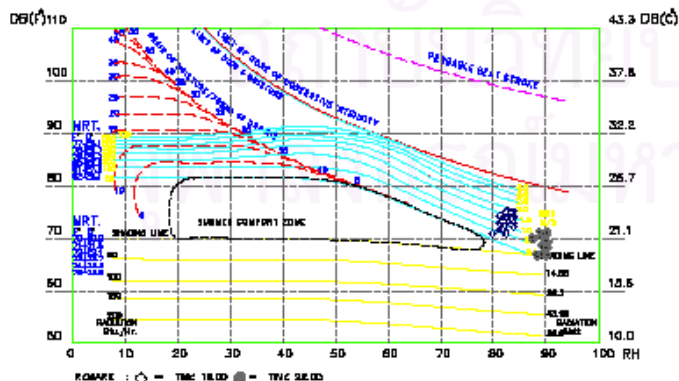
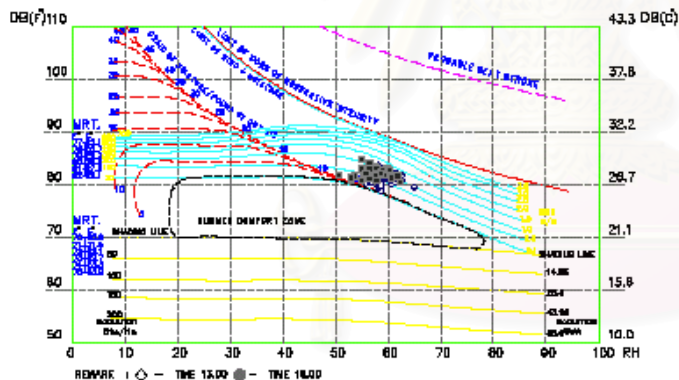
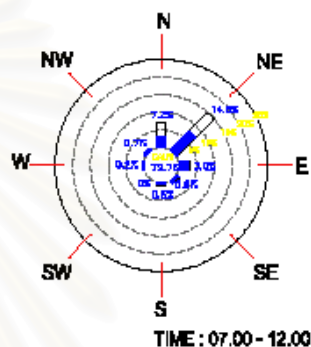
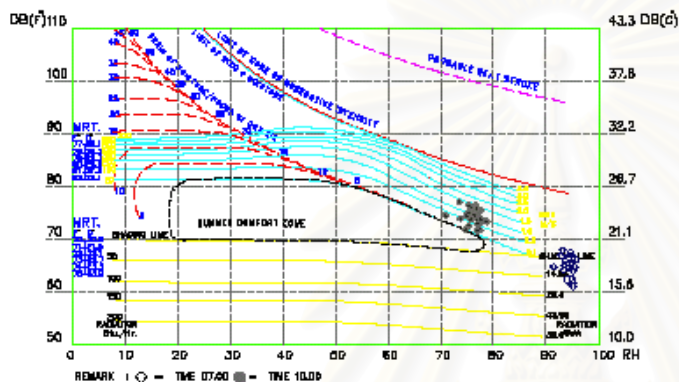
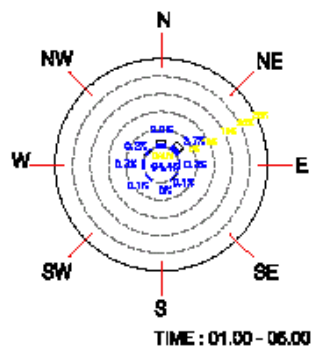
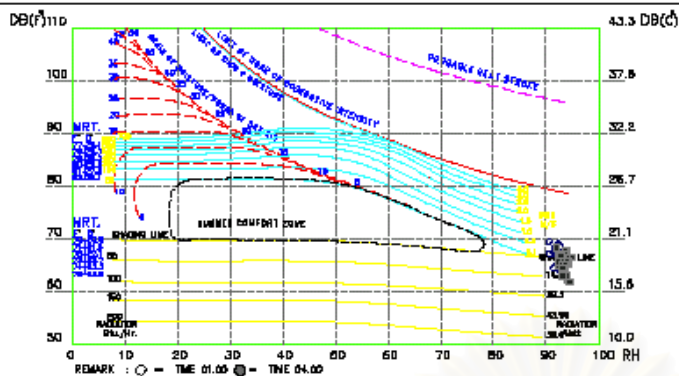


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : NOVEMBER 1981-1996 (2524-2541) Station : CHIANG RAI

