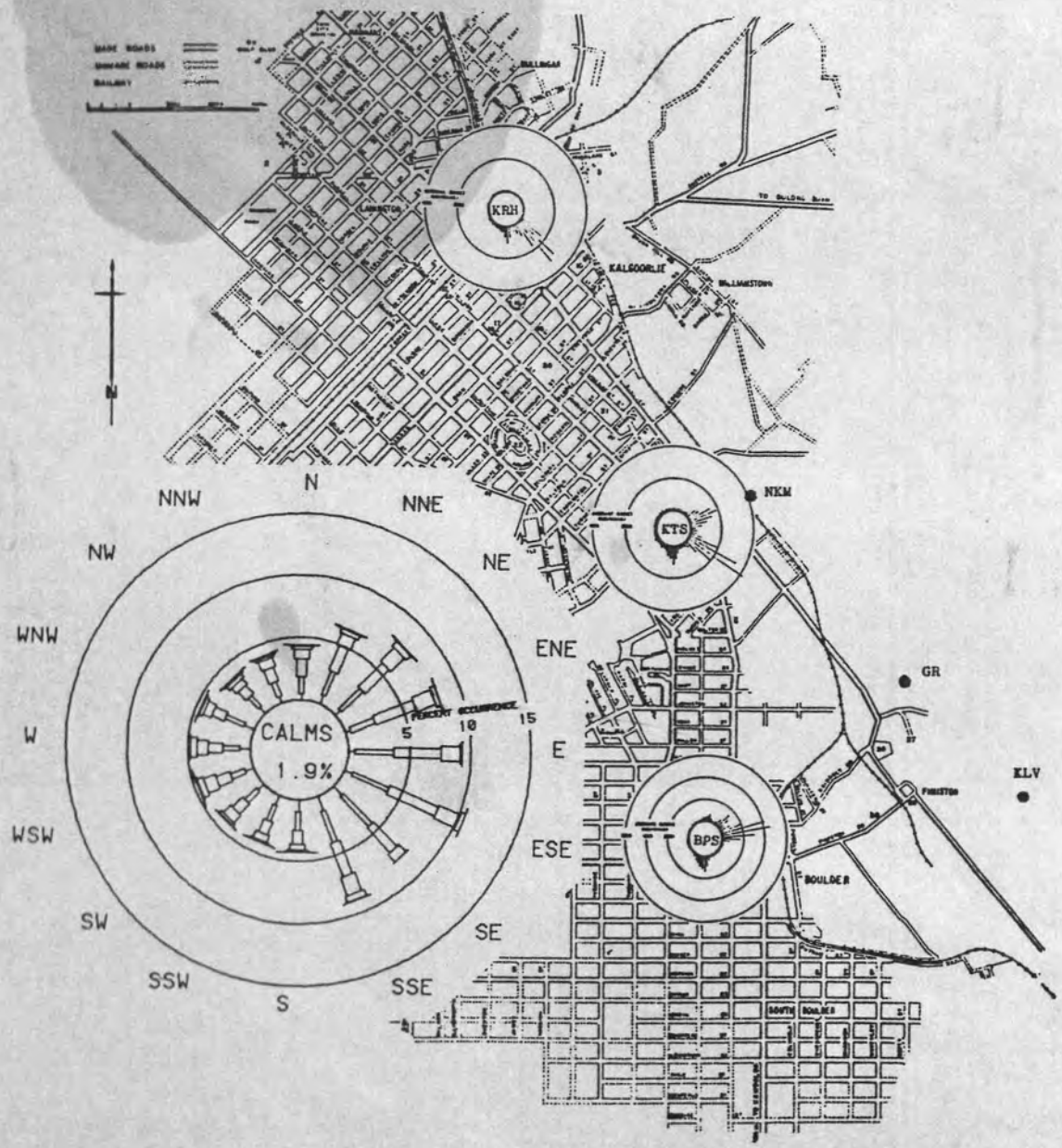
KALGOORLIE AIR QUALITY INVESTIGATION

Analysis of data:
March 1984 - May 1985



Department of Conservation and Environment,
Perth, Western Australia.

BULLETIN NUMBER 180

September 1985.

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Analysis of data:

March 1984 - May 1985

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1. INTRODUCTION

Rosher, Pitt, Bunbury and Paparo (1984) provided details on the background of the Kalgoorlie Air Quality Investigation and presented the monitoring results from 13 July 1982 to 13 March 1984. The purpose of this report is to present the subsequent results of the monitoring conducted at the three base station sites at Kalgoorlie up until 31 May 1985.

The locations of the three established base stations and the four major sulphur dioxide sources are shown in Figure 1.1. Also shown is the location of the Associated Headframe, at the top of which meteorological parameters are also being collected for comparison with the data being gathered at the Kalgoorlie Technical School base station. The operation of the "Kalgoorlie Headframe" site commenced on 15 May 1985. As this report covers the data period up until 31 May 1985, there was insufficient data available from this new site to allow a meaningfull comparison to be made.

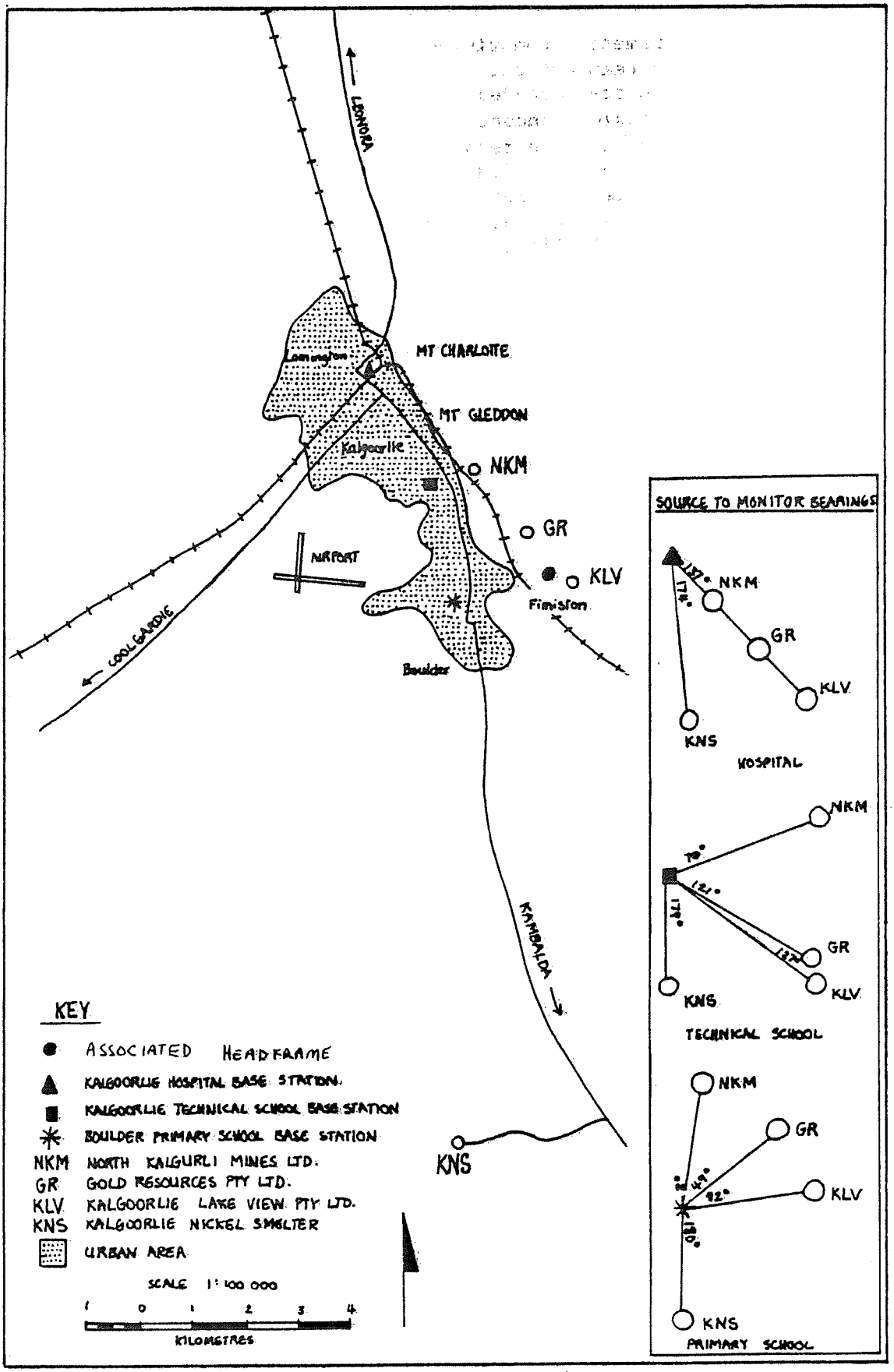


FIGURE 1.1 Map of Kalgoorlie-Boulder region showing gold roasters, nickel smelter, air quality investigation monitoring stations and source to monitor bearings.

2. DATA COLLECTION

Meteorological parameters comprising wind speed, wind direction, sigma theta, ambient air temperature, dew point temperature, solar radiation and long wave radiation are recorded at the Kalgoorlie Technical School base station. Sulphur dioxide concentrations are monitored at all three base stations. All parameters are recorded in the form of ten minute scalar averages. A detailed description of the instumentation and measurement techniques used for data collection at the base station sites is contained in Rosher et al. (1984) and, as such, will not be repeated here. The total periods that sulphur dioxide concentrations have now been measured at each site are:

Kalgoorlie Regional Hospital - 16 July 1982 to 31 May 1985
total days = 1051

Kalgoorlie Technical School - 17 February 1983 to 31 May 1985
total days = 835

South Boulder Primary School - 17 August 1984 to 31 May 1985
total days = 288

The percentage data recoveries (not previously documented) for all parameters measured are presented in Tables 2.1a, 2.1b and 2.1c for the Kalgoorlie Regional Hospital (KRH), Kalgoorlie Technical School (KTS), and South Boulder Primary School (SBPS) base stations respectively. From Table 2.1b, it can be seen that the rate of data recovery for all of the meteorological parameters is excellent, being greater than ninety nine percent for every month since January 1984. The recovery rates for sulphur dioxide included in Tables 2.1a to 2.1c are highly variable and this reflects the difficulties in maintaining the complex monitoring equipment required for the measurement of this parameter. Even so, the recovery rates of the ambient sulphur dioxide concentrations are often higher than ninety percent.

2.1 Summary of Meteorological Data

Two of the important meteorological parameters affecting the concentrations of sulphur dioxide that will be experienced at any location are the wind speed and the wind direction. Table 2.2 presents a wind speed - wind direction percentage occurrence matrix for the two year period from 1 March 1983 until 28 February 1985. This is graphically represented by the corresponding "wind rose" in Figure 2.1. In Table 2.2 and Figure 2.1 the wind direction compass has been divided up into 16 sectors, each with a width of 22.5 degrees and centred on the compass points N, NNE, NE, ... etc. Within each direction sector, the wind speeds have been classed in 1.5 metres per second (m/s) steps up to 13.5 m/s. Calms have been defined as periods when the wind speed is less than 0.5 m/s.

Figure 2.1 shows that the predominant wind direction is from the east-south-east. Winds from the north-north-east sector, clockwise around to the south-south-east sector account for 59 % of all winds observed at the KTS base station. This width encloses the range of bearings from the roasters to the township. Wind speeds of between 1.5 and 4.5 m/s are the most common, accounting for approximately 64 % of the total distribution.

Table 2.3, Figure 2.2 and Figure 2.3 present a further, more detailed breakdown of the frequency of wind speeds and wind directions as a function

Table 2.1a Kalgoorlie Regional Hospital base station monthly percentage data recoveries.

	SO2 (%)	
	1984	1985
January	37.0	97.8
February	71.1	87.6
March	99.6	77.1
April	99.3	98.8
May	98.6	99.6
June	99.4	-
July	93.1	-
August	90.0	-
September	22.1	-
October	72.1	-
November	99.1	-
December	99.8	-

Table 2.1c South Boulder Primary School base station monthly percentage data recoveries.

	SO2 (%)	
	1984	1985
January	-	55.8
February	-	99.2
March	-	92.7
April	-	99.5
May	-	99.8
June	-	-
July	-	-
August	97.4	-
September	99.7	-
October	99.6	-
November	99.5	-
December	81.9	-

Table 2.1b Kalgoorlie Technical School base station monthly percentage data recoveries.

	Wind Speed (%)	Wind Dirn (%)	Sigma Theta (%)	Temp (%)	Dew Pt (%)	Solar Rad (%)	Long Wave (%)	SO2 (%)
1984								
January	99.9	99.9	99.9	99.9	99.9	99.9	99.9	94.0
February	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.3
March	100.0	100.0	100.0	100.0	100.0	100.0	100.0	84.2
April	99.7	99.7	99.7	99.7	99.7	99.7	99.7	61.7
May	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0
June	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.6
July	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9
August	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.6
September	100.0	100.0	100.0	100.0	100.0	100.0	100.0	57.7
October	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.3
November	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3
December	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7
1985								
January	100.0	100.0	100.0	100.0	100.0	100.0	100.0	69.4
February	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2
March	100.0	100.0	100.0	100.0	100.0	100.0	100.0	17.7
April	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
May	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0

of time of day. For this analysis, the wind directions have been divided up into eight sectors. Figure 2.2 indicates the expected increase in wind speeds during the day, while Figure 2.3 again highlights the dominance of the winds from the north-east around to the south-east as observed from Figure 2.1.

Monthly wind roses, wind speed - wind direction percentage occurrence matrices, and time of the day frequency breakdowns are presented in Appendix D. Together with the information presented in Appendix D of Rosher et al. (1984), it is apparent that the wind directions undergo a marked shift from being predominantly east to south-south-east in the summer months to mostly west to north-north-east in the winter months. This shift is the result of changes between the summer and winter synoptic pattern.

The plotted daily maximum and the minimum temperatures are presented in Figure 2.4. The temperatures show a marked seasonal variation with a maximum temperature in excess of 42 degrees Celsius being recorded in January 1985. The minimum temperature recorded over the period of time illustrated was approximately 1.8 degrees Celsius in June 1984.

2.2 Summary of Sulphur Dioxide Data

Measurements of sulphur dioxide concentrations collected at Kalgoorlie are recorded as ten minute scalar averages. Sulphur dioxide concentrations for longer averaging periods have been calculated from the ten minute data. In this document, sulphur dioxide information is presented using the following averaging periods:

- annual;
- month;
- 24 hour;
- 3 hour;
- 1 hour; and
- 10 minute.

Sulphur dioxide statistics for each month of monitoring are presented in Appendices A to C for the KRH, KTS and SBPS base stations respectively. Tables 2.4a to 2.4d, 2.5a to 2.5c and 2.6a to 2.6b present the annual summaries of this data for the three base stations. It should be noted that missing data were assumed to have values of zero when calculating the 1-hour, 3-hour and 24-hour average concentrations given in Tables 2.4 to 2.6 and Appendices A to C. Consequently, it is likely that the number of 1-hour average concentrations exceeding the various nominated levels is underestimated during those months where a significant proportion of the available data were not recovered. Monthly and annual average concentrations were calculated using only the data available and missing data were not considered. Implicit in these calculations was the assumption that, where data recovery was less than 100.0 %, the measured data were still representative.

2.2.1 Seasonal Trends

The plotted monthly average concentrations for all three base stations are presented in Figures 2.5 to 2.7 for the KRH, KTS and SBPS sites respectively. Also plotted on each graph is the monthly percentage occurrence of winds from each sector containing the bearing from any source which contributes to concentrations at the respective monitor. The correlation between the monthly average concentration and the percentage of winds within the chosen sectors is generally high.

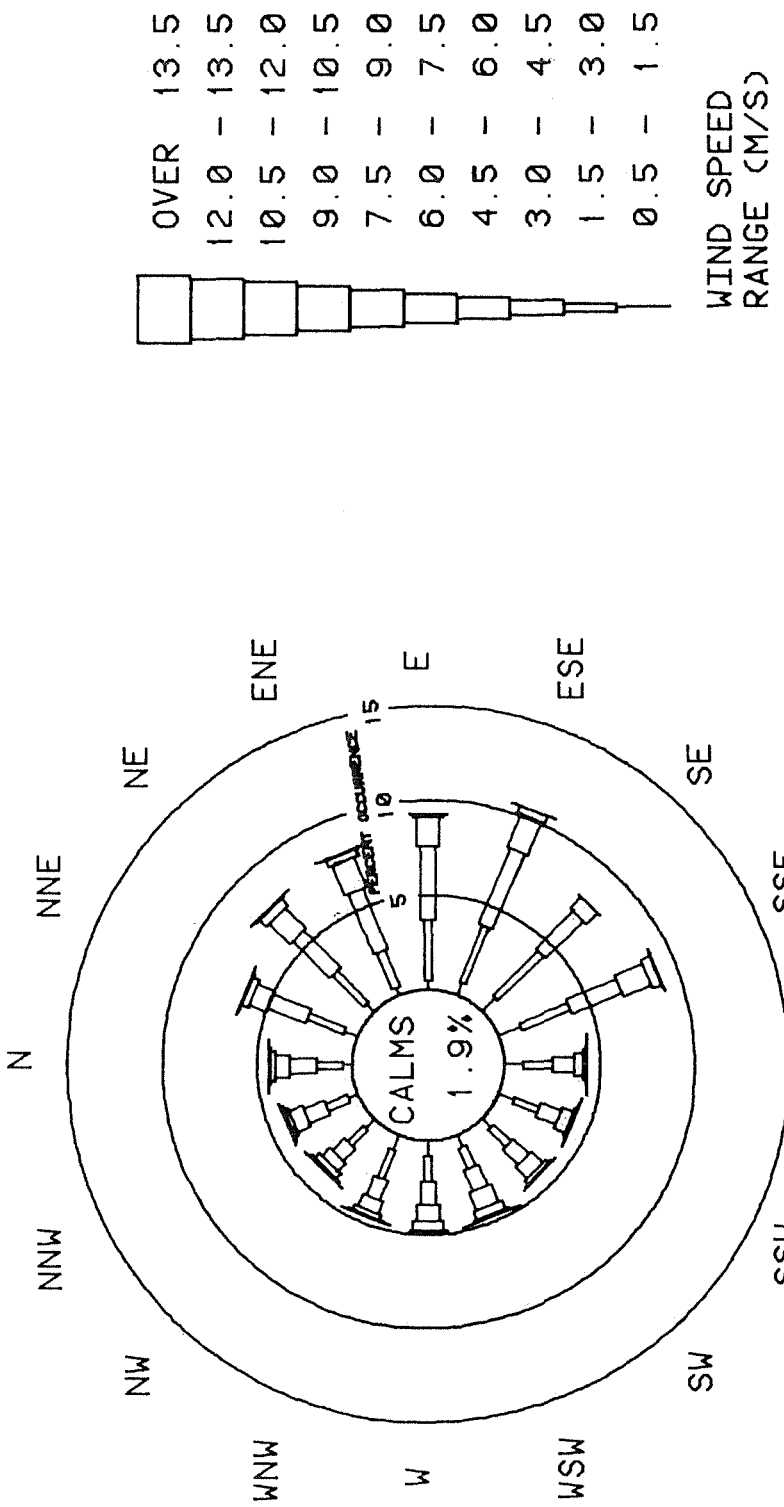


Figure 2.1 Wind rose for Kalgoorlie using data collected from 1 March 1983 to 28 February 1985.

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.83 TO 28. 2.85 INCLUSIVE.

*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.2
7.5 - 9.0	0.1	0.1	0.1					0.1			0.1	0.1	0.2	0.1	0.1	0.1	1.1
6.0 - 7.5	0.3	0.4	0.5	0.4	0.2	0.4		0.5	0.2	0.1	0.2	0.5	0.5	0.3	0.3	0.2	4.9
4.5 - 6.0	0.7	1.0	1.5	1.7	1.5	1.9	0.8	1.6	0.5	0.6	0.8	1.1	0.9	0.7	0.6	0.7	16.5
3.0 - 4.5	1.4	2.1	2.8	3.5	3.9	4.3	2.8	2.9	1.1	1.1	1.1	1.2	1.3	1.1	0.9	1.2	32.7
1.5 - 3.0	1.4	2.1	2.4	2.1	3.2	3.2	3.3	2.7	1.5	1.4	1.3	1.2	1.3	1.6	1.2	1.3	31.2
0.5 - 1.5	0.5	0.7	0.6	0.4	0.5	0.7	1.0	1.2	1.0	0.8	0.7	0.7	0.8	0.8	0.6	0.5	11.5
TOTALS	4.4	6.4	7.8	8.1	9.3	10.5	7.9	8.9	4.3	4.1	4.2	4.7	4.9	4.6	3.8	4.1	

CALMS (LESS THAN 0.5 M/S): 1.9%
DATA RECOVERY: 99.7%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.4	1.6	12.5
NORTHERLY COMPONENT	0.0	2.5	-12.0
EASTERLY COMPONENT	0.7	2.7	-12.2

Table 2.2 Wind speed - wind direction percentage occurrence matrix for Kalgoorlie using data collected from 1 March 1983 to 28 February 1985.

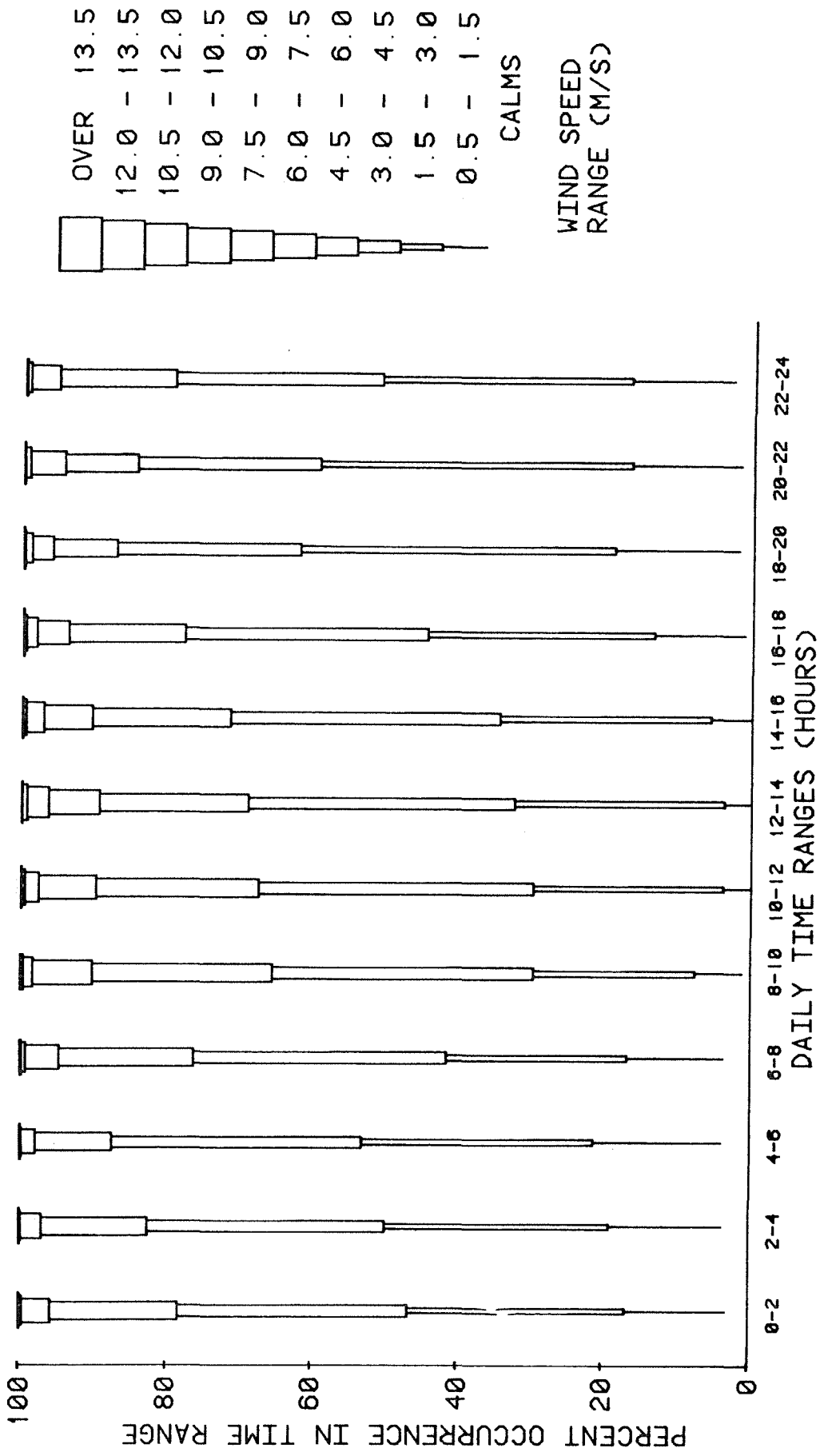


Figure 2.2 Wind speed as a function of time of day for Kalgoorlie, from data measured from 1 March 1983 to 28 February 1985.

