

ข้อมูลอากาศประเทศไทยสำหรับงานอนุรักษ์พลังงาน  
จังหวัดภูเก็ต



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จุฬาลงกรณ์มหาวิทยาลัย

เล่ม

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ตารางสรุปรวมผลของข้อมูลทุกประเภทจังหวัดภูเก็ต

CLIMATOLOGICAL DATA FOR THE PERIOD 1981-1998												station : PHUKET		
Elevation of station above MSL						2 Meters			Latitude: 07 53 N					
												Longitude: 98 24 E		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
<b>TEMPERATURE (°C)</b>														
Averages														
Daily Maximum	31.6	32.4	32.8	32.6	31.2	31.0	30.3	30.4	29.7	30.0	30.2	30.4	31.1	
Monthly Mean	27.9	28.5	29.1	29.3	28.6	28.5	27.8	27.9	27.2	27.2	27.4	27.3	28.1	
Daily Minimum	24.8	25.1	25.8	26.3	26.2	26.4	25.6	25.9	25.2	25.0	25.2	24.8	25.5	
Dry bulb Standard Deviation	2.6	2.7	2.8	2.7	2.5	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.5	
Extremes														
Highest	35.0	36.2	36.5	36.6	36.0	34.5	34.0	34.1	33.5	33.5	33.5	33.5	36.6	
Lowest	21.6	20.5	21.6	22.3	23.1	22.9	19.5	22.7	22.5	22.6	22.7	21.9	19.5	
Monthly Dew Point	21.5	21.9	22.7	23.9	24.5	24.2	23.8	23.7	23.7	23.6	23.2	22.1	23.3	
Dew Point Standard Deviation	1.3	1.4	1.4	1.1	0.8	0.9	0.9	0.8	0.7	0.8	1.0	1.3	1.0	
Monthly Wet bulb Temperature	23.6	24.0	24.7	25.5	25.7	25.5	25.1	25.0	24.8	24.8	24.5	23.7	24.7	
<b>DEGREE DAY BASE 18.3° C</b>														
Heating														
Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Cooling														
Cooling	296.9	295.0	332.5	329.0	317.2	304.1	294.0	296.9	267.2	275.8	272.0	278.3	3,558.9	
<b>RELATIVE HUMIDITY (%)</b>														
Averages														
Monthly Mean	69.7	69.0	70.2	74.2	79.9	78.7	80.0	78.6	82.0	82.3	79.0	74.0	76.5	
Hour 01:00-06:00	79.7	79.4	80.7	84.7	88.5	87.0	88.1	86.3	89.7	90.6	87.1	82.5	85.4	
Hour 07:00-12:00	73.2	72.5	73.1	76.6	81.3	79.6	81.7	79.9	83.0	83.2	80.3	76.4	78.4	
Hour 13:00-18:00	55.1	53.2	54.6	59.5	68.5	67.6	69.0	68.2	71.5	70.6	67.0	61.5	63.9	
Hour 19:00-24:00	71.0	71.1	72.2	76.1	81.2	80.4	81.0	80.6	83.9	84.7	81.5	75.6	76.3	
<b>WIND</b>														
Average Speed (m/s)														
Average Speed (m/s)	1.4	1.3	1.2	0.9	1.0	1.2	1.2	1.7	1.2	1.0	1.0	1.4	1.2	
Prevailing wind														
Prevailing wind	E	E	ESE, NW	W	W	W	W	W	W	W	NE	NE	W	
Maximum Speed (m/s)														
Maximum Speed (m/s)	6.2	7.7	6.2	6.2	12.9	10.3	11.3	10.3	7.7	7.7	7.7	7.7	12.9	
<b>SKY COVER (0-10)</b>														
Average Sky Condition														
Average Sky Condition	3.9	3.9	4.5	5.5	7	7.2	7.5	7.6	7.9	7.6	6.7	5	6.2	
<b>Percentage of Sky cover</b>														
Clear sky (0-3)														
Clear sky (0-3)	48	47	38	24	8	6	5	4	3	4	11	35	19	
Partly Cloudy sky (4-7)														
Partly Cloudy sky (4-7)	36	37	42	46	41	41	38	36	32	35	42	36	39	
Cloudy sky (8-10)														
Cloudy sky (8-10)	16	15	20	30	51	53	58	60	66	60	46	26	42	
<b>SUNSHINE DURATION* (hours)</b>														
Average Monthly total														
Average Monthly total	269.5	259.2	261.9	235.8	176.6	148.3	153.1	141.1	103.2	141.1	170.3	207.7	2,267.8	
Percentage of Sunshine														
Percentage of Sunshine	72.4	74.5	70.4	65.5	47.5	41.2	41.2	37.9	28.7	37.9	47.3	55.6	51.6	
<b>SOLAR RADIATION* (W/m<sup>2</sup>)</b>														
Average Hourly max														
Average Hourly max	-	-	-	-	-	-	-	-	-	-	-	-	-	
Average Hourly mean														
Average Hourly mean	-	-	-	-	-	-	-	-	-	-	-	-	-	
Average Daily Total														
Average Daily Total	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>RAINFALL (mm)</b>														
Average Monthly total														
Average Monthly total	22.5	25.1	57.9	169.2	327.5	272.1	317.2	349.2	429.3	350.2	211.9	71.5	2,593.6	
Daily record high														
Daily record high	34.3	56.9	111.9	134.8	104.4	593.7	101.6	175.4	175.9	280.6	181.6	64.9	593.7	
Average Number of rainy days (0.1 mm. Or more)														
Average Number of rainy days (0.1 mm. Or more)	4	3	5	11	20	18	20	20	23	23	16	9	172	
<b>EVAPORATION (mm)</b>														
Average Monthly total														
Average Monthly total	157.1	157.4	172.2	150.7	124.2	114.8	113.7	114.8	104.0	109.2	112.3	133.9	1,564.3	

remark: 1 m/s = 3.597 km/h, = 2.237 mph, = 1.945 kts

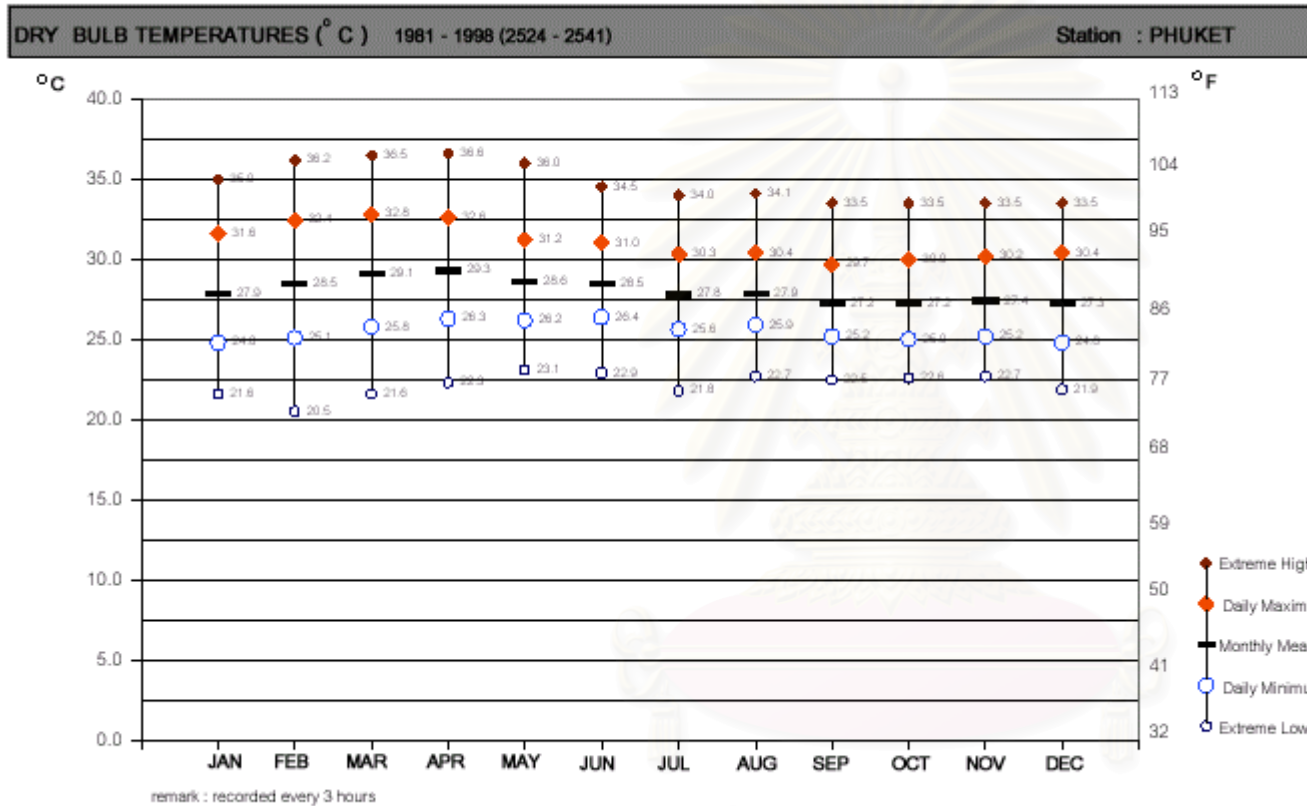
(\*) data base on 1997 - 1998 recorded period

1 W/m2 = 0.317 Btu/h.ft2

(-) missing value or no data report



แผนภูมิอุณหภูมิกระเปาะแห้ง (dry bulb temperatures)

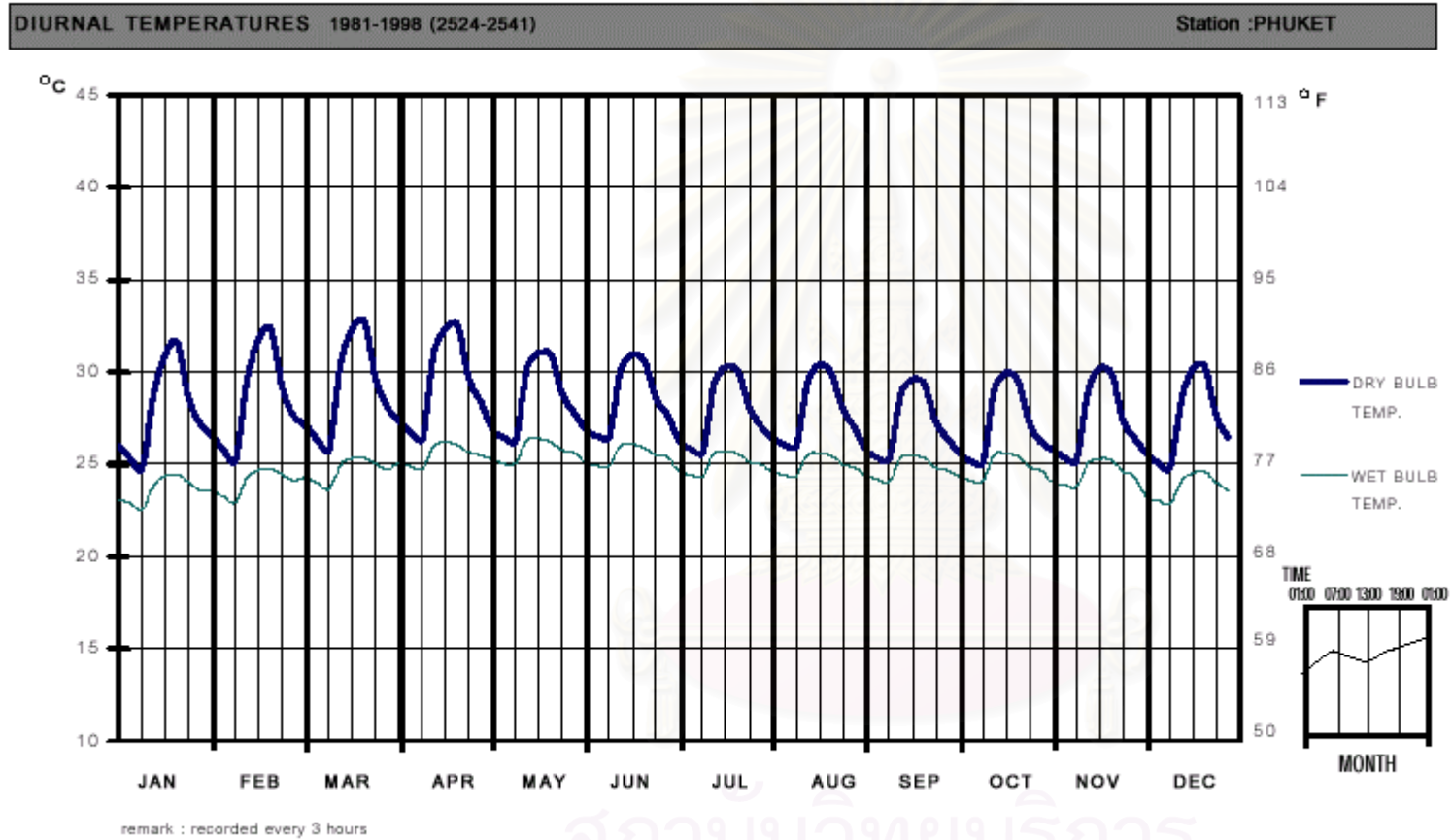


สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย





แผนภูมิความแตกต่างระหว่างอุณหภูมิกระเปาะแห้งและอุณหภูมิกระเปาะเปียก (diurnal temperatures)



สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย

ตารางแสดงผลข้อมูลปริมาณองศาวัน 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 : PHUKET														
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		°C		°C		°C		°C		°C		°C		°C		°C		°C		°C		°C		°C		
35	1.7	813.6	0.0	778.3	0.0	849.1	0.0	829.0	0.0	833.8	0.0	804.1	0.0	810.7	0.0	813.6	0.0	767.2	0.0	792.4	0.0	772.0	0.0	795.0	0.0	9,658.8	0.0
36	2.2	796.4	0.0	762.2	0.0	831.9	0.0	812.3	0.0	816.6	0.0	787.4	0.0	793.4	0.0	796.4	0.0	750.5	0.0	775.2	0.0	755.3	0.0	777.7	0.0	9,455.5	0.0
37	2.8	779.2	0.0	746.1	0.0	814.7	0.0	795.7	0.0	799.4	0.0	770.8	0.0	776.2	0.0	779.2	0.0	733.8	0.0	758.0	0.0	738.6	0.0	760.5	0.0	9,252.2	0.0
38	3.3	761.9	0.0	730.0	0.0	797.5	0.0	779.0	0.0	782.2	0.0	754.1	0.0	759.0	0.0	761.9	0.0	717.2	0.0	740.8	0.0	722.0	0.0	743.3	0.0	9,048.8	0.0
39	3.9	744.7	0.0	713.9	0.0	780.3	0.0	762.3	0.0	765.0	0.0	737.4	0.0	741.8	0.0	744.7	0.0	700.5	0.0	723.5	0.0	705.3	0.0	726.1	0.0	8,845.5	0.0
40	4.4	727.5	0.0	697.8	0.0	763.0	0.0	745.7	0.0	747.7	0.0	720.8	0.0	724.6	0.0	727.5	0.0	683.8	0.0	706.3	0.0	688.6	0.0	708.8	0.0	8,642.2	0.0
41	5.0	710.3	0.0	681.7	0.0	745.8	0.0	729.0	0.0	730.5	0.0	704.1	0.0	707.3	0.0	710.3	0.0	667.2	0.0	689.1	0.0	672.0	0.0	691.6	0.0	8,438.8	0.0
42	5.6	693.1	0.0	665.5	0.0	728.6	0.0	712.3	0.0	713.3	0.0	687.4	0.0	690.1	0.0	693.1	0.0	650.5	0.0	671.9	0.0	655.3	0.0	674.4	0.0	8,235.5	0.0
43	6.1	675.8	0.0	649.4	0.0	711.4	0.0	695.7	0.0	696.1	0.0	670.8	0.0	672.9	0.0	675.8	0.0	633.8	0.0	654.7	0.0	638.6	0.0	657.2	0.0	8,032.2	0.0
44	6.7	658.6	0.0	633.3	0.0	694.1	0.0	679.0	0.0	678.8	0.0	654.1	0.0	655.7	0.0	658.6	0.0	617.2	0.0	637.4	0.0	622.0	0.0	640.0	0.0	7,828.8	0.0
45	7.2	641.4	0.0	617.2	0.0	676.9	0.0	662.3	0.0	661.6	0.0	637.4	0.0	638.4	0.0	641.4	0.0	600.5	0.0	620.2	0.0	605.3	0.0	622.7	0.0	7,625.5	0.0
46	7.8	624.2	0.0	601.1	0.0	659.7	0.0	645.7	0.0	644.4	0.0	620.8	0.0	621.2	0.0	624.2	0.0	583.8	0.0	603.0	0.0	588.6	0.0	605.5	0.0	7,422.2	0.0
47	8.3	606.9	0.0	585.0	0.0	642.5	0.0	629.0	0.0	627.2	0.0	604.1	0.0	604.0	0.0	606.9	0.0	567.2	0.0	585.8	0.0	572.0	0.0	588.3	0.0	7,218.8	0.0
48	8.9	589.7	0.0	568.9	0.0	625.3	0.0	612.3	0.0	610.0	0.0	587.4	0.0	586.8	0.0	589.7	0.0	550.5	0.0	568.5	0.0	555.3	0.0	571.1	0.0	7,015.5	0.0
49	9.4	572.5	0.0	552.8	0.0	608.0	0.0	595.7	0.0	592.7	0.0	570.8	0.0	569.6	0.0	572.5	0.0	533.8	0.0	551.3	0.0	538.6	0.0	553.8	0.0	6,812.2	0.0
50	10.0	555.3	0.0	536.7	0.0	590.8	0.0	579.0	0.0	575.5	0.0	554.1	0.0	552.3	0.0	555.3	0.0	517.2	0.0	534.1	0.0	522.0	0.0	536.6	0.0	6,608.8	0.0
51	10.6	538.1	0.0	520.5	0.0	573.6	0.0	562.3	0.0	558.3	0.0	537.4	0.0	535.1	0.0	538.1	0.0	500.5	0.0	516.9	0.0	505.3	0.0	519.4	0.0	6,405.5	0.0
52	11.1	520.8	0.0	504.4	0.0	556.4	0.0	545.7	0.0	541.1	0.0	520.8	0.0	517.9	0.0	520.8	0.0	483.8	0.0	499.7	0.0	488.6	0.0	502.2	0.0	6,202.2	0.0
53	11.7	503.6	0.0	488.3	0.0	539.1	0.0	529.0	0.0	523.8	0.0	504.1	0.0	500.7	0.0	503.6	0.0	467.2	0.0	482.4	0.0	472.0	0.0	485.0	0.0	5,998.8	0.0
54	12.2	486.4	0.0	472.2	0.0	521.9	0.0	512.3	0.0	506.6	0.0	487.4	0.0	483.4	0.0	486.4	0.0	450.5	0.0	465.2	0.0	455.3	0.0	467.7	0.0	5,795.5	0.0
55	12.8	469.2	0.0	456.1	0.0	504.7	0.0	495.7	0.0	489.4	0.0	470.8	0.0	466.2	0.0	469.2	0.0	433.8	0.0	448.0	0.0	438.6	0.0	450.5	0.0	5,592.2	0.0
56	13.3	451.9	0.0	440.0	0.0	487.5	0.0	479.0	0.0	472.2	0.0	454.1	0.0	449.0	0.0	451.9	0.0	417.2	0.0	430.8	0.0	422.0	0.0	433.3	0.0	5,388.8	0.0
57	13.9	434.7	0.0	423.9	0.0	470.3	0.0	462.3	0.0	455.0	0.0	437.4	0.0	431.8	0.0	434.7	0.0	400.5	0.0	413.5	0.0	405.3	0.0	416.1	0.0	5,185.5	0.0
58	14.4	417.5	0.0	407.8	0.0	453.0	0.0	445.7	0.0	437.7	0.0	420.8	0.0	414.6	0.0	417.5	0.0	383.8	0.0	396.3	0.0	388.6	0.0	398.8	0.0	4,982.2	0.0
59	15.0	400.3	0.0	391.7	0.0	435.8	0.0	429.0	0.0	420.5	0.0	404.1	0.0	397.3	0.0	400.3	0.0	367.2	0.0	379.1	0.0	372.0	0.0	381.6	0.0	4,778.8	0.0
60	15.6	383.1	0.0	375.5	0.0	418.6	0.0	412.3	0.0	403.3	0.0	387.4	0.0	380.1	0.0	383.1	0.0	350.5	0.0	361.9	0.0	355.3	0.0	364.4	0.0	4,575.5	0.0
61	16.1	365.8	0.0	359.4	0.0	401.4	0.0	395.7	0.0	386.1	0.0	370.8	0.0	362.9	0.0	365.8	0.0	333.8	0.0	344.7	0.0	338.6	0.0	347.2	0.0	4,372.2	0.0
62	16.7	348.6	0.0	343.3	0.0	384.1	0.0	379.0	0.0	368.8	0.0	354.1	0.0	345.7	0.0	348.6	0.0	317.2	0.0	327.4	0.0	322.0	0.0	330.0	0.0	4,168.8	0.0
63	17.2	331.4	0.0	327.2	0.0	366.9	0.0	362.3	0.0	351.6	0.0	337.4	0.0	328.4	0.0	331.4	0.0	300.5	0.0	310.2	0.0	305.3	0.0	312.7	0.0	3,965.5	0.0
64	17.8	314.2	0.0	311.1	0.0	349.7	0.0	345.7	0.0	334.4	0.0	320.8	0.0	311.2	0.0	314.2	0.0	283.8	0.0	293.0	0.0	288.6	0.0	295.5	0.0	3,762.2	0.0
65	18.3	296.9	0.0	295.0	0.0	332.5	0.0	329.0	0.0	317.2	0.0	304.1	0.0	294.0	0.0	296.9	0.0	267.2	0.0	275.8	0.0	272.0	0.0	278.3	0.0	3,558.8	0.0
66	18.9	279.7	0.0	278.9	0.0	315.3	0.0	312.3	0.0	300.0	0.0	287.4	0.0	276.8	0.0	279.7	0.0	250.5	0.0	258.5	0.0	255.3	0.0	261.1	0.0	3,355.5	0.0
67	19.4	262.5	0.0	262.8	0.0	298.0	0.0	295.7	0.0	282.7	0.0	270.8	0.0	259.6	0.0	262.5	0.0	233.8	0.0	241.3	0.0	238.6	0.0	243.8	0.0	3,152.2	0.0
68	20.0	245.3	0.0	246.7	0.0	280.8	0.0	279.0	0.0	265.5	0.0	254.1	0.0	242.3	0.0	245.3	0.0	217.2	0.0	224.1	0.0	222.0	0.0	226.6	0.0	2,948.8	0.0