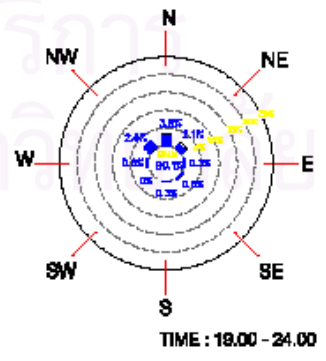
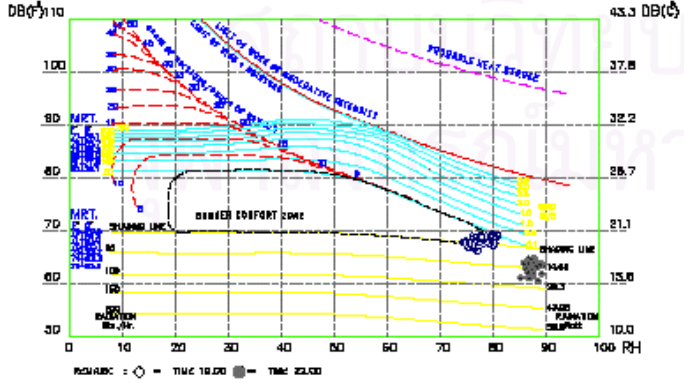
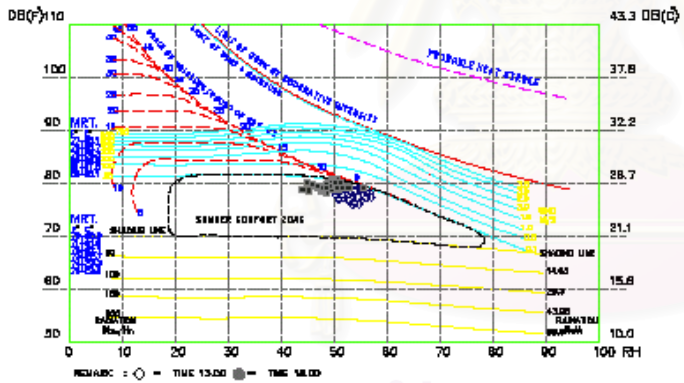
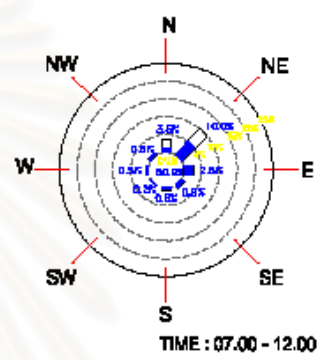
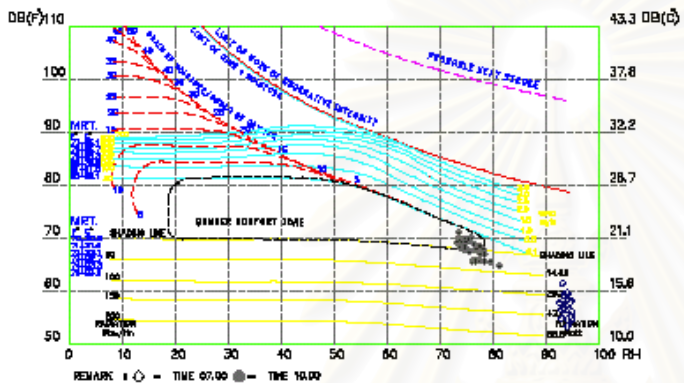
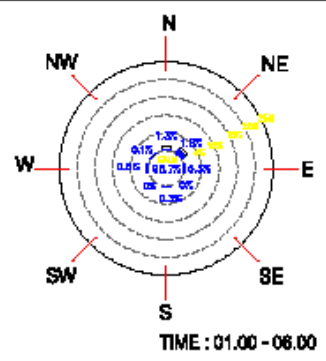
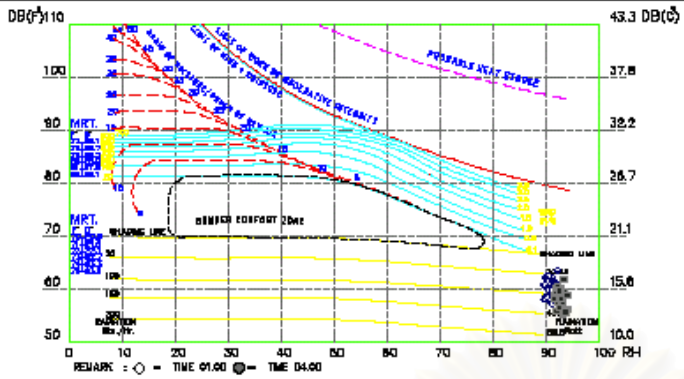


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : DECEMBER 1001-1000 (2624-2641) Station : CHIANG RAI