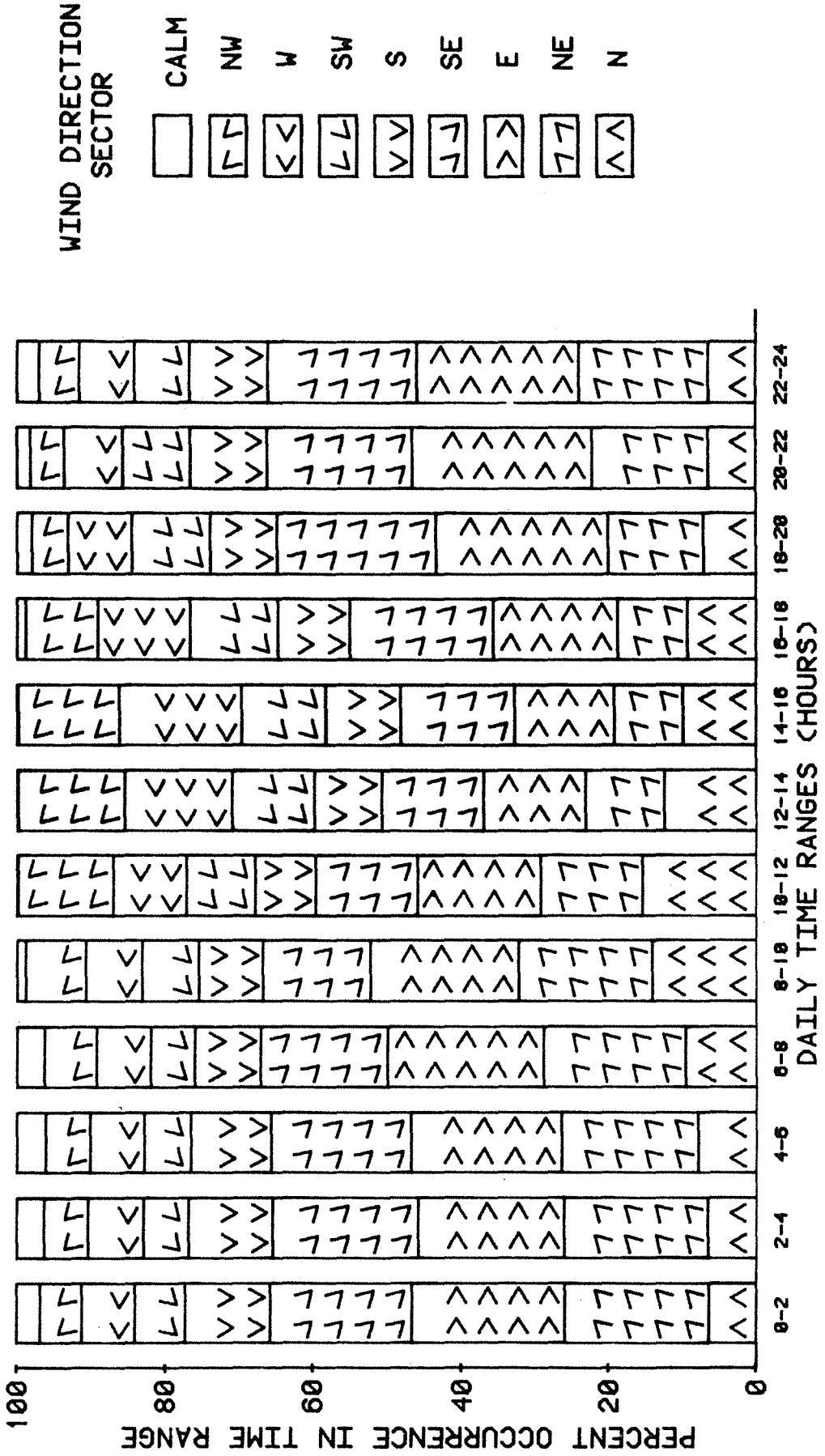


Figure 2.3 Wind direction as a function of time of day for Kalgoorlie, from data measured from 1 March 1983 to 28 February 1985.

Table 2.3 Wind speed and wind direction as a function of time of day for Kalgoorlie, from data measured from 1 March 1983 to 28 February 1985.

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.83 TO 28. 2.85 INCLUSIVE.
DATA RECOVERY: 99.7%

*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

	DAILY TIME RANGES (HOURS)											
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	3.1	3.6	3.8	3.6	1.1	0.1		0.1	1.1	1.9	1.7	2.9
NW	5.6	5.9	6.1	7.1	8.1	12.8	14.4	13.6	9.7	4.8	4.6	5.4
W	7.2	7.6	7.3	7.2	7.6	9.9	14.5	16.6	12.5	8.6	7.8	7.4
SW	6.8	6.0	6.3	6.0	7.6	9.3	11.3	11.4	11.8	10.6	9.1	7.4
S	11.4	11.5	10.8	9.0	8.7	8.3	9.0	10.2	9.8	9.1	10.4	10.6
SE	19.3	19.7	19.0	17.2	14.6	13.7	13.8	15.4	19.4	21.5	19.7	20.3
E	20.6	19.8	20.3	21.0	20.0	16.6	13.8	13.6	16.9	23.4	24.2	21.9
NE	19.6	19.5	18.7	19.4	18.2	13.9	10.8	9.4	9.5	13.1	15.9	17.6
N	6.4	6.5	7.7	9.5	14.0	15.4	12.4	9.9	9.3	7.0	6.4	6.4

	DAILY TIME RANGES (HOURS)											
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5				0.1	0.3	0.5	0.6	0.5	0.3	0.2		0.1
7.5-9.0	0.3	0.1	0.1	0.5	1.3	1.9	3.0	2.3	1.5	0.9	0.7	0.6
6.0-7.5	3.8	2.9	1.9	4.5	8.2	7.8	7.0	6.7	4.3	2.9	4.8	4.0
4.5-6.0	17.6	14.5	10.4	18.6	24.8	22.3	20.4	19.0	16.0	8.8	10.0	15.8
3.0-4.5	31.6	32.7	34.4	34.7	35.8	37.7	36.4	36.9	33.3	25.0	25.0	28.5
1.5-3.0	29.7	30.6	31.7	24.8	22.1	26.0	28.9	29.0	31.1	43.2	42.8	34.3
0.5-1.5	13.8	15.5	17.6	13.2	6.5	3.7	3.6	5.5	12.4	17.0	15.0	14.0

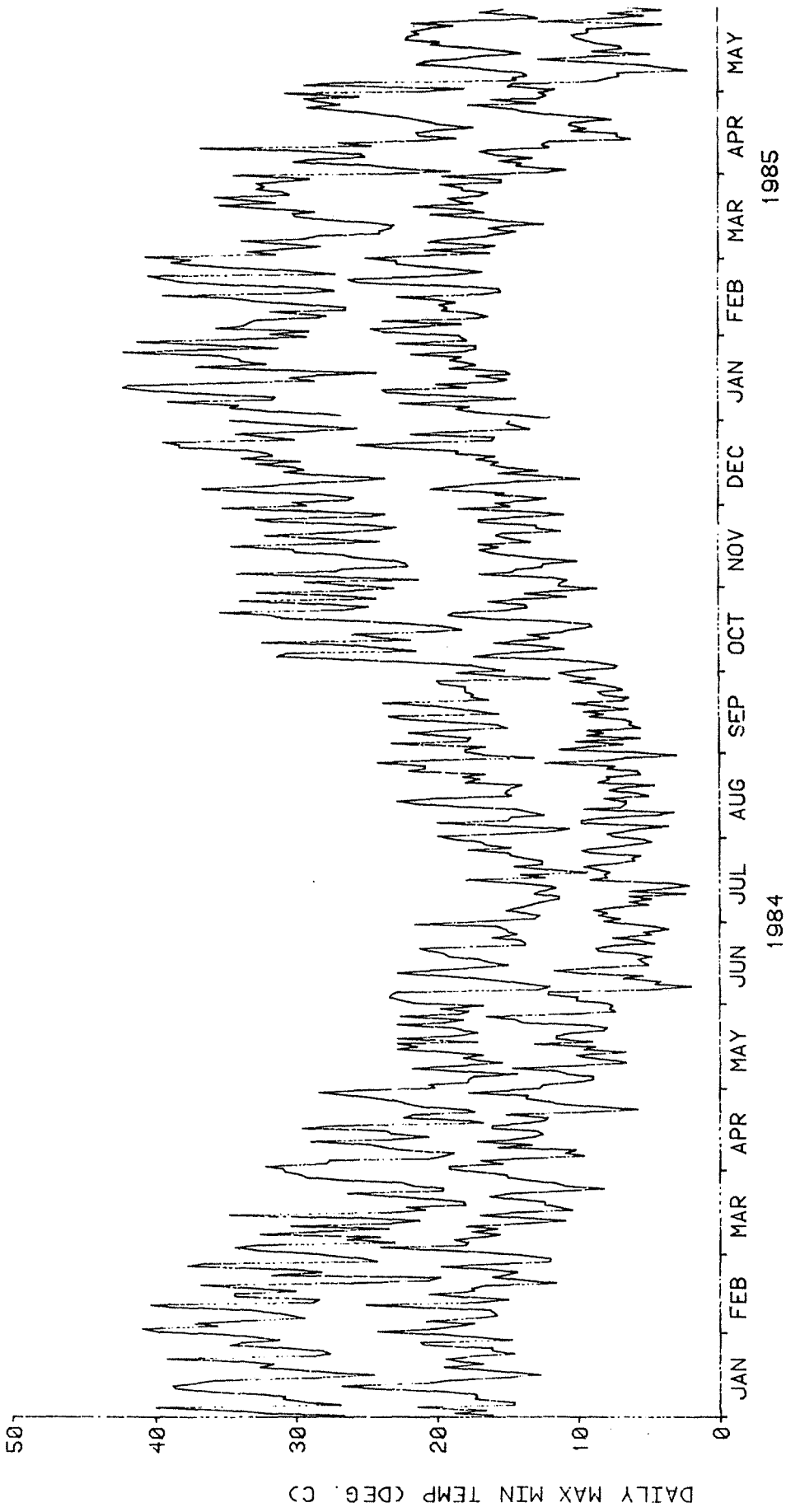


Figure 2.4 Daily maximum and minimum temperatures at Kalgoorlie using data from 1 January 1984 to 31 May 1985.

Table 2.4a Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Regional Hospital base station during 1982.

KALGOORLIE REGIONAL HOSPITAL 1982

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	-	-	-	-	-	-	36	36	43	48	64	45	46
Max. 24 hr Avg. (ug/m3)	-	-	-	-	-	-	158	311	260	235	233	171	311
Max. 3 hr Avg. (ug/m3)	-	-	-	-	-	-	593	1322	1205	1048	1160	988	1322
Max. 1 hr Avg. (ug/m3)	-	-	-	-	-	-	1218	1629	1732	1306	1719	2301	2301
Hours >500 (ug/m3)	-	-	-	-	-	-	3	14	18	17	31	16	99
Hours >1000 (ug/m3)	-	-	-	-	-	-	1	9	9	4	12	9	44
Hours >1400 (ug/m3)	-	-	-	-	-	-	0	3	5	0	3	3	14
Hours >2000 (ug/m3)	-	-	-	-	-	-	0	0	0	0	0	2	2
Data Recovery for period (%)							49.5	98.5	97.5	98.4	98.7	98.3	45.4

Table 2.4b Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Regional Hospital base station during 1983.

KALGOORLIE REGIONAL HOSPITAL 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	29	55	32	57	61	24	38	18	18	59	55	41	40
Max. 24 hr Avg. (ug/m3)	101	245	143	210	237	199	190	98	151	307	272	176	307
Max. 3 hr Avg. (ug/m3)	689	890	738	1380	1232	1030	1259	594	1075	1842	981	657	1842
Max. 1 hr Avg. (ug/m3)	975	1391	1478	3093	3107	2625	2425	1056	1912	2473	1649	1581	3107
Hours >500 (ug/m3)	6	21	9	21	25	5	11	3	4	32	30	21	188
Hours >1000 (ug/m3)	0	8	1	4	11	2	6	1	2	13	12	3	63
Hours >1400 (ug/m3)	0	0	1	2	5	1	3	0	1	7	3	1	24
Hours >2000 (ug/m3)	0	0	0	1	2	1	1	0	0	3	0	0	8
Data Recovery for period (%)	89.3	90.7	99.1	97.4	88.3	98.1	99.1	99.5	99.1	99.3	98.5	98.5	96.4

Table 2.4c Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Regional Hospital base station during 1984.

KALGOORLIE REGIONAL HOSPITAL 1984

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	15	66	54	42	16	13	45	6	11	12	32	66	34
Max. 24 hr Avg. (ug/m3)	68	209	332	219	169	96	298	64	35	74	348	278	348
Max. 3 hr Avg. (ug/m3)	330	1282	1105	898	1020	487	1172	301	208	536	1005	1566	1566
Max. 1 hr Avg. (ug/m3)	907	2097	1664	1984	2172	809	1545	503	486	872	1306	1996	2172
Hours >500 (ug/m3)	1	23	32	20	6	2	27	1	0	5	20	45	182
Hours >1000 (ug/m3)	0	10	10	8	3	0	7	0	0	0	6	16	60
Hours >1400 (ug/m3)	0	3	2	2	1	0	3	0	0	0	0	5	16
Hours >2000 (ug/m3)	0	1	0	0	1	0	0	0	0	0	0	0	2
Data Recovery for period (%)	37.0	71.1	99.6	99.3	98.6	99.4	93.1	90.1	22.1	72.1	99.1	99.8	81.8

Table 2.4d Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Regional Hospital base station during 1985.

KALGOORLIE REGIONAL HOSPITAL 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	69	35	39	27	42	-	-	-	-	-	-	-	43
Max. 24 hr Avg. (ug/m3)	263	179	284	267	423	-	-	-	-	-	-	-	423
Max. 3 hr Avg. (ug/m3)	1532	616	1339	1436	1833	-	-	-	-	-	-	-	1833
Max. 1 hr Avg. (ug/m3)	3528	1632	1794	1972	2468	-	-	-	-	-	-	-	3528
Hours >500 (ug/m3)	37	16	18	14	22	-	-	-	-	-	-	-	107
Hours >1000 (ug/m3)	13	4	9	7	12	-	-	-	-	-	-	-	45
Hours >1400 (ug/m3)	8	1	4	5	8	-	-	-	-	-	-	-	26
Hours >2000 (ug/m3)	4	0	0	0	3	-	-	-	-	-	-	-	7
Data Recovery for period (%)	97.8	87.6	77.1	98.8	99.6	-	-	-	-	-	-	-	92.2

Table 2.5a Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Technical School base station during 1983.

KALGOORLIE TECHNICAL SCHOOL 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	-	141	94	68	62	34	30	29	55	146	194	108	73
Max. 24 hr Avg. (ug/m3)	-	349	233	219	419	161	181	100	282	404	605	292	605
Max. 3 hr Avg. (ug/m3)	-	871	799	974	1174	622	1195	586	1491	1164	1462	1810	1810
Max. 1 hr Avg. (ug/m3)	-	1568	1433	1567	2222	1815	1813	1172	2799	1475	2208	2797	2799
Hours >500 (ug/m3)	-	30	28	25	31	12	8	5	17	20	86	35	297
Hours >1000 (ug/m3)	-	9	4	9	10	2	2	1	5	7	31	16	96
Hours >1400 (ug/m3)	-	1	1	2	2	1	2	0	3	1	9	8	30
Hours >2000 (ug/m3)	-	0	0	0	1	0	0	0	1	0	1	2	5
Data Recovery for period (%)	-	41.3	50.6	99.3	99.6	98.3	99.1	98.2	92.3	22.2	66.9	68.4	69.7

Table 2.5b Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Technical School base station during 1984.

KALGOORLIE TECHNICAL SCHOOL 1984

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	65	118	90	81	39	25	40	18	23	42	79	93	60
Max. 24 hr Avg. (ug/m3)	220	319	275	212	288	96	174	119	134	273	259	415	415
Max. 3 hr Avg. (ug/m3)	844	1075	1436	793	1623	630	661	825	647	1095	979	1046	1623
Max. 1 hr Avg. (ug/m3)	2263	1590	2050	1212	3396	1265	1105	2144	1248	1748	1414	1930	3396
Hours >500 (ug/m3)	16	60	40	28	14	7	18	10	3	27	38	63	323
Hours >1000 (ug/m3)	3	14	14	4	4	2	1	4	1	9	4	12	72
Hours >1400 (ug/m3)	2	3	3	0	2	0	0	2	0	2	1	5	20
Hours >2000 (ug/m3)	1	0	1	0	2	0	0	1	0	0	0	0	5
Data Recovery for period (%)	90.8	97.3	84.2	61.7	99.0	97.6	98.9	97.6	57.7	94.3	99.3	99.7	89.8

Table 2.5c Sulphur dioxide continuous monitoring statistics from data measured at the Kalgoorlie Technical School base station during 1985.

KALGOORLIE TECHNICAL SCHOOL 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	100	63	19	-	-	-	-	-	-	-	-	-	73
Max. 24 hr Avg. (ug/m3)	241	249	57	-	-	-	-	-	-	-	-	-	249
Max. 3 hr Avg. (ug/m3)	1112	1129	342	-	-	-	-	-	-	-	-	-	1129
Max. 1 hr Avg. (ug/m3)	2295	2005	456	-	-	-	-	-	-	-	-	-	1129
Hours >500 (ug/m3)	47	26	0	-	-	-	-	-	-	-	-	-	73
Hours >1000 (ug/m3)	12	7	0	-	-	-	-	-	-	-	-	-	19
Hours >1400 (ug/m3)	4	3	0	-	-	-	-	-	-	-	-	-	7
Hours >2000 (ug/m3)	1	1	0	-	-	-	-	-	-	-	-	-	2
Data Recovery for period (%)	69.4	99.2	17.7	0.0	0.0	0.0	-	-	-	-	-	-	31.0

Table 2.6a Sulphur dioxide continuous monitoring statistics from data measured at the South Boulder Primary School base station during 1984.

SOUTH BOULDER PRIMARY SCHOOL 1984

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	-	-	-	-	-	-	-	18	36	87	118	56	63
Max. 24 hr Avg. (ug/m3)	-	-	-	-	-	-	-	52	173	315	360	260	360
Max. 3 hr Avg. (ug/m3)	-	-	-	-	-	-	-	400	1018	1467	1390	1085	1467
Max. 1 hr Avg. (ug/m3)	-	-	-	-	-	-	-	1109	1431	2363	1861	1523	2363
Hours >500 (ug/m3)	-	-	-	-	-	-	-	3	16	52	45	21	137
Hours >1000 (ug/m3)	-	-	-	-	-	-	-	1	5	24	18	3	51
Hours >1400 (ug/m3)	-	-	-	-	-	-	-	0	1	13	10	1	25
Hours >2000 (ug/m3)	-	-	-	-	-	-	-	0	0	3	0	0	3
Data Recovery for period (%)	-	-	-	-	-	-	-	97.4	99.7	99.6	99.5	81.9	95.6

Table 2.6b Sulphur dioxide continuous monitoring statistics from data measured at the South Boulder Primary School base station during 1985.