สถาบันวิทยบริการ  
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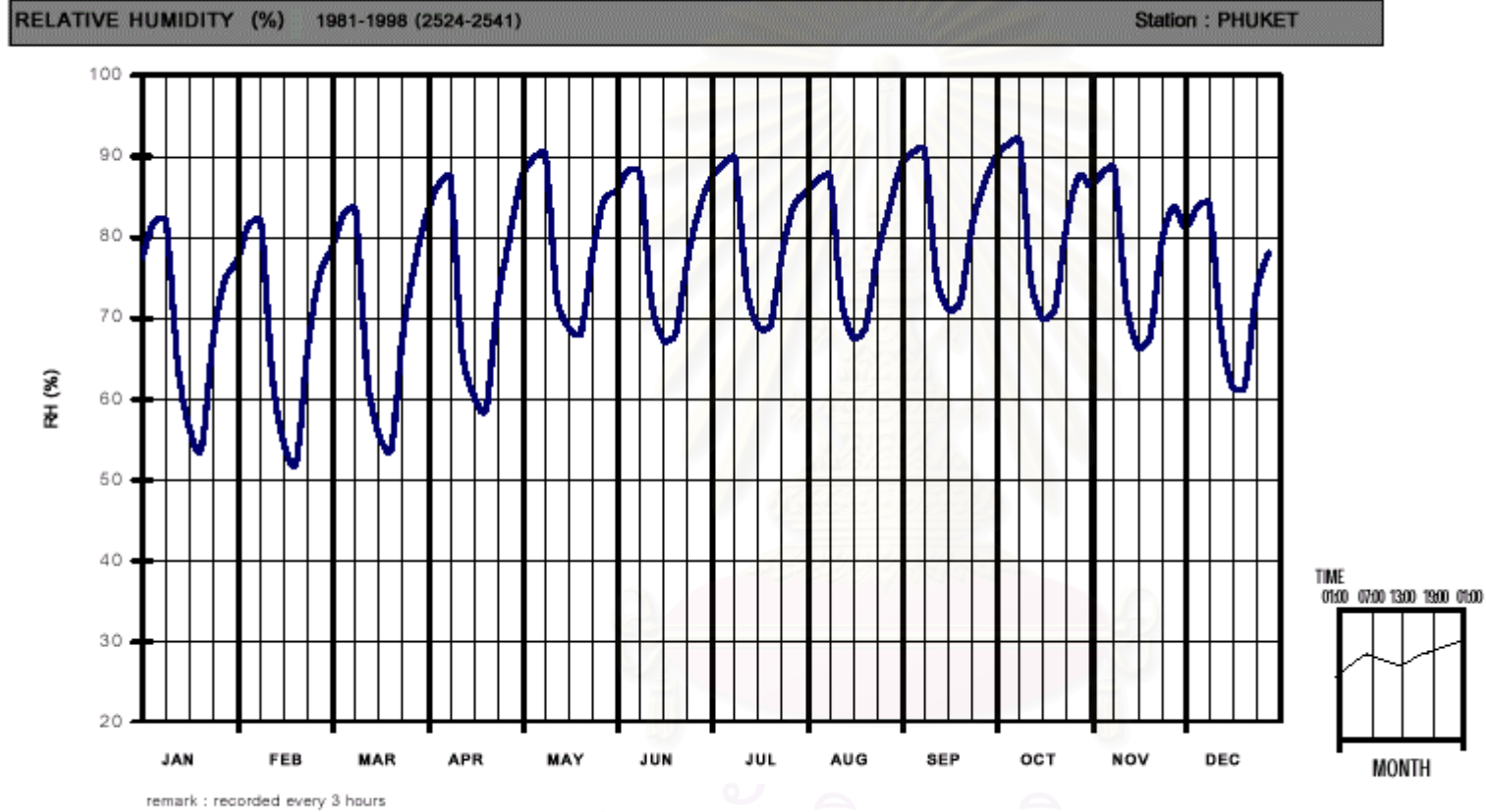


HEATING & COOLING DEGREE DAYS BASE RANGE 35 - 100 °F (1.7 - 37.8 °C) 1981 - 1998 (2524 - 2541)														Station : PHUKET													
MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL		
Degree	Cooling	Heating	Cooling	Heating	Cooling	Heating	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	228.1	0.0	230.5	0.0	263.6	0.0	262.3	0.0	248.3	0.0	237.4	0.0	225.1	0.0	228.1	0.0	200.5	0.0	206.9	0.0	205.3	0.0	209.4	0.0	2,745.5	0.0
70	21.1	210.8	0.0	214.4	0.0	246.4	0.0	245.7	0.0	231.1	0.0	220.8	0.0	207.9	0.0	210.8	0.0	183.8	0.0	189.7	0.0	188.6	0.0	192.2	0.0	2,542.2	0.0
71	21.7	193.6	0.0	198.3	0.0	229.1	0.0	229.0	0.0	213.8	0.0	204.1	0.0	190.7	0.0	193.6	0.0	167.2	0.0	172.4	0.0	172.0	0.0	175.0	0.0	2,338.8	0.0
72	22.2	176.4	0.0	182.2	0.0	211.9	0.0	212.3	0.0	196.6	0.0	187.4	0.0	173.4	0.0	176.4	0.0	150.5	0.0	155.2	0.0	155.3	0.0	157.7	0.0	2,135.5	0.0
73	22.8	159.2	0.0	166.1	0.0	194.7	0.0	195.7	0.0	179.4	0.0	170.8	0.0	156.2	0.0	159.2	0.0	133.8	0.0	138.0	0.0	138.6	0.0	140.5	0.0	1,932.2	0.0
74	23.3	141.9	0.0	150.0	0.0	177.5	0.0	179.0	0.0	162.2	0.0	154.1	0.0	139.0	0.0	141.9	0.0	117.2	0.0	120.8	0.0	122.0	0.0	123.3	0.0	1,728.8	0.0
75	23.9	124.7	0.0	133.9	0.0	160.3	0.0	162.3	0.0	145.0	0.0	137.4	0.0	121.8	0.0	124.7	0.0	100.5	0.0	103.5	0.0	105.3	0.0	106.1	0.0	1,525.5	0.0
76	24.4	107.5	0.0	117.8	0.0	143.0	0.0	145.7	0.0	127.7	0.0	120.8	0.0	104.6	0.0	107.5	0.0	83.8	0.0	86.3	0.0	88.6	0.0	88.8	0.0	1,322.2	0.0
77	25.0	90.3	0.0	101.7	0.0	125.8	0.0	129.0	0.0	110.5	0.0	104.1	0.0	87.3	0.0	90.3	0.0	67.2	0.0	69.1	0.0	72.0	0.0	71.6	0.0	1,118.8	0.0
78	25.6	73.1	0.0	85.5	0.0	108.6	0.0	112.3	0.0	93.3	0.0	87.4	0.0	70.1	0.0	73.1	0.0	50.5	0.0	51.9	0.0	55.3	0.0	54.4	0.0	915.5	0.0
79	26.1	55.8	0.0	69.4	0.0	91.4	0.0	95.7	0.0	76.1	0.0	70.8	0.0	52.9	0.0	55.8	0.0	33.8	0.0	34.7	0.0	38.6	0.0	37.2	0.0	712.2	0.0
80	26.7	38.6	0.0	53.3	0.0	74.1	0.0	79.0	0.0	58.8	0.0	54.1	0.0	35.7	0.0	38.6	0.0	17.3	-0.2	17.4	0.0	22.0	0.0	20.0	0.0	509.0	-0.2
81	27.2	21.4	0.0	37.2	0.0	56.9	0.0	62.3	0.0	41.6	0.0	37.4	0.0	18.4	0.0	21.4	0.0	4.5	-4.0	3.1	-2.9	5.8	-0.5	3.5	-0.8	313.6	-8.1
82	27.8	4.3	-0.1	21.1	0.0	39.7	0.0	45.7	0.0	24.4	0.0	20.8	0.0	3.8	-2.6	6.0	-1.9	0.0	-16.2	0.0	-17.0	0.0	-11.4	0.0	-14.5	165.8	-63.6
83	28.3	0.0	-13.1	5.9	-0.9	22.5	0.0	29.0	0.0	7.6	-0.5	5.3	-1.2	0.3	-16.3	0.3	-13.4	0.0	-32.8	0.0	-34.2	0.0	-28.0	0.0	-31.7	70.9	-172.1
84	28.9	0.0	-30.3	0.7	-11.8	6.4	-1.1	12.5	-0.2	0.1	-10.1	0.1	-12.6	0.0	-33.2	0.0	-30.3	0.0	-49.5	0.0	-51.5	0.0	-44.7	0.0	-48.9	19.8	-324.2
85	29.4	0.0	-47.5	0.0	-27.2	0.0	-12.0	0.5	-4.8	0.0	-27.3	0.0	-29.2	0.0	-50.4	0.0	-47.5	0.0	-66.2	0.0	-68.7	0.0	-61.4	0.0	-66.2	0.5	-508.3
86	30.0	0.0	-64.7	0.0	-43.3	0.0	-29.2	0.0	-21.0	0.0	-44.5	0.0	-45.9	0.0	-67.7	0.0	-64.7	0.0	-82.8	0.0	-85.9	0.0	-78.0	0.0	-83.4	0.0	-711.2
87	30.6	0.0	-81.9	0.0	-59.5	0.0	-46.4	0.0	-37.7	0.0	-61.7	0.0	-62.6	0.0	-84.9	0.0	-81.9	0.0	-99.5	0.0	-103.1	0.0	-94.7	0.0	-100.6	0.0	-914.5
88	31.1	0.0	-99.2	0.0	-75.6	0.0	-63.6	0.0	-54.3	0.0	-78.9	0.0	-79.2	0.0	-102.1	0.0	-99.2	0.0	-116.2	0.0	-120.3	0.0	-111.4	0.0	-117.8	0.0	-1,117.8
89	31.7	0.0	-116.4	0.0	-91.7	0.0	-80.9	0.0	-71.0	0.0	-96.2	0.0	-95.9	0.0	-119.3	0.0	-116.4	0.0	-132.8	0.0	-137.6	0.0	-128.0	0.0	-135.0	0.0	-1,321.2
90	32.2	0.0	-133.6	0.0	-107.8	0.0	-98.1	0.0	-87.7	0.0	-113.4	0.0	-112.6	0.0	-136.6	0.0	-133.6	0.0	-149.5	0.0	-154.8	0.0	-144.7	0.0	-152.3	0.0	-1,524.5
91	32.8	0.0	-150.8	0.0	-123.9	0.0	-115.3	0.0	-104.3	0.0	-130.6	0.0	-129.2	0.0	-153.8	0.0	-150.8	0.0	-166.2	0.0	-172.0	0.0	-161.4	0.0	-169.5	0.0	-1,727.8
92	33.3	0.0	-168.1	0.0	-140.0	0.0	-132.5	0.0	-121.0	0.0	-147.8	0.0	-145.9	0.0	-171.0	0.0	-168.1	0.0	-182.8	0.0	-189.2	0.0	-178.0	0.0	-186.7	0.0	-1,931.2
93	33.9	0.0	-185.3	0.0	-156.1	0.0	-149.7	0.0	-137.7	0.0	-165.0	0.0	-162.6	0.0	-188.2	0.0	-185.3	0.0	-199.5	0.0	-206.5	0.0	-194.7	0.0	-203.9	0.0	-2,134.5
94	34.4	0.0	-202.5	0.0	-172.2	0.0	-167.0	0.0	-154.3	0.0	-182.3	0.0	-179.2	0.0	-205.4	0.0	-202.5	0.0	-216.2	0.0	-223.7	0.0	-211.4	0.0	-221.2	0.0	-2,337.8
95	35.0	0.0	-219.7	0.0	-188.3	0.0	-184.2	0.0	-171.0	0.0	-199.5	0.0	-195.9	0.0	-222.7	0.0	-219.7	0.0	-232.8	0.0	-240.9	0.0	-228.0	0.0	-238.4	0.0	-2,541.2
96	35.6	0.0	-236.9	0.0	-204.5	0.0	-201.4	0.0	-187.7	0.0	-216.7	0.0	-212.6	0.0	-239.9	0.0	-236.9	0.0	-249.5	0.0	-258.1	0.0	-244.7	0.0	-255.6	0.0	-2,744.5
97	36.1	0.0	-254.2	0.0	-220.6	0.0	-218.6	0.0	-204.3	0.0	-233.9	0.0	-229.2	0.0	-257.1	0.0	-254.2	0.0	-266.2	0.0	-275.3	0.0	-261.4	0.0	-272.8	0.0	-2,947.8
98	36.7	0.0	-271.4	0.0	-236.7	0.0	-235.9	0.0	-221.0	0.0	-251.2	0.0	-245.9	0.0	-274.3	0.0	-271.4	0.0	-282.8	0.0	-292.6	0.0	-278.0	0.0	-290.0	0.0	-3,151.2
99	37.2	0.0	-288.6	0.0	-252.8	0.0	-253.1	0.0	-237.7	0.0	-268.4	0.0	-262.6	0.0	-291.6	0.0	-288.6	0.0	-299.5	0.0	-309.8	0.0	-294.7	0.0	-307.3	0.0	-3,354.5
100	37.8	0.0	-305.8	0.0	-268.9	0.0	-270.3	0.0	-254.3	0.0	-285.6	0.0	-279.2	0.0	-308.8	0.0	-305.8	0.0	-316.2	0.0	-327.0	0.0	-311.4	0.0	-324.5	0.0	-3,557.8

สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย



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 : PHUKET																									
January			N	NE	E	SE	S	SW	W	NW	Calm	Total	February			N	NE	E	SE	S	SW	W	NW	Calm	Total	March			N	NE	E	SE	S	SW	W	NW	Calm	Total
kts	km/h	m/s										46.3 46.3	kts	km/h	m/s										49.5 49.5	kts	km/h	m/s									52.5 52.5	
1-3	2-6	0.6-1.5	1.6	3.2	5.8	1.2	0.3	0	0.1	0.8	13	1-3	2-6	0.6-1.5	0.5	1.7	6.3	1.6	0.7	0.2	0.8	1.5	13.3	1-3	2-6	0.6-1.5	0.9	1.6	4.2	1.9	1	0.3	1.2	1.2	12.3			
4-16	7-30	1.8-8.5	2.2	11.8	22	3.1	0.3	0	0.3	1	40.7	4-16	7-30	1.8-8.5	1.1	4	22.3	4.3	0.8	0.2	1.4	2.9	37	4-16	7-30	1.8-8.5	1	2.8	14.8	6.8	1.5	0.2	3	4.9	35			
17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0			
>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0			
Total			3.8	15	27.8	4.3	0.6	0	0.4	1.8	46.3 100	Total			1.6	6.7	28.6	6.9	1.5	0.4	2.2	4.4	49.5 100	Total			1.9	4.4	19	8.7	2.5	0.5	4.2	6.1	52.5 100			
April			N	NE	E	SE	S	SW	W	NW	Calm	Total	May			N	NE	E	SE	S	SW	W	NW	Calm	Total	June			N	NE	E	SE	S	SW	W	NW	Calm	Total
kts	km/h	m/s										60.2 60.2	kts	km/h	m/s										61.5 61.5	kts	km/h	m/s									54.2 54.2	
1-3	2-6	0.6-1.5	0.7	0.7	2.9	1.6	1.3	0.3	1.7	1.5	10.7	1-3	2-6	0.6-1.5	0.5	0.5	1.5	1.4	1.2	0.9	3.1	1.5	10.6	1-3	2-6	0.6-1.5	0.1	0.1	0.4	0.8	0.4	1.5	5	1.1	9.4			
4-16	7-30	1.8-8.5	1.1	2	5.5	6	1.4	0.8	5.6	6.3	28.7	4-16	7-30	1.8-8.5	0.3	0.5	1.7	3.3	1.1	2.4	12.9	5.5	27.7	4-16	7-30	1.8-8.5	0.1	0.2	0.4	2.1	1	6.1	22.2	3.9	36			
17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0.1	0.1			
>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0		
Total			1.8	2.7	8.4	7.6	2.7	1.1	7.3	7.8	60.2 100	Total			0.8	1	3.2	4.7	2.3	3.3	16	7	61.5 100	Total			0.2	0.3	0.8	2.9	1.4	7.6	27.3	5	54.2 100			
July			N	NE	E	SE	S	SW	W	NW	Calm	Total	August			N	NE	E	SE	S	SW	W	NW	Calm	Total	September			N	NE	E	SE	S	SW	W	NW	Calm	Total
kts	km/h	m/s										56.8 56.8	kts	km/h	m/s										47.7 47.7	kts	km/h	m/s									58 58	
1-3	2-6	0.6-1.5	0.4	0.1	0.4	0.7	0.6	1.4	4.5	1.1	9.2	1-3	2-6	0.6-1.5	0.1	0	0.2	0.4	0.2	1	4.7	1.3	7.9	1-3	2-6	0.6-1.5	0.3	0.2	0.3	0.4	0.5	0.9	3.7	1.7	8			
4-16	7-30	1.8-8.5	0.2	0.1	0.3	1.9	0.5	5.4	20.8	4.7	33.9	4-16	7-30	1.8-8.5	0.1	0	0.3	1	0.7	6.3	29.2	6.6	44.2	4-16	7-30	1.8-8.5	0.3	0	0.2	1	0.8	3.6	19.9	8.4	34.2			
17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0			
>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0			
Total			0.6	0.2	0.7	2.6	1.1	6.8	25.3	5.8	56.8 100	Total			0.2	0	0.5	1.4	0.9	7.3	33.9	7.9	47.7 100	Total			0.6	0.2	0.5	1.4	1.3	4.5	23.6	10.1	58 100			
October			N	NE	E	SE	S	SW	W	NW	Calm	Total	November			N	NE	E	SE	S	SW	W	NW	Calm	Total	December			N	NE	E	SE	S	SW	W	NW	Calm	Total
kts	km/h	m/s										64.5 64.5	kts	km/h	m/s										59.7 59.7	kts	km/h	m/s									45.6 45.6	
1-3	2-6	0.6-1.5	0.5	0.6	1.5	1.1	0.5	0.4	2.3	1.2	8.1	1-3	2-6	0.6-1.5	1.3	3	2.7	1	0.2	0.2	0.8	1.4	10.6	1-3	2-6	0.6-1.5	2	4.4	3.6	0.6	0.1	0	0.2	0.8	11.7			
4-16	7-30	1.8-8.5	0.8	1.7	2.7	2.7	0.8	1.8	10.8	6.2	27.5	4-16	7-30	1.8-8.5	3	9.4	8.8	1.8	0.4	0.3	2.7	3.1	29.5	4-16	7-30	1.8-8.5	5.2	22.4	11.5	1.4	0.1	0	0.4	1.3	42.6			
17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0	17-27	31-50	8.6-14	0	0	0	0	0	0	0	0	0			
>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0	>27	>50	>14	0	0	0	0	0	0	0	0	0			
Total			1.3	2.3	4.2	3.8	1.3	2.2	13.1	7.4	64.5 100	Total			4.3	12.4	11.5	2.8	0.6	0.5	3.5	4.5	59.7 100	Total			7.2	26.8	15.4	2	0.2	0	0.6	2.1	45.6 100			

remark : kts = KNOTS

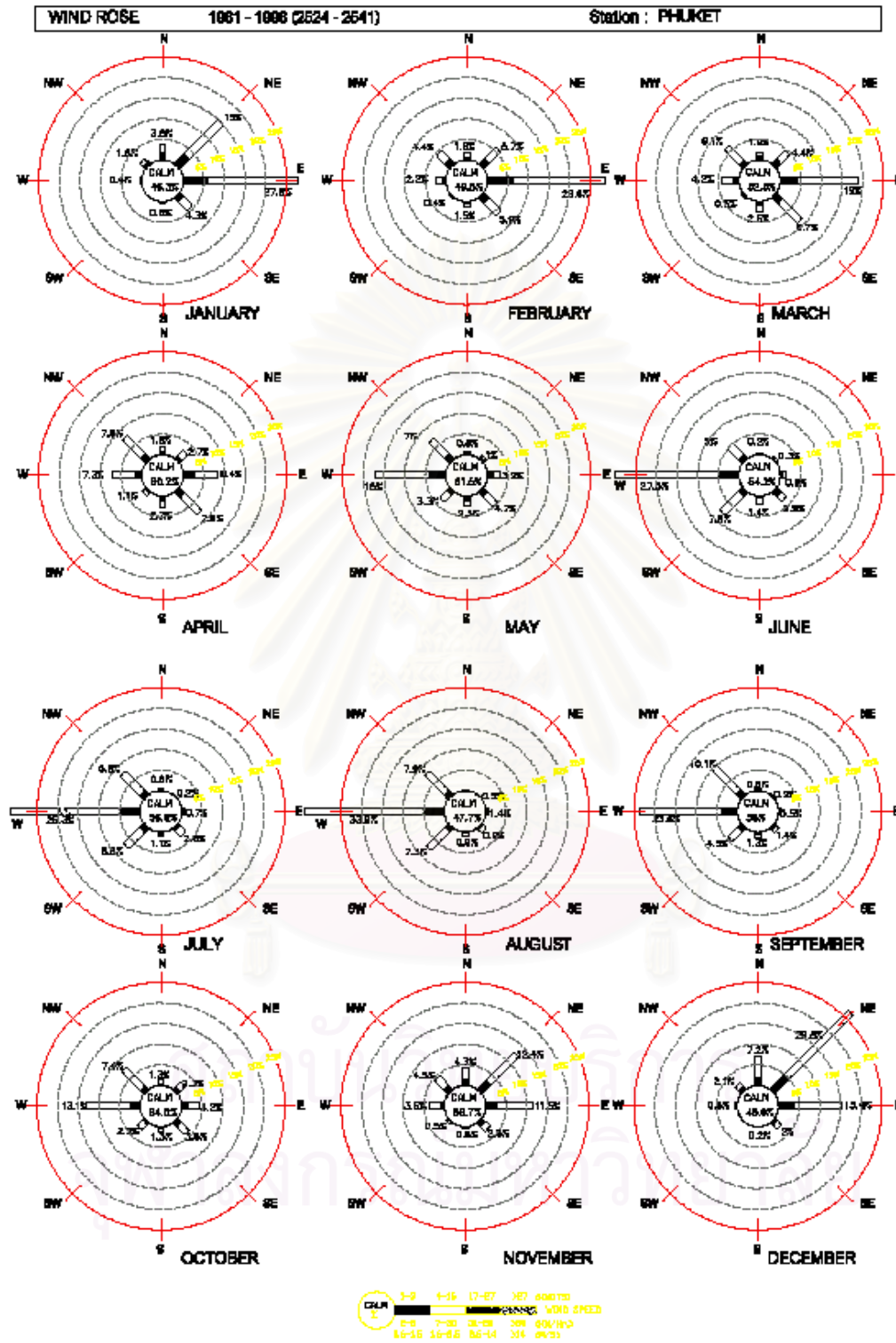
1 kts = 1.853 km/h = 0.514 m/s

\* this label shows the frequency of wind speed & direction in percent





แผนภูมิจำแนกความถี่ของลม ในแต่ละความเร็วและทิศทาง ที่เกิดลมรายเดือน (Wind rose)