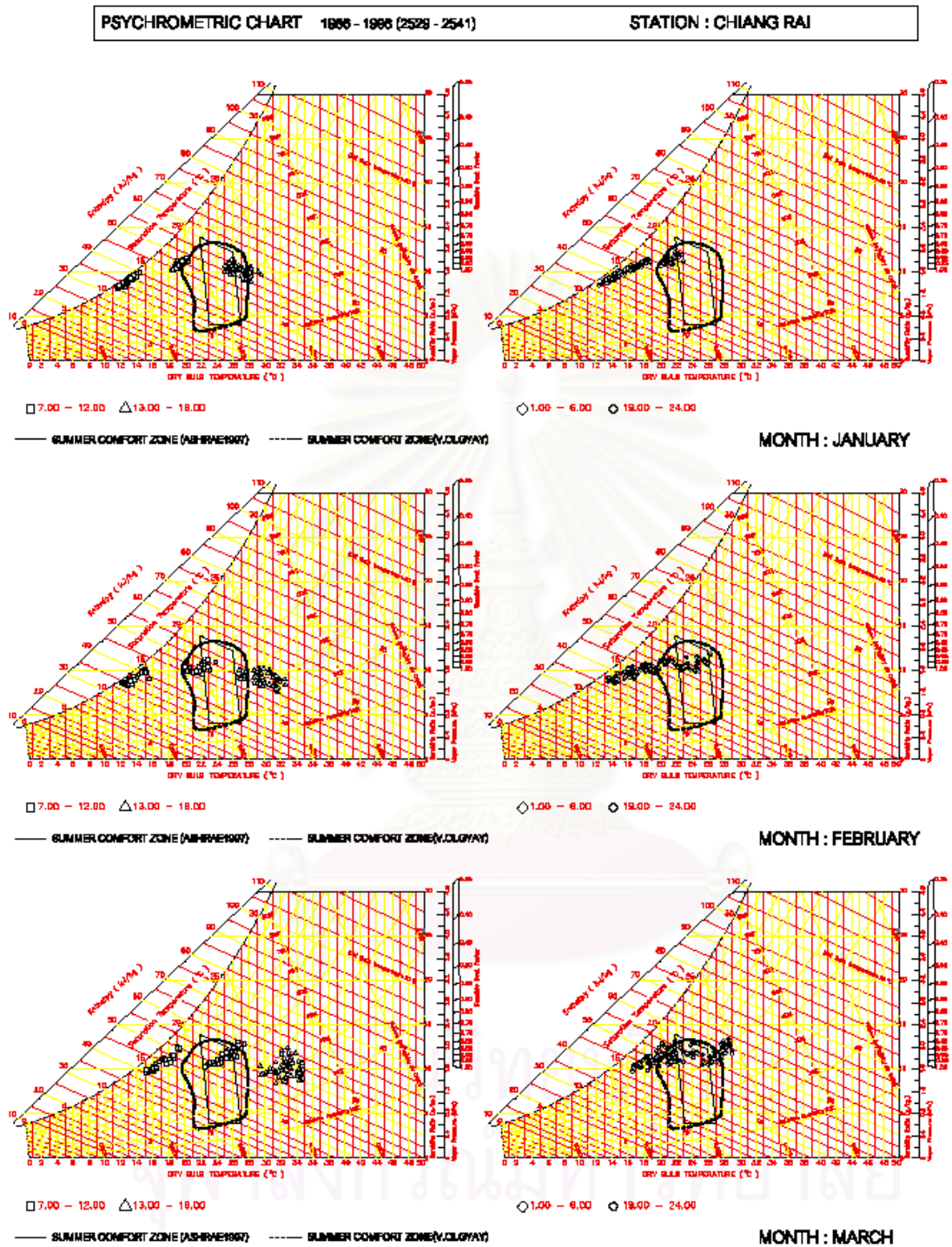


BIOCLIMATIC CHART

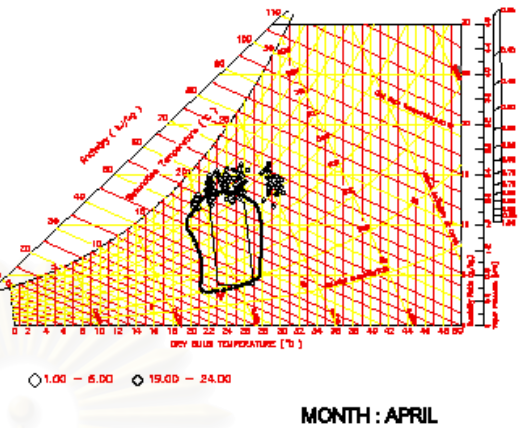
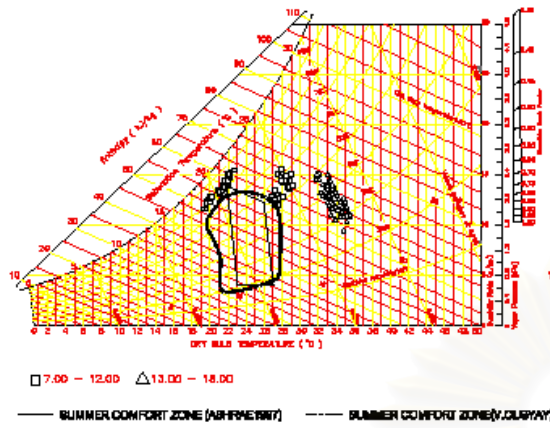
WIND ROSE



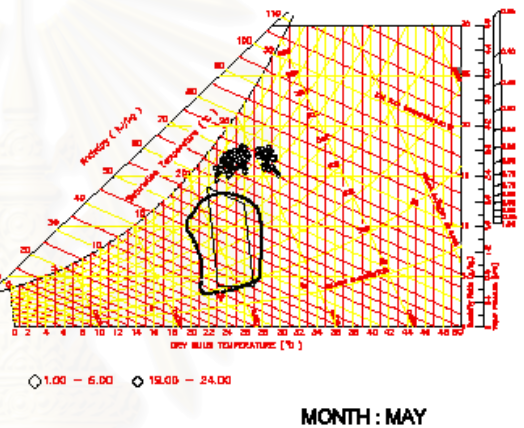
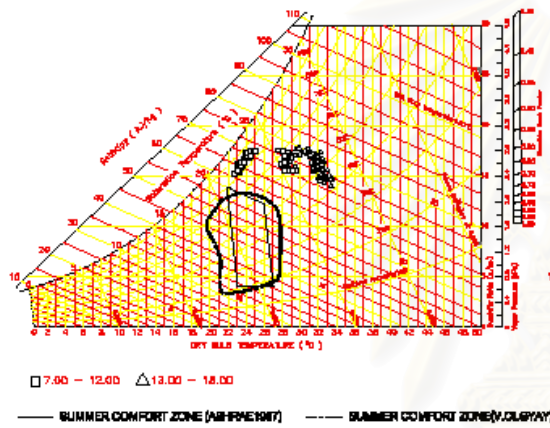
แผนภูมิความสัมพันธ์ระหว่างข้อมูลสภาวะอากาศ ในแผนภูมิไซโครเมตริก (psychrometric chart) แยกตามช่วงเวลา



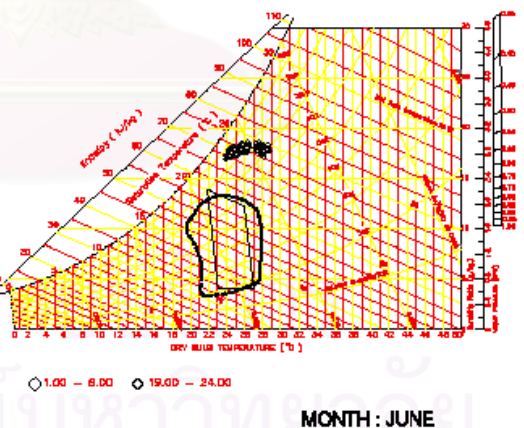
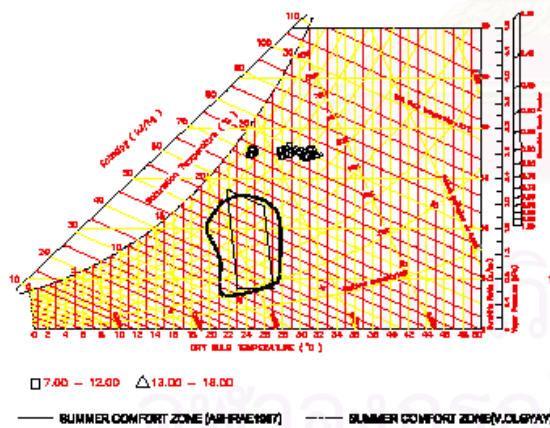
PSYCHROMETRIC CHART 1986 - 1995 (2529 - 2541) STATION : CHIANG RAI