SOUTH BOULDER PRIMARY SCHOOL 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Monthly Avg. (ug/m3)	84	107	85	59	74	-	-	-	-	-	-	-	82
Max. 24 hr Avg. (ug/m3)	323	329	386	298	377	-	-	-	-	-	-	-	386
Max. 3 hr Avg. (ug/m3)	1205	1157	1467	862	1488	-	-	-	-	-	-	-	1488
Max. 1 hr Avg. (ug/m3)	1624	1975	1940	1382	2723	-	-	-	-	-	-	-	2723
Hours >500 (ug/m3)	27	44	41	33	42	-	-	-	-	-	-	-	187
Hours >1000 (ug/m3)	8	12	14	7	12	-	-	-	-	-	-	-	53
Hours >1400 (ug/m3)	3	6	5	0	4	-	-	-	-	-	-	-	18
Hours >2000 (ug/m3)	0	0	0	0	1	-	-	-	-	-	-	-	1
Data Recovery for period (%)	55.8	99.2	92.7	99.5	99.8	-	-	-	-	-	-	-	89.4

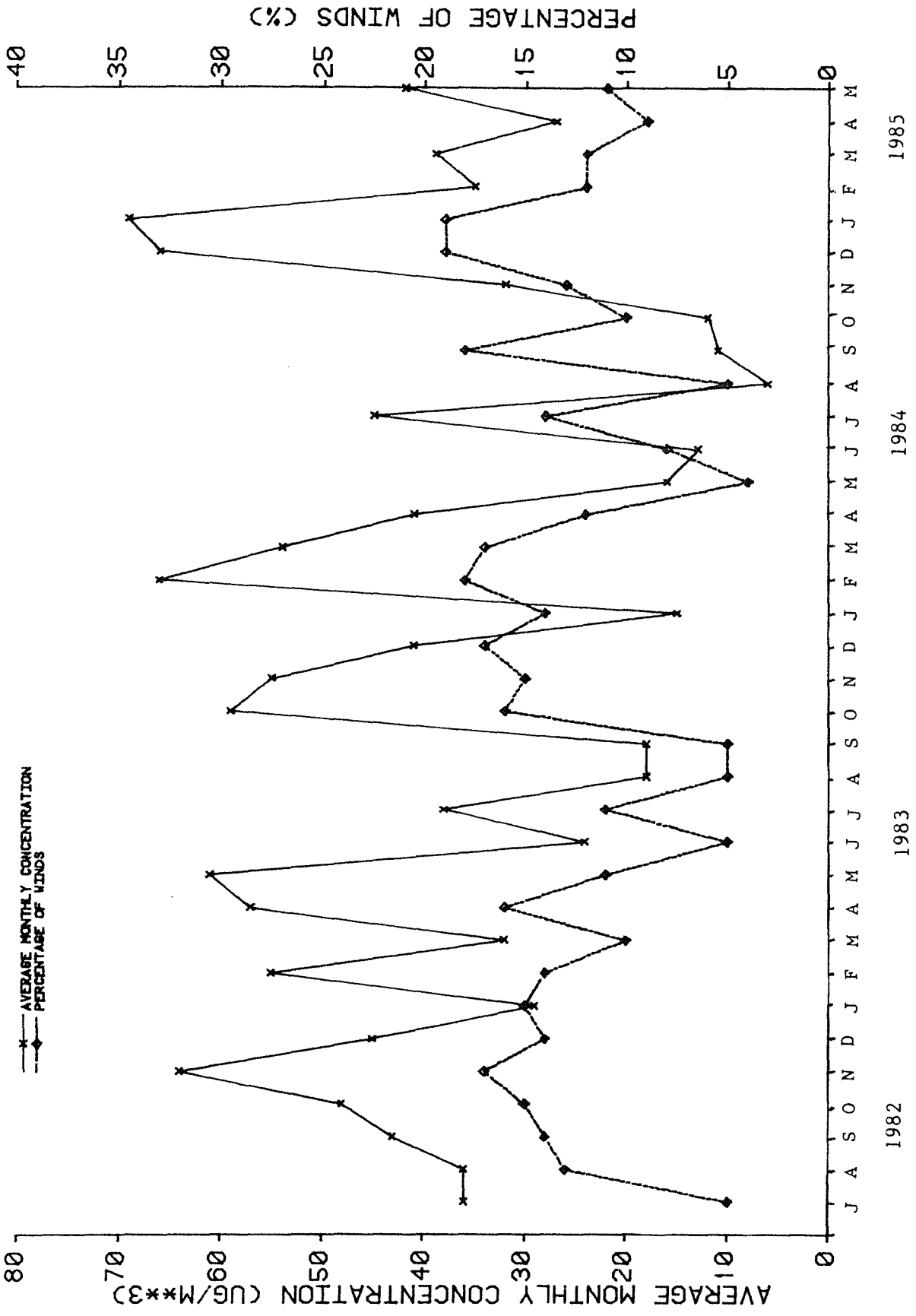


Figure 2.5 Monthly average sulphur dioxide concentrations for the Kalgoorlie Regional Hospital base station from data measured from 16 July 1982 to 31 May 1985. Also shown is the monthly relative frequency of wind directions along the bearings from major sulphur dioxide sources.

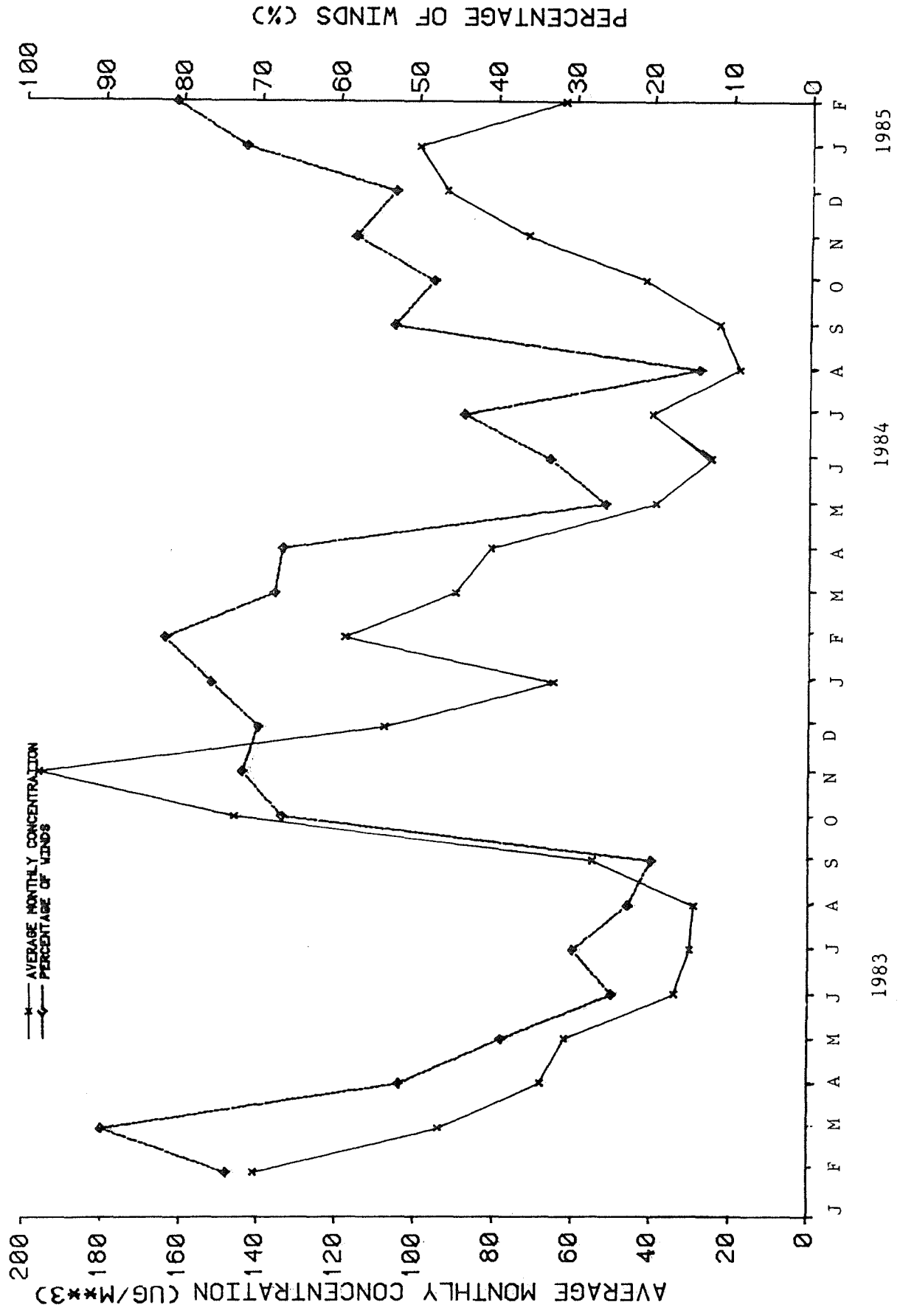


Figure 2.6 Monthly average sulphur dioxide concentrations for the Kalgoorlie Technical School base station from data measured from 17 February 1983 to 31 May 1985. Also shown is the monthly relative frequency of wind directions along the bearings from major sulphur dioxide sources.

Figure 2.7 Monthly average sulphur dioxide concentrations for the South Boulder Primary School base station from data measured from 17 August 1984 to 31 May 1985. Also shown is the monthly relative frequency of wind directions along the bearings from major sulphur dioxide sources.

Figure 2.6 shows a clear seasonal trend in the monthly average sulphur dioxide concentrations observed at the KTS base station. Over the months from May to August, the sulphur dioxide concentration measured at the KTS is about one fifth of the concentration observed in other months. This is the result of the shift in the distribution of winds away from the sources as noted in Section 2.1 and highlighted in Figure 2.3.

The seasonal relationship to sulphur dioxide concentrations at the KRH base station, as shown in Figure 2.5, does not indicate a clear trend. This is probably the result of the less marked monthly variation in the percentage of winds that would blow a plume from any of the three gold roasters (i.e. a south easterly wind) or from the nickel smelter (i.e. a southerly wind), towards the Hospital.

At the time of writing, there was insufficient data from the SBPS base station to allow a conclusion to be drawn from Figure 2.7 regarding a seasonal trend in sulphur dioxide concentrations at that site.

2.2.2 Daily Trends

The number of times each 1-hourly average sulphur dioxide concentration exceeded 500 and 1000 micrograms per cubic metre (ug/m**3) in the "average" year is plotted in Figures 2.8, 2.9 and 2.10 for the KRH, KTS and SBPS base stations respectively. The events were grouped into fixed 2 hour daily time steps based on the time at the mid-point of the one hour average event under consideration.

Both the KRH and SBPS base stations experienced a similar diurnal variation in the frequency that the specified 1-hourly averaged concentrations were exceeded. From Figures 2.8 and 2.10, most of the episodes occurred either at night or in the early morning, up to two hours after sunrise.

The high concentrations at night-time are the result of the vertical spread of the plume becoming large enough to bring the plume into contact with the ground. In neutral to stable conditions at night, the elevated source must be a moderate distance (more than 2 kilometres) from the receptor (ie. the base stations) to enable the plume to have a vertical spread sufficiently large to bring it to ground. This is consistent with the heights of the gold roaster stacks and source to receptor distances, as contained in Rosher et al. (1984).

The early morning events were most likely the result of fumigation or plume looping. Fumigation occurs in the early morning when pollutant material that has accumulated aloft during stable night-time conditions is brought rapidly to ground by the growing convective motions produced by the warming of the atmosphere near the ground. Plume looping is the result of a plume being caught in a convective thermal and being brought to ground very close to the source, resulting in very high, short-term concentrations.

From Figure 2.9, it is noticeable that there was a marked increase in the number of hours exceeding the specified concentrations during the four hour period from 0800 until 1200 hours. Plume fumigation and plume looping in unstable conditions from NKM were the cause of this increase.

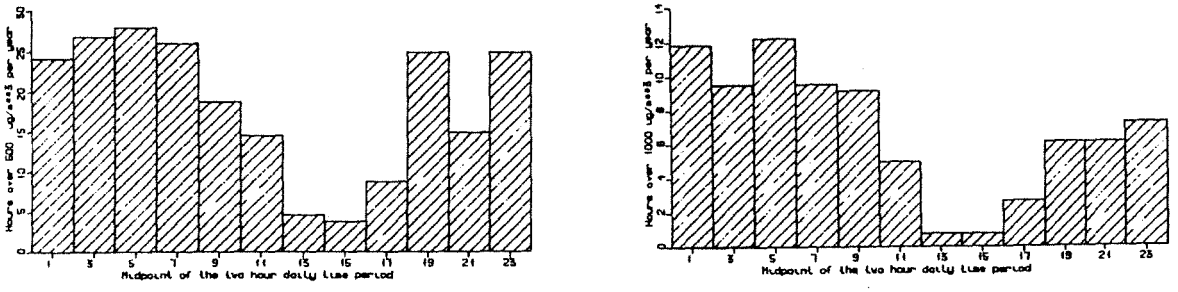


Figure 2.8a,b Time distribution of the number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the Kalgoorlie Regional Hospital.

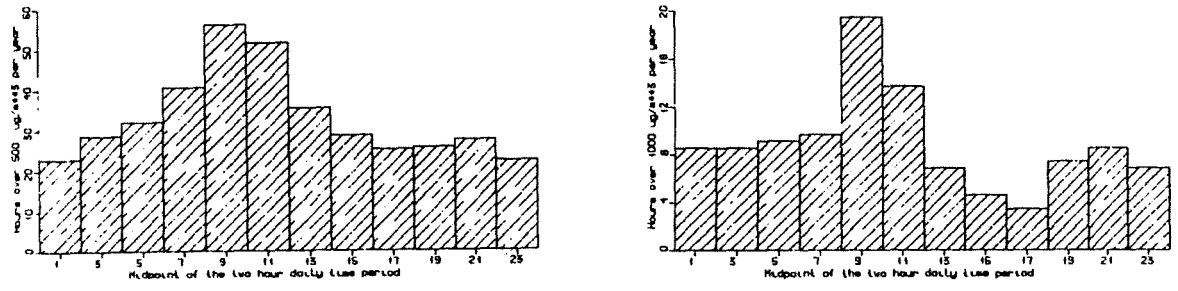


Figure 2.9a,b Time distribution of the number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the Kalgoorlie Technical School.

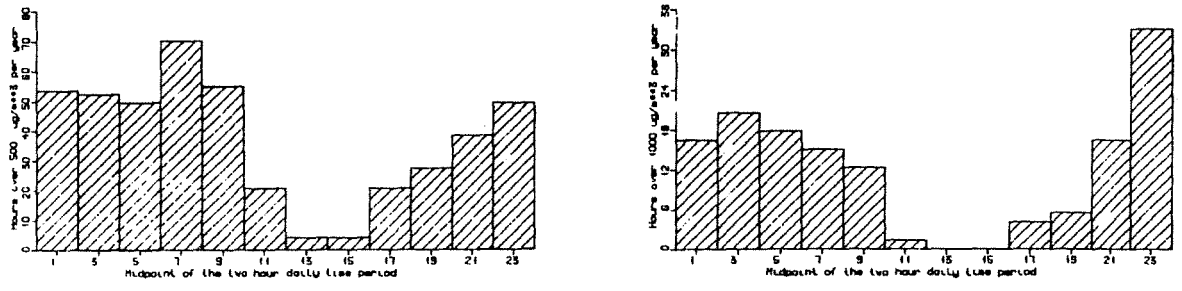


Figure 2.10a,b Time distribution of the number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the South Boulder Primary School.

3. SOURCE RECOGNITION

This Section quantifies which sources contribute to the sulphur dioxide concentrations measured at each monitor. The source strength, release height and other emissions characteristics, together with the distance to the receptor will influence the contribution each source will make to the total number of hours in excess of certain levels. The following emission rates of sulphur dioxide were given in Rosher et. al. (1984):

- NKM, 0.58 kilograms per second;
- GR, 0.35 kilograms per second; and
- KLV, 1.16 kilograms per second.

Based only on the amount of sulphur dioxide emitted, the KLV gold roaster would be expected to contribute a larger number of high level concentrations than the other two roasters.

3.1 Pollution Roses

Pollution roses illustrate the mean 10-minute average sulphur dioxide concentration measured for a given wind direction over the period of analysis. In these analyses, the wind direction compass has been divided up into 64 sectors, each of 5.625 degrees width. For periods longer than one month (to smooth out anomalies), this form of analysis readily identifies those wind directions where elevated levels of sulphur dioxide at the monitoring stations occur, thus enabling identification of the contributing source or sources.

The monthly pollution roses for the KRH, KTS and SBPS base stations are presented in Appendices D to F respectively.

Figure 3.1 presents three pollution roses from the KTS, KRH and SBPS base stations using all data available at each site. Also marked on the figure are the locations of the three gold roasters: North Kalgurli Mines (NKM), Gold Resources (GR) and Kalgoorlie Lake View (KLV). The Kalgoorlie Nickel Smelter (KNS) is located approximately 10 kilometres directly south of the SBPS base station and is not shown on Figure 3.1.

The pollution rose from the KRH base station clearly indicates that the Gold roasters, all on a bearing of between 137 and 138 degrees, are the major contributors to the ground level concentrations of sulphur dioxide. The contribution from the KNS is less than at the other two base stations (ie. KTS and SBPS), as would be expected because of the increased source to receptor distance.

For the KTS base station, it has been possible to separate the gold roasters into two source groups. The first comprises NKM, on a bearing of 70.3 degrees, and the second group contains GR and KLV, which lie on bearings of 120.7 and 126.9 degrees respectively. From Figure 3.1, it is apparent that the major contributors to the measured sulphur dioxide concentrations are the GR and KLV gold roasters, although the impacts from the NKM roaster and KNS are still significant.

The location of the SBPS base station readily enables each emissions source to be distinguished individually. From Figure 3.1, the KLV gold roaster is the largest relative contributor to the sulphur dioxide levels at the SBPS base station. The GR gold roaster and the KNS have similar relative contributions, while the NKM gold roaster has a relatively minor impact.

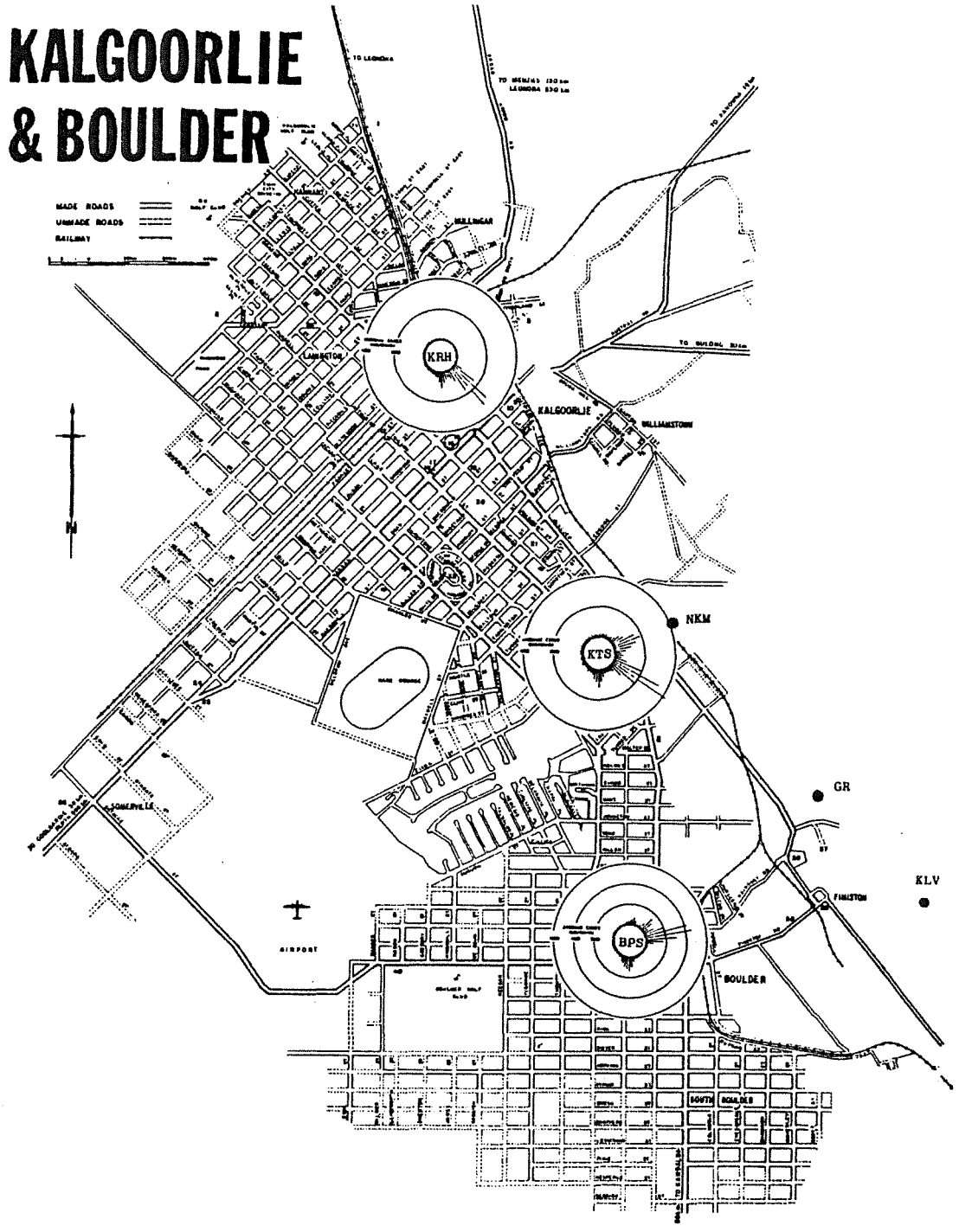


Figure 3.1 Pollution roses for the KRH, KTS and SBPS base stations using all the sulphur dioxide concentration data at each site.

3.2 Time of the Day Frequency Distributions

While pollution roses enable recognition of the relative contributions by each source to average concentrations, the major concern at Kalgoorlie is the short-term high concentration events.

In order to determine the major source contributors to high 1-hourly concentrations, a modification of the approach used in Section 2.2.2 was adopted.

Again, the frequency that 1-hourly sulphur dioxide concentrations exceeded various nominated levels in an "average" year were grouped into fixed 2 hour daily time steps based on the time at the mid-point of the hour under consideration. In addition, the vector average wind direction over the duration of the event was computed, and this was related to the known bearing from the base station to the various emissions sources. If the calculated wind direction was within 15 degrees of the bearing to any of the individual sources or the nominated source groups, then the event under consideration was allocated to that source or source group. If the event could not be allocated to any of the sources or source groups, then it was classed as being of unknown origin.

3.2.1 Kalgoorlie Regional Hospital

At the KRH base station, all of the gold roasters (ie. NKM, GR and KLV) are on approximately the same bearing, and therefore have been classified as one source group. The KNS can be separated from the gold roasters and is generally easy to distinguish. The results for the KRH base station are presented in Figures 3.2a to 3.2d for the yearly normalised number of hours exceeding 500, 1000, 1400 and 2000 ug/m**3 respectively. From these diagrams, it is apparent that the gold roasters produce a large percentage of all the high sulphur dioxide concentration events. Table 3.1 presents the percentages of the events that can attributed to the two source groups, and also contains the percentage of events that could not be linked to a source. As depicted in Figure 3.2 and Table 3.1, the roasters can be linked to over 80 % of all events where high 1-hourly sulphur dioxide concentrations are experienced at the KRH base station. Most of these events occur either at night or in early to mid-morning.

The KNS was associated with sulphur dioxide concentrations in excess of 2000 ug/m**3 at the KRH base station. The 1-hourly concentrations over 1400 ug/m**3 were related exclusively to the night-time and the early morning periods. The night-time events are the result of the plume being sufficiently dispersed in the stable to near neutral conditions to come into contact with the receptor at ground level. The early morning events are the result of fumigation or plume looping, which cause high, short-term concentrations.

3.2.2 Kalgoorlie Technical School

At the KTS base station, the GR and KLV roasters were grouped, while the NKM roaster and the KNS were treated individually. The results for the KTS base station are presented in Figures 3.3a to 3.3d and Table 3.2. The three roasters were the cause of approximately 80 % of all 1-hour averages greater than 500 ug/m**3, of which 45 % to 67 % (depending on the level under consideration), were attributed to the combination of the KLV and GR roasters. Almost all of the high concentrations associated with the NKM gold roaster occurred during the day, particularly during early to

mid-morning. This is due to the plume being caught in highly convective looping motions of the atmosphere and subsequently brought to ground close to the source. Most of the other high concentration events occurred at night under stable conditions.

In contrast to the KRH site, no 1-hour averages exceeding 2000 ug/m**3 resulting from KNS were recorded at the Technical School. At this stage, there is insufficient data available to determine the exact reason for this observation.