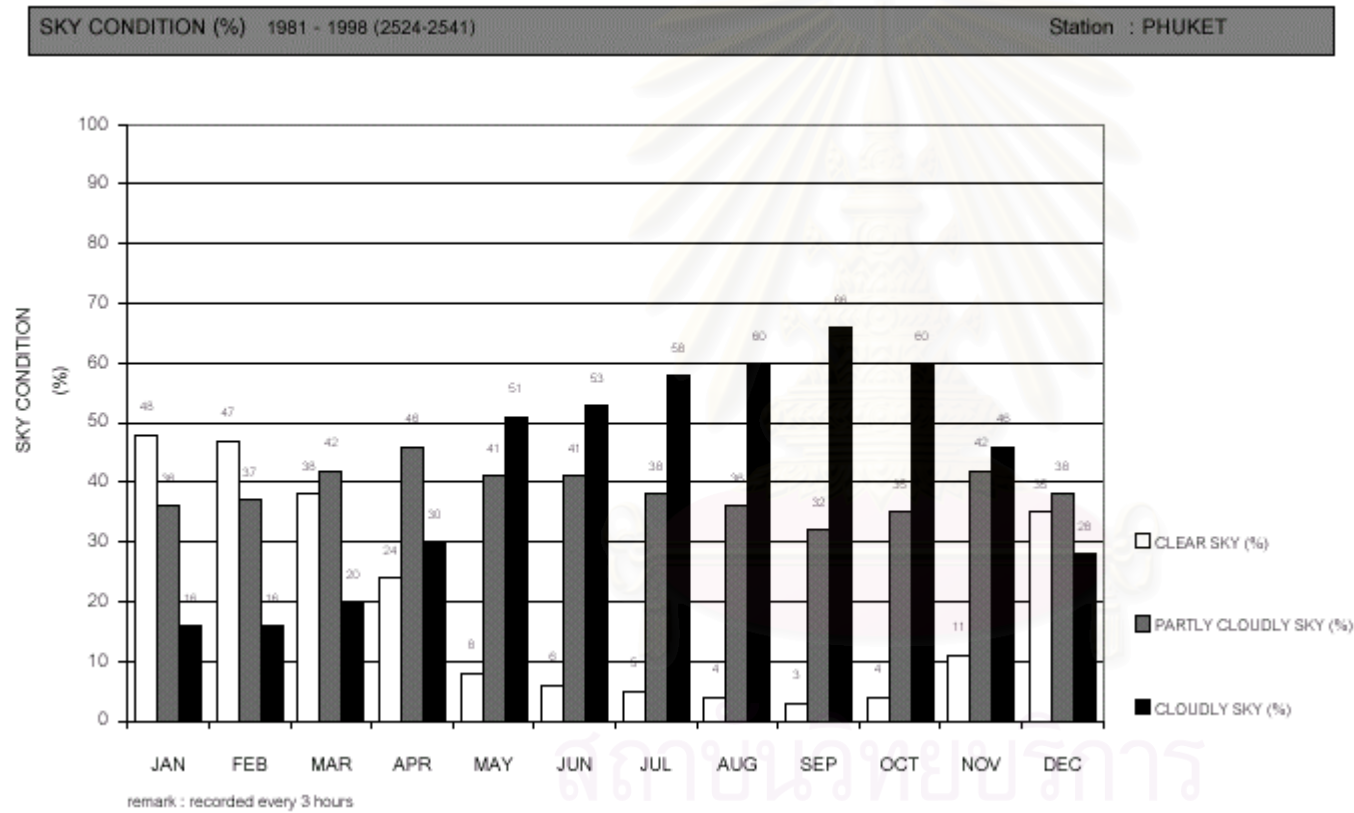
ตารางแสดงผลข้อมูลสภาพท้องฟ้าและสัดส่วนเปอร์เซ็นต์สภาพท้องฟ้า (sky cover and percentage of sky condition)

SKY COVER (%) & SKY CONDITION 1981 - 1998 (2524 - 2541)														Station : PHUKET																									
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						
1	43%	38%	19%	51%	36%	13%	41%	38%	21%	25%	43%	32%	15%	39%	46%	11%	46%	43%	7%	40%	53%	4%	47%	49%	1%	41%	58%	2%	33%	65%	1%	42%	57%	20%	35%	46%	18%	40%	42%
2	46%	40%	14%	51%	29%	20%	39%	38%	23%	24%	54%	22%	5%	35%	60%	4%	40%	55%	7%	46%	47%	5%	54%	40%	0%	43%	57%	3%	39%	58%	1%	43%	55%	16%	46%	38%	17%	42%	41%
3	52%	35%	13%	43%	35%	21%	46%	40%	14%	29%	46%	26%	12%	47%	41%	5%	43%	52%	8%	39%	53%	7%	46%	47%	1%	47%	52%	1%	38%	61%	13%	36%	51%	18%	44%	38%	20%	41%	39%
4	52%	31%	17%	38%	47%	15%	58%	31%	11%	25%	55%	20%	13%	43%	43%	8%	20%	72%	5%	41%	54%	4%	38%	59%	1%	35%	65%	1%	28%	71%	5%	38%	57%	21%	43%	37%	19%	37%	43%
5	56%	29%	15%	43%	36%	21%	41%	37%	22%	39%	50%	11%	15%	51%	34%	3%	43%	54%	7%	47%	46%	4%	33%	63%	2%	39%	59%	1%	24%	75%	7%	37%	57%	18%	39%	43%	20%	39%	42%
6	44%	37%	19%	35%	49%	17%	42%	40%	18%	37%	46%	18%	11%	43%	46%	3%	38%	59%	8%	38%	54%	1%	26%	73%	1%	36%	63%	4%	32%	65%	6%	54%	40%	23%	35%	43%	18%	39%	43%
7	51%	31%	18%	51%	36%	13%	43%	37%	21%	25%	49%	26%	14%	37%	49%	4%	44%	51%	7%	43%	50%	5%	24%	71%	1%	32%	67%	10%	42%	49%	7%	38%	55%	24%	32%	45%	20%	37%	43%
8	50%	38%	12%	52%	36%	12%	37%	41%	22%	18%	60%	22%	10%	40%	50%	4%	53%	43%	4%	37%	59%	3%	32%	65%	2%	38%	60%	6%	35%	60%	4%	43%	52%	18%	49%	32%	17%	42%	41%
9	49%	32%	20%	51%	38%	11%	35%	43%	22%	27%	49%	24%	7%	32%	60%	4%	35%	62%	5%	41%	54%	7%	29%	64%	3%	40%	57%	4%	42%	54%	6%	38%	57%	26%	40%	34%	19%	38%	43%
10	50%	37%	13%	44%	44%	12%	40%	38%	22%	25%	48%	27%	6%	40%	54%	6%	34%	60%	4%	32%	64%	6%	34%	60%	4%	39%	57%	4%	27%	68%	8%	33%	59%	34%	41%	25%	19%	37%	44%
11	54%	36%	10%	38%	43%	18%	51%	38%	11%	22%	52%	26%	7%	51%	43%	10%	38%	51%	7%	33%	60%	6%	33%	61%	7%	46%	46%	0%	25%	75%	8%	33%	59%	32%	34%	34%	20%	39%	41%
12	46%	38%	15%	45%	36%	19%	47%	38%	15%	19%	49%	32%	10%	45%	46%	5%	51%	44%	4%	29%	67%	7%	37%	57%	7%	32%	61%	1%	24%	76%	4%	43%	53%	18%	43%	38%	18%	39%	44%
13	58%	29%	13%	38%	41%	21%	45%	40%	15%	32%	43%	25%	5%	47%	48%	8%	39%	53%	4%	29%	67%	9%	38%	53%	4%	29%	67%	2%	26%	71%	6%	40%	54%	26%	38%	35%	20%	37%	43%
14	60%	29%	12%	40%	43%	16%	35%	36%	29%	24%	54%	22%	3%	35%	62%	7%	46%	46%	2%	42%	56%	6%	48%	46%	7%	21%	72%	6%	44%	50%	11%	51%	38%	28%	42%	30%	19%	41%	40%
15	49%	42%	10%	55%	34%	11%	44%	29%	26%	26%	51%	23%	3%	46%	51%	13%	43%	44%	1%	29%	69%	8%	45%	47%	7%	21%	73%	4%	41%	54%	11%	46%	43%	26%	46%	29%	21%	39%	40%
16	49%	35%	17%	54%	38%	8%	32%	43%	25%	30%	40%	30%	11%	40%	49%	13%	40%	48%	3%	31%	66%	7%	40%	54%	3%	29%	68%	7%	33%	60%	15%	38%	47%	32%	43%	24%	21%	37%	41%
17	49%	38%	13%	56%	35%	9%	44%	29%	26%	26%	44%	30%	13%	41%	46%	4%	40%	56%	7%	34%	59%	4%	27%	69%	4%	15%	81%	7%	41%	51%	19%	45%	36%	38%	35%	27%	23%	35%	42%
18	56%	29%	15%	54%	35%	12%	34%	43%	23%	28%	39%	33%	10%	36%	54%	1%	46%	52%	4%	38%	57%	2%	29%	69%	1%	16%	83%	7%	42%	51%	17%	44%	39%	27%	48%	25%	20%	37%	43%
19	45%	41%	14%	60%	29%	11%	36%	44%	20%	29%	35%	36%	6%	46%	49%	4%	34%	63%	5%	34%	61%	3%	35%	62%	2%	21%	77%	3%	33%	64%	12%	49%	40%	36%	33%	31%	20%	36%	44%
20	54%	36%	10%	52%	34%	14%	38%	38%	24%	19%	46%	35%	4%	35%	61%	2%	44%	54%	3%	42%	55%	3%	32%	65%	1%	27%	72%	2%	43%	54%	16%	47%	37%	48%	29%	23%	20%	38%	42%
21	53%	25%	22%	40%	42%	18%	34%	42%	24%	24%	35%	41%	6%	38%	56%	1%	48%	51%	2%	44%	54%	1%	32%	67%	5%	32%	63%	5%	47%	48%	13%	36%	51%	43%	35%	21%	19%	38%	43%
22	42%	35%	24%	53%	31%	16%	27%	48%	25%	17%	41%	42%	8%	49%	43%	6%	39%	55%	4%	29%	67%	1%	46%	53%	5%	33%	62%	4%	37%	59%	11%	42%	47%	51%	26%	23%	19%	38%	43%
23	36%	43%	21%	41%	38%	21%	33%	50%	17%	21%	37%	42%	1%	37%	62%	5%	43%	52%	4%	31%	65%	3%	30%	67%	7%	37%	57%	4%	49%	47%	14%	43%	43%	56%	28%	16%	19%	39%	43%
24	40%	37%	24%	39%	35%	26%	31%	52%	17%	17%	51%	32%	5%	49%	46%	9%	33%	58%	4%	40%	57%	9%	25%	66%	4%	38%	58%	5%	49%	46%	10%	47%	43%	45%	37%	18%	18%	41%	41%
25	40%	43%	17%	46%	38%	17%	30%	54%	16%	16%	43%	40%	8%	42%	50%	6%	44%	50%	4%	28%	68%	4%	26%	69%	1%	27%	72%	7%	30%	63%	19%	51%	30%	49%	32%	19%	19%	38%	43%
26	32%	43%	25%	61%	23%	16%	38%	38%	24%	14%	42%	44%	9%	38%	53%	4%	54%	42%	4%	38%	57%	2%	32%	65%	0%	23%	77%	4%	31%	65%	18%	46%	36%	51%	38%	12%	20%	37%	43%
27	40%	38%	21%	48%	40%	12%	43%	41%	16%	26%	45%	29%	10%	43%	48%	10%	39%	51%	7%	42%	51%	7%	27%	66%	1%	29%	71%	6%	38%	57%	16%	51%	33%	52%	38%	10%	22%	39%	39%
28	39%	43%	18%	54%	26%	19%	32%	51%	18%	20%	34%	46%	6%	46%	48%	4%	28%	68%	7%	38%	55%	4%	38%	57%	3%	29%	68%	3%	29%	68%	24%	44%	32%	49%	37%	14%	20%	37%	43%
29	47%	34%	19%	44%	47%	9%	30%	45%	25%	18%	47%	35%	10%	31%	60%	1%	40%	58%	2%	38%	60%	4%	35%	60%	0%	24%	76%	2%	32%	65%	17%	42%	41%	44%	41%	15%	18%	38%	44%
30	46%	39%	15%				30%	52%	18%	16%	39%	45%	6%	33%	61%	7%	46%	47%	2%	43%	54%	2%	43%	54%	1%	29%	70%	9%	37%	54%	17%	35%	49%	51%	32%	17%	17%	39%	44%
31	60%	28%	13%				19%	58%	23%				4%	45%	51%				2%	49%	49%	4%	38%	59%				6%	28%	66%				51%	31%	18%	21%	39%	40%
AVG % condition	48%	36%	16%	47%	37%	15%	38%	42%	20%	24%	46%	30%	8%	41%	51%	6%	41%	53%	5%	38%	58%	4%	36%	60%	3%	32%	66%	4%	35%	60%	11%	42%	46%	35%	38%	28%	19%	39%	42%
condition	3.9			3.9			4.5			5.5			7.0			7.2			7.5			7.6			7.9			7.6			6.7			5.0			6.2		

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

จุฬาลงกรณ์มหาวิทยาลัย

แผนภูมิสภาพท้องฟ้าและสัดส่วนเปอร์เซ็นต์สภาพท้องฟ้า (sky cover and percentage of sky condition)



สถาบันวิจัยการ  
จุฬาลงกรณ์มหาวิทยาลัย



ตารางแสดงผลข้อมูลระยะเวลาของแสงแดด (duration of sunshine)

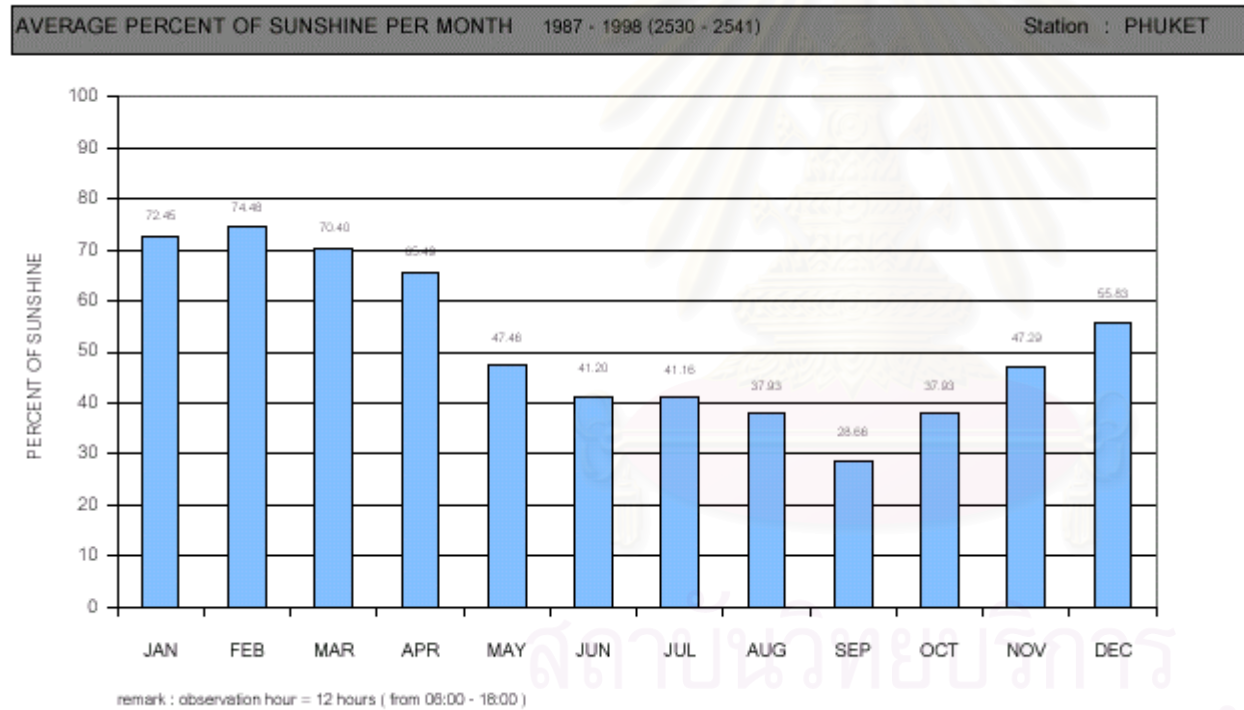
DURATION OF SUNSHINE (hours) 1981 - 1998 (2524 - 2541)														Station : PHUKET
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	ANNUAL	
DAY	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	hours avg %	
1	8.6 71.6%	8.8 73.7%	9.5 79.3%	7.6 63.0%	5.8 48.5%	6.3 52.2%	5.2 43.1%	5.0 42.0%	4.1 34.0%	5.5 46.1%	6.2 52.0%	6.1 50.8%	6.6 54.7%	
2	8.8 72.9%	9.2 76.8%	8.7 72.8%	6.8 56.7%	5.9 49.4%	5.0 41.5%	5.6 46.3%	6.4 53.1%	3.7 30.9%	4.3 35.9%	5.4 45.1%	5.9 48.8%	6.3 52.5%	
3	9.1 75.5%	7.8 65.3%	8.6 71.6%	7.4 61.9%	6.8 56.3%	3.6 30.3%	5.9 49.0%	5.3 44.2%	3.4 28.3%	4.9 41.1%	5.0 42.0%	6.4 53.5%	6.2 51.6%	
4	9.0 74.7%	8.3 68.9%	9.3 77.6%	8.2 68.5%	6.5 54.2%	4.6 38.4%	6.5 54.2%	5.1 42.5%	2.3 19.4%	4.3 36.0%	4.7 38.8%	5.9 49.0%	6.2 51.9%	
5	9.1 76.1%	7.8 65.3%	8.9 74.2%	8.3 68.8%	7.7 64.3%	5.0 41.5%	5.9 49.0%	4.3 35.6%	4.3 35.7%	4.3 36.0%	5.4 45.4%	5.7 47.3%	6.4 53.3%	
6	8.0 66.5%	8.4 70.3%	8.5 71.0%	8.0 66.4%	5.9 49.4%	4.8 40.3%	5.0 41.6%	3.6 30.0%	4.2 35.1%	4.5 37.1%	6.1 50.9%	5.4 44.6%	6.0 50.3%	
7	9.1 75.8%	9.3 77.7%	9.0 75.2%	8.3 69.4%	6.1 51.2%	5.7 47.6%	6.1 51.1%	4.1 34.3%	3.3 27.6%	6.2 51.9%	4.0 33.3%	5.6 47.0%	6.4 53.5%	
8	8.2 68.4%	9.3 77.6%	8.2 68.3%	5.5 45.6%	5.7 47.3%	4.5 37.1%	3.7 30.7%	5.0 41.3%	5.6 46.7%	4.3 36.2%	6.4 53.1%	6.2 51.7%		
9	9.0 75.2%	9.3 77.7%	8.6 71.5%	8.3 69.0%	4.6 38.0%	3.2 26.7%	6.2 51.3%	5.1 42.8%	4.2 34.9%	4.6 38.2%	4.6 38.7%	6.0 49.7%	6.1 51.2%	
10	9.1 75.8%	8.9 73.9%	8.4 70.0%	8.2 68.7%	7.1 59.0%	5.0 41.5%	5.7 47.2%	4.2 35.0%	5.1 42.4%	4.1 34.4%	4.9 41.0%	6.1 50.9%	6.4 53.3%	
11	8.8 73.1%	9.0 74.6%	8.7 72.8%	7.1 59.1%	5.8 48.5%	5.5 45.6%	5.5 45.6%	5.0 41.6%	5.2 43.3%	3.1 26.2%	4.8 40.2%	5.4 45.1%	6.2 51.3%	
12	8.2 68.7%	8.9 73.8%	8.4 69.7%	7.7 63.8%	6.0 50.3%	5.9 49.2%	2.5 21.0%	6.3 52.7%	4.1 34.2%	3.6 30.1%	5.0 41.3%	3.8 31.8%	5.9 48.9%	
13	9.0 74.6%	9.2 76.4%	8.7 72.6%	7.8 65.3%	5.4 44.6%	5.6 46.5%	4.5 37.4%	6.3 52.6%	4.1 34.4%	5.0 41.6%	4.7 39.0%	5.8 48.7%	6.3 52.8%	
14	8.6 71.8%	8.6 72.0%	8.3 69.2%	7.9 66.0%	5.2 43.3%	5.4 45.1%	5.2 43.5%	6.7 55.4%	3.2 26.9%	5.6 46.6%	5.8 48.5%	7.1 58.8%	6.5 53.9%	
15	8.8 73.2%	9.3 77.7%	8.2 68.4%	7.4 61.8%	5.6 46.8%	5.8 48.5%	3.7 31.2%	4.7 39.3%	2.6 21.3%	4.5 37.5%	6.0 50.3%	6.2 51.7%	6.1 50.6%	
16	8.2 67.9%	8.8 73.5%	7.5 62.5%	8.6 71.6%	5.2 43.4%	5.4 44.9%	5.7 47.7%	4.8 40.1%	2.9 24.1%	4.4 36.6%	6.4 53.3%	7.4 61.3%	6.3 52.2%	
17	9.0 74.8%	9.6 79.7%	7.5 62.8%	8.9 73.8%	6.8 56.7%	3.2 26.6%	5.8 48.2%	3.4 27.9%	2.3 19.2%	4.6 38.3%	6.6 54.6%	6.5 54.2%	6.2 51.4%	
18	8.4 69.9%	9.4 78.1%	7.3 60.6%	8.5 71.0%	5.0 41.5%	3.6 29.9%	5.5 45.4%	2.4 19.7%	1.2 9.9%	4.1 33.8%	6.3 52.1%	6.0 49.9%	5.6 46.8%	
19	9.3 77.4%	9.1 76.0%	8.7 72.4%	8.0 66.5%	5.9 48.8%	3.3 27.4%	4.7 38.8%	5.6 46.9%	2.3 19.4%	5.5 46.0%	6.6 54.7%	7.3 60.9%	6.4 52.9%	
20	9.1 75.6%	9.3 77.6%	9.3 77.6%	7.8 65.1%	4.3 35.9%	5.1 42.6%	4.3 36.0%	4.4 36.7%	3.0 25.1%	3.7 30.6%	6.4 53.4%	8.0 66.3%	6.2 51.9%	
21	9.0 74.7%	8.5 71.2%	7.4 61.6%	7.8 64.9%	5.3 44.2%	5.5 46.0%	4.3 35.4%	3.5 29.2%	4.2 34.6%	4.6 38.5%	3.9 32.4%	7.9 65.7%	6.0 49.9%	
22	7.9 66.0%	9.4 78.2%	8.1 67.4%	7.3 60.8%	5.7 47.8%	4.7 39.3%	3.6 30.2%	4.3 35.8%	3.5 28.8%	4.6 38.5%	4.2 34.8%	7.0 58.7%	5.9 48.9%	
23	7.8 64.8%	8.6 71.5%	9.0 74.9%	7.9 66.0%	4.3 35.8%	5.0 41.7%	4.0 33.1%	3.2 26.6%	3.9 32.8%	6.1 50.5%	4.9 41.1%	7.8 64.9%	6.0 50.3%	
24	8.4 70.1%	8.0 66.3%	8.6 71.6%	8.2 68.5%	5.2 43.1%	4.8 40.1%	4.2 35.1%	4.1 34.4%	4.0 33.0%	5.0 41.3%	5.9 49.0%	7.8 65.3%	6.2 51.5%	
25	8.4 70.3%	8.9 74.4%	8.0 66.9%	7.6 63.6%	5.4 44.7%	5.2 42.9%	4.7 39.2%	4.0 33.5%	2.9 24.2%	4.4 36.6%	6.8 56.9%	7.8 65.3%	6.2 51.5%	
26	7.8 65.0%	9.3 77.5%	8.1 67.8%	7.3 60.6%	6.9 57.2%	4.7 39.4%	4.6 38.1%	5.2 43.5%	2.8 23.6%	4.1 34.2%	7.0 58.5%	7.7 64.1%	6.3 52.5%	
27	8.5 71.1%	9.5 79.3%	9.0 74.9%	7.7 63.8%	4.6 38.7%	5.3 44.3%	6.3 52.8%	3.6 29.8%	3.2 26.6%	5.0 41.5%	7.6 63.3%	8.4 70.3%	6.6 54.7%	
28	9.0 75.0%	9.0 74.8%	9.3 77.1%	7.0 58.5%	6.2 51.9%	4.8 39.9%	4.1 34.0%	3.6 29.7%	3.0 24.8%	2.9 23.8%	7.6 63.3%	7.9 65.4%	6.2 51.5%	
29	8.6 71.7%	9.6 80.0%	7.9 65.7%	8.6 71.4%	5.3 44.0%	4.6 38.3%	4.7 39.4%	4.8 39.7%	2.5 21.0%	3.8 31.9%	6.6 55.3%	7.9 65.5%	6.2 52.0%	
30	9.1 75.9%		8.5 70.8%	7.4 61.7%	4.6 38.5%	6.1 50.9%	4.8 40.0%	4.1 33.8%	2.8 23.1%	4.6 38.5%	6.4 53.5%	8.2 68.3%	6.1 50.5%	
31	9.8 81.8%		7.6 63.7%		6.0 49.7%		4.1 34.4%	4.4 36.8%		3.6 29.9%		6.5 54.0%	6.0 50.0%	
Average	8.7 72.4%	8.9 74.5%	8.4 70.4%	7.9 65.5%	5.7 47.5%	4.9 41.2%	4.9 41.2%	4.6 37.9%	3.4 28.7%	4.6 37.9%	5.7 47.3%	6.7 55.8%	6.2 51.6%	
Total	269.5	259.2	261.9	235.8	176.6	148.3	153.1	141.1	103.2	141.1	170.3	207.7	2,267.7	