MONTH : APRIL

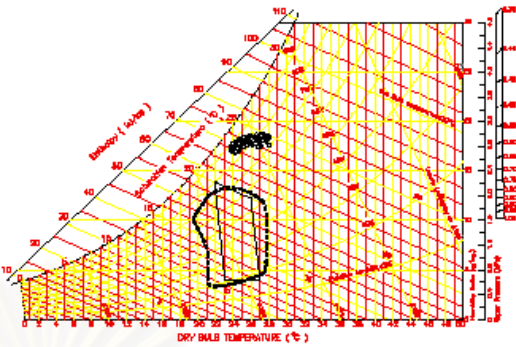
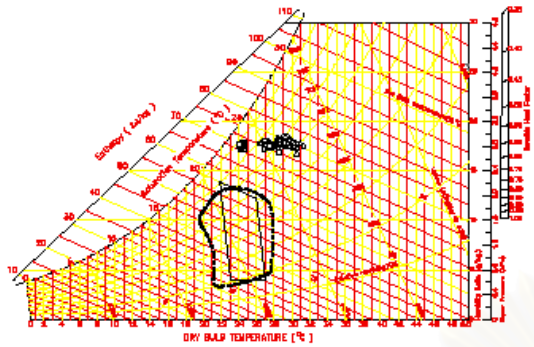


MONTH : MAY



MONTH : JUNE

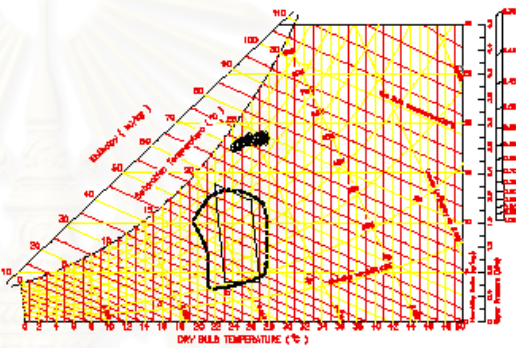
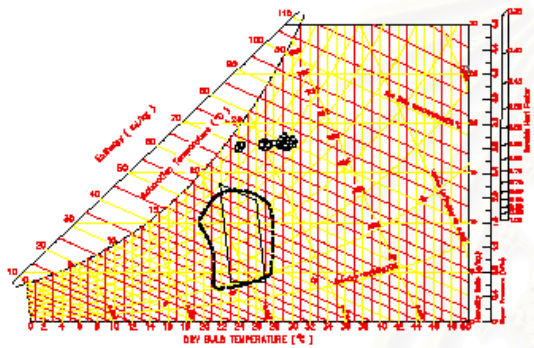
PSYCHROMETRIC CHART 1988 - 1998 (2629 - 2641) STATION : CHIANG RAI



□ 7.00 - 12.00 △ 13.00 - 18.00
 ——— SUMMER COMFORT ZONE (ASHRAE1987) ——— SUMMER COMFORT ZONE (V.OLOAY)

◇ 1.00 - 6.00 ○ 19.00 - 24.00

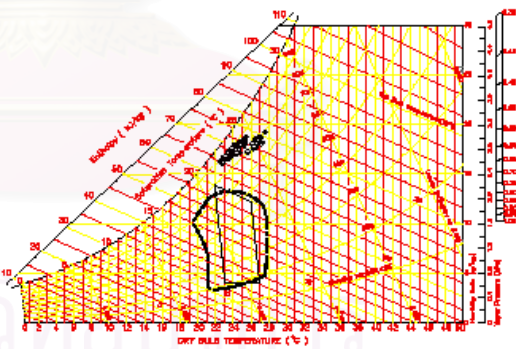
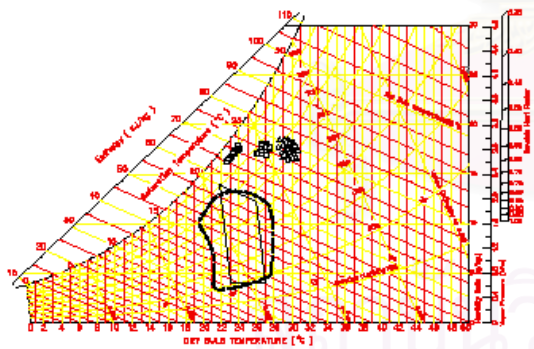
MONTH : JULY



□ 7.00 - 12.00 △ 13.00 - 18.00
 ——— SUMMER COMFORT ZONE (ASHRAE1987) ——— SUMMER COMFORT ZONE (V.OLOAY)