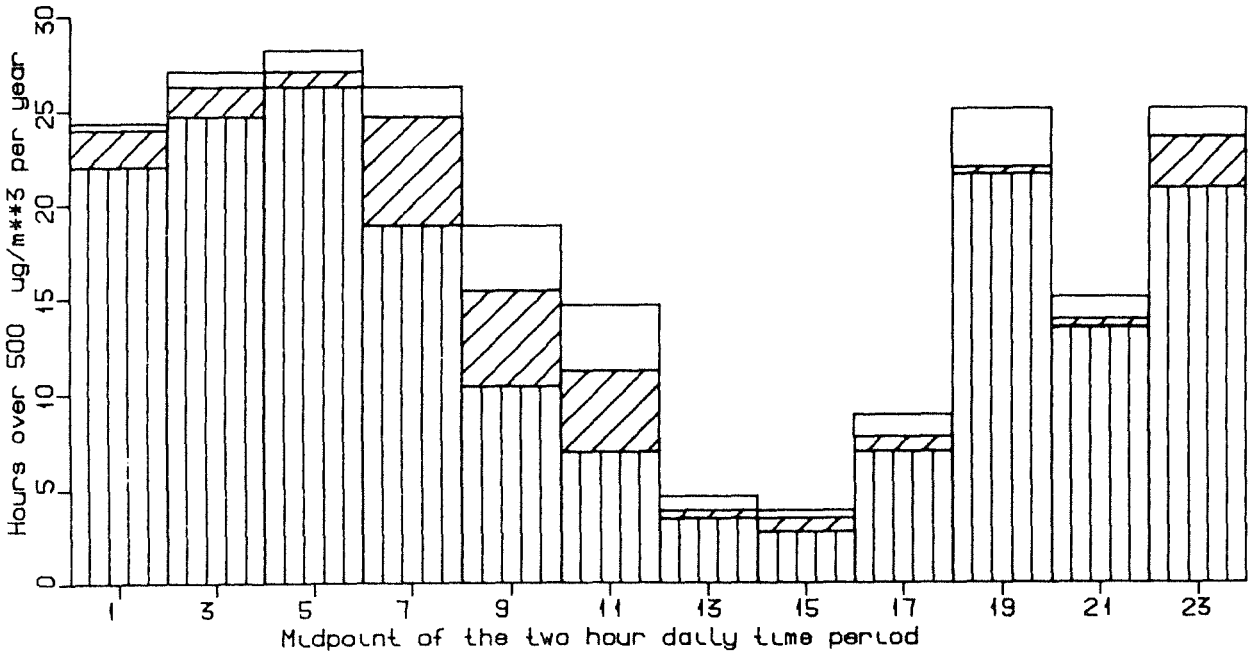
A further feature of Table 3.2 is the large increase in the percentage of events that could not be associated with any one source or source group. Up to 18 % of the 1-hourly concentrations exceeding 500 ug/m**3 could not be directly related to a source or source group using this method. A visual inspection of these events indicated that most were either associated with highly variable wind directions or could be related to a combination of the plumes from the three gold roasters. Therefore, the number of events attributed to the gold roasters would be larger than the 80 % determined above.

3.2.3 South Boulder Primary School

At the SBPS base station, all four sources could be identified separately. The percentages of 1-hourly concentrations exceeding the selected levels are presented in Table 3.3. and Figures 3.4 (a) to (d). Although the SBPS base station has been in operation for only seven months, it is apparent that a large percentage of high concentration events are likely to be linked with the KLV gold roaster. All of the 1-hourly average concentrations exceeding 2000 ug/m**3 so far recorded were caused by the emissions from the KLV roaster. Most of these events were at night, with the other events occurring under fumigation or plume looping conditions in the early morning just following sunrise.

From Figure 3.4 and Table 3.3, it is apparent that other gold roasters contributed only a small percentage of the events considered. The NKM and GR gold roasters were not linked with any 1-hourly average concentrations greater than 1000 ug/m**3, and only 10 % of the 1-hourly concentrations greater than 500 ug/m**3.

As with the other two base stations, the KNS only contributed a small proportion of the total number of events. The KNS did not contribute to any 1-hourly average concentrations in excess of 2000 ug/m**3.



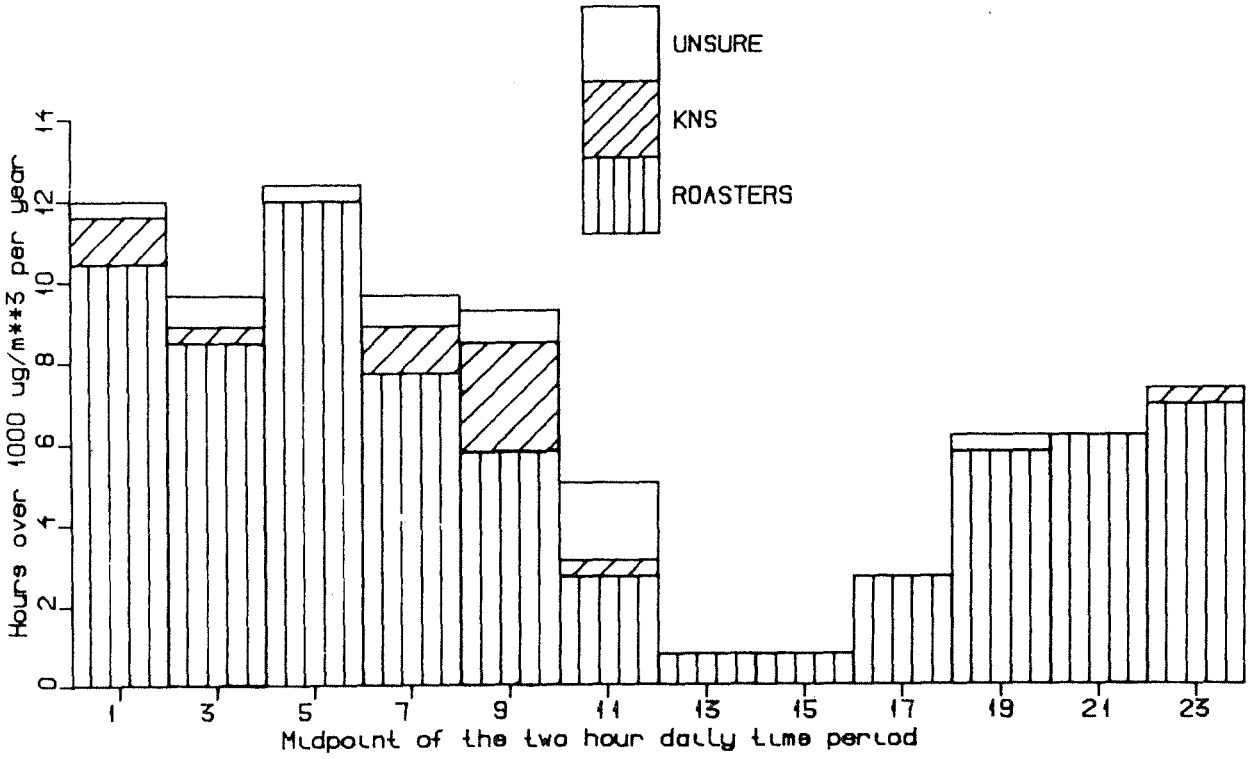
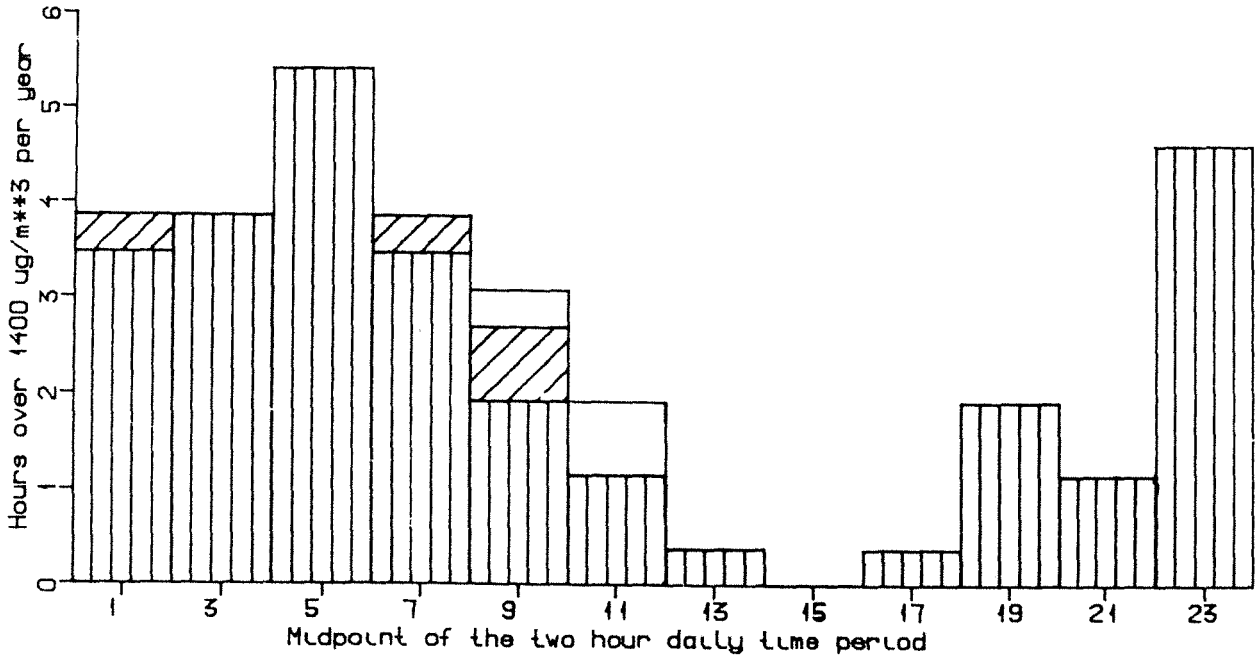


Figure 3.2a,b Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the Kalgoorlie Regional Hospital.



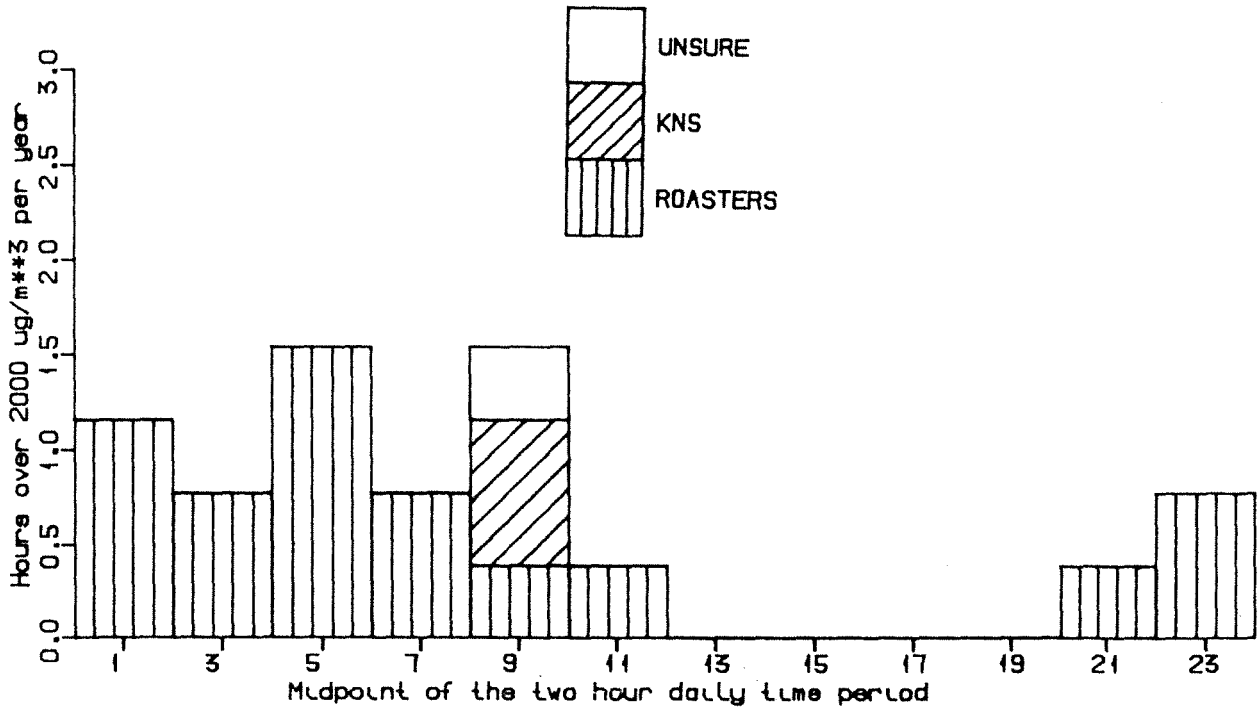


Figure 3.2c,d Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 1400 and 2000 ug/m**3 each year at the Kalgoorlie Regional Hospital.

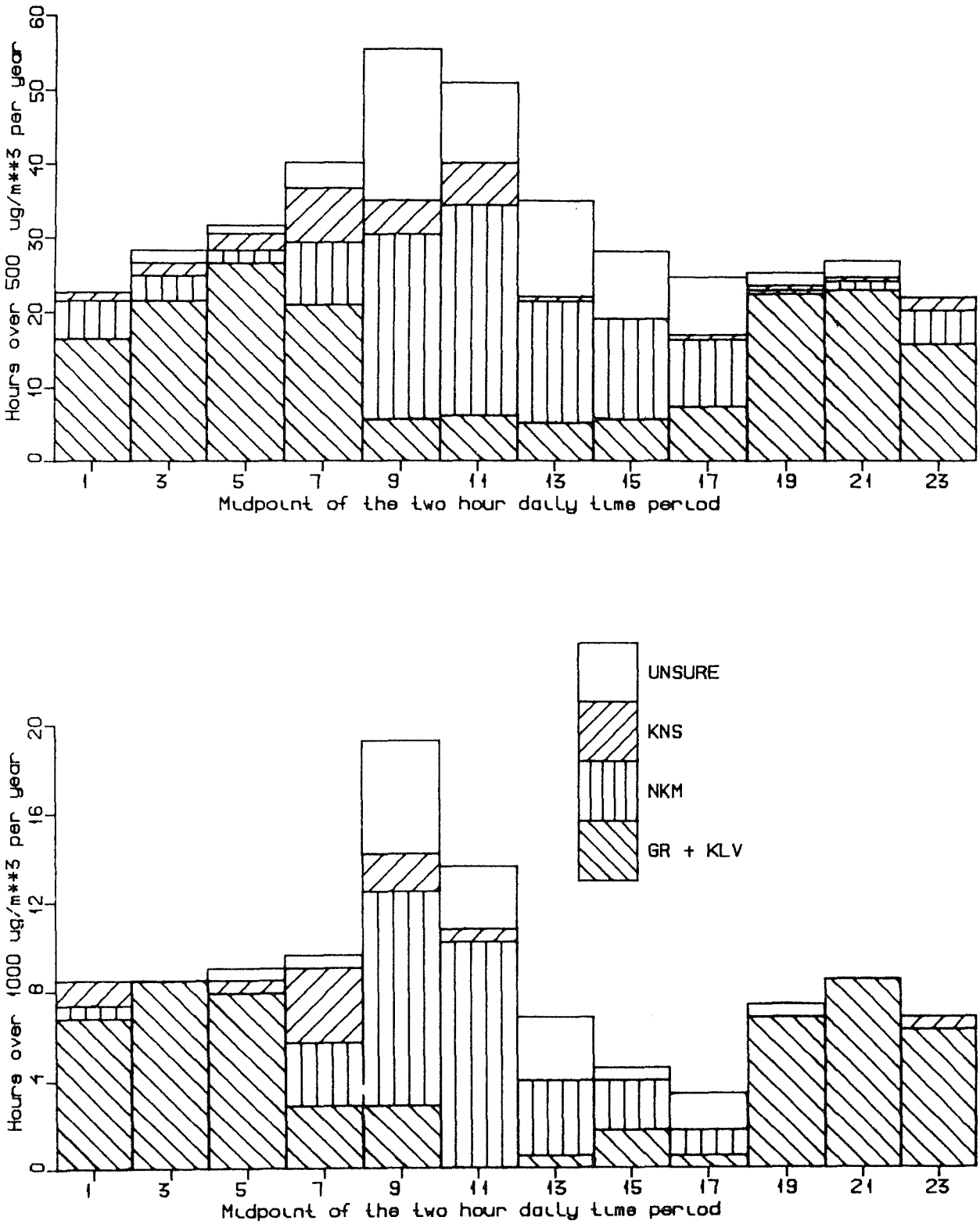
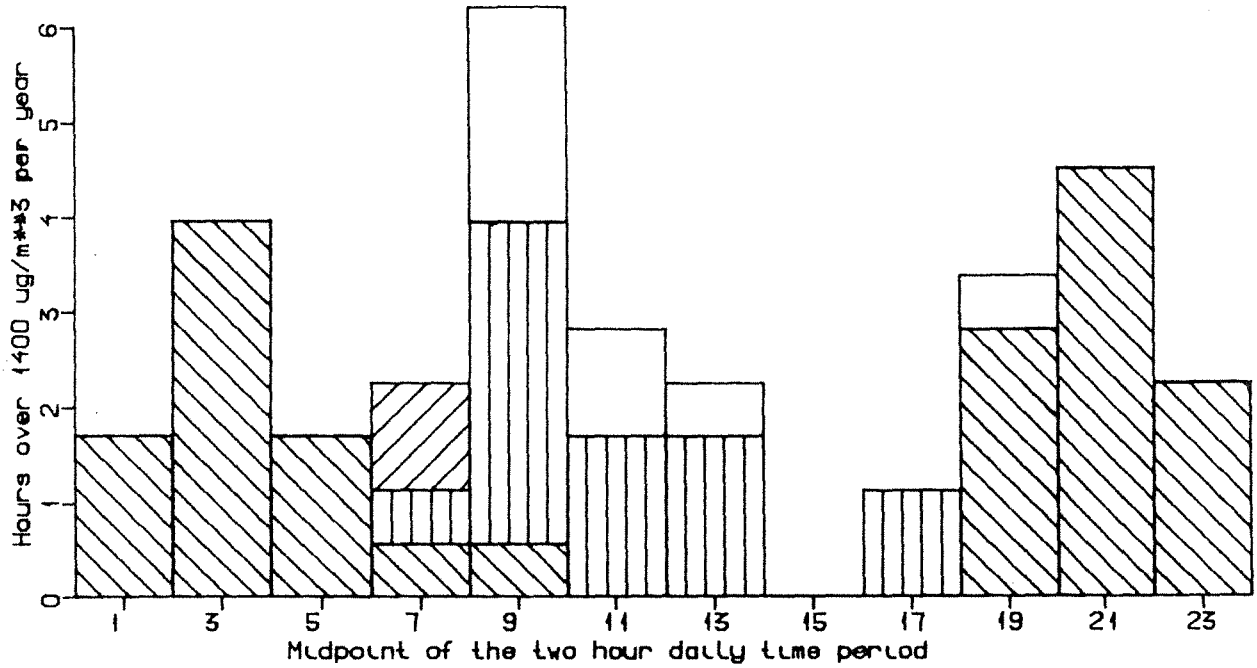


Figure 3.3a,b Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the Kalgoorlie Technical School.



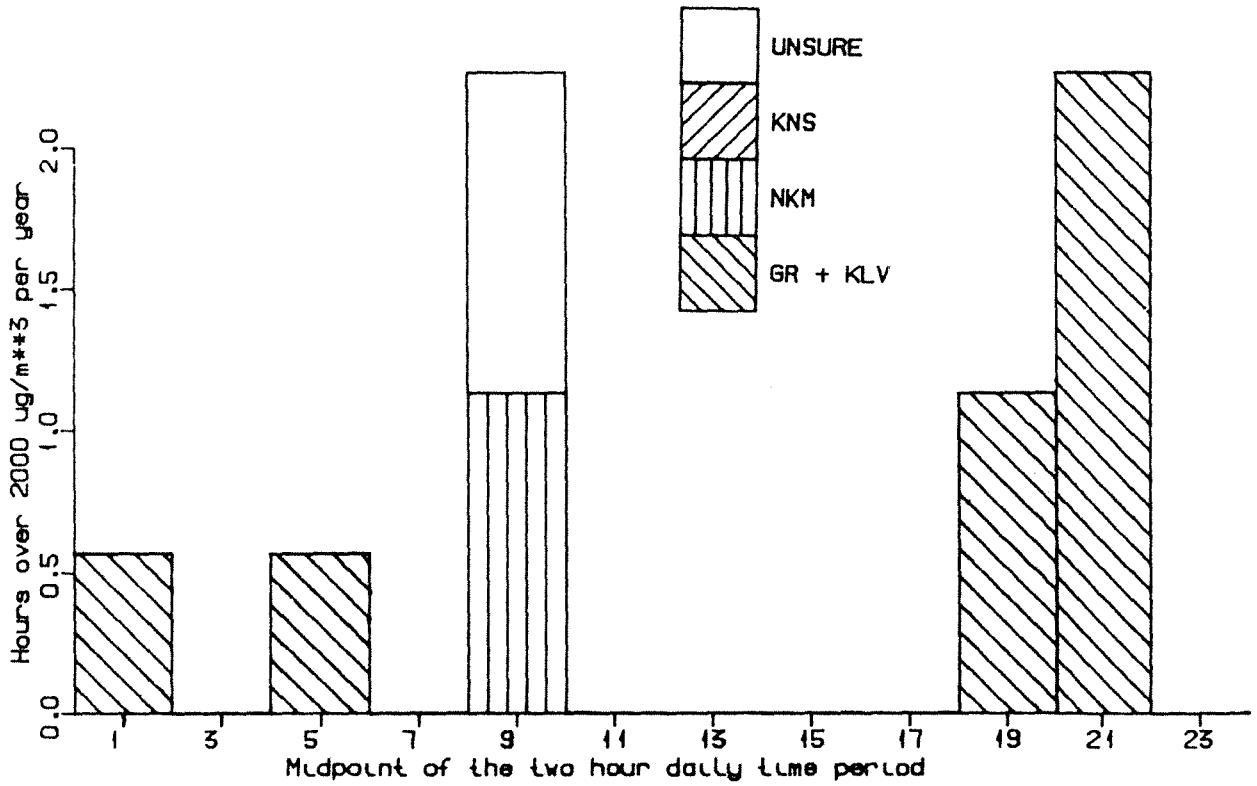


Figure 3.3c,d Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 1400 and 2000 ug/m**3 each year at the Kalgoorlie Technical School.