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

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แผนภูมิระยะเวลาของแสงแดด (average percent of sunshine per month)



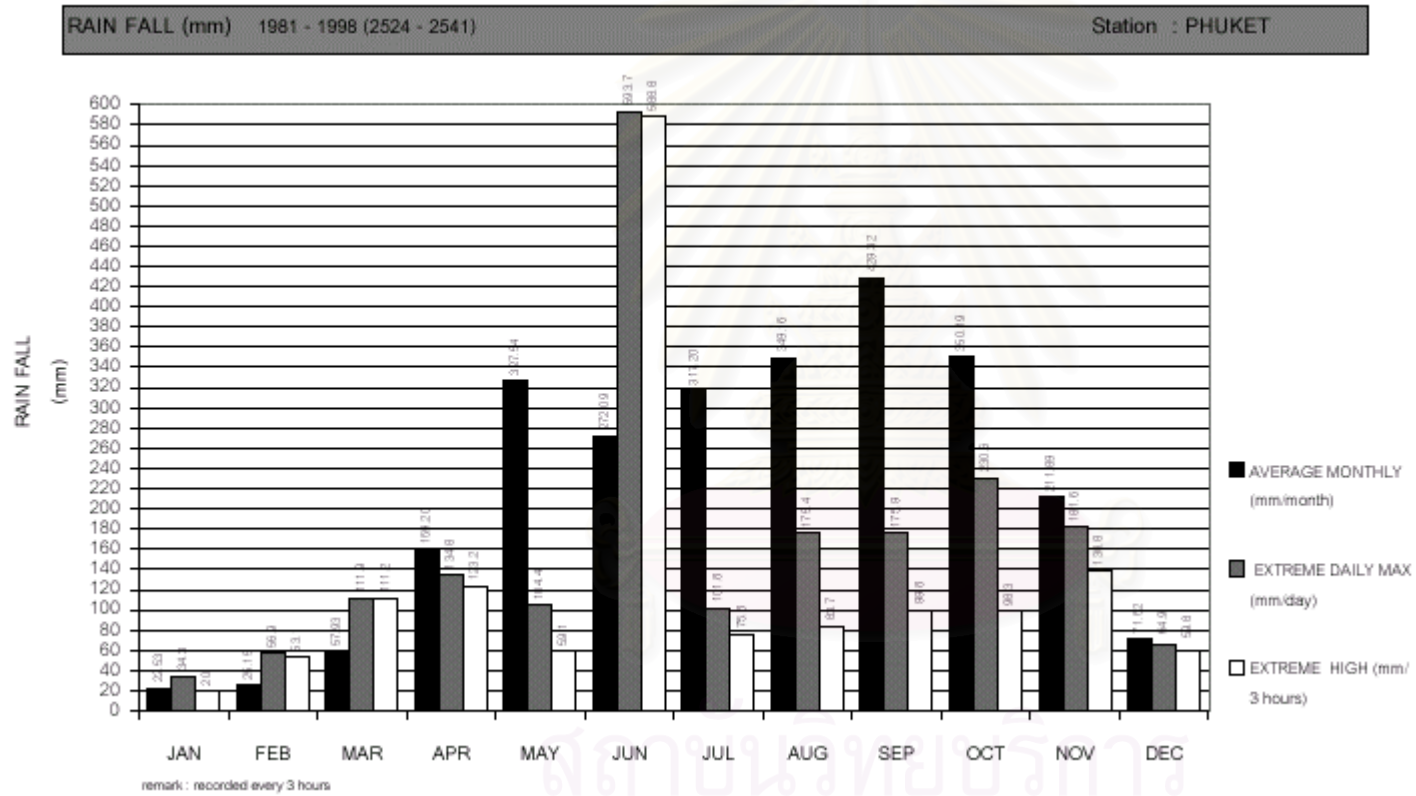
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ตารางแสดงผลข้อมูลปริมาณน้ำฝน (rain

RAIN FALL (mm) 1981 - 1998 (2524 - 2541) Station : PHUKET													
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	0.2	1.9	1.4	2.1	13.8	7.1	6.0	5.5	8.5	8.3	6.5	5.6	66.9
2	0.3	1.3	3.4	7.7	8.2	8.9	13.5	1.8	10.8	11.9	16.5	3.5	87.9
3	0.3	5.6	0.0	4.5	8.9	15.0	4.9	11.2	7.8	13.4	6.9	4.4	82.8
4	0.1	1.0	0.0	3.7	10.9	46.9	8.2	8.0	11.2	14.9	8.6	1.5	115.0
5	0.3	0.1	0.3	0.5	7.4	4.7	11.9	18.6	9.8	12.4	8.1	12.9	87.0
6	0.4	0.0	2.6	6.5	3.0	7.9	11.3	9.7	11.5	13.5	9.0	2.1	77.7
7	0.3	2.4	0.0	6.0	6.4	11.5	17.9	7.2	11.4	6.7	4.3	2.9	76.9
8	0.1	0.0	1.4	1.2	13.3	7.9	14.2	12.3	11.9	14.9	15.0	0.2	92.4
9	1.7	0.0	0.5	3.7	14.9	8.5	10.8	15.0	16.8	11.8	16.6	1.1	101.3
10	0.0	2.1	5.0	2.5	5.3	14.8	14.8	13.4	10.2	14.2	8.4	0.1	90.8
11	0.0	0.4	0.4	3.4	10.7	8.4	12.2	12.4	9.8	21.8	4.9	3.4	87.9
12	0.0	1.1	0.2	2.1	4.4	2.5	12.0	5.9	12.1	15.9	12.0	0.6	69.0
13	0.3	0.3	4.5	3.5	8.1	9.6	11.7	6.3	11.8	8.3	4.0	3.5	71.9
14	1.3	2.0	2.9	4.3	7.7	4.1	8.4	11.1	25.5	4.5	7.5	0.9	80.1
15	0.1	0.8	0.3	1.7	13.7	9.0	16.2	10.2	18.0	20.0	7.0	2.7	99.5
16	0.2	0.4	1.4	5.5	13.1	4.7	8.5	19.9	15.3	31.0	10.9	6.3	117.2
17	0.0	0.0	2.9	5.9	14.1	12.3	12.8	13.1	26.4	8.5	4.6	2.0	102.7
18	1.6	0.2	2.6	12.9	15.3	14.0	9.1	4.6	19.9	8.9	2.4	3.0	94.5
19	1.4	0.0	1.0	11.1	21.3	8.7	11.6	14.6	15.7	10.4	4.9	1.0	101.8
20	2.7	0.1	4.1	1.6	14.4	4.1	8.1	8.5	18.2	4.9	4.3	4.8	75.8
21	0.4	0.8	2.6	7.4	10.2	2.9	5.9	13.1	10.5	9.8	4.7	1.3	69.4
22	1.3	0.0	2.8	3.3	8.4	8.6	9.1	7.0	8.4	8.2	4.3	1.3	62.5
23	1.4	1.1	0.5	5.4	8.4	5.5	7.7	11.8	12.9	8.9	14.2	0.4	78.2
24	2.2	0.8	1.2	2.4	14.4	6.5	10.3	20.2	18.0	3.6	3.6	0.8	84.0
25	0.4	0.2	0.9	6.0	7.2	5.9	22.2	26.2	11.0	16.4	1.0	1.0	98.5
26	0.2	0.0	0.1	11.1	6.1	5.6	9.2	17.8	17.0	13.0	3.2	1.3	84.8
27	1.1	2.6	2.4	4.0	16.1	5.1	6.1	13.3	23.6	9.1	3.9	0.3	87.5
28	1.5	0.0	1.2	12.3	7.3	7.3	6.5	7.8	25.3	8.7	4.7	1.4	84.0
29	2.1	0.0	9.6	6.1	10.9	5.1	10.2	5.9	11.8	11.7	8.4	0.0	81.8
30	0.2		1.0	10.5	11.9	8.9	3.1	7.8	8.3	2.8	1.3	0.8	56.6
31	0.5		0.9		11.9		2.7	9.1		1.8		0.5	27.2
Monthly	22.5	25.1	57.9	159.2	327.5	272.1	317.2	349.2	429.3	350.2	211.9	71.5	2,593.7
Daily record high	34.3	56.9	111.9	134.8	104.4	593.7	101.8	175.4	175.9	230.6	181.6	64.9	593.7
3 hr. Extremes	20.0	53.1	111.2	123.2	59.1	588.8	75.8	83.7	99.8	98.3	138.8	59.8	588.8
No. of rainy days	1	2	2	5	15	16	17	20	22	17	6	1	125

fall)

แผนภูมิปริมาณน้ำฝน (rain fall)



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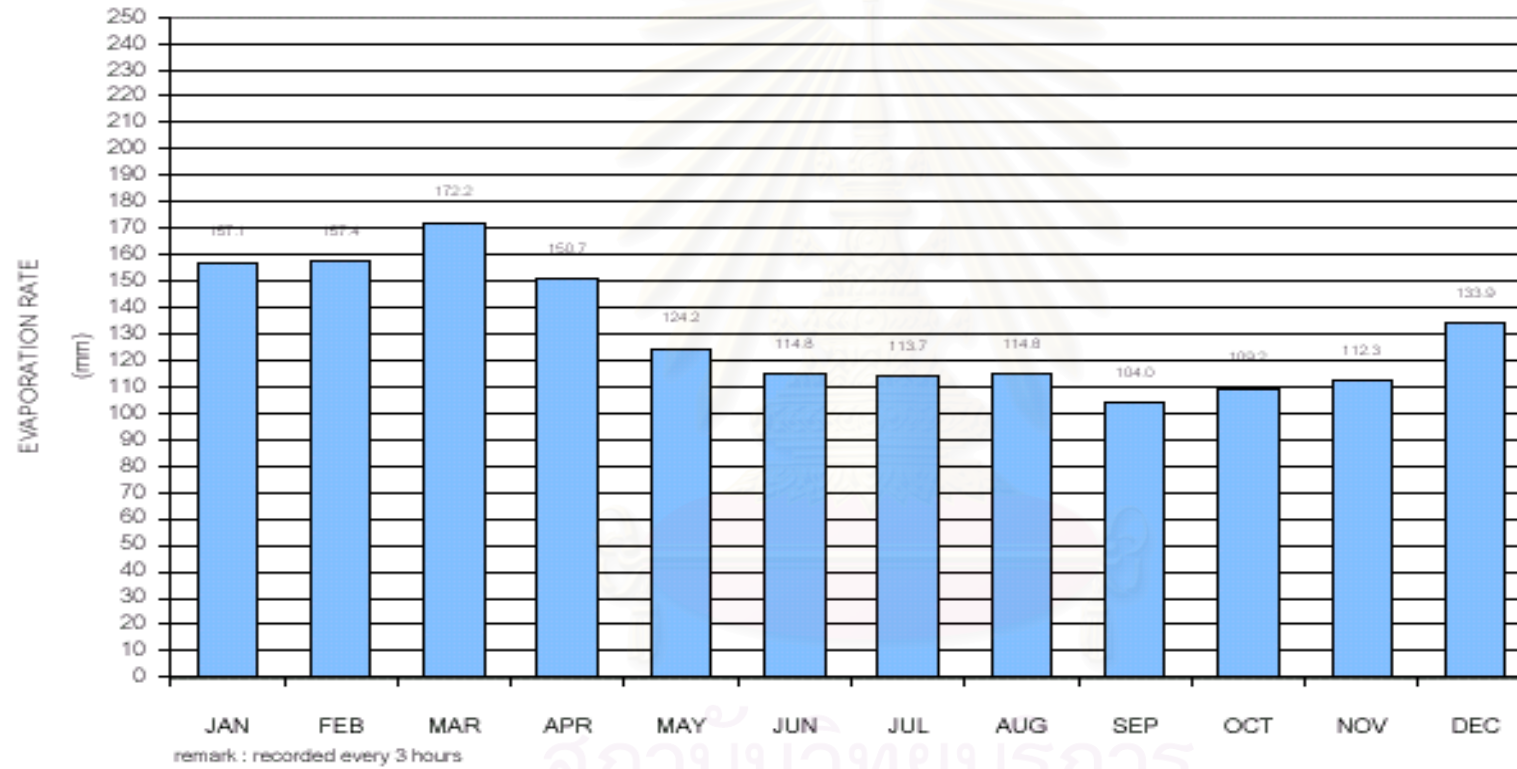
ตารางแสดงผลข้อมูลค่าเฉลี่ยอัตราการระเหยของน้ำรายวัน (evaporation)

EVAPORATION (mm) 1981 - 1998 (2524 - 2541)													Station : PHUKET
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	4.7	5.4	5.8	5.1	4.3	3.5	3.8	3.7	3.7	3.8	4.3	4.2	52.2
2	5.1	6.1	5.9	5.3	3.9	4.0	3.9	4.0	2.8	3.6	3.5	3.6	51.6
3	4.7	4.7	5.8	5.0	4.3	3.8	3.7	3.9	3.8	3.9	3.4	4.1	51.2
4	5.1	5.1	6.1	5.3	3.7	3.8	3.9	3.4	3.3	3.2	3.8	3.6	50.2
5	4.9	5.5	5.8	5.5	4.4	3.8	4.3	3.9	4.0	2.9	3.4	3.9	52.3
6	4.9	4.7	5.5	5.5	3.6	3.7	3.7	3.2	3.8	3.3	4.1	4.0	49.9
7	5.1	5.6	5.3	5.0	4.2	3.3	3.6	3.2	3.9	4.0	4.0	3.9	50.9
8	5.3	5.5	5.9	5.0	4.3	4.2	3.4	4.1	4.0	3.9	3.8	3.9	53.1
9	4.5	5.8	5.5	5.0	3.8	3.3	3.1	4.0	3.4	3.4	3.3	3.9	48.9
10	5.3	5.8	5.7	4.9	4.1	3.5	3.6	3.6	3.9	3.8	3.9	4.2	52.3
11	5.2	5.0	5.6	5.2	3.9	4.1	3.8	3.7	4.3	3.4	3.6	3.5	51.3
12	4.7	5.2	5.8	4.8	4.1	4.3	3.7	3.8	3.6	3.4	3.3	3.7	50.3
13	5.3	5.2	5.3	5.0	3.9	3.5	3.7	3.7	3.6	3.3	3.5	4.6	50.6
14	4.7	4.6	6.0	5.7	4.1	4.3	3.7	4.9	3.4	3.7	3.7	4.2	53.0
15	5.1	5.2	5.3	4.9	3.9	4.5	3.3	3.8	3.3	3.3	3.9	4.0	50.3
16	5.1	5.6	4.9	5.9	4.4	3.8	3.5	4.0	3.8	3.4	3.5	4.4	52.2
17	4.9	5.0	5.4	5.4	4.7	3.5	3.6	3.8	2.7	3.0	3.7	4.6	50.2
18	4.9	5.1	5.7	4.8	4.1	3.9	4.4	3.3	2.8	3.7	3.7	4.5	50.9
19	5.1	5.5	5.4	5.0	3.8	3.8	3.6	4.1	3.1	3.1	3.9	4.3	50.6
20	5.3	5.6	5.9	4.4	3.8	3.7	3.2	3.9	2.9	3.1	3.8	4.7	50.4
21	4.8	5.1	5.2	4.5	3.9	3.5	2.9	3.6	3.5	3.4	3.5	4.9	48.7
22	5.2	6.0	5.1	4.7	4.4	3.7	3.5	3.4	3.5	3.8	3.6	4.7	51.7
23	4.5	5.6	5.4	4.9	3.7	3.8	3.3	3.6	3.7	4.0	3.4	4.8	50.6
24	5.2	5.4	5.4	5.1	4.1	4.5	3.5	3.5	3.7	4.0	3.7	4.9	53.1
25	5.2	5.6	5.7	4.7	3.8	3.8	3.5	2.9	3.6	4.3	4.1	4.7	52.0
26	5.1	5.6	5.8	4.8	4.2	4.3	3.5	3.8	3.0	3.8	3.9	4.7	52.5
27	5.4	6.4	5.5	5.1	3.9	4.1	3.5	3.6	3.3	3.3	4.4	4.9	53.3
28	5.6	5.9	5.4	4.5	4.3	3.6	4.0	3.3	3.2	3.3	3.9	4.6	51.6
29	5.5	5.6	5.4	5.2	3.3	3.8	4.2	4.0	3.5	3.3	4.1	4.6	52.5
30	5.4		5.6	4.4	3.5	3.7	4.3	3.7	3.1	3.9	3.8	5.0	46.3
31	5.5		5.1		3.8		4.0	3.3		3.2		4.5	29.5
AVG.Monthly	157.1	157.4	172.2	150.7	124.2	114.8	113.7	114.8	104.0	109.2	112.3	133.9	1,564.4
Daily Mean	5.1	5.4	5.6	5.0	4.0	3.8	3.7	3.7	3.5	3.5	3.7	4.3	4.3
Extremes	8.1	10.0	11.5	12.2	11.2	9.7	13.3	7.3	9.4	8.8	8.6	8.3	13.3