◇ 1.00 - 6.00 ○ 19.00 - 24.00

MONTH : AUGUST



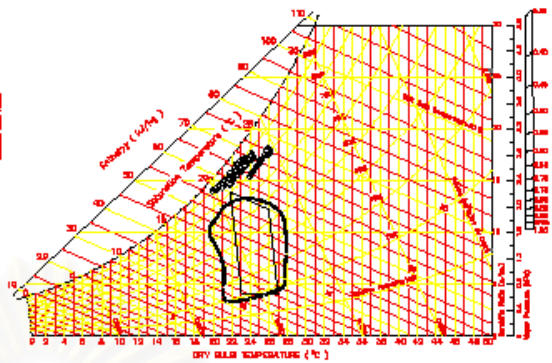
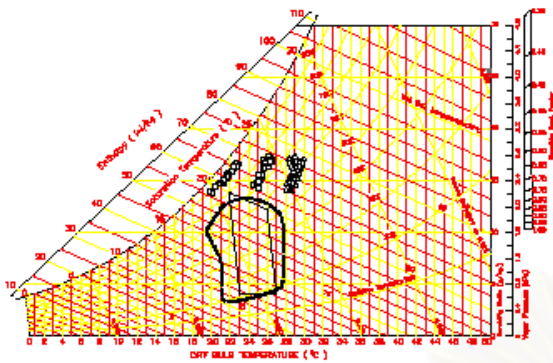
□ 7.00 - 12.00 △ 13.00 - 18.00
 ——— SUMMER COMFORT ZONE (ASHRAE1987) ——— SUMMER COMFORT ZONE (V.OLOAY)

◇ 1.00 - 6.00 ○ 19.00 - 24.00

MONTH : SEPTEMBER

จุฬาลงกรณ์มหาวิทยาลัย

PSYCHROMETRIC CHART 1986 - 1988 (2520 - 2541) STATION : CHIANG RAI

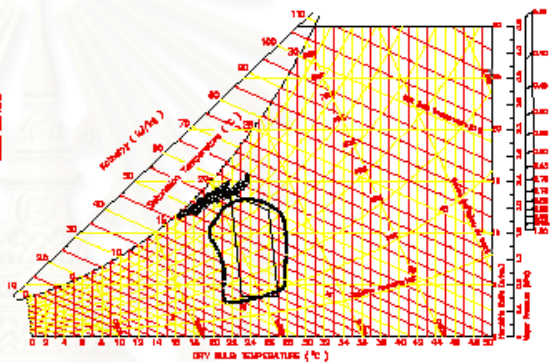
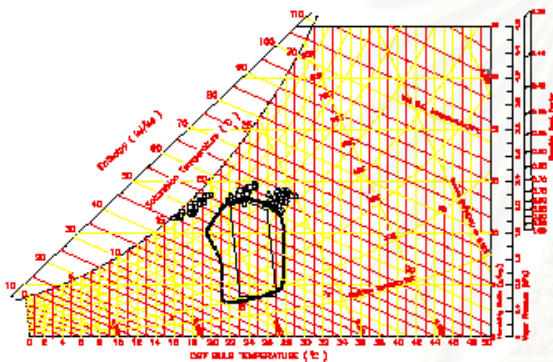


□ 7.00 - 12.00 △ 13.00 - 18.00

◇ 1.00 - 6.00 ○ 19.00 - 24.00

— SUMMER COMFORT ZONE (ASHRAE(1987)) - - - SUMMER COMFORT ZONE (OLGUYAY)

MONTH : OCTOBER

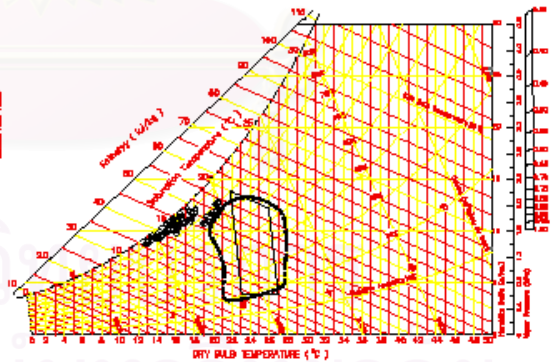
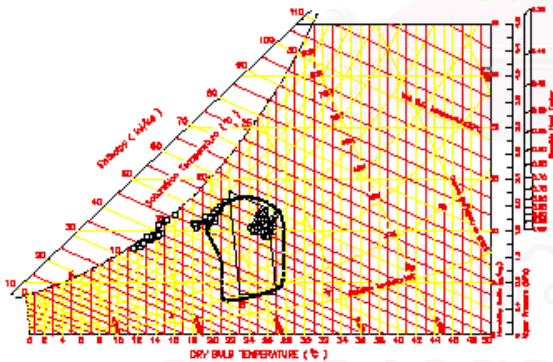


□ 7.00 - 12.00 △ 13.00 - 18.00

◇ 1.00 - 6.00 ○ 19.00 - 24.00

— SUMMER COMFORT ZONE (ASHRAE(1987)) - - - SUMMER COMFORT ZONE (OLGUYAY)

MONTH : NOVEMBER



□ 7.00 - 12.00 △ 13.00 - 18.00

◇ 1.00 - 6.00 ○ 19.00 - 24.00

— SUMMER COMFORT ZONE (ASHRAE(1987)) - - - SUMMER COMFORT ZONE (OLGUYAY)

MONTH : DECEMBER

ตารางแสดงผลข้อมูลจำนวนรายชั่วโมงอุณหภูมิกระเปาะแห้ง และค่าเฉลี่ยอุณหภูมิกระเปาะเปียกที่เกิดขึ้น จำแนกตามช่วงอุณหภูมิกระเปาะแห้ง (bin data) ในแต่ละช่วงเวลา