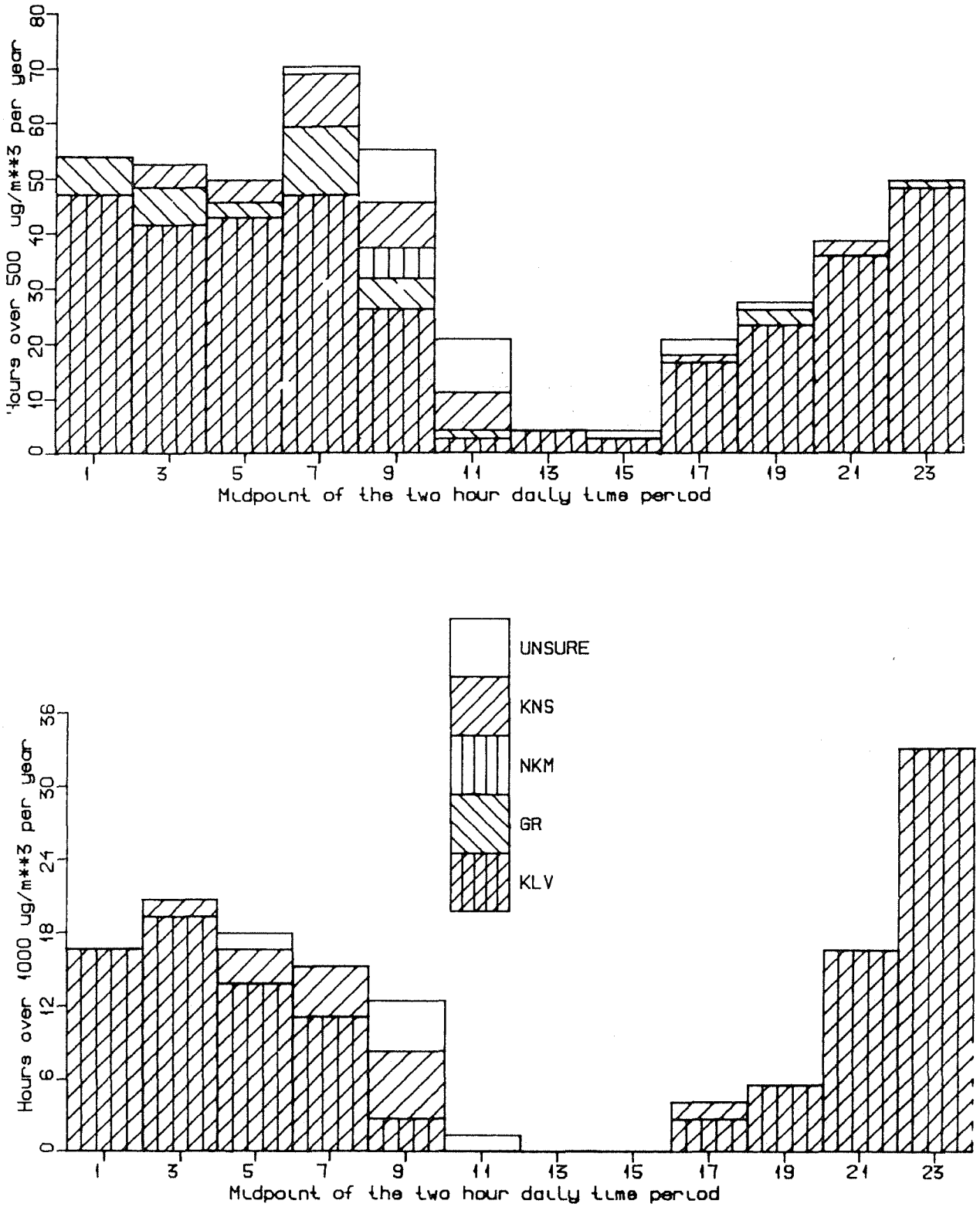
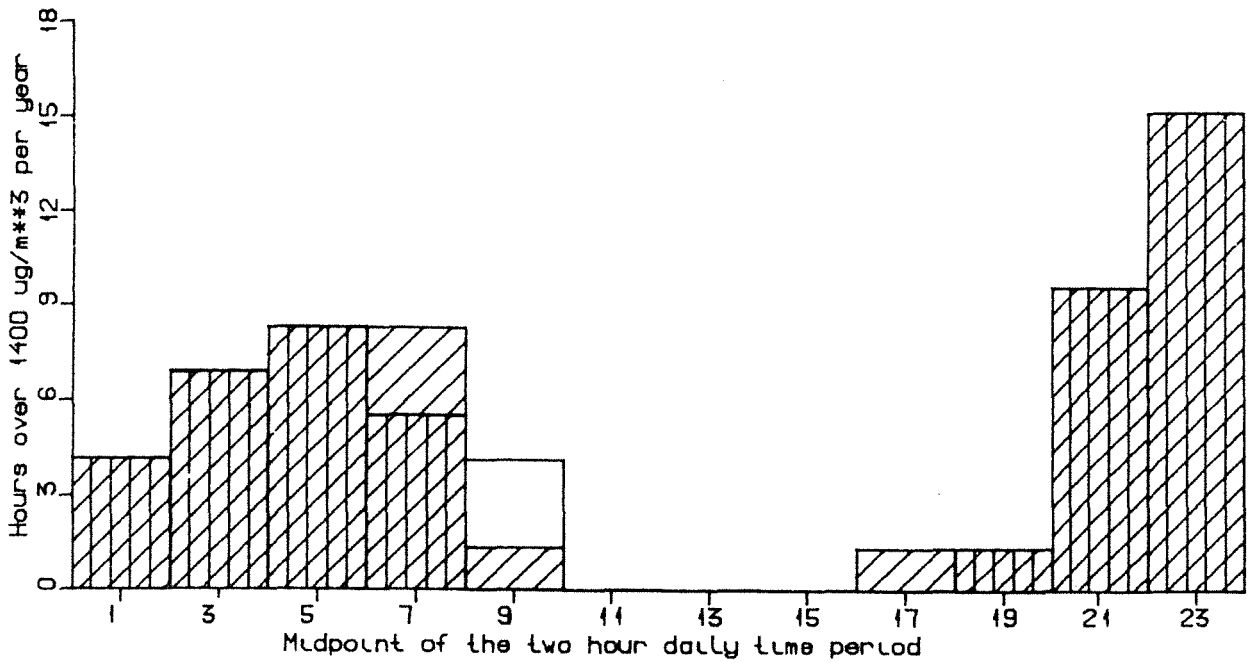


Figure 3.4a,b Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 500 and 1000 ug/m**3 each year at the South Boulder Primary School.



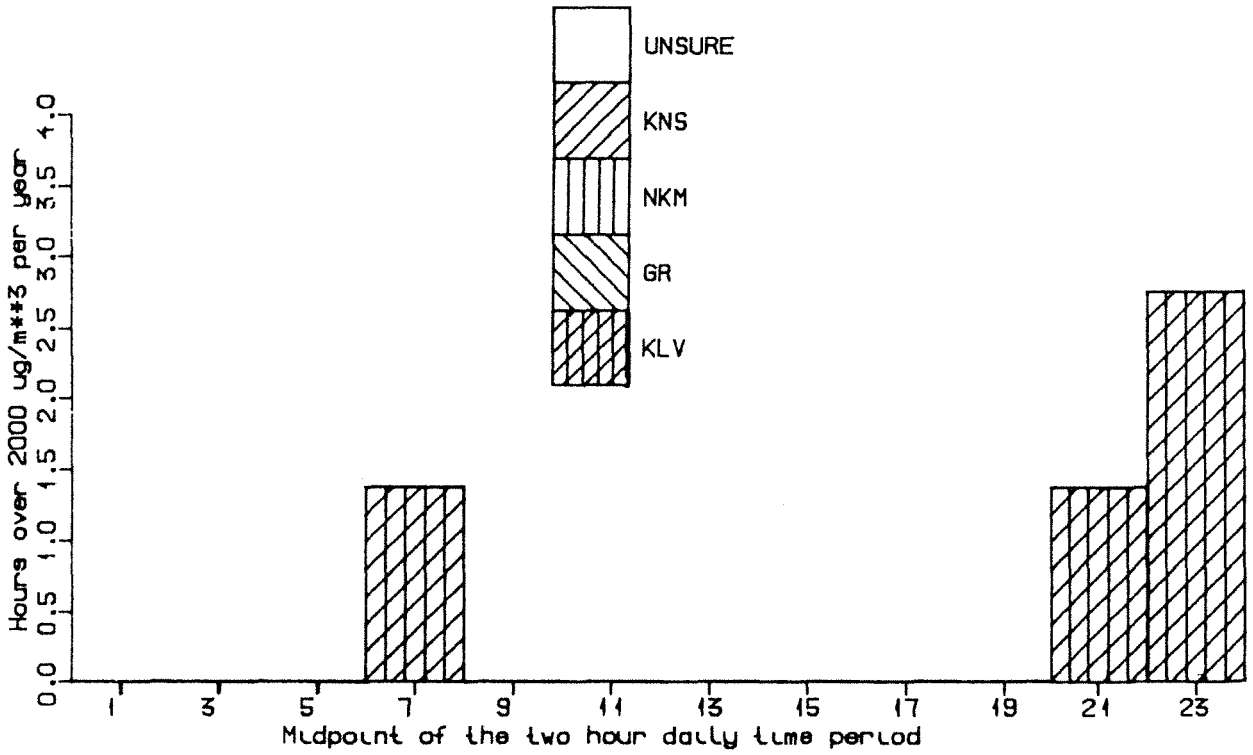


Figure 3.4c,d Sources responsible for number of 1-hourly average sulphur dioxide concentrations exceeding 1400 and 2000 ug/m**3 each year at the South Boulder Primary School.

Table 3.1. Number of hours above various sulphur dioxide concentrations attributed to various sources for the Kalgoorlie Regional Hospital base station based on data collected 16-7-82 to 31-5-85.

Source	Concentration level (ug/m**3) >500 No. (%)	>1000 No. (%)	>1400 No. (%)	>2000 No. (%)
Roasters	177 (80.4)	70 (85.8)	27 (91.1)	6. (84.2)
KNS	24 (11.1)	6 (7.6)	1 (5.1)	.7 (10.5)
Uncertain	18 (8.5)	5 (6.6)	2 (3.8)	.5 (5.3)
Total number	219	81	30	7.2

Table 3.2. Number of hours above various sulphur dioxide concentrations attributed to various sources for the Kalgoorlie Technical School base station based on data collected 17-2-83 to 31-5-85.

Source	Concentration level (ug/m**3) >500 No. (%)	>1000 No. (%)	>1400 No. (%)	>2000 No. (%)
GR and KLV	179 (45.2)	54 (50.3)	18 (56.1)	6. (66.7)
NKM	119 (29.9)	30 (28.3)	9 (26.3)	1. (16.7)
KNS	27 (6.8)	8 (7.5)	1 (3.5)	(0.0)
Uncertain	72 (18.2)	15 (13.9)	4 (14.0)	1. (16.7)
Total number	397	107	33	7.0

Table 3.3. Number of hours above various sulphur dioxide concentrations attributed to various sources for the South Boulder Primary School base station based on data collected 17-8-85 to 31-5-85.

Source	Concentration level (ug/m**3) >500 No. (%)	>1000 No. (%)	>1400 No. (%)	>2000 No. (%)
KLV	337 (75.6)	121 (84.6)	51 (86.1)	5.5 (100.)
GR	40 (8.9)	(0.0)	(0.0)	(0.0)
NKM	6 (1.2)	(0.0)	(0.0)	(0.0)
KNS	37 (8.3)	15 (10.6)	5 (9.3)	(0.0)
Uncertain	27 (5.9)	7 (4.8)	3 (4.6)	(0.0)
Total number	446	143	59	5.5

4.0 CONCLUSIONS

The meteorological and sulphur dioxide data collected at the three base stations in the Kalgoorlie and Boulder areas have been presented and analysed for the period 14 March 1984 to 31 May 1985.

The monthly averaged sulphur dioxide concentrations have been found to be well correlated with the percentage of winds along the bearings from the major sources.

An analysis of daily trends has revealed that most of the high sulphur dioxide concentrations at the Hospital and Primary School base station sites occurred at night and in the early to mid-morning periods. Therefore, the meteorology associated with such events is stable atmospheric conditions and early morning fumigation, respectively. A similar trend was evident for the Kalgoorlie Technical School base station, with an exception being that the North Kalgurli Mines roaster contributed 1-hourly averaged concentrations greater than 1400 ug/m**3 only between sunrise and the early evening. This is due to the plume from North Kalgurli Mines being brought rapidly to ground by a convective atmosphere and, in combination with the small source to receptor distance, results in high, short-term concentrations.

The emissions from the Kalgoorlie Lake View gold roaster were identified as being the major contributor to high levels of sulphur dioxide at the SBPS.

The Kalgoorlie Nickel Smelter has contributed to a limited number of 1-hourly average concentrations exceeding 2000 ug/m**3 at the Kalgoorlie Regional Hospital base station. However, the percentage of high concentration events attributed to the Kalgoorlie Nickel Smelter was relatively low (generally less than 10 %). Again, these events occurred at night under stable conditions, or during fumigation conditions in the early morning.

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APPENDIX B

Monthly Sulphur Dioxide Statistics for Data Measured at the Kalgoorlie Technical School Base Station, January 1984 to May 1985.

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL JANUARY 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 1 84	26.	27. 1250	28. 1450		32. 2140	100.
2 1 84	27.	91. 2350	56. 750		126. 820	100.
3 1 84	50.	132. 210	241. 400		523. 450	100.
4 1 84	38.	81. 1820	179. 1900		578. 1910	100.
5 1 84	81.	484. 1750	779. 1850		1762. 1930	82.
6 1 84	35.	76. 1610	133. 1700		266. 10	100.
7 1 84	50.	191. 1810	364. 1950		701. 1950	100.
8 1 84	43.	105. 40	237. 310		847. 320	100.
9 1 84	76.	422. 1530	750. 1640		3924. 1650	100.
10 1 84	41.	554. 2340	792. 2340		443. 630	100.
11 1 84	115.	604. 0	899. 0		2019. 0	100.
12 1 84	98.	545. 1930	888. 2100		2265. 2150	100.
13 1 84	61.	130. 750	268. 740		952. 1300	100.
14 1 84	30.	45. 0	83. 0		226. 20	100.
15 1 84	72.	330. 600	633. 650		1075. 730	100.
16 1 84	27.	198. 2350	55. 2130		203. 2130	100.
17 1 84	75.	225. 50	488. 130		1130. 140	100.
18 1 84	120.	816. 1820	2263. 2010	1	3506. 2040	71.
19 1 84	44.	113. 220	294. 220		1344. 250	100.
20 1 84	220.	844. 850	1515. 1030	2	3103. 1120	100.
21 1 84	134.	413. 10	657. 1040		3089. 1130	100.
22 1 84	31.	53. 620	78. 620		120. 700	100.
23 1 84	26.	118. 2350	26. 2350		26. 2350	100.
24 1 84	140.	284. 440	602. 1720		2817. 1800	100.
25 1 84	69.	280. 240	378. 450		1176. 530	100.
26 1 84	29.	36. 0	61. 0		137. 40	100.
27 1 84	28.	31. 1400	32. 1440		34. 1710	100.
28 1 84	31.	48. 700	64. 650		183. 700	100.
29 1 84	16.	27. 1200	29. 1210		34. 1220	62.
30 1 84						
31 1 84						

MONTHLY AVERAGE: 65.
MAXIMUM 24 HOUR AVERAGE: 220.
MAXIMUM 3 HOUR AVERAGE: 844.
MAXIMUM 1 HOUR AVERAGE: 2263.
MAXIMUM 10 MIN. AVERAGE: 3924.
NUMBER HOURS > 500 UG: 16
NUMBER HOURS > 1000 UG: 3
NUMBER HOURS > 1400 UG: 2
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 90.8%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL FEBRUARY 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 2 84	11.	60. 1550	135. 1820		638. 1840	34.
2 2 84	83.	557. 650	1590. 700	1	2320. 730	100.
3 2 84	29.	460. 2350	199. 900		335. 920	100.
4 2 84	251.	769. 130	1291. 210	1	2291. 1030	100.
5 2 84	147.	533. 850	688. 1110		1816. 1120	100.
6 2 84	81.	348. 1730	492. 1820		743. 1910	100.
7 2 84	68.	224. 1320	343. 1450		1198. 950	100.
8 2 84	89.	475. 910	681. 1100		1690. 940	100.
9 2 84	113.	623. 1500	1279. 1620	1	2291. 1700	100.
10 2 84	241.	1075. 920	1307. 920	2	3009. 1110	100.
11 2 84	126.	788. 840	1587. 910	2	2806. 950	100.
12 2 84	16.	95. 2350	45. 740		149. 750	100.
13 2 84	99.	392. 150	834. 240		1656. 250	100.
14 2 84	163.	898. 1620	1408. 1740	1	3584. 1810	100.
15 2 84	55.	283. 1020	505. 1110		812. 1140	100.
16 2 84	170.	757. 410	949. 450		2008. 500	87.
17 2 84	225.	729. 850	1369. 840	1	3172. 900	100.
18 2 84	28.	125. 2110	345. 2110		732. 2130	100.
19 2 84	170.	872. 420	1309. 420	2	2214. 500	100.
20 2 84	89.	237. 420	639. 1950		2911. 2030	100.
21 2 84	115.	326. 210	901. 200		1710. 250	100.
22 2 84	112.	388. 1030	784. 640		1699. 700	100.
23 2 84	319.	1055. 240	1322. 430	3	2134. 250	100.
24 2 84	101.	393. 1030	969. 1050		1659. 1100	100.
25 2 84	81.	275. 1050	560. 1050		1707. 1050	100.
26 2 84	15.	16. 1630	19. 1630		40. 1630	100.
27 2 84	203.	826. 420	976. 420		1441. 450	100.
28 2 84	55.	261. 1050	375. 1050		1570. 1050	100.
29 2 84	62.	342. 1620	685. 1820		1862. 1840	100.

MONTHLY AVERAGE: 118.
MAXIMUM 24 HOUR AVERAGE: 319.
MAXIMUM 3 HOUR AVERAGE: 1075.
MAXIMUM 1 HOUR AVERAGE: 1590.
MAXIMUM 10 MIN. AVERAGE: 3584.
NUMBER HOURS > 500 UG: 60
NUMBER HOURS > 1000 UG: 14
NUMBER HOURS > 1400 UG: 3
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 97.3%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL MARCH 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 3 84	207.	1037. 1040	1381. 1120	2	2557. 1120	100.
2 3 84	113.	528. 710	933. 800		1762. 820	100.
3 3 84	49.	157. 0	414. 1220		1647. 1300	100.
4 3 84	60.	236. 1530	557. 1640		1490. 1730	100.
5 3 84	108.	374. 1040	665. 1240		1793. 1330	100.
6 3 84	235.	1436. 2000	1833. 1950	4	3275. 2030	100.
7 3 84	165.	375. 1940	583. 1700		1484. 1000	100.
8 3 84	10.	17. 1210	17. 1410		17. 1700	72.
9 3 84						
10 3 84						
11 3 84						
12 3 84						
13 3 84	5.	19. 2350	23. 1710		63. 1740	38.
14 3 84	100.	408. 1050	851. 1230		3180. 1310	100.
15 3 84	14.	15. 820	15. 820		17. 830	100.
16 3 84	14.	14. 1600	19. 2230		37. 2230	100.
17 3 84	18.	53. 900	87. 950		226. 1010	100.
18 3 84	275.	1176. 240	2050. 410	3	2523. 450	100.
19 3 84	234.	882. 2010	1246. 2140	2	2134. 2220	100.
20 3 84	57.	259. 1410	586. 1510		1805. 1520	100.
21 3 84	114.	403. 930	766. 1200		2036. 1210	100.
22 3 84	115.	603. 1220	1046. 1420	1	3947. 1500	100.
23 3 84	29.	138. 1440	383. 1550		1015. 1550	100.
24 3 84	58.	145. 1510	266. 1710		801. 1750	100.
25 3 84	33.	144. 1100	249. 1100		337. 1100	100.
26 3 84	115.	760. 800	1187. 810	1	1796. 830	100.
27 3 84	21.	79. 110	134. 140		403. 120	100.
28 3 84	14.	16. 1350	17. 1540		17. 1630	100.
29 3 84	78.	716. 2330	1116. 2330	1	3446. 2100	100.
30 3 84	85.	562. 0	763. 0		1447. 0	100.
31 3 84	18.	36. 30	86. 30		283. 110	100.

MONTHLY AVERAGE: 90.
MAXIMUM 24 HOUR AVERAGE: 275.
MAXIMUM 3 HOUR AVERAGE: 1436.
MAXIMUM 1 HOUR AVERAGE: 2050.
MAXIMUM 10 MIN. AVERAGE: 3947.
NUMBER HOURS > 500 UG: 40
NUMBER HOURS > 1000 UG: 14
NUMBER HOURS > 1400 UG: 3
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 84.2%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL APRIL 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 4 84	15.	26. 1300	45. 1500		189. 1550	91.
2 4 84	108.	333. 1140	778. 1750		1916. 1810	100.
3 4 84	182.	497. 300	838. 1230		1862. 310	85.
4 4 84	139.	676. 830	904. 1000		2691. 920	100.
5 4 84	187.	424. 1550	784. 1800		2474. 1030	100.
6 4 84	6.	22. 500	44. 700		123. 720	33.
7 4 84						
8 4 84						
9 4 84						
10 4 84						
11 4 84						
12 4 84						
13 4 84						
14 4 84						
15 4 84						
16 4 84						
17 4 84	7.	75. 2350	30. 1840		77. 1850	42.
18 4 84	180.	561. 2040	1178. 2050	1	2397. 2100	100.
19 4 84	86.	331. 1140	648. 1340		1539. 1340	100.
20 4 84	25.	107. 1300	154. 1320		652. 1510	100.
21 4 84	15.	16. 130	20. 130		51. 130	100.
22 4 84	14.	18. 1420	22. 1610		46. 1610	100.
23 4 84	61.	337. 920	554. 1040		1464. 1050	100.
24 4 84	103.	586. 1230	1212. 1230	1	2094. 1300	100.
25 4 84	19.	58. 2230	91. 2240		183. 2310	100.
26 4 84	101.	435. 750	1053. 820	1	2199. 1850	100.
27 4 84	212.	793. 1040	1146. 1230	1	2660. 1630	100.
28 4 84	14.	16. 10	18. 100		26. 120	100.
29 4 84	15.	16. 1150	17. 1330		17. 1540	100.
30 4 84	14.	15. 910	15. 1120		17. 1150	100.

MONTHLY AVERAGE: 81.
MAXIMUM 24 HOUR AVERAGE: 212.
MAXIMUM 3 HOUR AVERAGE: 793.
MAXIMUM 1 HOUR AVERAGE: 1212.
MAXIMUM 10 MIN. AVERAGE: 2691.
NUMBER HOURS > 500 UG: 28
NUMBER HOURS > 1000 UG: 4
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 61.7%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL MAY 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 5 84	12.	14. 1010	15. 1100		17. 1100	90.
2 5 84	14.	17. 2300	26. 2300		77. 2310	100.
3 5 84	288.	1623. 2030	3396. 2040	2	4133. 2100	100.
4 5 84	100.	470. 1140	570. 1310		1773. 1310	100.
5 5 84	98.	390. 2030	897. 1740		1936. 2210	100.
6 5 84	33.	101. 1640	207. 1850		801. 1930	100.
7 5 84	15.	20. 1230	31. 1200		86. 1240	100.
8 5 84	15.	17. 1110	17. 1310		17. 1640	100.
9 5 84	14.	15. 1100	16. 1210		17. 1340	100.
10 5 84	14.	14. 2350	14. 2350		14. 2350	100.
11 5 84	14.	16. 1230	21. 1230		54. 1230	100.
12 5 84	72.	355. 1020	615. 1010		1705. 1030	100.
13 5 84	86.	561. 1330	1381. 1330	1	2826. 1410	100.
14 5 84	14.	17. 1320	18. 1440		20. 1440	100.
15 5 84	13.	15. 940	16. 930		20. 940	92.
16 5 84	22.	69. 840	168. 850		254. 900	100.
17 5 84	16.	17. 1910	17. 2110		17. 2240	100.
18 5 84	15.	17. 1130	18. 1130		20. 1130	100.
19 5 84	16.	17. 2350	17. 2350		17. 2350	100.
20 5 84	15.	17. 230	17. 430		23. 2140	100.
21 5 84	14.	15. 1240	15. 1240		17. 1320	100.
22 5 84	51.	220. 1540	332. 1550		561. 1550	100.
23 5 84	15.	17. 1410	17. 1610		17. 1720	100.
24 5 84	16.	17. 1620	17. 2210		17. 2350	100.
25 5 84	15.	17. 1350	17. 1550		17. 1940	100.
26 5 84	16.	17. 2350	17. 2350		17. 2350	100.
27 5 84	17.	17. 2350	17. 2350		17. 2350	100.
28 5 84	16.	17. 1310	17. 1510		17. 1650	100.
29 5 84	13.	18. 1400	18. 1400		26. 1400	86.
30 5 84	15.	17. 1410	17. 1610		17. 1850	100.
31 5 84	129.	480. 820	1207. 830	1	3638. 920	100.