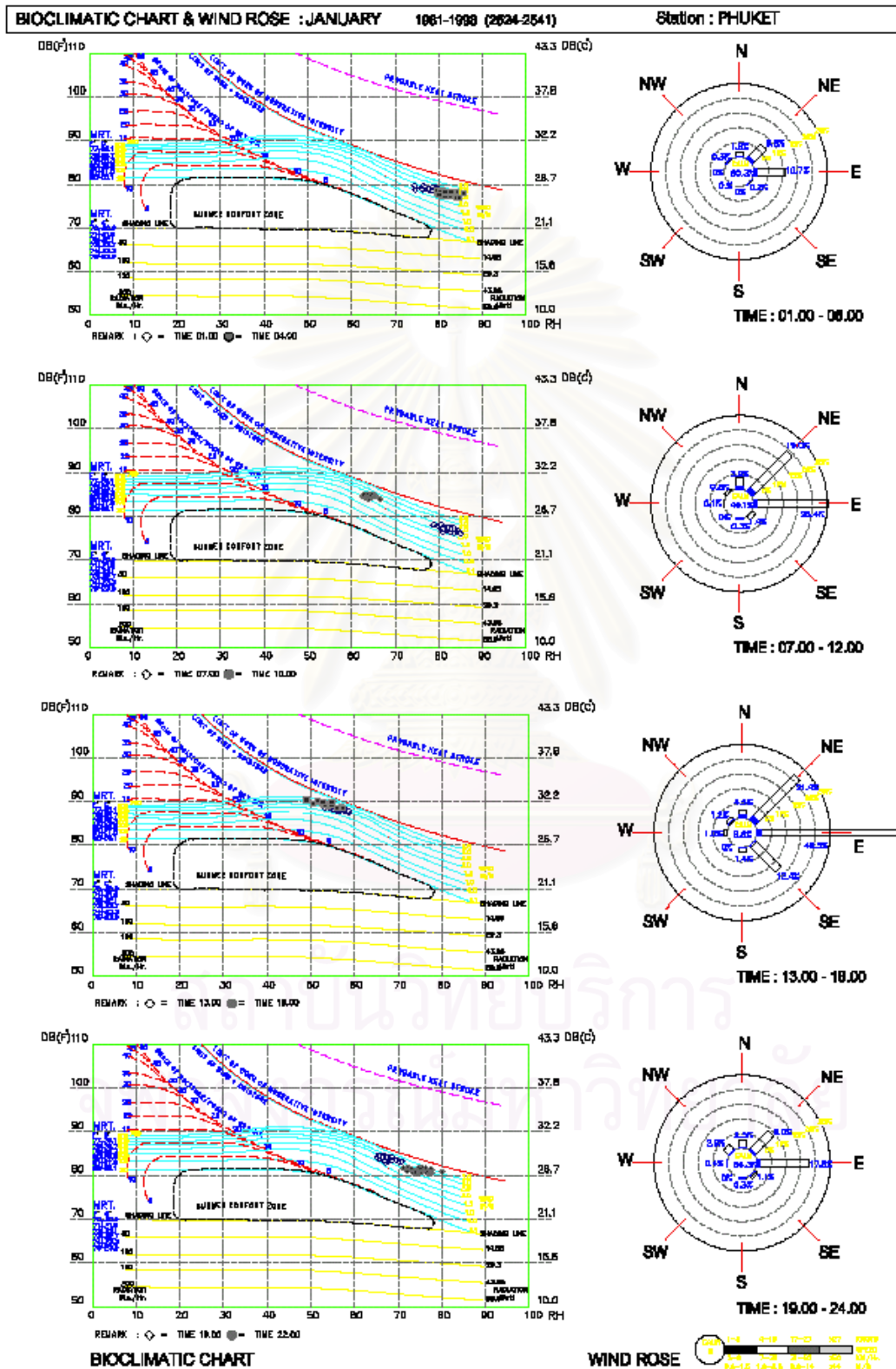
แผนภูมิค่าเฉลี่ยอัตราการระเหยของน้ำรายเดือน (average monthly evaporation from U.S. class "A" pan)

AVERAGE MONTHLY EVAPORATION (mm) from U.S. class "A" pan 1981 - 1998 (2524 - 2541) Station : PHUKET

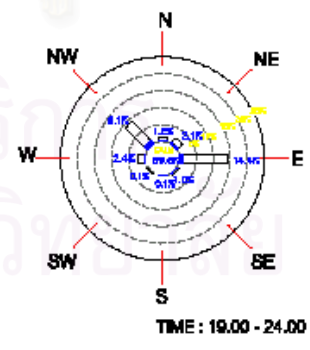
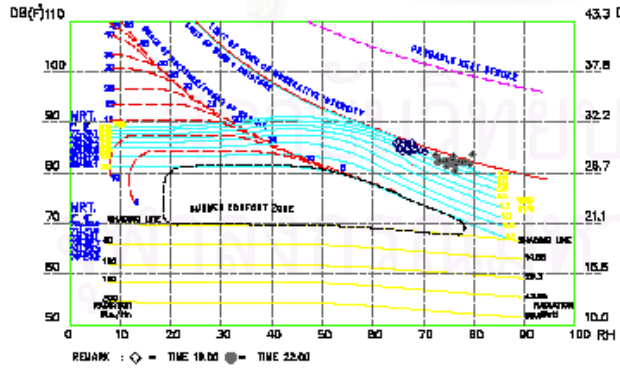
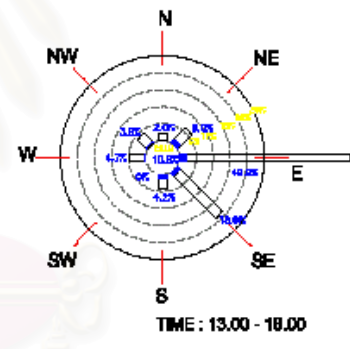
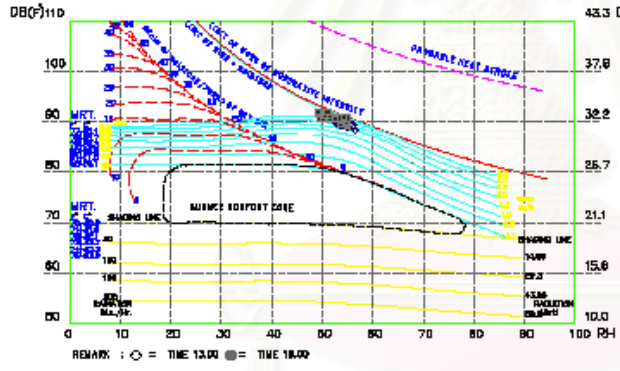
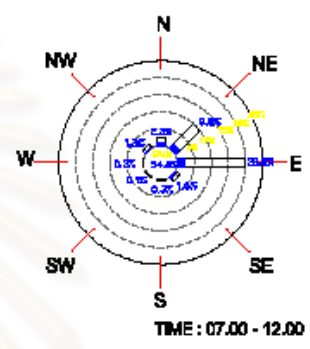
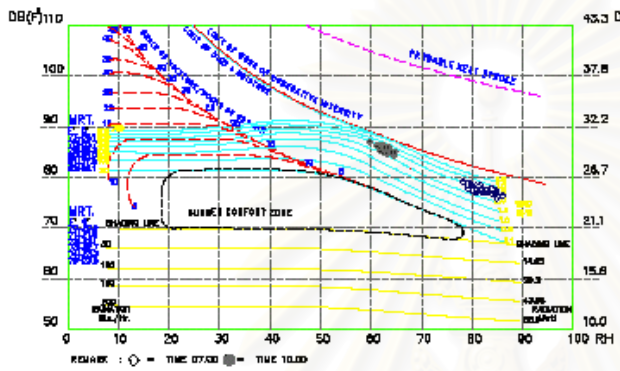
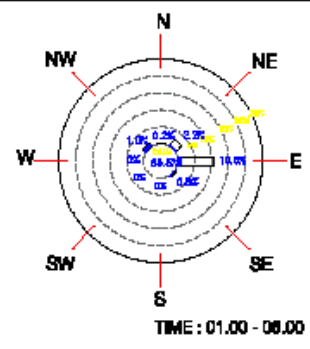
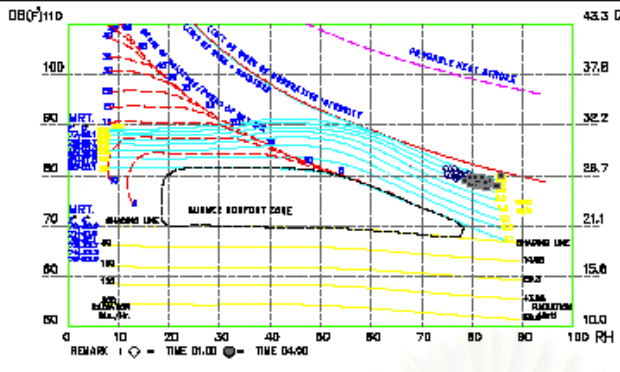


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แผนภูมิความสัมพันธ์ระหว่างข้อมูลสภาพอากาศในแผนภูมิไบโอไคลเมตริก (bioclimatic chart) กับแผนภูมิแสดงความถี่ของลมในแต่ละความเร็วและทิศทางที่เกิดลมรายเดือน (wind rose) แยกตามช่วงเวลา



**BIOCLIMATIC CHART & WIND ROSE : FEBRUARY 1961-1998 (2624-2641) Station : PHUKET**

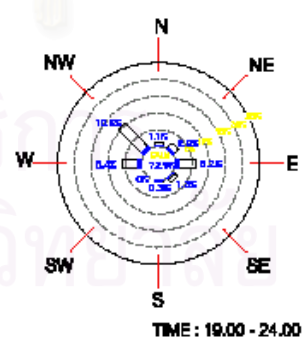
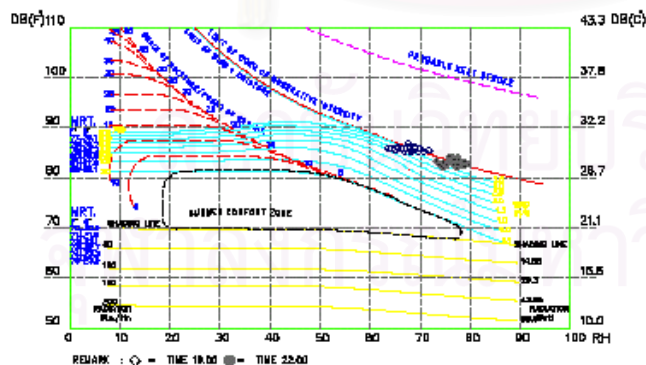
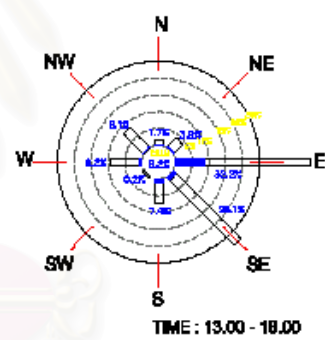
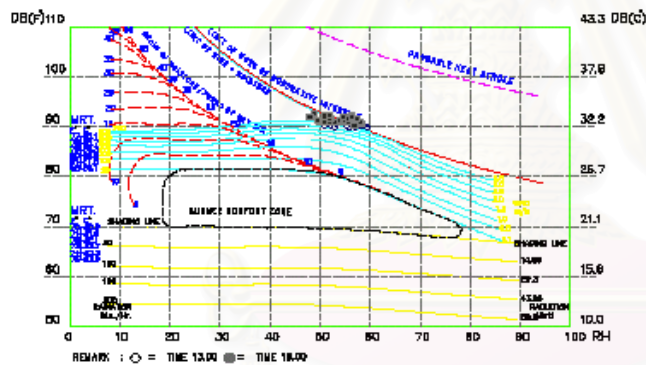
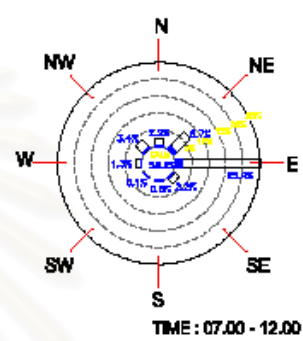
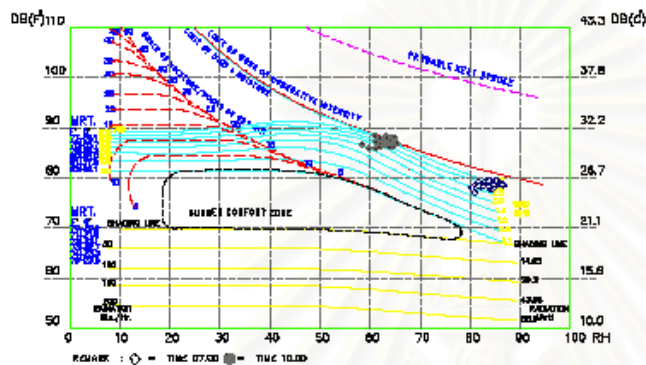
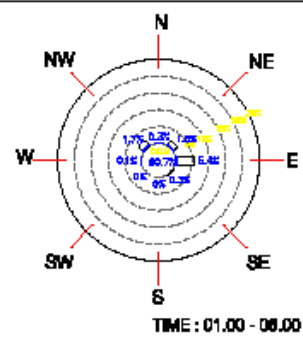
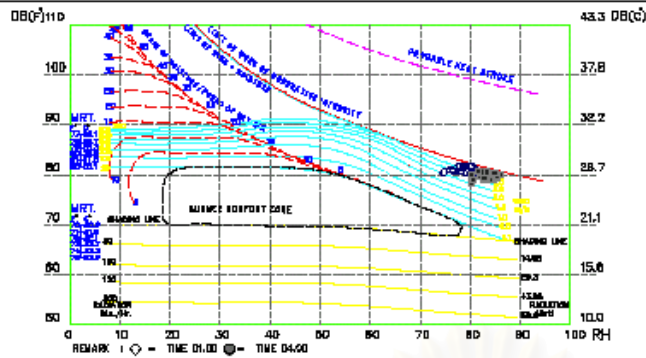


**BIOCLIMATIC CHART**

**WIND ROSE**



**BIOCLIMATIC CHART & WIND ROSE : MARCH 1961-1998 (2624-2641) Station : PHUKET**



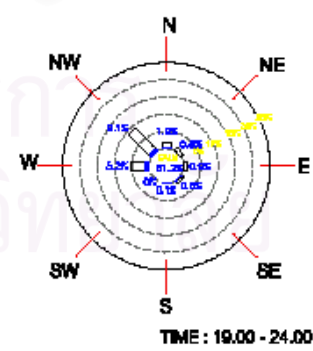
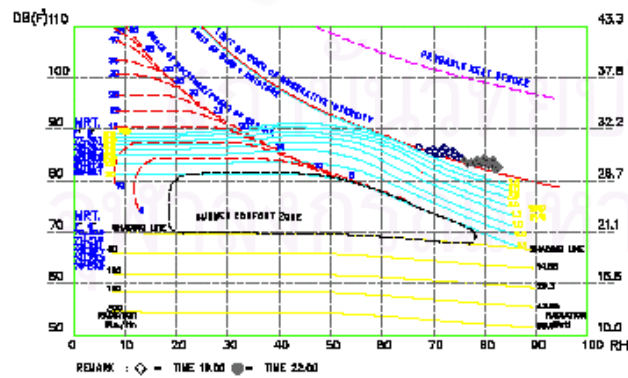
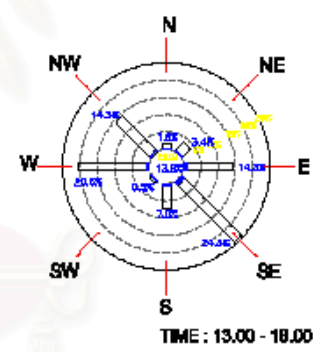
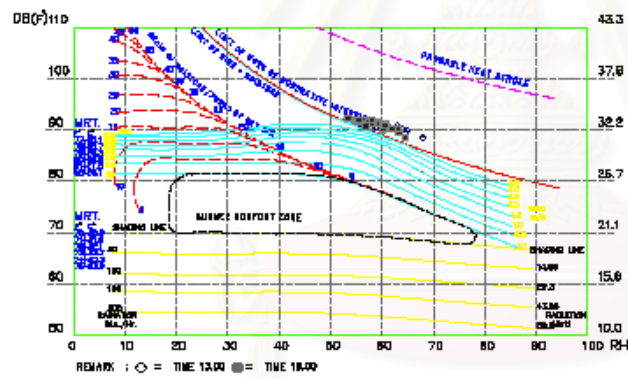
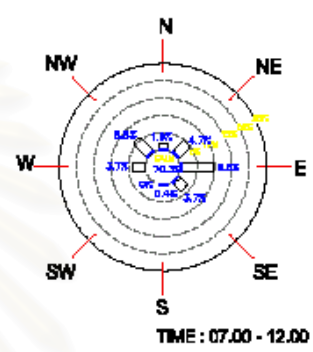
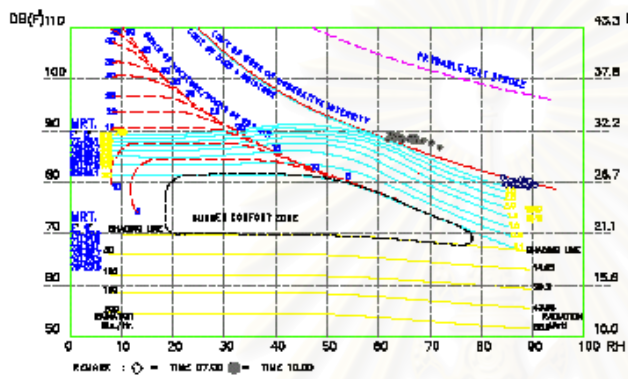
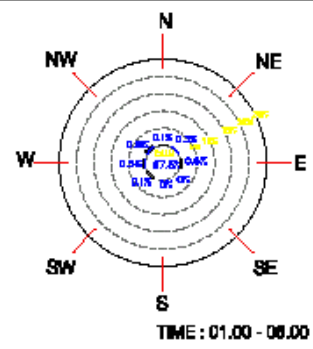
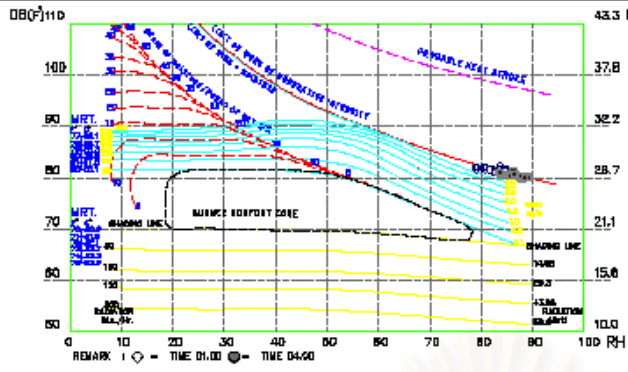
**BIOCLIMATIC CHART**

**WIND ROSE**





BIOCLIMATIC CHART & WIND ROSE : APRIL 1961-1998 (2624-2641) Station : PHUKET

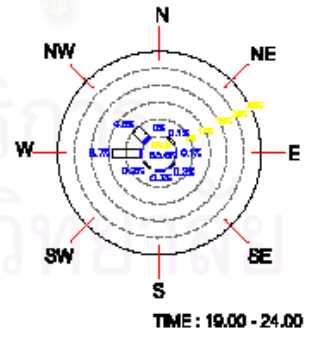
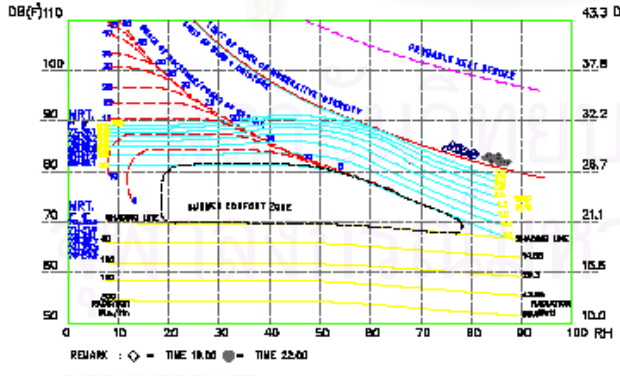
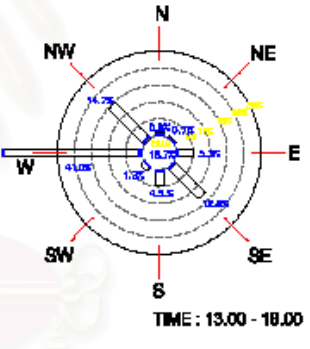
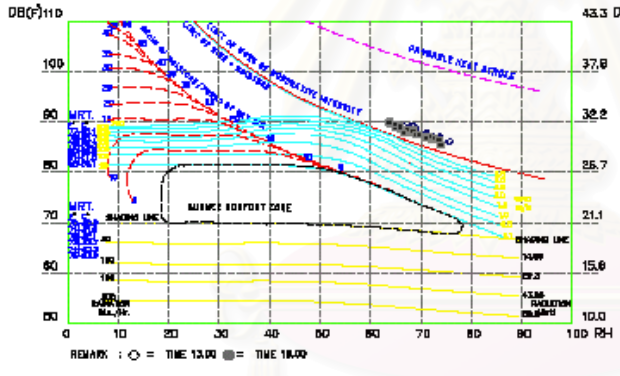
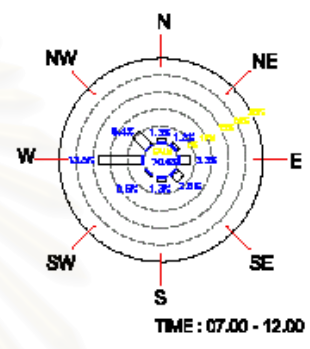
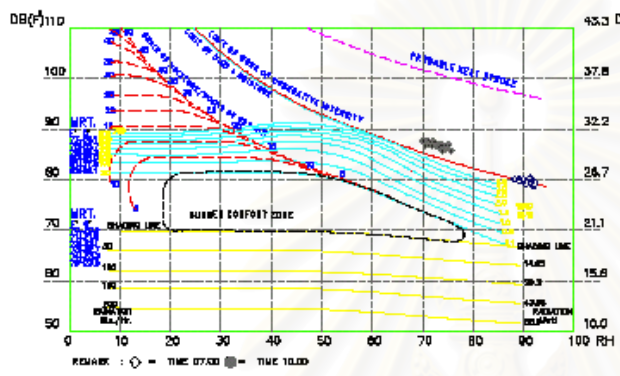
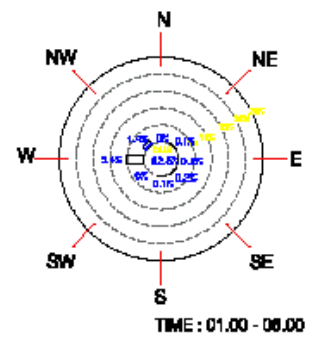
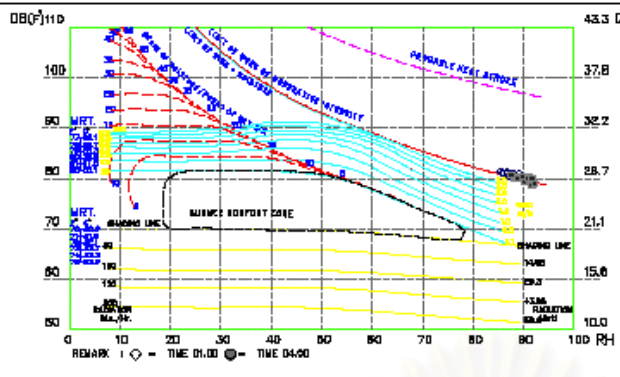