ANNUAL BIN-HOUR WEATHER DATA							year : 1996	STATION : CHIANG RAI		
Hours of occurrence of DB in each bin with MCWB in parentheses										
Temperature range	Observation hour group						Total Observation	MCWB	Temperature range	
	01:00 to 04:00	05:00 to 08:00	09:00 to 12:00	13:00 to 16:00	17:00 to 20:00	21:00 to 24:00				
°C	Annual								°F	
	DB MCWB	DB MCWB	DB MCWB	DB MCWB	DB MCWB	DB MCWB	Total MCWB			
40.6 / 42.8									105 / 109	
37.8 / 40.0				6 (24.5)			6 (24.5)		100 / 104	
35.0 / 37.2			3 (24.7)	80 (24.0)	12 (22.5)		95 (23.7)		95 / 99	
32.2 / 34.4			21 (23.7)	216 (24.3)	72 (24.8)		309 (24.3)		90 / 94	
29.4 / 31.7			188 (24.4)	498 (23.5)	254 (23.9)	10 (24.0)	950 (24.0)		85 / 89	
26.7 / 28.9	13 (24.1)	14 (24.2)	439 (23.1)	420 (22.5)	450 (22.9)	177 (23.9)	1,513 (23.5)		80 / 84	
23.9 / 26.1	535 (22.7)	507 (22.8)	426 (21.7)	203 (21.9)	413 (21.9)	629 (22.8)	2,713 (22.3)		75 / 79	
21.1 / 23.3	400 (21.2)	364 (21.4)	192 (19.9)	28 (19.0)	163 (19.7)	255 (20.9)	1,402 (20.3)		70 / 74	
18.3 / 20.6	172 (18.2)	193 (18.2)	117 (17.4)	11 (18.4)	79 (17.1)	180 (17.8)	752 (17.8)		65 / 69	
15.6 / 17.8	136 (15.7)	144 (15.8)	65 (14.8)	2 (16.4)	18 (15.1)	144 (15.3)	509 (15.5)		60 / 64	
12.8 / 15.0	155 (12.9)	126 (13.3)	9 (13.0)		1 (12.1)	57 (13.2)	348 (12.9)		55 / 59	
10.0 / 12.2	42 (11.2)	102 (10.9)	2 (10.4)			6 (10.1)	152 (10.6)		50 / 54	
7.2 / 9.4	9 (8.0)	10 (7.9)					19 (8.0)		45 / 49	
4.4 / 6.7		2 (6.2)					2 (6.2)		40 / 44	
1.7 / 3.9									35 / 39	

NOTE : MCWB = Mean coincident wet-bulb temperature (number in parentheses) °C

Temperature (Celsius deg.) C = (deg.F-32) * 5 / 9

BIN-HOUR WEATHER DATA Hours of occurrence of DB in each bin with MCWB in parentheses																		STATION : CHIANG RAI								
Temperature range °C	Observation hour group						Tidal Observation	MCWB	Observation hour group						Tidal Observation	MCWB	Temperature range °F									
	01:00	05:00	09:00	13:00	17:00	21:00			01:00	05:00	09:00	13:00	17:00	21:00				01:00	05:00	09:00	13:00	17:00	21:00			
	to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00			to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00				to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00			
°C	January							February							March							°F				
40.8 / 42.8																										105 / 109
37.8 / 40.8																										100 / 104
35.8 / 37.8																										95 / 99
32.3 / 34.4																										90 / 94
29.4 / 31.7																										85 / 89
26.7 / 28.9																										80 / 84
23.9 / 26.1																										75 / 79
21.1 / 23.3																										70 / 74
18.3 / 20.6																										65 / 69
15.6 / 17.8																										60 / 64
12.8 / 15.0																										55 / 59
10.0 / 12.2																										50 / 54
7.3 / 9.4																										45 / 49
4.4 / 6.7																										40 / 44
1.7 / 3.9																										35 / 39
°C	April							May							June							°F				
40.8 / 42.8																										105 / 109
37.8 / 40.8																										100 / 104
35.8 / 37.8																										95 / 99
32.3 / 34.4																										90 / 94
29.4 / 31.7																										85 / 89
26.7 / 28.9																										80 / 84
23.9 / 26.1																										75 / 79
21.1 / 23.3																										70 / 74
18.3 / 20.6																										65 / 69
15.6 / 17.8																										60 / 64
12.8 / 15.0																										55 / 59
10.0 / 12.2																										50 / 54
7.3 / 9.4																										45 / 49
4.4 / 6.7																										40 / 44
1.7 / 3.9																										35 / 39