MONTHLY AVERAGE: 39.
MAXIMUM 24 HOUR AVERAGE: 288.
MAXIMUM 3 HOUR AVERAGE: 1623.
MAXIMUM 1 HOUR AVERAGE: 3396.
MAXIMUM 10 MIN. AVERAGE: 4133.
NUMBER HOURS > 500 UG: 14
NUMBER HOURS > 1000 UG: 4
NUMBER HOURS > 1400 UG: 2
NUMBER HOURS > 2000 UG: 2
DATA RECOVERY FOR MONTH: 99.0%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL JUNE 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 6 84	16.	17. 1640	17. 1950		17. 2350	100.
2 6 84	16.	18. 1040	19. 1050		20. 1140	100.
3 6 84	95.	630. 1000	1022. 1100	1	1404. 1120	100.
4 6 84	15.	17. 1340	17. 1540		17. 1710	100.
5 6 84	15.	17. 1430	17. 1630		23. 2150	100.
6 6 84	14.	14. 2230	14. 2350		14. 2350	100.
7 6 84	72.	245. 930	571. 940		735. 1010	100.
8 6 84	17.	48. 1320	110. 1520		237. 1550	100.
9 6 84	14.	16. 1250	16. 1340		17. 1610	100.
10 6 84	15.	17. 1240	17. 1340		17. 1700	100.
11 6 84	15.	17. 1350	17. 1540		17. 1630	100.
12 6 84	13.	19. 920	25. 920		63. 1000	85.
13 6 84	21.	70. 1340	180. 1530		583. 1550	100.
14 6 84	20.	50. 1100	110. 1100		469. 1110	100.
15 6 84	75.	418. 940	733. 1010		932. 1020	100.
16 6 84	15.	17. 1300	18. 1300		20. 1310	100.
17 6 84	15.	18. 1200	20. 1300		20. 1350	100.
18 6 84	15.	17. 1450	17. 1650		17. 1740	100.
19 6 84	15.	17. 1430	17. 1630		17. 1740	100.
20 6 84	17.	29. 1730	42. 1830		51. 1910	100.
21 6 84	10.	17. 1220	17. 1420		17. 1510	64.
22 6 84	14.	15. 0	16. 0		17. 30	100.
23 6 84	16.	23. 1810	34. 1900		49. 1920	100.
24 6 84	15.	18. 950	19. 950		20. 1020	100.
25 6 84	16.	17. 1320	17. 1520		17. 1630	100.
26 6 84	11.	15. 1550	16. 1600		17. 1930	78.
27 6 84	96.	594. 830	1265. 920	1	1690. 1000	100.
28 6 84	15.	18. 1250	19. 1440		20. 1500	100.
29 6 84	15.	17. 1450	17. 1650		17. 2340	100.
30 6 84	16.	17. 1600	17. 1800		17. 1910	100.

MONTHLY AVERAGE: 25.
MAXIMUM 24 HOUR AVERAGE: 96.
MAXIMUM 3 HOUR AVERAGE: 630.
MAXIMUM 1 HOUR AVERAGE: 1265.
MAXIMUM 10 MIN. AVERAGE: 1690.
NUMBER HOURS > 500 UG: 7
NUMBER HOURS > 1000 UG: 2
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 97.6%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL JULY 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 7 84	40.	415. 2330	686. 2340		1210. 2340	100.
2 7 84	126.	337. 1140	725. 1140		2617. 1150	100.
3 7 84	14.	16. 1500	17. 1020		28. 320	100.
4 7 84	16.	17. 1230	17. 1430		17. 2300	100.
5 7 84	16.	17. 1720	17. 2150		17. 2240	100.
6 7 84	14.	15. 1250	16. 1450		17. 1620	100.
7 7 84	15.	16. 1420	17. 1500		17. 1850	100.
8 7 84	14.	14. 2350	14. 2350		14. 2350	100.
9 7 84	16.	27. 2250	51. 2250		154. 2300	100.
10 7 84	31.	181. 1600	304. 1600		821. 1600	76.
11 7 84	54.	253. 1020	574. 1130		1047. 1140	100.
12 7 84	5.	19. 1850	58. 1850		175. 700	100.
13 7 84	101.	280. 1500	398. 2010		1650. 2030	100.
14 7 84	34.	255. 1100	509. 1310		2282. 1350	100.
15 7 84	1.	3. 1340	3. 1540		3. 2110	100.
16 7 84	1.	3. 1340	3. 1540		3. 1650	100.
17 7 84	62.	434. 1050	1105. 1250	1	2271. 1310	100.
18 7 84	127.	298. 1240	761. 840		1138. 910	100.
19 7 84	174.	661. 1640	931. 1640		1850. 1520	100.
20 7 84	23.	159. 0	249. 100		475. 140	100.
21 7 84	19.	146. 1400	221. 1400		706. 1420	100.
22 7 84	0.	1. 1300	1. 1430		3. 1520	100.
23 7 84	67.	256. 1440	578. 830		878. 1710	100.
24 7 84	115.	405. 930	954. 1200		1808. 940	90.
25 7 84	3.	4. 1420	6. 1420		11. 1440	100.
26 7 84	3.	3. 2350	3. 2350		3. 2350	100.
27 7 84	39.	203. 1240	365. 1340		830. 1030	100.
28 7 84	74.	413. 1240	715. 1450		1158. 1530	100.
29 7 84	2.	3. 1440	3. 1640		3. 1850	100.
30 7 84	5.	26. 850	73. 850		303. 900	100.
31 7 84	2.	5. 1300	6. 1400		6. 1610	100.

MONTHLY AVERAGE: 40.
MAXIMUM 24 HOUR AVERAGE: 174.
MAXIMUM 3 HOUR AVERAGE: 661.
MAXIMUM 1 HOUR AVERAGE: 1105.
MAXIMUM 10 MIN. AVERAGE: 2617.
NUMBER HOURS > 500 UG: 18
NUMBER HOURS > 1000 UG: 1
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 98.9%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL AUGUST 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 8 84	3.	5. 850	8. 850		34. 850	100.
2 8 84	3.	3. 2350	3. 2350		3. 2350	100.
3 8 84	3.	3. 2000	3. 2200		3. 2340	100.
4 8 84	2.	3. 1530	3. 2300		3. 2350	100.
5 8 84	2.	3. 2350	3. 2350		3. 2350	100.
6 8 84	3.	4. 1500	4. 1600		6. 1640	100.
7 8 84	3.	3. 1350	4. 1350		11. 1350	100.
8 8 84	3.	3. 2040	3. 2240		3. 2350	100.
9 8 84	2.	3. 1350	3. 1550		3. 1800	100.
10 8 84	33.	197. 940	409. 1000		535. 1030	100.
11 8 84	119.	479. 820	838. 820		2322. 830	100.
12 8 84	3.	6. 1320	6. 1520		6. 1640	100.
13 8 84	3.	6. 1330	7. 1340		14. 1340	100.
14 8 84	4.	8. 830	14. 830		57. 830	100.
15 8 84	3.	5. 1410	6. 1540		14. 2150	92.
16 8 84	3.	16. 1620	41. 1630		140. 1720	33.
17 8 84	3.	3. 2350	3. 2350		3. 2350	100.
18 8 84	3.	5. 1230	6. 1410		6. 2010	100.
19 8 84	3.	4. 1320	5. 1400		6. 1600	100.
20 8 84	4.	6. 1430	6. 1630		6. 2350	100.
21 8 84	4.	6. 1550	6. 1750		6. 2210	100.
22 8 84	47.	342. 510	1015. 510	1	2008. 530	100.
23 8 84	5.	6. 1410	7. 1440		9. 1530	100.
24 8 84	20.	124. 1010	273. 1020		369. 1100	100.
25 8 84	108.	825. 810	2144. 850	2	3063. 850	100.
26 8 84	24.	151. 1040	278. 1130		561. 1100	100.
27 8 84	86.	505. 920	1493. 920	1	5214. 1010	100.
28 8 84	21.	104. 0	221. 50		561. 140	100.
29 8 84	8.	9. 2020	9. 2220		9. 2350	100.
30 8 84	7.	10. 1130	12. 1130		28. 1130	100.
31 8 84	10.	17. 1030	30. 1030		109. 1040	100.

MONTHLY AVERAGE: 18.
MAXIMUM 24 HOUR AVERAGE: 119.
MAXIMUM 3 HOUR AVERAGE: 825.
MAXIMUM 1 HOUR AVERAGE: 2144.
MAXIMUM 10 MIN. AVERAGE: 5214.
NUMBER HOURS > 500 UG: 9
NUMBER HOURS > 1000 UG: 4
NUMBER HOURS > 1400 UG: 2
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 97.6%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL SEPTEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 9 84	9.	11. 1420	11. 1620		11. 2310	100.
2 9 84	10.	11. 1530	11. 1730		11. 2340	100.
3 9 84	9.	14. 1450	14. 1550		14. 1740	100.
4 9 84	11.	13. 1240	13. 1240		14. 1600	100.
5 9 84	10.	11. 1430	11. 1630		11. 1740	100.
6 9 84	33.	129. 750	263. 900		1221. 900	100.
7 9 84	16.	37. 800	85. 800		183. 810	100.
8 9 84	12.	14. 1110	15. 250		17. 250	100.
9 9 84	12.	14. 1430	14. 1630		14. 1810	100.
10 9 84	27.	79. 750	214. 750		609. 810	100.
11 9 84	10.	31. 1510	64. 1710		252. 1750	78.
12 9 84	12.	17. 1220	18. 1220		23. 1220	100.
13 9 84	13.	15. 1440	15. 1440		23. 730	100.
14 9 84	13.	14. 1410	14. 730		26. 730	100.
15 9 84	11.	12. 1210	12. 1210		14. 1210	100.
16 9 84	49.	147. 1640	351. 1720		1224. 1750	100.
17 9 84	134.	647. 730	1248. 850	1	3186. 920	100.
18 9 84	5.	14. 950	16. 1150		17. 1240	53.
19 9 84						
20 9 84						
21 9 84						
22 9 84						
23 9 84						
24 9 84						
25 9 84						
26 9 84						
27 9 84						
28 9 84						
29 9 84						
30 9 84						

MONTHLY AVERAGE: 23.
MAXIMUM 24 HOUR AVERAGE: 134.
MAXIMUM 3 HOUR AVERAGE: 647.
MAXIMUM 1 HOUR AVERAGE: 1248.
MAXIMUM 10 MIN. AVERAGE: 3186.
NUMBER HOURS > 500 UG: 3
NUMBER HOURS > 1000 UG: 1
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 57.7%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL OCTOBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 10 84						
2 10 84	4.	31. 1900	93. 1900		235. 1910	26.
3 10 84	0.	0. 2350	0. 2350		0. 2350	100.
4 10 84	93.	744. 830	1218. 850	1	3103. 900	100.
5 10 84	36.	307. 2350	521. 800		752. 910	100.
6 10 84	46.	307. 120	589. 150		1321. 240	100.
7 10 84	1.	10. 2140	13. 2150		23. 2210	100.
8 10 84	0.	4. 0	10. 0		23. 20	100.
9 10 84	122.	624. 820	1330. 910	1	1773. 920	100.
10 10 84	273.	1095. 940	1748. 1150	3	3455. 1210	100.
11 10 84	0.	0. 2350	0. 2350		0. 2350	100.
12 10 84	0.	1. 2350	2. 2350		0. 2350	100.
13 10 84	0.	1. 30	2. 30		11. 30	100.
14 10 84	70.	554. 640	1460. 700	1	2245. 730	100.
15 10 84	62.	314. 2320	583. 2320		2580. 2020	100.
16 10 84	151.	415. 320	452. 520		1402. 1140	98.
17 10 84	74.	401. 810	899. 1000		2182. 1030	100.
18 10 84	5.	38. 1810	115. 1810		687. 1810	100.
19 10 84	51.	327. 1310	542. 1530		2222. 1530	100.
20 10 84	0.	0. 2350	0. 2350		0. 2350	100.
21 10 84	52.	374. 2120	1088. 2240	1	2832. 2310	100.
22 10 84	0.	0. 2350	0. 2350		0. 2350	100.
23 10 84	39.	299. 630	666. 640		830. 710	100.
24 10 84	1.	4. 2010	8. 2110		40. 2110	100.
25 10 84	24.	188. 430	312. 520		967. 450	100.
26 10 84	3.	25. 2010	76. 2010		323. 2030	100.
27 10 84	29.	122. 700	191. 800		778. 1710	100.
28 10 84	40.	224. 620	390. 750		1359. 750	100.
29 10 84	56.	436. 720	1044. 740	1	2234. 820	100.
30 10 84	0.	0. 2350	0. 2350		0. 2350	100.
31 10 84	0.	443. 2350	1199. 2350	1	0. 2350	100.

MONTHLY AVERAGE: 42.
MAXIMUM 24 HOUR AVERAGE: 273.
MAXIMUM 3 HOUR AVERAGE: 1095.
MAXIMUM 1 HOUR AVERAGE: 1748.
MAXIMUM 10 MIN. AVERAGE: 3455.
NUMBER HOURS > 500 UG: 27
NUMBER HOURS > 1000 UG: 9
NUMBER HOURS > 1400 UG: 2
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 94.3%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL , NOVEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 11 84	67.	443. 0	1256. 0		2525. 30	100.
2 11 84	22.	126. 1850	243. 2100		795. 2110	100.
3 11 84	23.	144. 1440	214. 1530		572. 1620	100.
4 11 84	228.	787. 900	1008. 940	1	2554. 1320	100.
5 11 84	134.	618. 150	815. 440		3135. 440	100.
6 11 84	0.	0. 2350	0. 2350		0. 2350	78.
7 11 84	132.	979. 630	1414. 640	2	1744. 640	100.
8 11 84	0.	1. 0	2. 0		3. 40	100.
9 11 84	58.	424. 1850	794. 2010		1516. 2030	100.
10 11 84	12.	52. 2350	101. 700		420. 720	100.
11 11 84	80.	386. 730	499. 730		1688. 730	100.
12 11 84	19.	106. 1250	274. 1310		752. 1330	100.
13 11 84	125.	484. 750	859. 1000		1419. 1310	100.
14 11 84	259.	730. 940	939. 1040		2211. 1100	100.
15 11 84	14.	36. 0	43. 0		51. 10	100.
16 11 84	9.	15. 140	17. 150		20. 240	100.
17 11 84	5.	8. 2230	9. 2330		11. 2120	100.
18 11 84	8.	11. 850	11. 2250		14. 1100	100.
19 11 84	35.	144. 410	295. 520		515. 540	100.
20 11 84	13.	15. 1440	17. 710		28. 740	100.
21 11 84	186.	558. 2010	813. 2210		1070. 2250	100.
22 11 84	231.	599. 340	1095. 520	1	1630. 600	100.
23 11 84	46.	141. 450	236. 450		566. 500	100.
24 11 84	24.	30. 0	38. 20		54. 100	100.
25 11 84	28.	56. 1020	63. 1200		103. 1020	100.
26 11 84	21.	24. 650	25. 800		28. 800	100.
27 11 84	166.	520. 430	639. 440		1044. 440	100.
28 11 84	174.	498. 300	751. 500		1084. 500	100.
29 11 84	104.	491. 730	737. 930		1456. 1000	100.
30 11 84	125.	462. 1740	982. 1850		1416. 1850	100.

MONTHLY AVERAGE: 79.
MAXIMUM 24 HOUR AVERAGE: 259.
MAXIMUM 3 HOUR AVERAGE: 979.
MAXIMUM 1 HOUR AVERAGE: 1414.
MAXIMUM 10 MIN. AVERAGE: 3135.
NUMBER HOURS > 500 UG: 38
NUMBER HOURS > 1000 UG: 4
NUMBER HOURS > 1400 UG: 1
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.3%

KALGOORLIE AIR POLLUTION
==========

KALGOORLIE TECHNICAL SCHOOL DECEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 12 84	161.	632. 920	983. 930		1522. 1000	100.
2 12 84	234.	691. 2000	1293. 2000	1	2225. 2020	100.
3 12 84	117.	462. 40	621. 140		818. 1750	100.
4 12 84	116.	317. 1730	513. 1950		1024. 2010	90.
5 12 84	44.	174. 2100	249. 2340		592. 2340	100.
6 12 84	27.	110. 300	263. 440		540. 500	100.
7 12 84	41.	185. 820	458. 1000		741. 1030	100.
8 12 84	112.	558. 420	817. 210		1848. 250	100.
9 12 84	0.	0. 2230	1. 2230		6. 2230	100.
10 12 84	44.	232. 1740	576. 1820		1487. 1820	100.
11 12 84	83.	583. 620	752. 800		2351. 850	100.
12 12 84	15.	77. 850	225. 1100		457. 1130	100.
13 12 84	186.	1046. 450	1613. 500	2	3089. 550	100.
14 12 84	57.	295. 630	654. 630		1407. 640	100.
15 12 84	95.	679. 300	1458. 300	1	2159. 330	100.
16 12 84	4.	89. 2350	264. 2350		129. 1830	100.
17 12 84	31.	160. 620	479. 620		1233. 640	100.
18 12 84	121.	684. 2350	1930. 2130	1	3792. 2150	100.
19 12 84	285.	854. 30	1481. 40	2	3767. 1840	100.
20 12 84	168.	683. 320	976. 10		2385. 1830	100.
21 12 84	4.	189. 2350	239. 2350		277. 450	100.
22 12 84	51.	182. 0	343. 2010		1153. 2100	100.
23 12 84	9.	226. 2350	247. 2350		1055. 550	100.
24 12 84	135.	539. 130	798. 340		1519. 250	100.
25 12 84	415.	1039. 740	1473. 730	4	2803. 1020	100.
26 12 84	17.	59. 0	137. 1630		821. 1630	100.
27 12 84	0.	0. 2350	0. 2350		0. 2350	100.
28 12 84	0.	0. 2350	0. 2350		0. 2350	100.
29 12 84	52.	326. 640	889. 640		1502. 700	100.
30 12 84	237.	864. 610	1335. 720	1	2814. 740	100.
31 12 84	1.	11. 1810	34. 1810		203. 1810	100.

MONTHLY AVERAGE: 93.
MAXIMUM 24 HOUR AVERAGE: 415.
MAXIMUM 3 HOUR AVERAGE: 1046.
MAXIMUM 1 HOUR AVERAGE: 1930.
MAXIMUM 10 MIN. AVERAGE: 3792.
NUMBER HOURS > 500 UG: 63
NUMBER HOURS > 1000 UG: 12
NUMBER HOURS > 1400 UG: 5
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.7%

KALGOORLIE AIR POLLUTION
==========

KALGOORLIE TECHNICAL SCHOOL JANUARY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 1 85	5.	29. 1320	73. 1500		363. 1500	100.
2 1 85	54.	277. 1710	459. 1910		718. 1950	100.
3 1 85	102.	616. 220	1503. 240	1	2491. 240	87.
4 1 85	220.	1112. 2230	1370. 2250	2	2277. 2320	100.
5 1 85	241.	705. 20	1233. 30	1	2405. 110	100.
6 1 85	0.	0. 1300	1. 1450		3. 1540	100.
7 1 85	115.	498. 610	702. 720		1170. 730	100.
8 1 85	109.	305. 1500	591. 1000		2030. 1610	100.
9 1 85	160.	956. 1500	1540. 1650	2	3235. 1650	100.
10 1 85	17.	134. 1130	308. 1400		1839. 1400	100.
11 1 85	91.	533. 610	782. 750		2342. 1740	100.
12 1 85	105.	415. 750	825. 930		3375. 1010	100.
13 1 85	78.	476. 750	1201. 750	1	2168. 800	100.
14 1 85	4.	246. 2350	78. 2350		197. 2320	100.
15 1 85	183.	1109. 1830	2295. 1920	2	3518. 2000	89.
16 1 85	172.	619. 1130	928. 950		2754. 1030	100.
17 1 85	176.	491. 1320	714. 2250		1690. 200	100.
18 1 85	98.	525. 50	1309. 300	1	3449. 330	100.
19 1 85	121.	632. 810	1105. 850	2	3026. 850	100.
20 1 85	0.	0. 2350	0. 2350		0. 2350	100.
21 1 85	78.	251. 330	604. 320		2316. 1030	58.
22 1 85						
23 1 85						
24 1 85						
25 1 85						
26 1 85						
27 1 85						
28 1 85						
29 1 85						
30 1 85	12.	90. 1920	212. 1920		666. 1920	19.
31 1 85	7.	48. 100	104. 310		600. 310	100.

MONTHLY AVERAGE: 100.
MAXIMUM 24 HOUR AVERAGE: 241.
MAXIMUM 3 HOUR AVERAGE: 1112.
MAXIMUM 1 HOUR AVERAGE: 2295.
MAXIMUM 10 MIN. AVERAGE: 3518.
NUMBER HOURS > 500 UG: 47
NUMBER HOURS > 1000 UG: 12
NUMBER HOURS > 1400 UG: 4
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 69.4%

KALGOORLIE AIR POLLUTION

KALGOORLIE TECHNICAL SCHOOL FEBRUARY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 2 85	0.	0. 1500	1. 1500		3. 1550	100.
2 2 85	110.	613. 2110	830. 2220		1825. 2300	100.
3 2 85	84.	383. 0	503. 0		1033. 0	100.
4 2 85	18.	132. 0	314. 150		546. 220	100.
5 2 85	48.	316. 1640	582. 1800		809. 1800	100.
6 2 85	94.	258. 310	406. 510		935. 320	100.
7 2 85	19.	53. 820	112. 820		355. 820	100.
8 2 85	20.	133. 310	291. 340		586. 420	100.
9 2 85	58.	426. 600	685. 710		1104. 720	100.
10 2 85	30.	154. 2010	427. 2010		801. 2040	100.
11 2 85	41.	200. 720	436. 750		967. 810	100.
12 2 85	42.	387. 2340	397. 150		1004. 1140	100.
13 2 85	147.	529. 110	825. 330		2380. 350	100.
14 2 85	38.	142. 200	369. 630		844. 700	91.
15 2 85	40.	313. 1940	433. 2000		815. 2150	87.
16 2 85	45.	111. 540	267. 630		412. 650	100.
17 2 85	43.	192. 1750	238. 1720		586. 1800	100.
18 2 85	249.	1129. 830	1552. 1000	4	3953. 840	100.
19 2 85	64.	430. 2000	670. 2010		1201. 2100	100.
20 2 85	83.	304. 1530	825. 1720		2646. 1430	100.
21 2 85	0.	3. 1340	5. 1530		17. 1530	100.
22 2 85	75.	358. 600	437. 550		569. 830	100.
23 2 85	120.	449. 920	787. 1030		2205. 2040	100.
24 2 85	152.	1032. 740	2005. 750	2	4785. 800	100.
25 2 85	21.	199. 2350	234. 920		549. 750	100.
26 2 85	25.	199. 10	313. 200		944. 230	100.
27 2 85	87.	607. 1610	1551. 1810	1	3112. 1850	100.
28 2 85	0.	1. 1430	2. 1450		3. 1620	100.