BIOCLIMATIC CHART

WIND ROSE



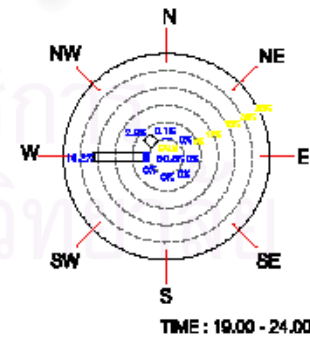
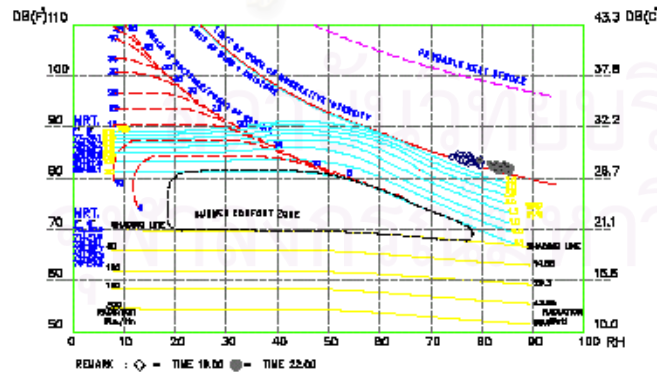
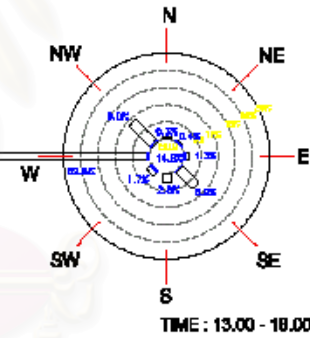
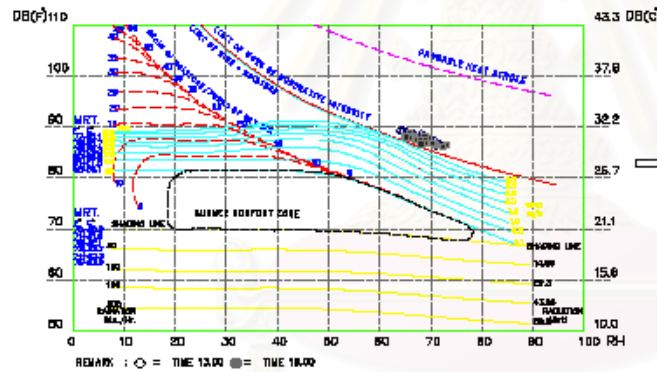
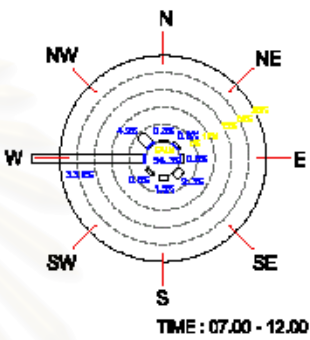
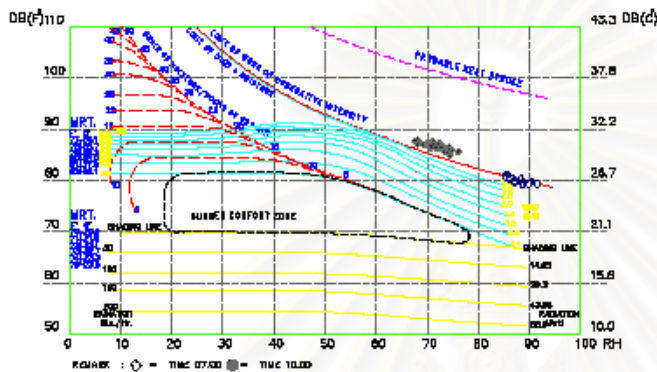
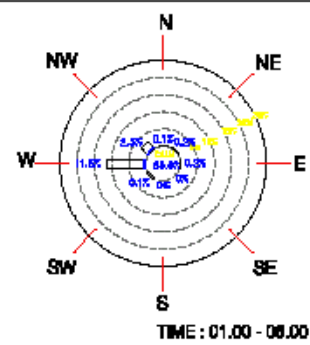
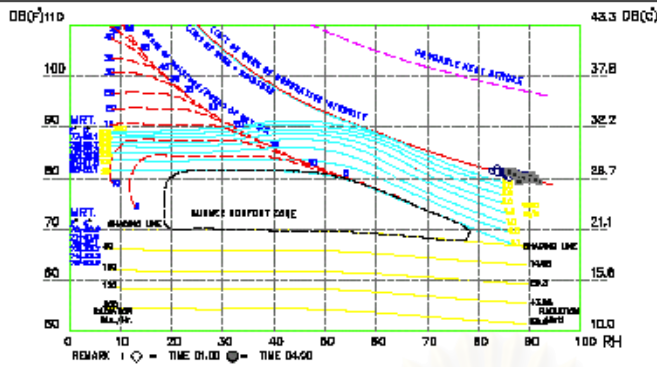
**BIOCLIMATIC CHART & WIND ROSE : MAY** 1961-1990 (2624-2541) Station : PHUKET



BIOCLIMATIC CHART



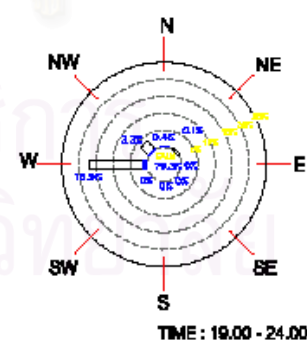
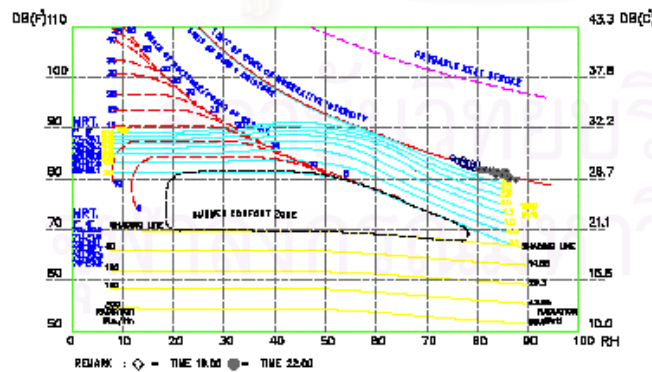
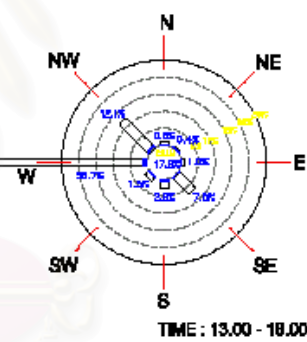
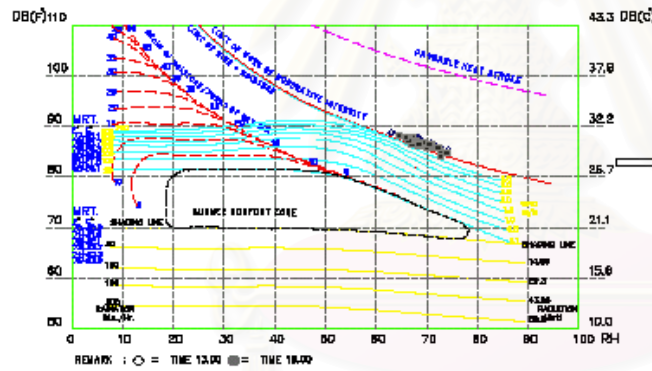
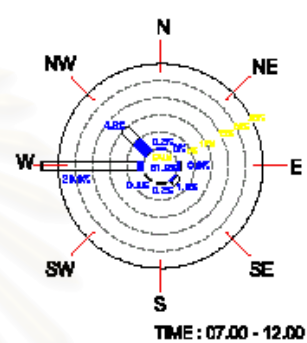
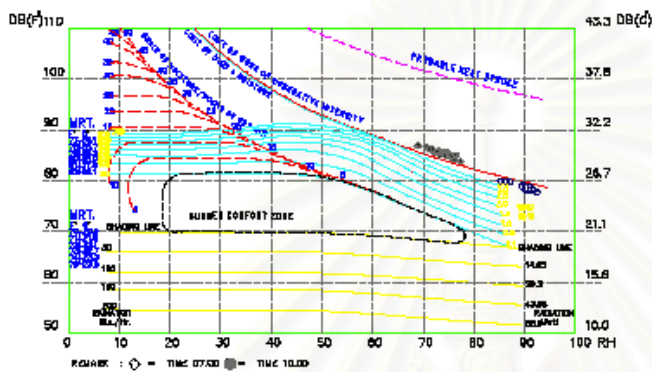
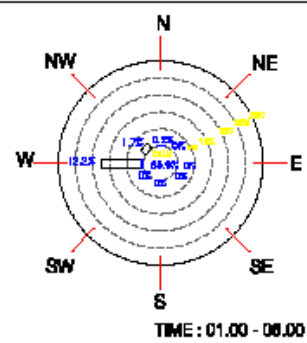
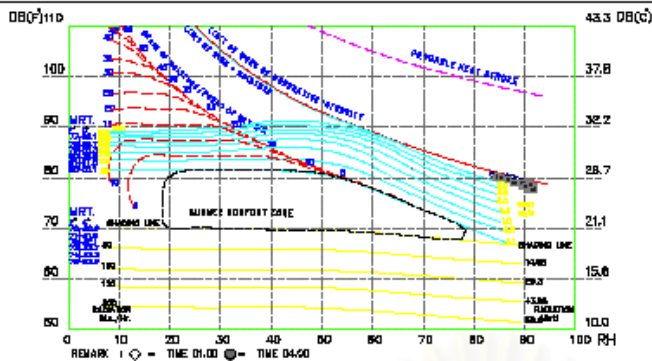
BIOCLIMATIC CHART & WIND ROSE : JUNE 1961-1998 (2624-2641) Station : PHUKET



BIOCLIMATIC CHART



BIOCLIMATIC CHART & WIND ROSE : JULY 1961-1998 (2634-2541) Station : PHUKET



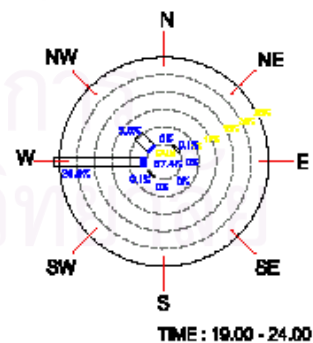
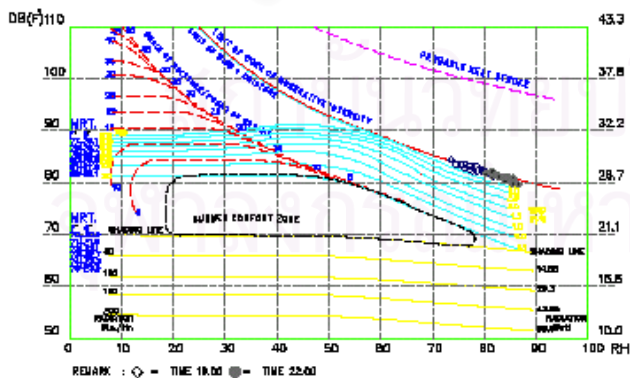
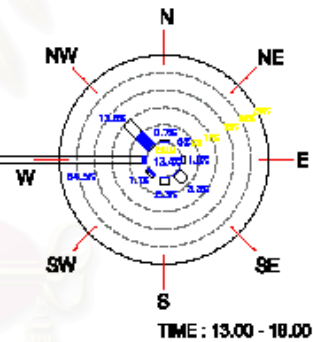
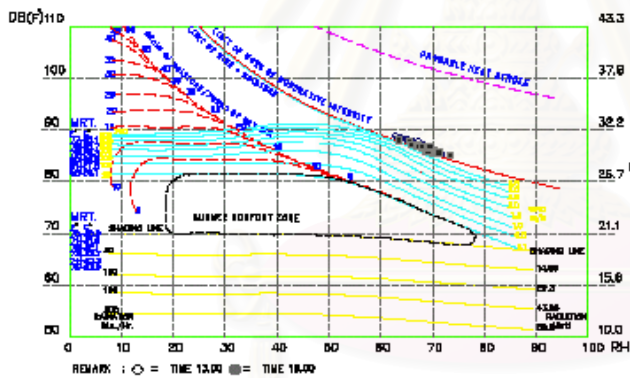
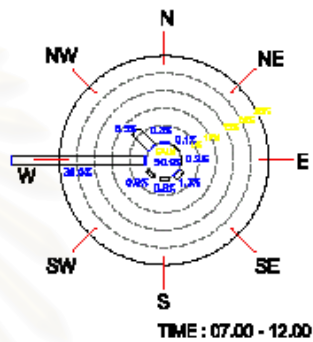
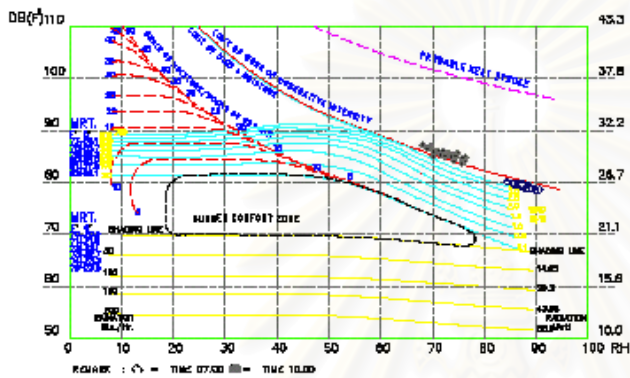
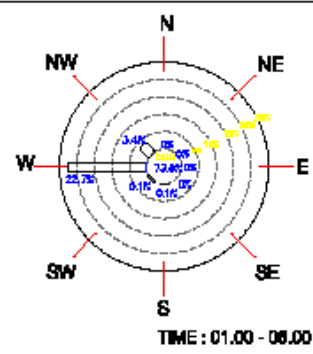
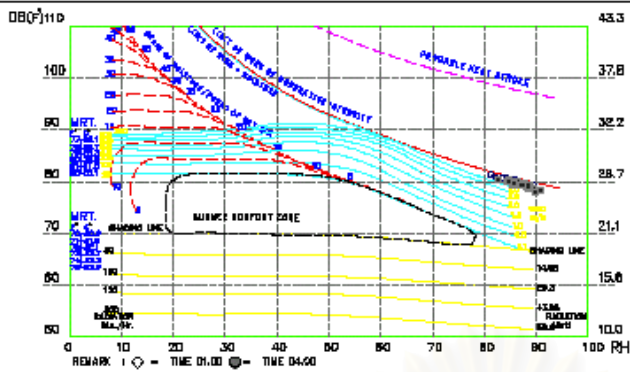
BIOCLIMATIC CHART

WIND ROSE





**BIOCLIMATIC CHART & WIND ROSE : AUGUST 1961-1990 (2524-2541) Station : PHUKET**

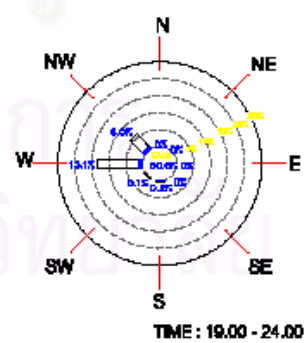
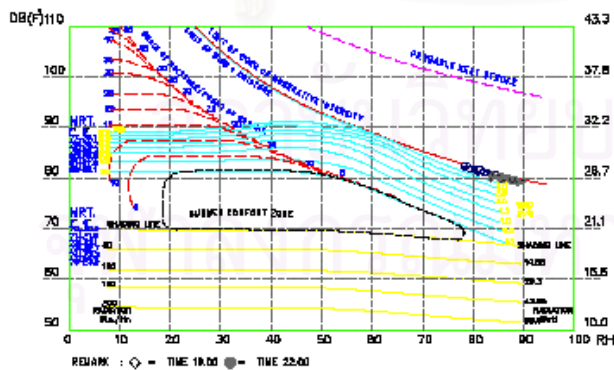
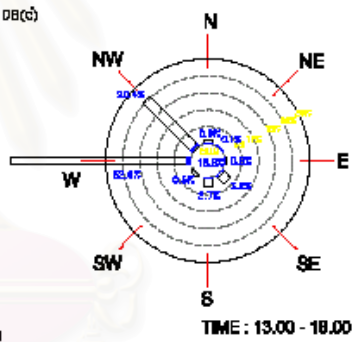
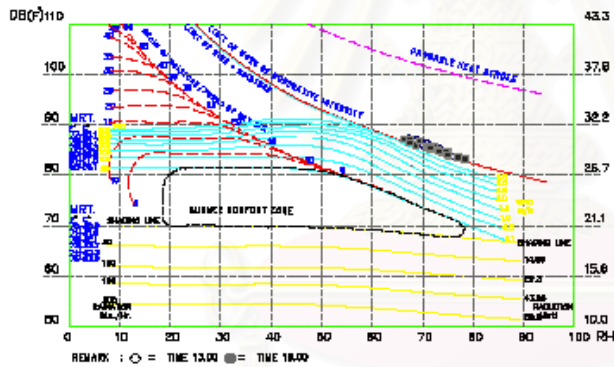
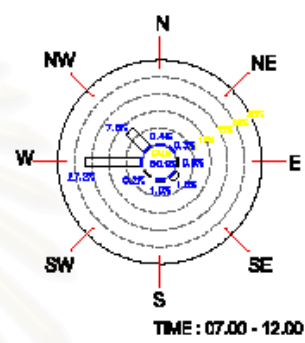
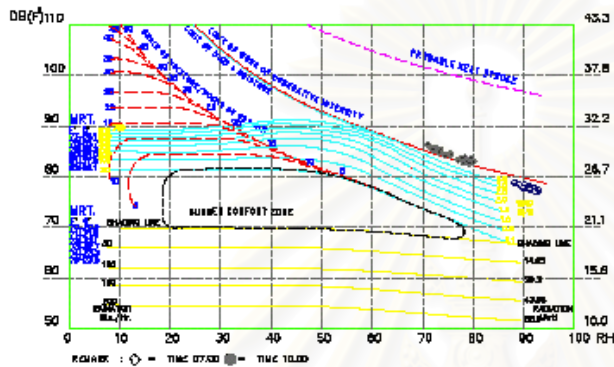
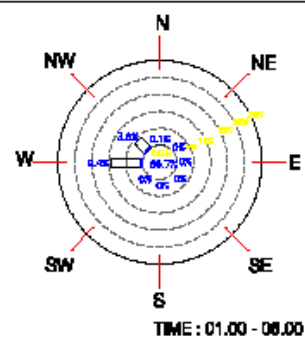
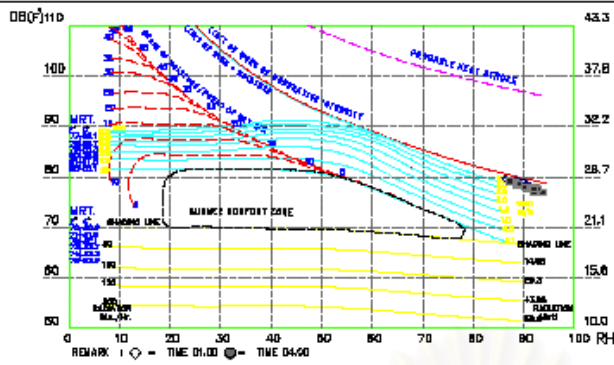


**BIOCLIMATIC CHART**

**WIND ROSE**



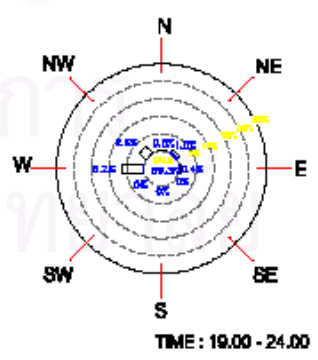
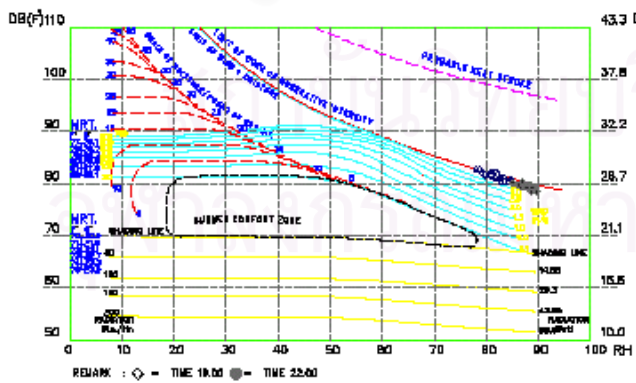
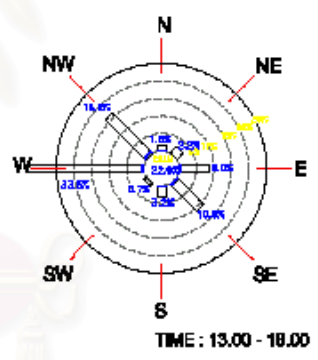
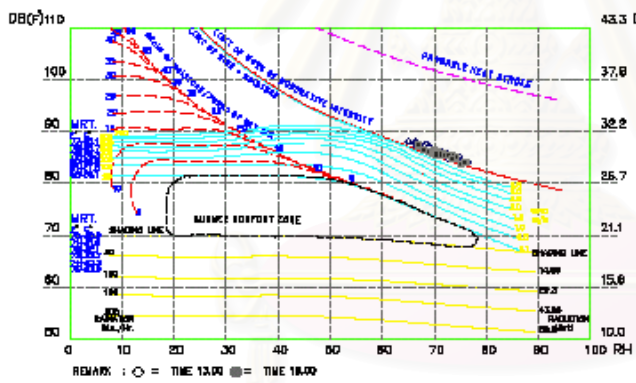
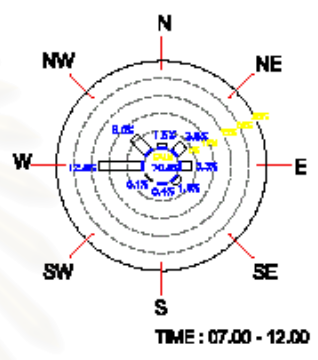
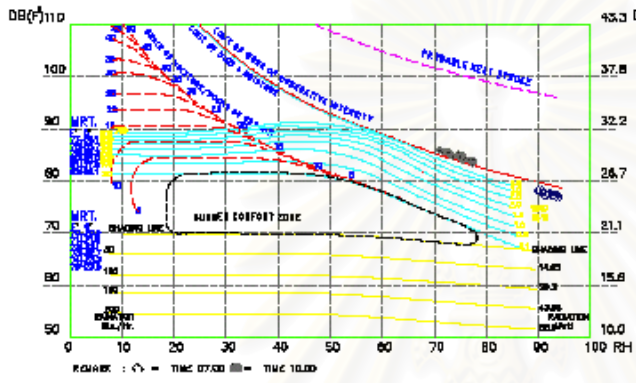
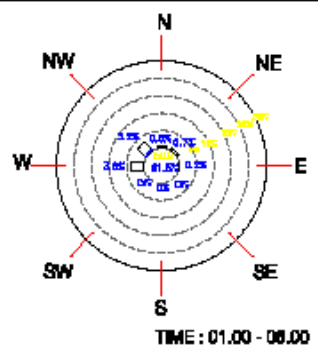
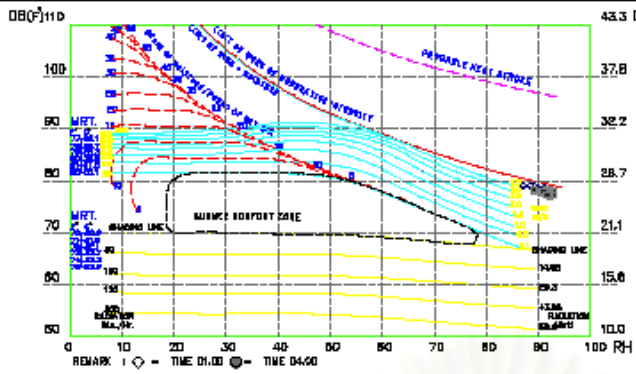
**BIOCLIMATIC CHART & WIND ROSE : SEPTEMBER 1961-1998 (2524-2541) Station : PHUKET**