NOTE : MCWB = Mean coincident wet-bulb temperature (number in parentheses) °C

Temperature (Celsius deg.) C = (deg F-32) * 5/9

BIN-HOUR WEATHER DATA Hours of occurrence of DB in each bin with MCWB in parentheses																				STATION : CHIANG RAI																											
Temperature range °C	Observation hour group						Total Observation	MCWB	Observation hour group						Total Observation	MCWB	Observation hour group						Temperature range °F																								
	01:00	05:00	09:00	13:00	17:00	21:00			01:00	05:00	09:00	13:00	17:00	21:00			01:00	05:00	09:00	13:00	17:00	21:00																									
	to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00			to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00			to 04:00	to 08:00	to 12:00	to 16:00	to 20:00	to 24:00																									
40.6 / 42.8	July						August						September						105 / 109																												
37.8 / 40.6																			100 / 104																												
35.0 / 37.3													1 (25.7)						1 (25.7)	95 / 99																											
32.2 / 34.4													26 (25.0) 2 (25.9)						28 (25.5)	90 / 94																											
29.4 / 31.7													20 (25.4) 54 (25.5) 25 (25.0)						99 (25.4)	11 (25.0) 52 (25.6) 19 (25.8)	82 (25.6)	107 (25.5)	85 / 89																								
26.7 / 28.9	1 (25.3)	4 (24.6)	46 (24.6)	40 (24.7)	46 (24.9)	26 (24.9)	163 (24.9)							53 (24.6) 44 (24.6) 52 (24.9) 15 (24.9)						164 (24.8)	2 (25.2)	1 (25.2)	56 (24.6)	30 (24.5)	62 (24.8)	13 (24.9)	166 (24.8)	80 / 84																			
23.9 / 26.1	107 (23.7)	103 (23.6)	58 (23.7)	20 (23.9)	46 (23.8)	90 (23.9)	427 (23.8)	60 (23.6)	82 (23.5)	53 (23.5)	26 (23.4)	52 (23.7)	101 (23.8)	408 (23.6)	78 (23.5)	74 (23.4)	37 (23.5)	6 (23.7)	26 (23.8)	101 (23.7)	308 (23.6)	75 / 79																									
21.1 / 23.3	16 (22.7)	16 (22.6)							2 (21.9)						8 (22.5)	42 (22.4)	34 (22.2)	42 (22.1)	7 (22.3)							6 (22.5)	66 (22.3)	39 (22.2)	45 (22.1)	2 (22.5)	90 (22.3)	70 / 74															
18.3 / 20.6																															65 / 69																
15.6 / 17.8																															60 / 64																
12.8 / 15.0																															55 / 59																
10.0 / 12.2																															50 / 54																
7.3 / 9.4																															45 / 49																
4.4 / 6.7																															40 / 44																
1.7 / 3.9																															35 / 39																
40.6 / 42.8	October						November						December						105 / 109																												
37.8 / 40.6																			100 / 104																												
35.0 / 37.3																			95 / 99																												
32.2 / 34.4																			90 / 94																												
29.4 / 31.7																			85 / 89																												
26.7 / 28.9																			80 / 84																												
23.9 / 26.1	20 (22.6)	14 (22.6)	53 (22.5)	10 (22.4)	61 (22.6)	90 (22.6)	218 (22.6)	2 (22.9)	2 (22.7)	61 (21.9)	12 (22.5)	55 (22.0)	16 (22.5)	148 (22.4)	1 (22.1)							27 (20.5)	67 (18.5)	32 (20.1)	4 (22.2)	121 (20.7)	75 / 79																				
21.1 / 23.3	66 (21.4)	91 (21.4)	6 (20.2)							2 (21.6)						63 (21.4)	251 (21.2)	51 (21.2)	45 (21.2)	29 (20.0)	1 (22.5)	25 (19.9)	56 (20.9)	217 (21.0)	14 (20.5)	11 (20.2)	42 (18.5)	6 (19.0)	46 (18.6)	23 (20.2)	141 (19.7)	70 / 74															
18.3 / 20.6	16 (19.2)	19 (19.0)							1 (19.5)						35 (19.2)	19 (19.2)	40 (18.4)	26 (18.4)	7 (18.2)							2 (18.1)	42 (18.5)	120 (18.4)	28 (18.4)	37 (18.5)	26 (17.2)	2 (19.5)	26 (16.7)	26 (18.6)	159 (18.1)	65 / 69											
15.6 / 17.8																															27 (16.4)	33 (16.5)							5 (16.5)	65 (16.5)	20 (15.9)	26 (15.7)	17 (15.1)	9 (14.8)	26 (14.9)	110 (15.2)	60 / 64
12.8 / 15.0																															2 (14.4)	42 (13.1)	33 (13.0)	2 (13.2)							23 (13.2)	101 (13.2)	55 / 59				
10.0 / 12.2																																					8 (11.2)	17 (11.0)							25 (11.2)	50 / 54	
7.3 / 9.4																																											45 / 49				
4.4 / 6.7																																											40 / 44				
1.7 / 3.9																																											35 / 39				

NOTE : MCWB = Mean coincident wet-bulb temperature [number in parentheses] °C Temperature (Celsius deg.) C = (deg.F-32) * 5 / 9

ตารางแสดงผลข้อมูลปริมาณองศาชั่วโมง การทำความร้อนและการทำความเย็น (degree hours and hours of occurrence)

DEGREE HOURS & HOURS OF OCCURRENCE							Station : CHIANG RAI		
YEARS : 1981 - 1998 (2524-2541)									
TEMPERATURE		MEAN TEMP.DEGREE (°F)	NO. OF HOURS BELOW TEMPERATURE	NO. OF DEGREE HOURS OF HEATING BELOW TEMPERATURE		NO. OF HOURS ABOVE TEMPERATURE	NO. OF DEGREE HOURS OF COOLING ABOVE TEMPERATURE		
Degree		HOURS OF OCCURRENCE		°F	°C		°F	°C	
°F	°C								
35	1.7	(37.5)	-	-	-	8,760.00	362,491.80	201,182.95	
36	2.2		-	-	-	8,760.00	353,731.80	198,321.15	
37	2.8	0	-	-	-	8,760.00	344,971.80	191,459.35	
38	3.3		-	-	-	8,760.00	336,211.80	188,597.55	
39	3.9		-	-	-	8,760.00	327,451.80	181,735.75	
40	4.4	(42.5)	-	-	-	8,760.00	318,691.80	178,873.95	
41	5.0		-	-	-	8,760.00	309,931.80	172,012.15	
42	5.6	0	-	-	-	8,760.00	301,171.80	167,150.35	
43	6.1		-	-	-	8,760.00	292,411.80	162,288.55	
44	6.7		-	-	-	8,760.00	283,651.80	157,426.75	
45	7.2	(47.5)	-	-	-	8,760.00	274,891.80	152,564.95	
46	7.8		-	-	-	8,760.00	266,131.80	147,703.15	
47	8.3	0	-	-	-	8,760.00	257,371.80	142,841.35	
48	8.9		-	-	-	8,760.00	248,611.80	137,979.55	
49	9.4		-	-	-	8,760.00	239,851.80	133,117.75	
50	10.0	52.5	9.60	-	-	8,760.00	231,091.80	128,255.95	
51	10.6		19.20	24.00	13.32	8,750.40	222,335.80	123,407.47	
52	11.1	48	28.80	48.00	26.64	8,740.80	213,579.80	118,558.99	
53	11.7		38.40	72.00	39.96	8,731.20	204,823.80	113,710.51	
54	12.2		48.00	96.00	53.28	8,721.60	196,067.80	108,862.03	
55	12.8	(57.5)	150.00	120.00	66.60	8,712.00	187,311.80	104,013.55	
56	13.3		252.00	423.00	234.77	8,610.00	178,555.80	99,164.91	
57	13.9	510	354.00	726.00	402.93	8,508.00	170,799.80	94,316.28	
58	14.4		456.00	1,029.00	571.10	8,406.00	162,043.80	89,467.64	
59	15.0		558.00	1,332.00	739.26	8,304.00	153,287.80	84,618.91	
60	15.6	(62.5)	675.60	1,635.00	907.43	8,202.00	144,531.80	79,770.27	
61	16.1		793.20	2,487.00	1,380.29	8,084.40	135,775.80	74,921.63	
62	16.7	588	910.80	3,339.00	1,853.15	7,966.80	127,019.80	70,072.99	
63	17.2		1,028.40	4,191.00	2,326.01	7,849.20	118,263.80	65,224.35	
64	17.8		1,146.00	5,043.00	2,798.87	7,731.60	109,507.80	60,375.71	
65	18.3	(67.5)	1,324.20	5,895.00	3,271.73	7,614.00	100,751.80	55,527.07	
66	18.9		1,502.40	7,486.50	4,155.01	7,435.80	92,005.80	50,678.43	
67	19.4	891	1,680.60	9,078.00	5,038.29	7,257.60	83,249.80	45,829.79	
68	20.0		1,858.80	10,869.50	5,921.57	7,079.40	74,503.80	41,001.15	
69	20.6		2,037.00	12,261.00	6,804.86	6,901.20	65,757.80	36,152.51	