MONTHLY AVERAGE: 63.
MAXIMUM 24 HOUR AVERAGE: 249.
MAXIMUM 3 HOUR AVERAGE: 1129.
MAXIMUM 1 HOUR AVERAGE: 2005.
MAXIMUM 10 MIN. AVERAGE: 4785.
NUMBER HOURS > 500 UG: 26
NUMBER HOURS > 1000 UG: 7
NUMBER HOURS > 1400 UG: 3
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 99.2%

KALGOORLIE AIR POLLUTION
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KALGOORLIE TECHNICAL SCHOOL MARCH 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

	DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1	3 85	3.	33. 2330	100. 2330		203. 2340	100.
2	3 85	14.	99. 1830	292. 1840		498. 1840	100.
3	3 85	21.	260. 2330	454. 2300		772. 2330	100.
4	3 85	57.	342. 200	456. 200		755. 220	100.
5	3 85	0.	78. 2350	0. 2350		0. 2350	100.
6	3 85	10.	78. 150	234. 150		772. 220	49.
7	3 85						
8	3 85						
9	3 85						
10	3 85						
11	3 85						
12	3 85						
13	3 85						
14	3 85						
15	3 85						
16	3 85						
17	3 85						
18	3 85						
19	3 85						
20	3 85						
21	3 85						
22	3 85						
23	3 85						
24	3 85						
25	3 85						
26	3 85						
27	3 85						
28	3 85						
29	3 85						
30	3 85						
31	3 85						

MONTHLY AVERAGE: 19.
MAXIMUM 24 HOUR AVERAGE: 57.
MAXIMUM 3 HOUR AVERAGE: 342.
MAXIMUM 1 HOUR AVERAGE: 456.
MAXIMUM 10 MIN. AVERAGE: 772.
NUMBER HOURS > 500 UG: 0
NUMBER HOURS > 1000 UG: 0
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 17.7%

KALGOORLIE AIR POLLUTION
==========

KALGOORLIE TECHNICAL SCHOOL APRIL 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 4 85						
2 4 85						
3 4 85						
4 4 85						
5 4 85						
6 4 85						
7 4 85						
8 4 85						
9 4 85						
10 4 85						
11 4 85						
12 4 85						
13 4 85						
14 4 85						
15 4 85						
16 4 85						
17 4 85						
18 4 85						
19 4 85						
20 4 85						
21 4 85						
22 4 85						
23 4 85						
24 4 85						
25 4 85						
26 4 85						
27 4 85						
28 4 85						
29 4 85						
30 4 85						

KALGOORLIE AIR POLLUTION
==========

KALGOORLIE TECHNICAL SCHOOL MAY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 5 85						
2 5 85						
3 5 85						
4 5 85						
5 5 85						
6 5 85						
7 5 85						
8 5 85						
9 5 85						
10 5 85						
11 5 85						
12 5 85						
13 5 85						
14 5 85						
15 5 85						
16 5 85						
17 5 85						
18 5 85						
19 5 85						
20 5 85						
21 5 85						
22 5 85						
23 5 85						
24 5 85						
25 5 85						
26 5 85						
27 5 85						
28 5 85						
29 5 85						
30 5 85						
31 5 85						

APPENDIX C

Monthly Sulphur Dioxide Statistics for Data Measured at the South Boulder Primary School Base Station, August 1984 to May 1985.

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL AUGUST 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
17 8 84	0.	0. 940	0. 940		3. 940	60.
18 8 84	0.	0. 2350	0. 2350		0. 2350	100.
19 8 84	0.	0. 2350	0. 2350		0. 2350	100.
20 8 84	0.	0. 2350	0. 2350		0. 2350	100.
21 8 84	0.	0. 2350	0. 2350		0. 2350	100.
22 8 84	47.	380. 450	1109. 500	1	2074. 510	100.
23 8 84	0.	0. 2350	0. 2350		0. 2350	100.
24 8 84	52.	400. 940	697. 1020		792. 1110	100.
25 8 84	42.	269. 810	493. 910		818. 950	100.
26 8 84	40.	215. 1010	409. 1130		432. 1200	100.
27 8 84	23.	96. 1030	116. 1200		163. 1210	100.
28 8 84	29.	103. 810	193. 2150		375. 2200	100.
29 8 84	2.	4. 710	6. 900		14. 10	100.
30 8 84	13.	43. 1440	89. 1120		269. 1130	100.
31 8 84	17.	115. 910	200. 1010		555. 1030	100.

MONTHLY AVERAGE: 18.
MAXIMUM 24 HOUR AVERAGE: 52.
MAXIMUM 3 HOUR AVERAGE: 400.
MAXIMUM 1 HOUR AVERAGE: 1109.
MAXIMUM 10 MIN. AVERAGE: 2074.
NUMBER HOURS > 500 UG: 3
NUMBER HOURS > 1000 UG: 1
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 97.4%

KALGOORLIE AIR POLLUTION
==========

SOUTH BOULDER PRIMARY SCHOOL SEPTEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 9 84	0.	2. 0	4. 0		6. 40	100.
2 9 84	0.	0. 2350	0. 2350		0. 2350	100.
3 9 84	0.	2. 1750	4. 1750		9. 2220	100.
4 9 84	0.	0. 510	1. 510		3. 2240	100.
5 9 84	3.	19. 2000	53. 2140		137. 2150	100.
6 9 84	38.	253. 1540	329. 1540		432. 1550	100.
7 9 84	26.	83. 820	230. 100		689. 110	100.
8 9 84	2.	8. 310	13. 310		32. 310	100.
9 9 84	0.	0. 920	1. 920		3. 1940	100.
10 9 84	63.	228. 1130	509. 740		992. 810	100.
11 9 84	5.	21. 920	43. 1120		163. 1510	92.
12 9 84	4.	10. 1850	20. 330		37. 730	100.
13 9 84	1.	4. 120	11. 120		20. 130	100.
14 9 84	0.	2. 550	5. 550		14. 550	100.
15 9 84	0.	0. 2350	0. 2350		0. 2350	100.
16 9 84	61.	340. 940	570. 1020		1241. 1040	100.
17 9 84	39.	234. 2350	306. 2140		738. 720	100.
18 9 84	86.	356. 440	563. 640		952. 710	100.
19 9 84	32.	247. 720	386. 720		1238. 750	100.
20 9 84	0.	200. 2350	3. 2350		0. 2350	100.
21 9 84	173.	392. 2310	1083. 2320	1	2520. 2330	100.
22 9 84	61.	208. 50	612. 240		1370. 250	100.
23 9 84	0.	0. 2350	0. 2350		0. 2350	100.
24 9 84	0.	0. 2350	0. 2350		0. 2350	100.
25 9 84	15.	109. 800	281. 800		521. 810	100.
26 9 84	123.	668. 700	1048. 800	1	1550. 800	100.
27 9 84	109.	637. 1800	975. 1940		2291. 1940	100.
28 9 84	0.	91. 2350	0. 2350		0. 2350	100.
29 9 84	150.	1018. 240	1229. 250	2	1590. 320	100.
30 9 84	89.	578. 1520	1431. 1610	1	1753. 1700	100.

MONTHLY AVERAGE: 36.
MAXIMUM 24 HOUR AVERAGE: 173.
MAXIMUM 3 HOUR AVERAGE: 1018.
MAXIMUM 1 HOUR AVERAGE: 1431.
MAXIMUM 10 MIN. AVERAGE: 2520.
NUMBER HOURS > 500 UG: 16
NUMBER HOURS > 1000 UG: 5
NUMBER HOURS > 1400 UG: 1
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.7%

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL OCTOBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 10 84	52.	248. 530	529. 540		1095. 550	100.
2 10 84	10.	75. 1850	224. 1850		518. 1900	94.
3 10 84	3.	22. 750	66. 750		183. 810	100.
4 10 84	88.	687. 840	1100. 840	1	3300. 840	100.
5 10 84	122.	669. 2230	1744. 2240	1	2809. 2300	100.
6 10 84	29.	105. 920	300. 940		718. 1000	100.
7 10 84	0.	0. 2350	0. 2350		0. 2350	100.
8 10 84	0.	0. 2350	0. 2350		0. 2350	100.
9 10 84	315.	1338. 750	1956. 800	5	2497. 810	100.
10 10 84	225.	1354. 530	2363. 630	2	2800. 700	100.
11 10 84	1.	12. 2350	7. 2000		14. 100	100.
12 10 84	3.	57. 2300	95. 2350		152. 220	100.
13 10 84	55.	334. 540	434. 710		1467. 550	100.
14 10 84	115.	817. 620	1896. 700	2	3046. 740	100.
15 10 84	3.	6. 1130	12. 1210		32. 1210	100.
16 10 84	27.	165. 720	251. 720		967. 740	92.
17 10 84	75.	414. 700	631. 720		1187. 1030	100.
18 10 84	219.	1347. 2300	2319. 2320	2	3097. 2350	100.
19 10 84	190.	742. 0	1872. 0	1	2322. 50	100.
20 10 84	216.	724. 110	856. 130		1101. 540	100.
21 10 84	28.	480. 2350	502. 820		712. 820	100.
22 10 84	61.	483. 50	1277. 130	1	1816. 210	100.
23 10 84	20.	104. 850	144. 930		166. 930	100.
24 10 84	10.	49. 830	101. 830		269. 830	100.
25 10 84	89.	606. 250	880. 400		1541. 410	100.
26 10 84	32.	139. 2000	412. 2010		1601. 2020	100.
27 10 84	73.	562. 2100	1592. 2100	1	2606. 2140	100.
28 10 84	299.	1467. 2110	2055. 2140	3	2520. 2200	100.
29 10 84	305.	1299. 220	1502. 410	5	2148. 410	100.
30 10 84	9.	10. 520	11. 1840		26. 1840	100.
31 10 84	12.	37. 1900	56. 2050		129. 2120	100.

MONTHLY AVERAGE: 87.
MAXIMUM 24 HOUR AVERAGE: 315.
MAXIMUM 3 HOUR AVERAGE: 1467.
MAXIMUM 1 HOUR AVERAGE: 2363.
MAXIMUM 10 MIN. AVERAGE: 3300.
NUMBER HOURS > 500 UG: 52
NUMBER HOURS > 1000 UG: 24
NUMBER HOURS > 1400 UG: 13
NUMBER HOURS > 2000 UG: 3
DATA RECOVERY FOR MONTH: 99.6%

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL NOVEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 11 84	47.	171. 620	430. 620		1110. 650	100.
2 11 84	85.	389. 700	785. 700		1118. 730	100.
3 11 84	35.	356. 2320	691. 2350		941. 1800	100.
4 11 84	340.	1319. 430	1861. 440	2	2440. 450	100.
5 11 84	58.	162. 320	372. 320		503. 350	100.
6 11 84	23.	58. 230	80. 440		106. 450	100.
7 11 84	153.	1091. 620	1416. 630	2	2523. 630	84.
8 11 84	11.	20. 2350	20. 2210		20. 2350	100.
9 11 84	92.	503. 1840	1000. 2010		1748. 2030	100.
10 11 84	57.	62. 1300	79. 240		94. 310	100.
11 11 84	145.	320. 640	689. 2250		2208. 2300	100.
12 11 84	360.	1390. 510	1777. 520	3	2437. 520	100.
13 11 84	285.	1318. 210	1796. 330	3	2122. 420	100.
14 11 84	290.	829. 2350	1573. 2200	1	2245. 2220	100.
15 11 84	293.	885. 50	1424. 500	3	2222. 540	100.
16 11 84	84.	189. 550	422. 600		844. 620	100.
17 11 84	57.	60. 40	60. 240		60. 700	100.
18 11 84	52.	54. 20	54. 2230		54. 2320	100.
19 11 84	111.	342. 620	498. 630		964. 630	100.
20 11 84	50.	52. 20	53. 110		54. 840	100.
21 11 84	45.	46. 10	47. 130		49. 1820	100.
22 11 84	102.	299. 1840	695. 1920		1524. 1950	100.
23 11 84	315.	637. 330	1142. 2130	2	2771. 610	100.
24 11 84	49.	96. 320	102. 330		120. 350	100.
25 11 84	38.	81. 1010	94. 1150		100. 1230	100.
26 11 84	23.	26. 0	26. 710		28. 1010	100.
27 11 84	61.	222. 1540	295. 1740		492. 1830	100.
28 11 84	66.	199. 700	356. 1800		741. 710	100.
29 11 84	135.	830. 450	1512. 620	2	2111. 640	100.
30 11 84	55.	240. 1130	313. 1130		463. 1130	100.

MONTHLY AVERAGE: 118.
MAXIMUM 24 HOUR AVERAGE: 360.
MAXIMUM 3 HOUR AVERAGE: 1390.
MAXIMUM 1 HOUR AVERAGE: 1861.
MAXIMUM 10 MIN. AVERAGE: 2771.
NUMBER HOURS > 500 UG: 45
NUMBER HOURS > 1000 UG: 18
NUMBER HOURS > 1400 UG: 10
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.5%

KALGOORLIE AIR POLLUTION
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SOUTH BOULDER PRIMARY SCHOOL DECEMBER 1984
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 12 84	35.	164. 910	293. 1040		469. 1100	100.
2 12 84	0.	2. 0	3. 10		3. 200	100.
3 12 84	188.	818. 2220	1102. 2320	1	1458. 2230	100.
4 12 84	86.	491. 0	1017. 0		2111. 10	95.
5 12 84	21.	103. 620	286. 610		718. 620	100.
6 12 84	81.	467. 300	852. 410		1270. 440	100.
7 12 84	80.	324. 900	700. 650		1353. 700	100.
8 12 84	23.	159. 800	219. 830		406. 910	100.
9 12 84	1.	7. 2220	21. 2220		94. 2220	100.
10 12 84	32.	170. 750	490. 800		687. 820	97.
11 12 84	15.	76. 610	209. 610		884. 620	97.
12 12 84	22.	108. 1030	277. 1050		546. 1110	100.
13 12 84	6.	40. 900	71. 1020		86. 1040	100.
14 12 84	18.	94. 950	134. 1050		154. 1120	100.
15 12 84	40.	319. 640	654. 640		1810. 700	100.
16 12 84	8.	166. 2350	101. 1640		177. 1640	100.
17 12 84	43.	174. 710	467. 110		912. 150	100.
18 12 84	17.	123. 1450	221. 1510		363. 1510	100.
19 12 84	4.	30. 1000	80. 1000		383. 1030	100.
20 12 84	91.	477. 1820	578. 2000		1933. 2050	100.
21 12 84	70.	423. 10	660. 40		861. 50	100.
22 12 84	41.	122. 210	242. 1930		586. 2000	100.
23 12 84	46.	313. 700	390. 800		1087. 710	100.
24 12 84	140.	385. 130	548. 230		1198. 10	100.
25 12 84	260.	1085. 2010	1523. 2030	2	2036. 540	100.
26 12 84	45.	297. 420	590. 600		741. 610	50.
27 12 84						
28 12 84						
29 12 84						
30 12 84						
31 12 84						

MONTHLY AVERAGE: 56.
MAXIMUM 24 HOUR AVERAGE: 260.
MAXIMUM 3 HOUR AVERAGE: 1085.
MAXIMUM 1 HOUR AVERAGE: 1523.
MAXIMUM 10 MIN. AVERAGE: 2111.
NUMBER HOURS > 500 UG: 21
NUMBER HOURS > 1000 UG: 3
NUMBER HOURS > 1400 UG: 1
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 81.9%

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL JANUARY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 1 85						
2 1 85						
3 1 85	1.	4. 2240	13. 2240		77. 2240	19.
4 1 85	29.	230. 850	554. 950		795. 950	100.
5 1 85	11.	86. 740	257. 740		666. 750	35.
6 1 85						
7 1 85						
8 1 85						
9 1 85						
10 1 85						
11 1 85						
12 1 85						
13 1 85						
14 1 85						
15 1 85	20.	116. 1040	224. 1040		466. 1100	56.
16 1 85	74.	299. 830	433. 930		975. 940	95.
17 1 85	109.	416. 1250	744. 1300		1135. 1650	100.
18 1 85	58.	283. 900	477. 1030		778. 940	100.
19 1 85	47.	241. 730	539. 730		973. 740	100.
20 1 85	9.	28. 2350	18. 230		20. 650	100.
21 1 85	62.	276. 1750	686. 1940		1367. 2000	100.
22 1 85	25.	121. 1210	194. 1330		295. 1330	100.
23 1 85	71.	940. 2350	971. 2230		2551. 2240	100.
24 1 85	270.	1205. 120	1605. 120	3	1928. 130	100.
25 1 85	44.	273. 910	652. 1100		950. 1100	100.
26 1 85	9.	54. 200	137. 200		592. 210	100.
27 1 85	158.	497. 1630	1192. 1830	1	1722. 1840	100.
28 1 85	69.	435. 0	574. 0		841. 200	100.
29 1 85	6.	17. 30	21. 200		23. 740	100.
30 1 85	56.	828. 2230	1553. 2320	2	1928. 2320	31.
31 1 85	323.	1043. 220	1624. 230	2	2279. 310	96.

MONTHLY AVERAGE: 84.
MAXIMUM 24 HOUR AVERAGE: 323.
MAXIMUM 3 HOUR AVERAGE: 1205.
MAXIMUM 1 HOUR AVERAGE: 1624.
MAXIMUM 10 MIN. AVERAGE: 2551.
NUMBER HOURS > 500 UG: 27
NUMBER HOURS > 1000 UG: 8
NUMBER HOURS > 1400 UG: 3
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 55.8%

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL FEBRUARY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 2 85	51.	110. 800	233. 830		372. 2040	100.
2 2 85	136.	316. 820	696. 1750		2503. 1820	100.
3 2 85	41.	53. 1420	87. 1520		183. 1540	100.
4 2 85	170.	582. 2310	1569. 2310	1	2231. 2320	100.
5 2 85	218.	697. 630	841. 740		1891. 750	100.
6 2 85	73.	115. 1230	141. 1230		403. 1410	100.
7 2 85	101.	194. 950	358. 1540		821. 1630	100.
8 2 85	172.	492. 2000	1290. 2000	1	1936. 2040	100.
9 2 85	227.	1157. 2350	1325. 2110	2	2148. 2150	100.
10 2 85	329.	1155. 0	1552. 100	2	2428. 1400	100.
11 2 85	83.	128. 330	149. 430		249. 500	100.
12 2 85	65.	99. 300	102. 500		111. 510	100.
13 2 85	78.	621. 2350	256. 1730		687. 1730	100.
14 2 85	183.	848. 150	1954. 200	2	2694. 250	91.
15 2 85	0.	0. 2350	0. 2350		0. 2350	94.
16 2 85	137.	1059. 2040	1975. 2120	2	2606. 2150	95.
17 2 85	18.	143. 740	424. 740		921. 750	97.
18 2 85	165.	485. 510	723. 500		1899. 2140	100.
19 2 85	53.	154. 1720	427. 1920		1453. 1930	100.
20 2 85	98.	307. 650	578. 730		1187. 1740	100.
21 2 85	2.	20. 50	60. 50		209. 120	100.
22 2 85	8.	58. 920	173. 920		604. 940	100.
23 2 85	174.	669. 2310	1361. 2310	1	2602. 2320	100.
24 2 85	224.	771. 2140	1791. 2300	1	3386. 2320	100.
25 2 85	61.	460. 2350	478. 2350		1290. 2150	100.
26 2 85	94.	454. 0	712. 10		1321. 50	100.
27 2 85	22.	109. 1050	207. 1150		666. 2300	100.
28 2 85	1.	10. 130	20. 220		34. 250	100.

MONTHLY AVERAGE: 107.
MAXIMUM 24 HOUR AVERAGE: 329.
MAXIMUM 3 HOUR AVERAGE: 1157.
MAXIMUM 1 HOUR AVERAGE: 1975.
MAXIMUM 10 MIN. AVERAGE: 3386.
NUMBER HOURS > 500 UG: 44
NUMBER HOURS > 1000 UG: 12
NUMBER HOURS > 1400 UG: 6
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.2%

KALGOORLIE AIR POLLUTION
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SOUTH BOULDER PRIMARY SCHOOL MARCH 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 3 85	1.	5. 740	16. 740		89. 740	100.
2 3 85	91.	308. 710	490. 730		878. 740	100.
3 3 85	3.	26. 440	78. 440		157. 450	100.
4 3 85	386.	1467. 1830	1657. 1940	6	3009. 2110	100.
5 3 85	30.	209. 710	399. 850		681. 940	41.
6 3 85	52.	163. 2040	285. 2140		766. 2150	44.
7 3 85	3.	24. 110	73. 110		435. 120	100.
8 3 85	42.	302. 1810	730. 1810		1596. 1820	100.
9 3 85	38.	162. 100	486. 100		807. 110	100.
10 3 85	80.	345. 1100	497. 1210		947. 250	100.
11 3 85	3.	27. 1050	82. 1050		252. 1100	100.
12 3 85	68.	227. 1100	291. 530		1510. 530	100.
13 3 85	0.	0. 2350	0. 2350		0. 2350	100.
14 3 85	28.	436. 2350	477. 2020		1176. 2020	100.
15 3 85	187.	570. 120	1125. 140	1	1504. 2240	100.
16 3 85	236.	911. 1750	1761. 250	3	2191. 300	100.
17 3 85	66.	531. 320	706. 440		1364. 530	100.
18 3 85	1.	9. 1720	28. 1720		169. 1720	100.
19 3 85	0.	0. 2100	0. 2300		0. 850	37.
20 3 85	5.	35. 1200	78. 1200		420. 1220	50.
21 3 85	79.	383. 440	548. 510		1273. 540	100.
22 3 85	46.	257. 50	519. 220		935. 240	100.
23 3 85	14.	98. 1300	215. 1440		724. 1530	100.
24 3 85	229.	980. 2040	1940. 2120	2	2294. 2120	100.
25 3 85	207.	488. 700	1282. 2150	1	2411. 2210	100.
26 3 85	128.	434. 710	892. 2150		1519. 2200	100.
27 3 85	158.	583. 320	1225. 330	1	1742. 410	100.
28 3 85	86.	379. 850	624. 850		1264. 920	100.
29 3 85	120.	366. 810	749. 2200		3109. 2210	100.
30 3 85	65.	337. 2030	950. 2040		2934. 2050	100.
31 3 85	0.	0. 0	0. 0		3. 0	100.