**BIOCLIMATIC CHART**



BIOCLIMATIC CHART & WIND ROSE : OCTOBER 1961-1998 (2024-2541) Station : PHUKET

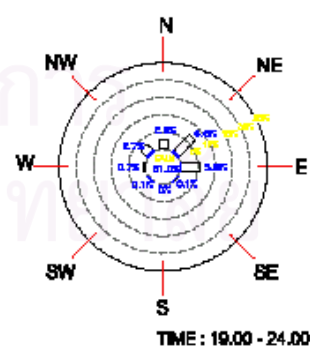
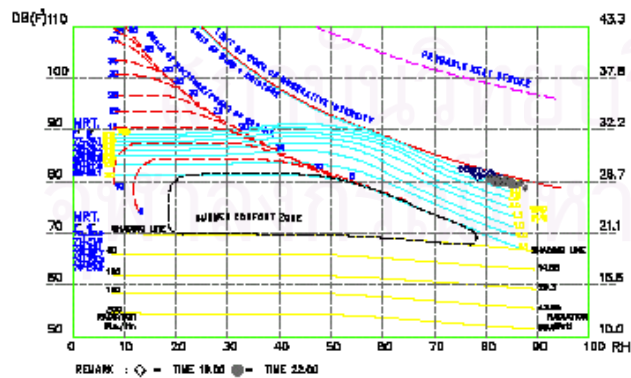
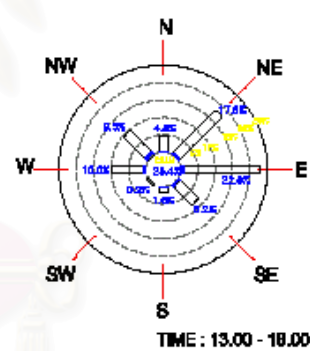
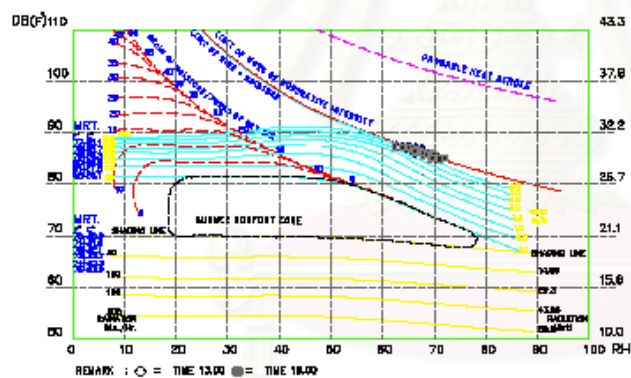
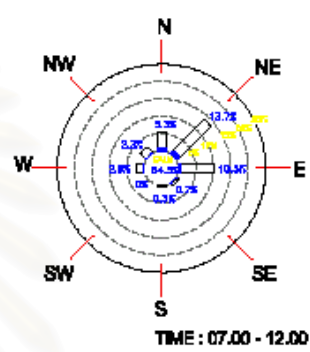
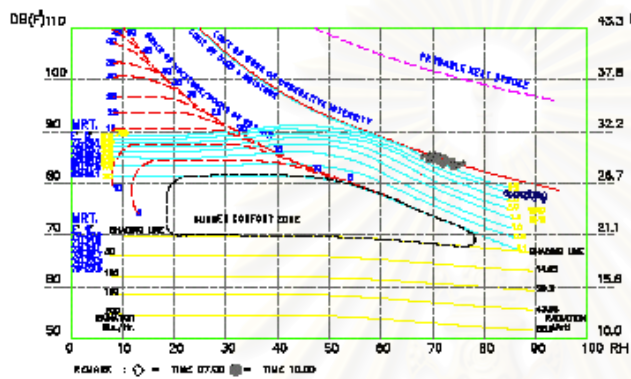
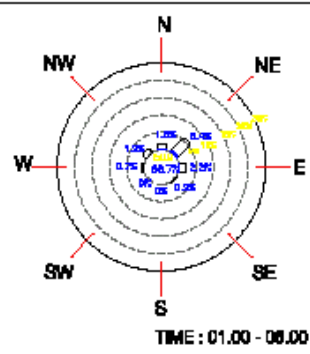
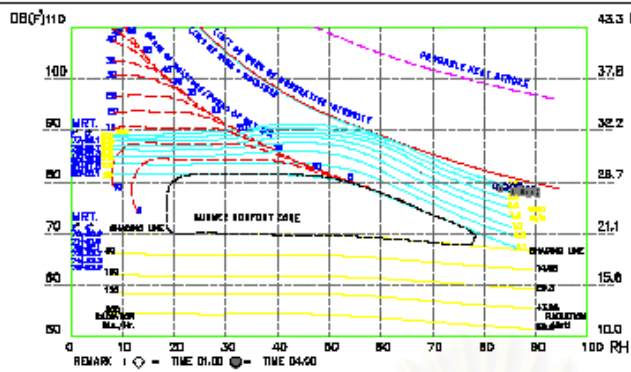


BIOCLIMATIC CHART

WIND ROSE



BIOCLIMATIC CHART & WIND ROSE : NOVEMBER 1961-1998 (2624-2541) Station : PHUKET

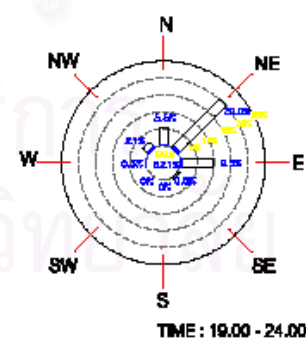
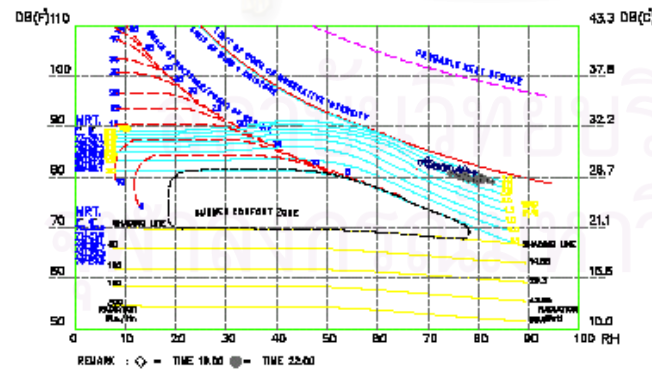
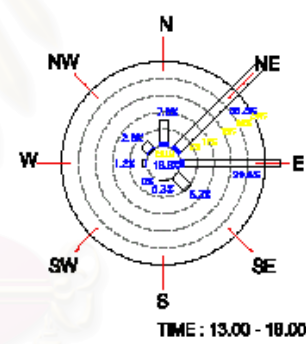
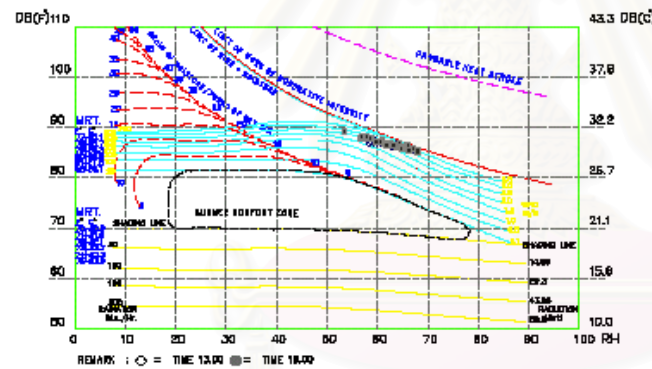
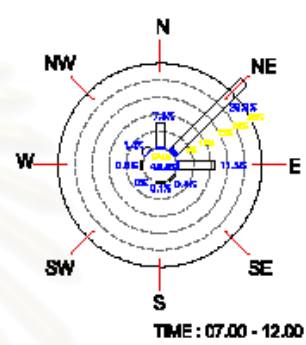
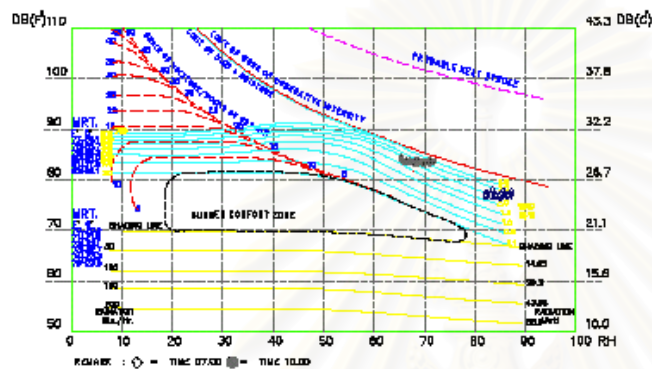
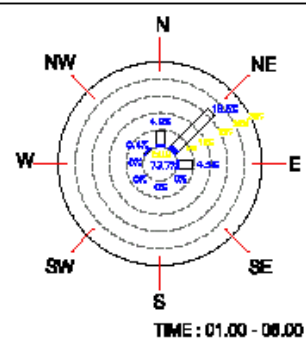
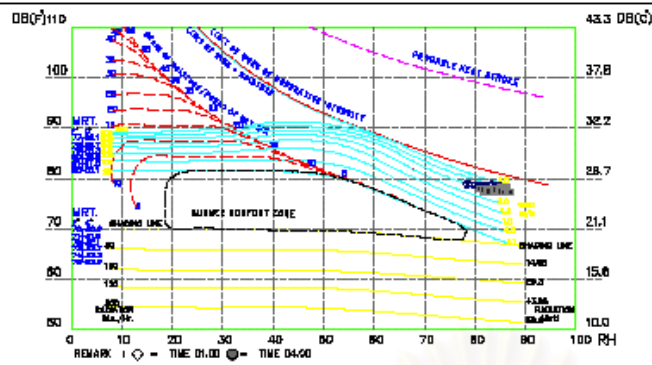


BIOCLIMATIC CHART





BIOCLIMATIC CHART & WIND ROSE : DECEMBER 1961-1990 (2634-2541) Station : PHUKET

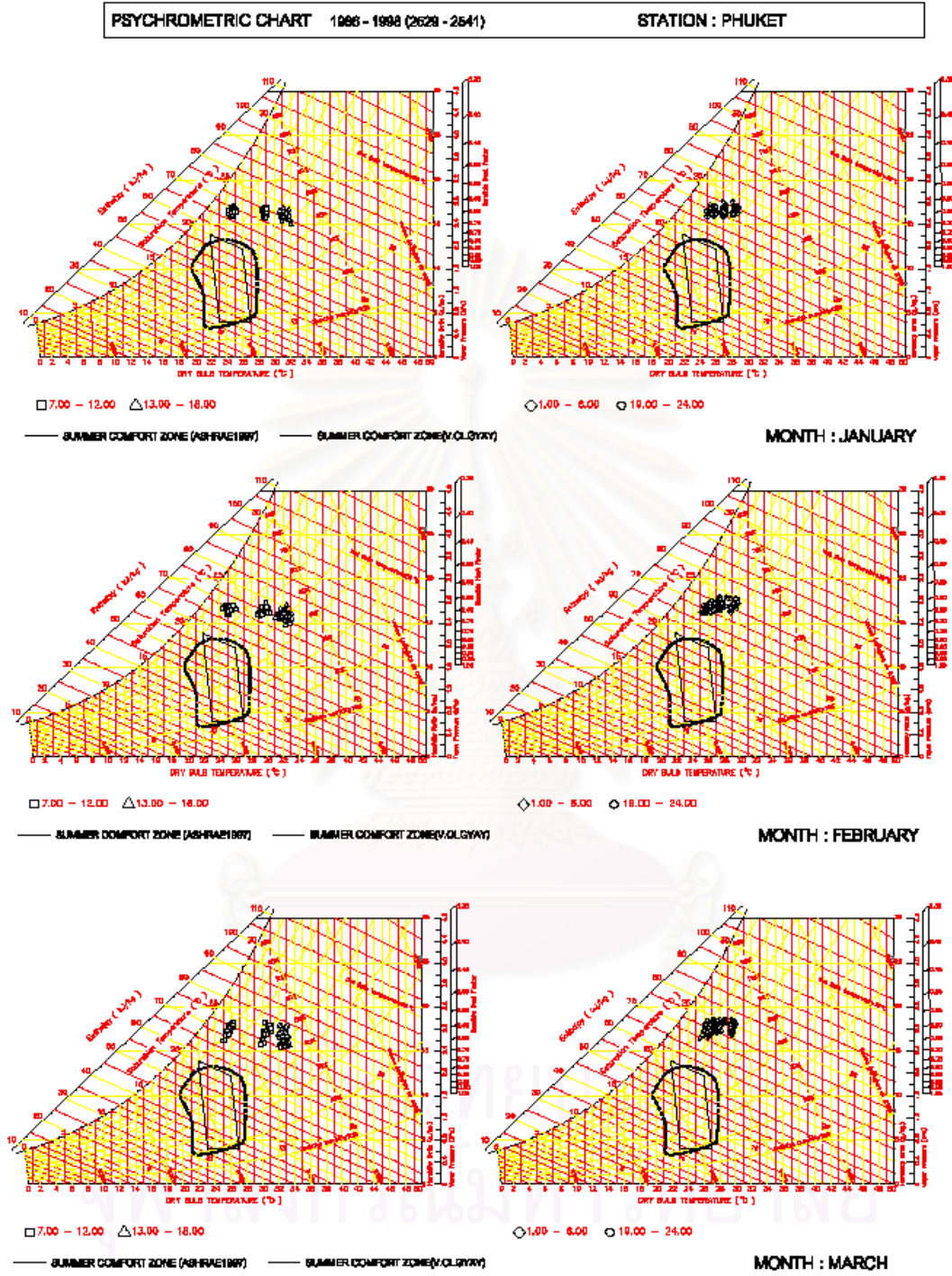


BIOCLIMATIC CHART

WIND ROSE

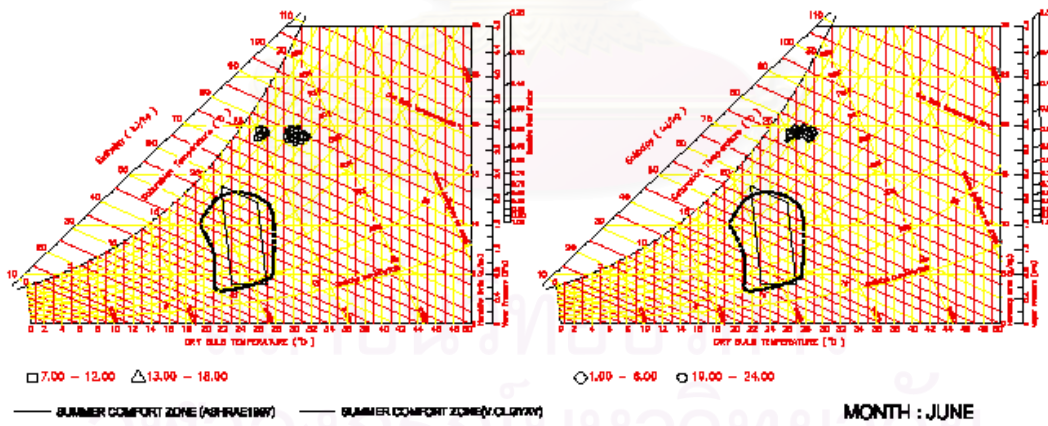
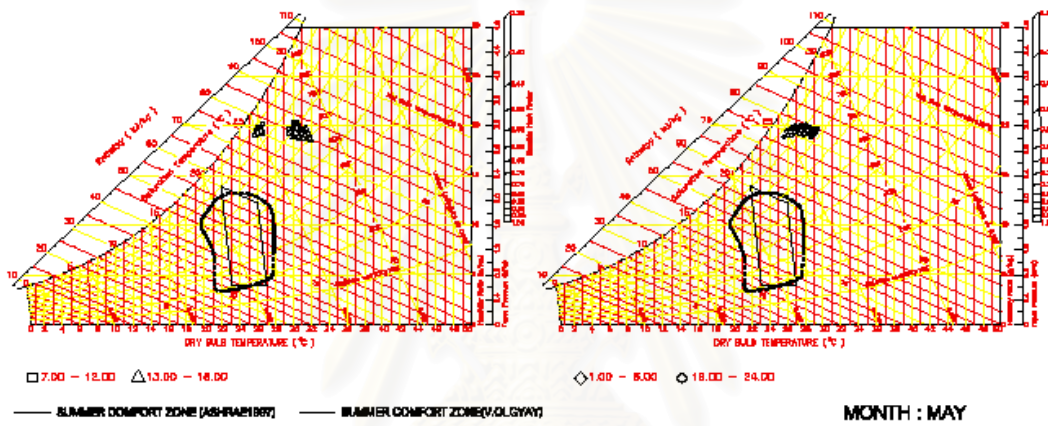
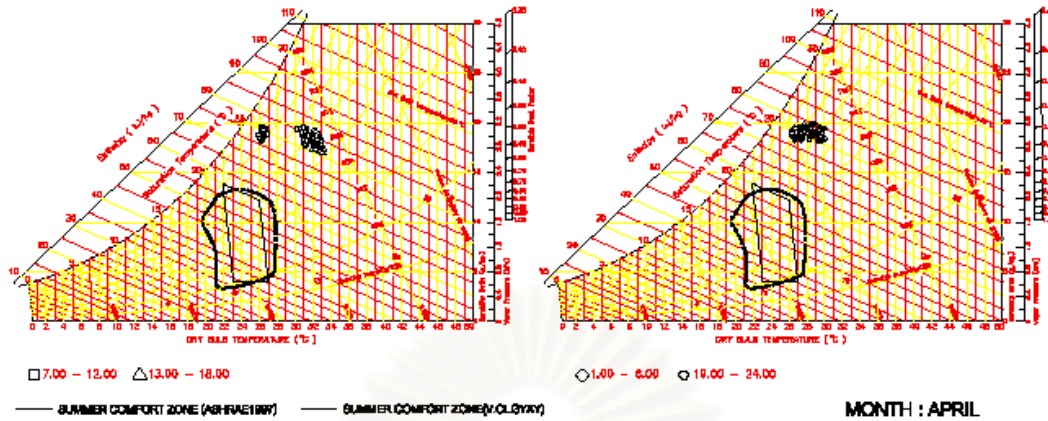


แผนภูมิความสัมพันธ์ระหว่างข้อมูลสภาพอากาศ ในแผนภูมิไซโครเมตริก (psychrometric chart) แยกตามช่วงเวลา



PSYCHROMETRIC CHART 1986 - 1998 (2628 - 2641)