หมายเหตุ : วิธีการหาค่า degree hours ได้จากการคำนวณจากจำนวนชั่วโมง hours of occurrence ที่เกิดขึ้นในแต่ละช่วงอุณหภูมิจุดสมดุลที่พิจารณา โดยอาศัยข้อมูลสภาพอากาศราย 3 ชั่วโมง

DEGREE HOURS & HOURS OF OCCURRENCE **Station : CHIANG RAI**
YEARS : 1981 - 1998 (2524-2541)

TEMPERATURE		MEAN TEMP.DEGREE (°F)	NO. OF HOURS BELOW TEMPERATURE	NO. OF DEGREE HOURS OF HEATING BELOW TEMPERATURE		NO. OF HOURS ABOVE TEMPERATURE	NO. OF DEGREE HOURS OF COOLING ABOVE TEMPERATURE	
Degree				HOURS OF OCCURRENCE	°F		°C	°F
°F	°C							
70	21.1	(72.5)	2,265.00	13,862.50	7,688.14	6,723.00	69,744.30	38,708.09
71	21.7		2,493.00	16,469.50	9,136.02	6,495.00	63,691.30	35,293.17
72	22.2	1140	2,721.00	19,066.50	10,581.91	6,267.00	67,438.30	31,878.26
73	22.8		2,949.00	21,673.50	12,026.79	6,039.00	61,285.30	28,463.34
74	23.3		3,177.00	24,280.50	13,476.68	5,811.00	45,132.30	25,048.43
75	23.9	(77.5)	3,669.60	26,887.50	14,922.56	5,583.00	38,979.30	21,633.61
76	24.4		4,162.20	31,296.00	17,369.28	5,090.40	34,627.80	19,218.43
77	25.0	2463	4,654.80	35,704.50	19,816.00	4,597.80	30,276.30	16,803.36
78	25.6		5,147.40	40,113.00	22,262.72	4,105.20	25,924.80	14,388.26
79	26.1		5,640.00	44,521.50	24,709.43	3,612.60	21,573.30	11,973.18
80	26.7	(82.5)	5,980.20	48,930.00	27,156.15	3,120.00	17,221.80	9,558.10
81	27.2		6,320.40	55,420.50	30,768.38	2,779.80	14,952.30	8,298.63
82	27.8	1701	6,660.60	61,911.00	34,380.61	2,439.60	12,682.80	7,038.95
83	28.3		7,000.80	68,401.50	37,962.83	2,099.40	10,413.30	5,779.38
84	28.9		7,341.00	74,892.00	41,585.06	1,759.20	8,143.80	4,519.81
85	29.4	(87.5)	7,540.80	81,382.50	45,187.29	1,419.00	5,874.30	3,260.24
86	30.0		7,740.60	89,223.00	49,518.77	1,219.20	4,954.80	2,749.91
87	30.6	999	7,940.40	97,063.50	53,870.24	1,019.40	4,036.30	2,239.69
88	31.1		8,140.20	104,904.00	58,221.72	819.60	3,115.80	1,729.27
89	31.7		8,340.00	112,744.50	62,573.20	619.80	2,196.30	1,218.96
90	32.2	(92.5)	8,415.60	120,585.00	66,924.68	420.00	1,276.80	708.62
91	32.8		8,491.20	129,114.00	71,668.27	344.40	1,045.80	580.42
92	33.3	378	8,566.80	137,643.00	76,391.87	268.80	814.80	462.21
93	33.9		8,642.40	146,172.00	81,126.46	193.20	693.80	324.01
94	34.4		8,718.00	154,701.00	85,869.06	117.60	352.80	195.80
95	35.0	(97.5)	8,726.40	163,230.00	90,592.66	42.00	121.80	67.60
96	35.6		8,734.80	171,969.00	96,442.80	33.60	92.40	51.28
97	36.1	42	8,743.20	180,708.00	100,292.94	25.20	63.00	34.97
98	36.7		8,751.60	189,447.00	106,143.09	16.80	33.60	18.66
99	37.2		8,760.00	198,186.00	109,993.23	8.40	4.20	2.33