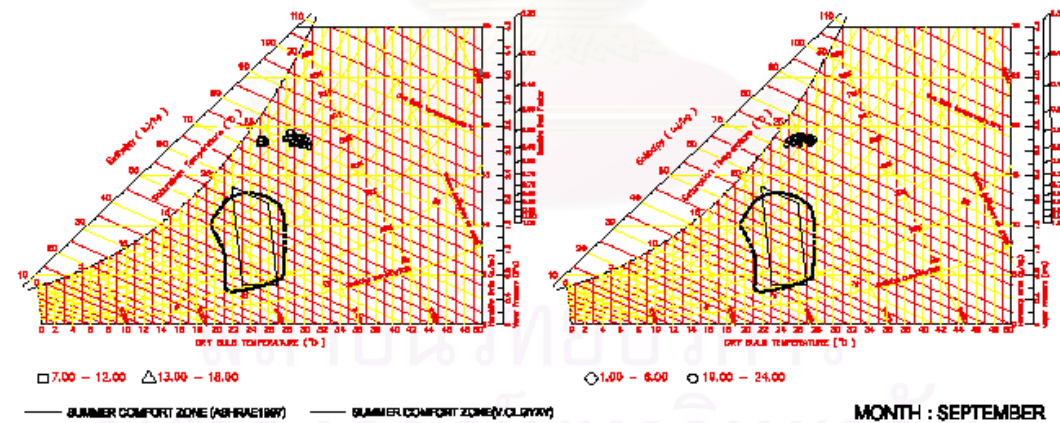
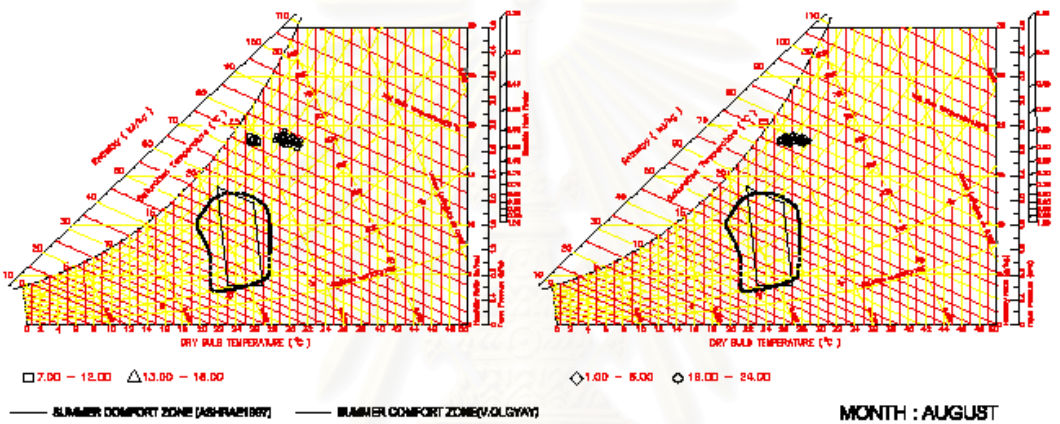
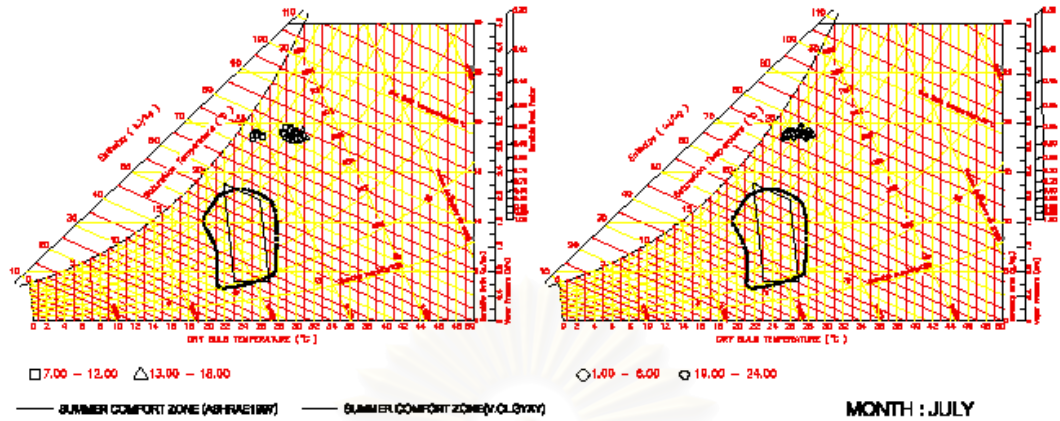
STATION : PHUKET



จุฬาลงกรณ์มหาวิทยาลัย



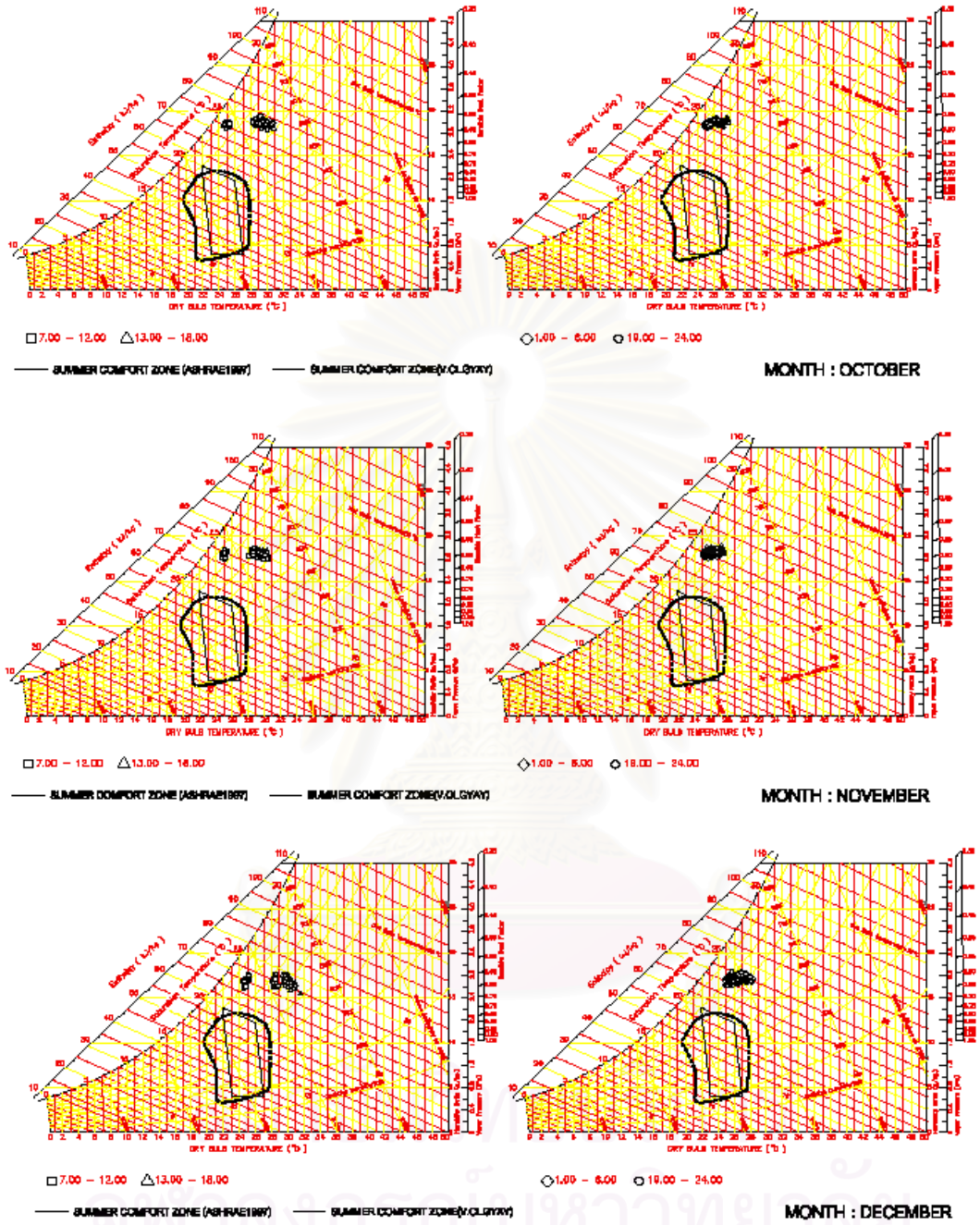
PSYCHROMETRIC CHART 1986 - 1998 (2629 - 2641) STATION : PHUKET



จุฬาลงกรณ์มหาวิทยาลัย



PSYCHROMETRIC CHART 1986 - 1998 (2628 - 2641) STATION : PHUKET



ตารางแสดงผลข้อมูลจำนวนรายชั่วโมงอุณหภูมิกระเปาะแห้ง และค่าเฉลี่ยอุณหภูมิกระเปาะเปียกที่เกิดขึ้น  
จำแนกตามช่วงอุณหภูมิกระเปาะแห้ง (bin data) ในแต่ละช่วงเวลา

ANNUAL BIN-HOUR WEATHER DATA								STATION : PHUKET	
Hours of occurrence of DB in each bin with MCWB in parentheses								year : 1996	
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								100 / 104	
35.0 / 37.2				8 (26.5)			8 (26.5)	95 / 99	
32.2 / 34.4			91 (26.1)	336 (25.8)	39 (25.6)		466 (25.9)	90 / 94	
29.4 / 31.7	1 (25.8)	12 (25.5)	774 (25.5)	855 (25.5)	621 (25.3)	64 (25.8)	2,327 (25.6)	85 / 89	
26.7 / 28.9	606 (24.8)	513 (24.7)	512 (24.8)	211 (25.0)	671 (24.9)	959 (24.8)	3,472 (24.8)	80 / 84	
23.9 / 26.1	846 (23.9)	900 (23.8)	87 (24.0)	53 (24.3)	132 (24.3)	441 (24.1)	2,459 (24.1)	75 / 79	
21.1 / 23.3	11 (20.8)	39 (21.7)		1 (22.2)	1 (22.6)		52 (21.8)	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	
7.2 / 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

สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย

BIN-HOUR WEATHER DATA Hours of occurrence of DB in each bin with MCWB in parentheses																				STATION : PHUKET					
Temperature range °C	Observation hour group						Total Observation	MCWB	Observation hour group						Total Observation	MCWB	Observation hour group						Total Observation	MCWB	Temperature range °F
	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			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			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			
	January								February								March								
40.6 / 42.8																									105 / 109
37.8 / 40.0																									100 / 104
35.0 / 37.2																8 (26.5)			8 (26.5)						95 / 99
32.2 / 34.4				18 (24.9)					3 (25.5)	43 (25.1)	7 (25.2)					50 (25.3)		27 (25.8)	87 (25.6)	19 (26.0)		133 (25.6)		90 / 94	
29.4 / 31.7			57 (24.2)	107 (24.3)	50 (24.4)		214 (24.3)		62 (24.4)	73 (24.4)	65 (24.6)	3 (25.9)	203 (24.8)					78 (24.9)	29 (25.0)	90 (25.2)	19 (25.6)	216 (25.2)		85 / 89	
26.7 / 28.9	15 (23.8)	12 (23.9)	62 (23.6)	1 (23.3)	70 (23.7)	76 (23.6)	238 (23.6)		40 (24.1)	24 (23.6)	51 (23.6)	44 (23.8)	102 (23.8)	291 (23.8)	91 (24.3)	68 (24.4)	19 (23.6)		15 (24.2)	105 (24.4)	256 (24.2)		80 / 84		
23.9 / 26.1	103 (22.7)	92 (22.7)	5 (22.1)		4 (23.6)	46 (22.8)	250 (22.8)		76 (22.9)	92 (22.8)			11 (23.1)	179 (22.9)	33 (23.1)	56 (23.0)					69 (23.0)		75 / 79		
21.1 / 23.3	6 (21.1)	20 (21.3)					26 (21.2)																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		
7.2 / 9.4																							45 / 49		
4.4 / 6.7																							40 / 44		
1.7 / 3.9																							35 / 39		
°C	April						May						June						°F						
40.6 / 42.8																								105 / 109	
37.8 / 40.0																								100 / 104	
35.0 / 37.2																								95 / 99	
32.2 / 34.4			25 (26.3)	60 (26.2)	12 (25.9)		97 (26.1)		11 (26.6)	41 (26.4)			52 (26.5)		8 (26.5)	33 (26.4)					39 (26.4)		90 / 94		
29.4 / 31.7	1 (25.8)	2 (26.1)	78 (26.2)	53 (26.4)	65 (26.1)	29 (25.9)	249 (26.1)		88 (26.4)	68 (26.4)	76 (26.1)		232 (26.3)		90 (26.4)	77 (26.5)	82 (26.2)	7 (26.7)	256 (26.5)				85 / 89		
26.7 / 28.9	56 (25.5)	73 (25.4)	17 (25.6)	5 (26.2)	19 (25.4)	85 (25.7)	257 (25.6)	88 (25.4)	74 (25.5)	21 (26.0)	11 (25.3)	36 (25.8)	114 (25.6)	344 (25.6)	85 (25.6)	71 (25.6)	21 (25.5)	9 (25.4)	32 (25.7)	100 (25.8)	318 (25.6)		80 / 84		
23.9 / 26.1	21 (24.6)	45 (24.6)		2 (24.3)	4 (24.9)	6 (24.6)	79 (24.6)	36 (24.8)	50 (24.9)	4 (24.9)	4 (24.5)	12 (24.6)	10 (24.9)	116 (24.8)	35 (24.5)	49 (24.6)	3 (24.5)	1 (25.1)	6 (24.6)	13 (24.6)	107 (24.6)		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		
7.2 / 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) °C = (deg F-32) \* 5 / 9

สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย

BIN-HOUR WEATHER DATA Hours of occurrence of DB in each bin with MCWB in parentheses																				STATION : PHUKET							
Temperature range	Observation hour group						Total Observation	MCWB	Observation hour group						Total Observation	MCWB	Observation hour group						Total Observation	MCWB	Temperature range		
	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	to	to	to	to	to			to	to	to	to	to	to			to	to	to	to	to	to					
	04:00	08:00	12:00	16:00	20:00	24:00			04:00	08:00	12:00	16:00	20:00	24:00			04:00	08:00	12:00	16:00	20:00	24:00					
<sup>o</sup> C	July								August								September								<sup>o</sup> F		
40.6 / 42.8																											105 / 109
37.8 / 40.0																											100 / 104
35.0 / 37.2																											95 / 99
32.2 / 34.4			10 (25.9)	24 (26.0)	1 (25.3)		36 (25.7)				3 (26.3)	15 (26.4)			18 (26.3)				6 (25.9)	13 (25.7)			19 (25.8)				90 / 94
29.4 / 31.7		7 (25.5)	70 (26.0)	77 (26.1)	57 (25.6)	6 (25.1)	217 (25.6)		2 (25.3)	73 (25.7)	80 (25.6)	36 (25.5)			194 (25.5)		1 (25.4)	44 (25.7)	47 (25.9)	25 (25.6)			117 (25.7)				85 / 89
26.7 / 28.9	60 (25.0)	49 (25.1)	39 (25.5)	18 (25.5)	57 (25.4)	87 (25.3)	310 (25.3)	51 (25.0)	48 (25.0)	31 (25.0)	19 (24.9)	77 (25.1)	83 (25.1)	309 (25.0)	56 (24.8)	56 (24.8)	55 (25.0)	43 (24.9)	71 (25.0)	76 (24.9)	367 (24.9)					80 / 84	
23.9 / 26.1	64 (24.4)	66 (24.3)	5 (24.9)	5 (24.5)	9 (24.9)	31 (24.8)	182 (24.6)	73 (24.2)	74 (24.0)	17 (23.9)	10 (24.1)	8 (24.4)	41 (24.2)	223 (24.1)	84 (23.9)	81 (23.8)	15 (24.1)	17 (23.9)	24 (24.1)	44 (24.1)	225 (24.0)					75 / 79	
21.1 / 23.3																2 (22.9)					2 (22.9)					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	
7.2 / 9.4																										45 / 49	
4.4 / 6.7																										40 / 44	
1.7 / 3.9																										35 / 39	
<sup>o</sup> C	October								November								December								<sup>o</sup> F		
40.6 / 42.8																											105 / 109
37.8 / 40.0																											100 / 104
35.0 / 37.2																											95 / 99
32.2 / 34.4												4 (25.5)			4 (25.5)												90 / 94
29.4 / 31.7			64 (25.9)	87 (26.0)	19 (25.7)		170 (25.9)				56 (25.4)	77 (25.4)	17 (25.4)	150 (25.5)					14 (24.3)	60 (24.2)	16 (23.8)		110 (24.1)				85 / 89
26.7 / 28.9	10 (25.0)	20 (24.9)	47 (25.4)	30 (25.4)	82 (25.2)	51 (25.2)	240 (25.2)	10 (24.4)	17 (24.5)	58 (24.9)	38 (24.9)	88 (24.9)	45 (24.7)	256 (24.7)	2 (24.3)	1 (23.8)	91 (23.8)	37 (24.4)	80 (23.8)	33 (23.3)	244 (23.9)					80 / 84	
23.9 / 26.1	114 (24.3)	104 (24.2)	13 (24.2)	6 (24.2)	22 (24.1)	73 (24.5)	332 (24.3)	110 (24.1)	103 (24.0)	6 (23.9)	1 (24.2)	15 (24.0)	75 (24.3)	310 (24.1)	117 (23.0)	106 (23.1)	19 (23.2)	7 (24.2)	26 (23.6)	91 (23.2)	366 (23.4)					75 / 79	
21.1 / 23.3				1 (22.2)	1 (22.6)		2 (22.4)								5 (20.6)	17 (20.9)					22 (20.7)					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	
7.2 / 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

สภามหาวิทยาลัย  
จุฬาลงกรณ์มหาวิทยาลัย



DEGREE HOURS & HOURS OF OCCURRENCE						Station :PHUKET		
						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	400,330.00	233,283.15
36	2.2		-	-	-	8,760.00	411,570.00	228,421.95
37	2.8	0	-	-	-	8,760.00	402,810.00	223,559.55
38	3.3		-	-	-	8,760.00	394,050.00	218,697.75
39	3.9		-	-	-	8,760.00	385,290.00	213,835.95
40	4.4	(42.5)	-	-	-	8,760.00	376,530.00	208,974.15
41	5.0		-	-	-	8,760.00	367,770.00	204,112.35
42	5.6	0	-	-	-	8,760.00	359,010.00	199,250.55
43	6.1		-	-	-	8,760.00	350,250.00	194,388.75
44	6.7		-	-	-	8,760.00	341,490.00	189,526.95
45	7.2	(47.5)	-	-	-	8,760.00	332,730.00	184,665.15
46	7.8		-	-	-	8,760.00	323,970.00	179,803.35
47	8.3	0	-	-	-	8,760.00	315,210.00	174,941.55
48	8.9		-	-	-	8,760.00	306,450.00	170,079.75
49	9.4		-	-	-	8,760.00	297,690.00	165,217.95
50	10.0	52.5	-	-	-	8,760.00	288,930.00	160,356.15
51	10.6		-	-	-	8,760.00	280,170.00	155,494.35
52	11.1	0	-	-	-	8,760.00	271,410.00	150,632.55
53	11.7		-	-	-	8,760.00	262,650.00	145,770.75
54	12.2		-	-	-	8,760.00	253,890.00	140,908.95
55	12.8	(57.5)	-	-	-	8,760.00	245,130.00	136,047.15
56	13.3		-	-	-	8,760.00	236,370.00	131,185.35
57	13.9	0	-	-	-	8,760.00	227,610.00	126,323.55
58	14.4		-	-	-	8,760.00	218,850.00	121,461.75
59	15.0		-	-	-	8,760.00	210,090.00	116,599.95
60	15.6	(62.5)	-	-	-	8,760.00	201,330.00	111,738.15
61	16.1		-	-	-	8,760.00	192,570.00	106,876.35
62	16.7	0	-	-	-	8,760.00	183,810.00	102,014.55
63	17.2		-	-	-	8,760.00	175,050.00	97,152.75
64	17.8		-	-	-	8,760.00	166,290.00	92,290.95
65	18.3	(67.5)	-	-	-	8,760.00	157,530.00	87,429.15
66	18.9		-	-	-	8,760.00	148,770.00	82,567.35
67	19.4	0	-	-	-	8,760.00	140,010.00	77,705.55
68	20.0		-	-	-	8,760.00	131,250.00	72,843.75
69	20.6		-	-	-	8,760.00	122,490.00	67,981.95

หมายเหตุ : วิธีการหาค่า degree hours ได้จากการคำนวณจากจำนวนชั่วโมง hours of occurrence ที่เกิดขึ้นในแต่ละช่วงอุณหภูมิคูณผลคูณที่พิจารณา โดยค่าที่เขียนออกมา  
จากตาราง 3 ชั่วโมง

สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย

DEGREE HOURS & HOURS OF OCCURRENCE										Station :PHUKET		
										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						°F	°C				
70	21.1	(72.5)	-	-	-	8,760.00	113,730.00	83,120.15				
71	21.7		-	-	-	8,760.00	104,070.00	98,259.35				
72	22.2	0	-	-	-	8,760.00	96,210.00	53,386.55				
73	22.8		-	-	-	8,760.00	87,450.00	48,534.75				
74	23.3		-	-	-	8,760.00	78,690.00	43,672.95				
75	23.9	(77.5)	626.00	-	-	8,760.00	69,930.00	38,811.15				
76	24.4		1,050.00	1,312.50	728.44	8,235.00	62,482.50	34,677.79				
77	25.0	2625	1,676.00	2,625.00	1,458.88	7,710.00	55,095.00	30,544.43				
78	25.6		2,100.00	3,037.50	2,185.31	7,185.00	47,587.50	26,411.06				
79	26.1		2,626.00	5,260.00	3,013.75	6,660.00	40,140.00	22,277.70				
80	26.7	(82.5)	3,250.20	6,502.50	3,642.19	6,135.00	32,682.50	18,144.34				
81	27.2		3,876.40	10,750.50	5,068.53	5,609.80	28,120.50	15,608.88				
82	27.8	3126	4,500.60	14,938.50	8,200.87	4,884.60	23,548.50	13,069.42				
83	28.3		5,126.80	19,126.50	10,615.21	4,269.40	18,076.50	10,531.96				
84	28.9		5,751.00	23,314.50	12,939.55	3,634.20	14,404.50	7,964.50				
85	29.4	(87.5)	6,260.40	27,502.50	15,269.89	3,009.00	9,832.50	5,457.04				
86	30.0		6,769.60	34,527.00	19,162.49	2,499.60	8,067.00	4,493.84				
87	30.6	2647	7,279.20	41,551.50	23,061.08	1,990.20	6,361.50	3,530.83				
88	31.1		7,788.60	48,576.00	26,959.68	1,480.80	4,626.00	2,567.43				
89	31.7		8,298.00	55,600.50	30,858.28	971.40	2,890.50	1,604.23				
90	32.2	(92.5)	8,390.40	62,625.00	34,758.88	462.00	1,195.00	641.03				
91	32.8		8,482.80	71,154.00	39,490.47	369.60	924.00	512.82				
92	33.3	462	8,576.20	79,683.00	44,224.07	277.20	693.00	384.62				
93	33.9		8,667.60	88,212.00	48,957.66	184.80	462.00	256.41				
94	34.4		8,760.00	96,741.00	53,691.26	92.40	231.00	128.21				
95	35.0	(97.5)	8,760.00	105,270.00	58,424.85	-	-	-				
96	35.6		8,760.00	114,030.00	63,268.65	-	-	-				
97	36.1	0	8,760.00	122,790.00	68,148.45	-	-	-				
98	36.7		8,760.00	131,550.00	73,010.25	-	-	-				
99	37.2		8,760.00	140,310.00	77,872.05	-	-	-				

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