MONTHLY AVERAGE: 85.
MAXIMUM 24 HOUR AVERAGE: 386.
MAXIMUM 3 HOUR AVERAGE: 1467.
MAXIMUM 1 HOUR AVERAGE: 1940.
MAXIMUM 10 MIN. AVERAGE: 3109.
NUMBER HOURS > 500 UG: 41
NUMBER HOURS > 1000 UG: 14
NUMBER HOURS > 1400 UG: 5
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 92.7%

KALGOORLIE AIR POLLUTION
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SOUTH BOULDER PRIMARY SCHOOL APRIL 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 4 85	0.	0. 2350	0. 2350		0. 2350	100.
2 4 85	124.	556. 730	784. 800		1593. 850	100.
3 4 85	298.	862. 440	1382. 230	2	2173. 320	100.
4 4 85	92.	405. 10	937. 50		2125. 720	100.
5 4 85	1.	3. 800	4. 40		6. 120	100.
6 4 85	0.	0. 2040	0. 2150		3. 2150	100.
7 4 85	21.	141. 740	278. 830		875. 850	100.
8 4 85	54.	315. 840	716. 840		1447. 850	100.
9 4 85	22.	91. 230	235. 240		483. 250	100.
10 4 85	7.	9. 1910	9. 1910		11. 1910	100.
11 4 85	8.	9. 2010	9. 2010		11. 2010	96.
12 4 85	22.	139. 2140	329. 2240		606. 2320	100.
13 4 85	3.	553. 2340	814. 2350		180. 2350	100.
14 4 85	194.	591. 2330	1198. 2350	2	2117. 110	100.
15 4 85	97.	523. 0	1182. 0		2425. 20	100.
16 4 85	3.	26. 930	51. 1110		229. 1110	100.
17 4 85	31.	236. 1000	482. 1010		1547. 1010	100.
18 4 85	158.	647. 730	1246. 810	2	1970. 2220	100.
19 4 85	107.	529. 650	875. 730		1910. 820	100.
20 4 85	52.	197. 1440	410. 1700		1447. 1720	100.
21 4 85	68.	471. 2350	533. 2350		738. 1700	100.
22 4 85	153.	488. 0	1107. 10	1	2239. 50	100.
23 4 85	76.	499. 200	857. 250		1018. 230	100.
24 4 85	30.	175. 800	521. 810		1121. 830	100.
25 4 85	0.	0. 2350	0. 2350		0. 2350	100.
26 4 85	38.	260. 830	391. 830		1112. 850	100.
27 4 85	3.	24. 0	58. 0		217. 40	100.
28 4 85	54.	371. 850	849. 1030		1241. 1050	100.
29 4 85	35.	206. 900	484. 930		855. 950	90.
30 4 85	23.	122. 900	195. 1000		480. 1130	100.

MONTHLY AVERAGE: 59.
MAXIMUM 24 HOUR AVERAGE: 298.
MAXIMUM 3 HOUR AVERAGE: 862.
MAXIMUM 1 HOUR AVERAGE: 1382.
MAXIMUM 10 MIN. AVERAGE: 2425.
NUMBER HOURS > 500 UG: 33
NUMBER HOURS > 1000 UG: 7
NUMBER HOURS > 1400 UG: 0
NUMBER HOURS > 2000 UG: 0
DATA RECOVERY FOR MONTH: 99.5%

KALGOORLIE AIR POLLUTION

SOUTH BOULDER PRIMARY SCHOOL MAY 1985
SULPHUR DIOXIDE CONTINUOUS MONITOR STATISTICS
CONCENTRATIONS QUOTED IN MICROGRAMS PER CUBIC METRE AT STP

DATE	24 HOUR AVERAGE	MAX 3HR AVE (TIME)	MAX 1HR AVE (TIME)	NUM HRS >1000 UG	10 MIN AVE PEAK(TIME)	%AGE DATA
1 5 85	90.	302. 1000	593. 1100		1241. 1550	100.
2 5 85	81.	340. 920	575. 920		909. 140	100.
3 5 85	16.	128. 2350	281. 2350		263. 1130	100.
4 5 85	25.	149. 10	299. 10		738. 20	100.
5 5 85	0.	0. 2350	0. 2350		0. 2350	100.
6 5 85	21.	167. 1510	414. 1530		952. 1540	100.
7 5 85	3.	15. 1850	19. 1910		74. 1620	100.
8 5 85	113.	681. 900	1757. 940	1	3363. 1000	100.
9 5 85	77.	316. 840	671. 910		1081. 950	100.
10 5 85	17.	41. 1530	82. 1540		235. 1630	100.
11 5 85	74.	266. 1550	403. 1730		1138. 1320	100.
12 5 85	20.	51. 940	114. 50		232. 1750	100.
13 5 85	10.	59. 200	74. 210		123. 230	100.
14 5 85	207.	1124. 2130	1411. 2200	3	1882. 2230	100.
15 5 85	168.	476. 0	856. 810		1398. 900	95.
16 5 85	7.	18. 1750	45. 110		146. 130	100.
17 5 85	104.	468. 920	1036. 930	1	1713. 1000	100.
18 5 85	218.	869. 610	1206. 620	2	1968. 750	100.
19 5 85	16.	58. 100	91. 220		146. 300	100.
20 5 85	12.	30. 1750	34. 2030		72. 2030	100.
21 5 85	27.	96. 1430	134. 1430		343. 1510	100.
22 5 85	257.	1488. 2230	2723. 2250	2	3075. 2300	100.
23 5 85	377.	874. 2000	1273. 2200	2	2932. 2040	100.
24 5 85	104.	368. 1420	666. 1600		1579. 1640	100.
25 5 85	53.	307. 820	595. 940		1733. 950	100.
26 5 85	11.	17. 1210	18. 1230		20. 1230	100.
27 5 85	6.	9. 0	9. 200		9. 1130	100.
28 5 85	3.	5. 1630	6. 1830		6. 2030	100.
29 5 85	4.	9. 2120	9. 2120		20. 1920	100.
30 5 85	122.	752. 930	1341. 930	1	2368. 940	100.
31 5 85	46.	226. 800	633. 930		1601. 1000	100.

MONTHLY AVERAGE: 74.
MAXIMUM 24 HOUR AVERAGE: 377.
MAXIMUM 3 HOUR AVERAGE: 1488.
MAXIMUM 1 HOUR AVERAGE: 2723.
MAXIMUM 10 MIN. AVERAGE: 3363.
NUMBER HOURS > 500 UG: 42
NUMBER HOURS > 1000 UG: 12
NUMBER HOURS > 1400 UG: 4
NUMBER HOURS > 2000 UG: 1
DATA RECOVERY FOR MONTH: 99.8%

APPENDIX D

Monthly Data from the Kalgoorlie Technical School Base Station for the Period from March 1984 to May 1985, are presented as follows:

(i) Wind speed and wind direction frequency table and wind rose;
(ii) Tables and plots of wind speed and wind direction frequency as a function of time of the day; and
(iii) Sulphur dioxide pollution rose.

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.84 TO 31. 3.84 INCLUSIVE.

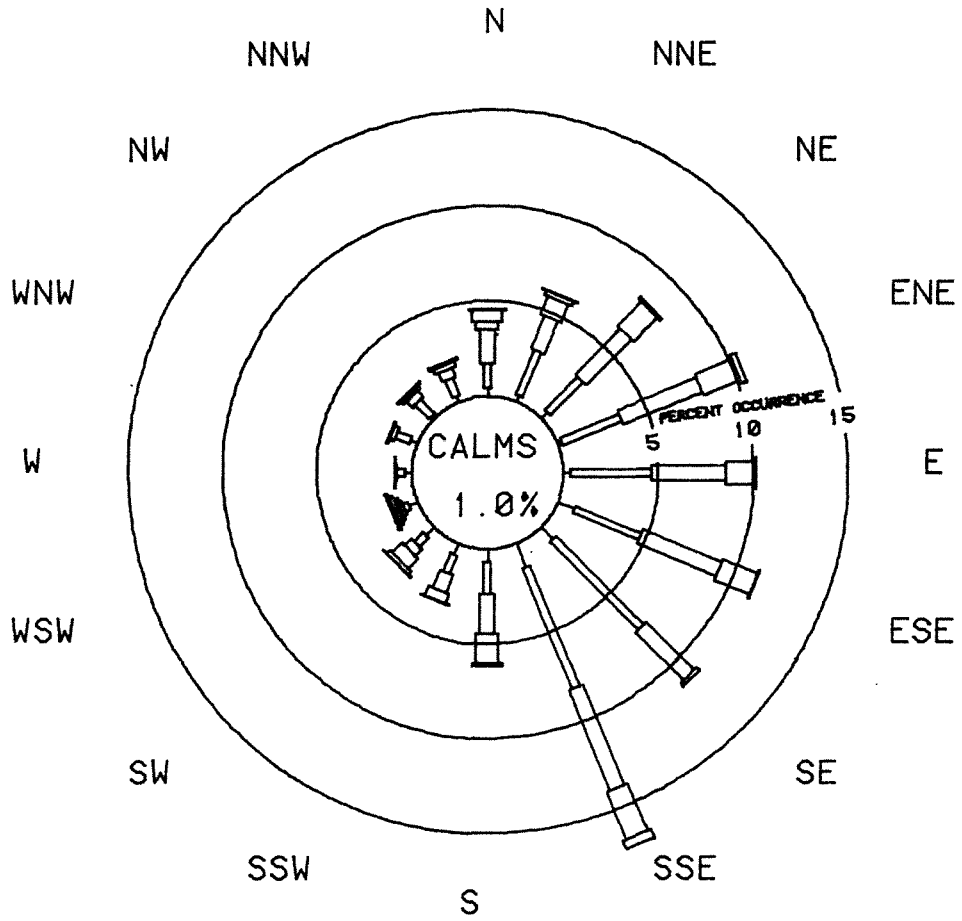
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

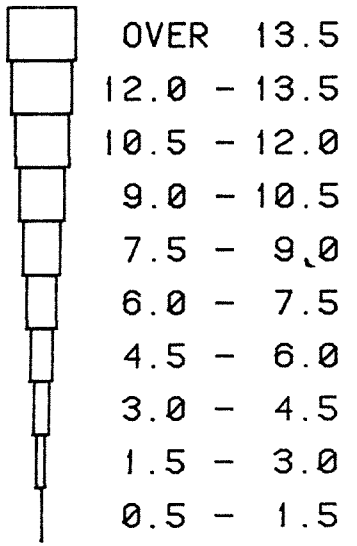
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.0
7.5 - 9.0												0.2					0.3
6.0 - 7.5	0.6	0.2	0.1	0.3				0.5	0.1		0.2	0.2			0.1	0.2	2.7
4.5 - 6.0	0.4	1.1	1.8	2.1	1.6	2.0	0.2	2.7	1.6	0.5	0.7	0.2		0.1	0.2	0.3	15.4
3.0 - 4.5	1.7	1.9	3.4	4.5	3.9	4.5	3.5	5.8	2.1	1.0	0.5	0.1		0.2	0.4	0.5	34.1
1.5 - 3.0	1.3	2.5	2.4	3.4	4.2	3.7	6.6	6.9	1.7	1.0	0.7	0.3	0.4	0.8	1.1	1.0	38.1
0.5 - 1.5	0.4	0.3	0.4	0.2	0.4	0.9	0.9	1.3	0.6	0.6	0.6	0.5	0.4	0.4	0.2	0.3	8.5
TOTALS	4.5	6.0	8.2	10.5	10.2	11.2	11.2	17.1	6.1	3.2	2.8	1.5	0.9	1.5	1.9	2.2	

CALMS (LESS THAN 0.5 M/S): 1.0%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.3	1.4	8.9
NORTHERLY COMPONENT	-0.4	2.5	8.3
EASTERLY COMPONENT	1.5	2.0	-7.8





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/84 TO 31/3/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.84 TO 31. 3.84 INCLUSIVE.
DATA RECOVERY: 100.0%

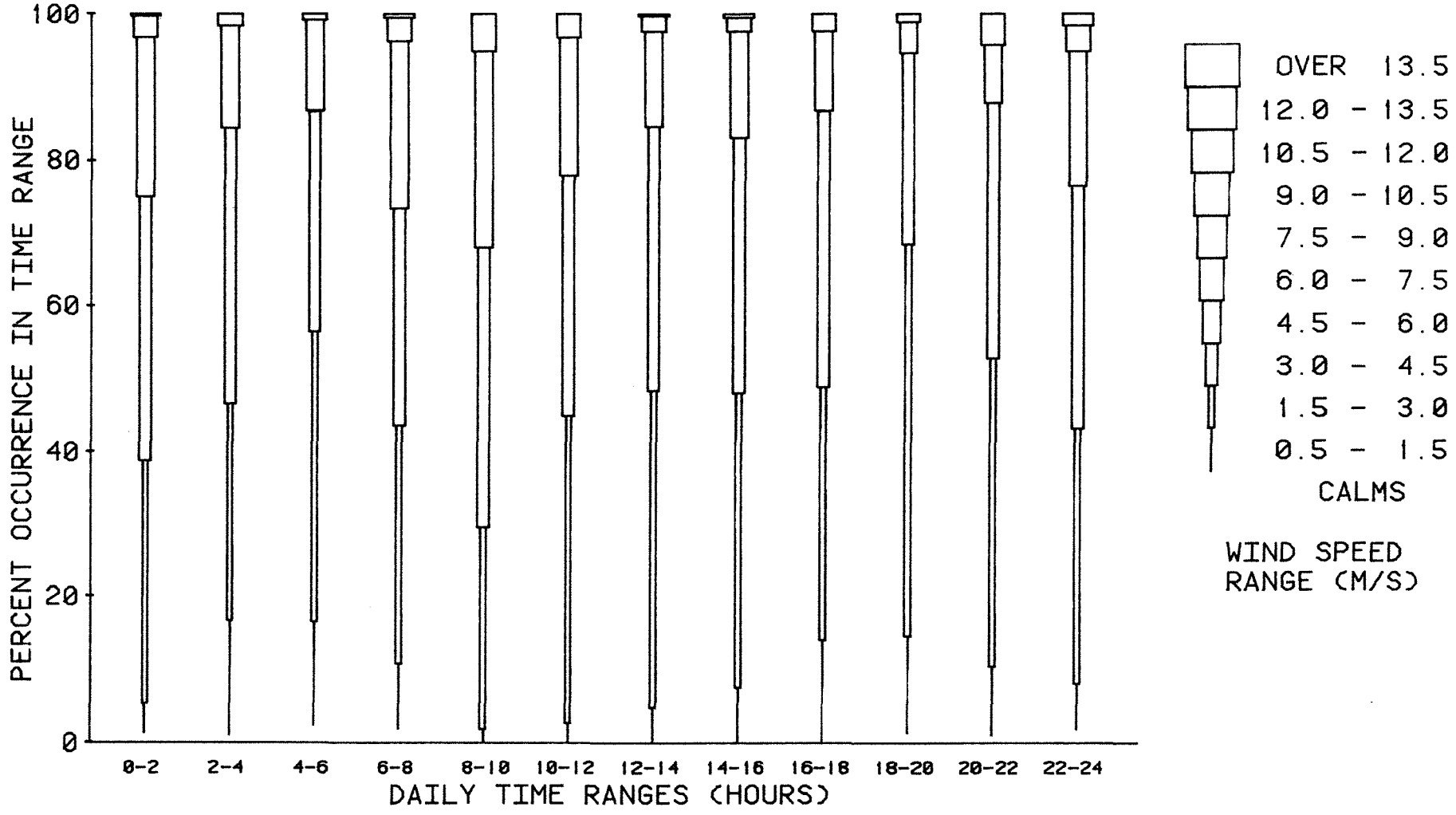
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

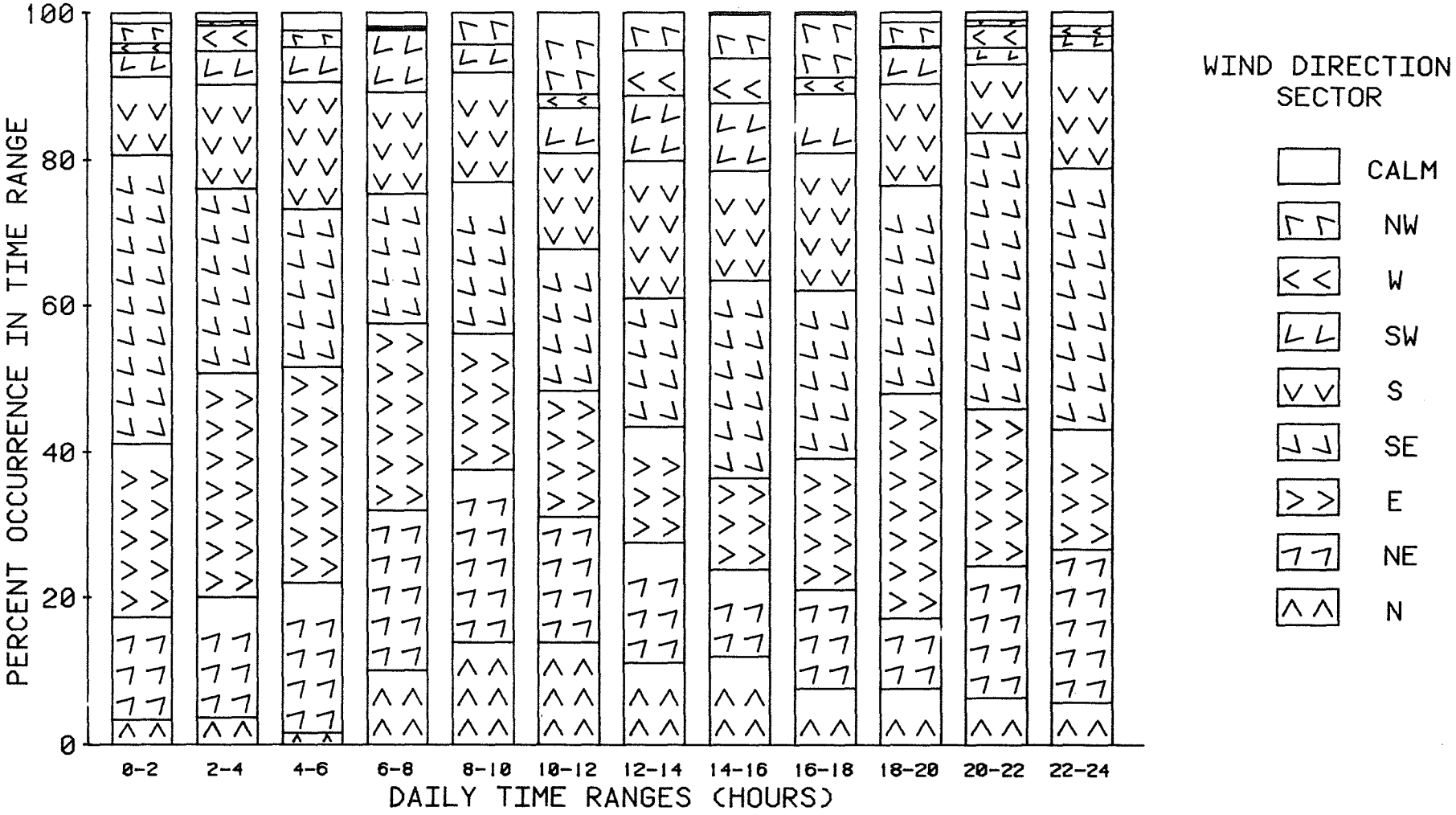
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	1.3	1.1	2.4	1.9				0.3	0.3	1.3	1.1	1.9
NW	2.7	0.5	2.2	0.3	4.3	11.0	5.1	5.9	8.6	3.2	0.8	
W	1.3	3.5		0.3		1.9	6.2	6.2	2.2	0.3	3.0	1.3
SW	3.2	4.6	4.8	8.3	3.8	6.2	8.9	9.1	8.1	4.8	2.2	1.9
S	10.8	14.2	17.5	14.0	15.1	13.2	18.8	15.1	18.8	14.0	9.4	16.1
SE	39.5	25.3	21.5	17.7	20.7	19.4	17.5	26.9	22.8	28.2	37.6	35.5
E	23.7	30.6	29.6	25.5	18.5	17.2	15.9	12.6	18.0	30.6	21.5	16.4
NE	14.0	16.4	20.4	21.8	23.7	17.2	16.4	11.8	13.4	9.7	18.0	21.0
N	3.5	3.8	1.6	10.2	14.0	14.0	11.3	12.1	7.8	7.8	6.5	5.9

DAILY TIME RANGES (HOURS)

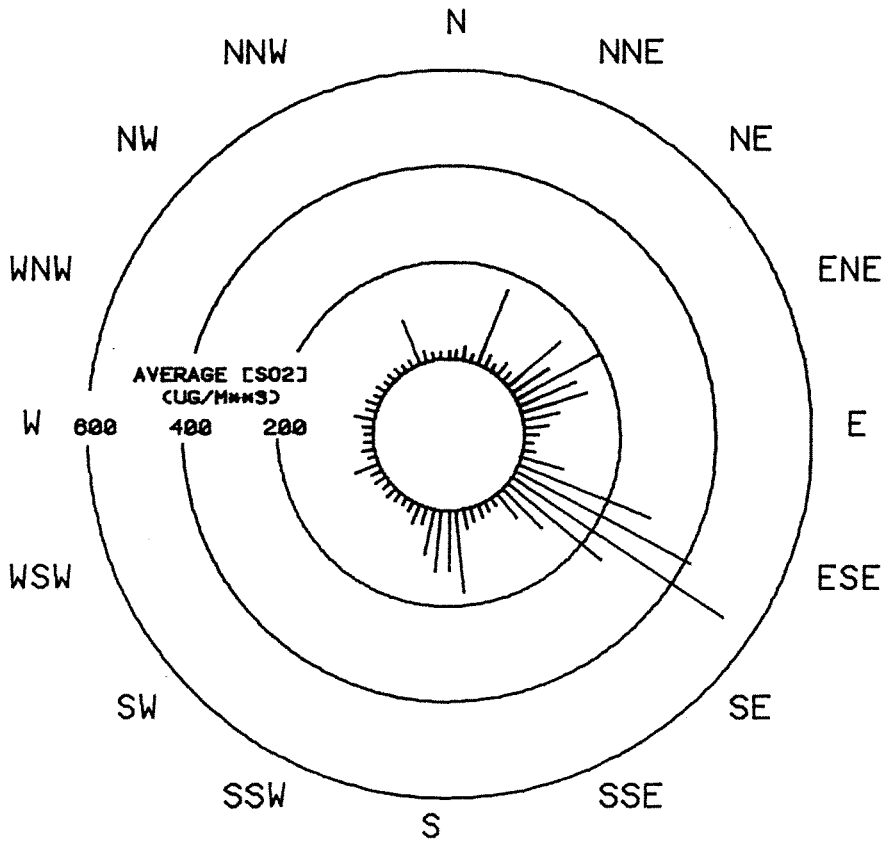
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5												
7.5-9.0	0.3			0.5			0.3	0.5				1.6
6.0-7.5	3.0	1.6	0.8	3.2	5.1	3.2	2.2	1.9	2.4	1.1	4.3	3.5
4.5-6.0	21.8	14.0	12.4	22.8	26.9	18.8	12.9	14.5	10.8	4.3	7.8	18.3
3.0-4.5	36.3	37.9	30.4	29.8	38.4	33.1	36.3	34.9	37.9	26.1	34.9	33.3
1.5-3.0	33.3	29.8	40.1	32.8	27.7	42.2	43.5	40.6	34.9	54.0	42.5	35.2
0.5-1.5	4.0	15.6	14.0	8.9	1.9	2.7	4.8	7.3	13.7	13.2	9.4	6.2
CALMS	1.3	1.1	2.4	1.9				0.3	0.3	1.3	1.1	1.9



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/84 TO 31/3/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/84 TO 31/3/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/84 TO 30/3/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 83.7%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 4.84 TO 30. 4.84 INCLUSIVE.

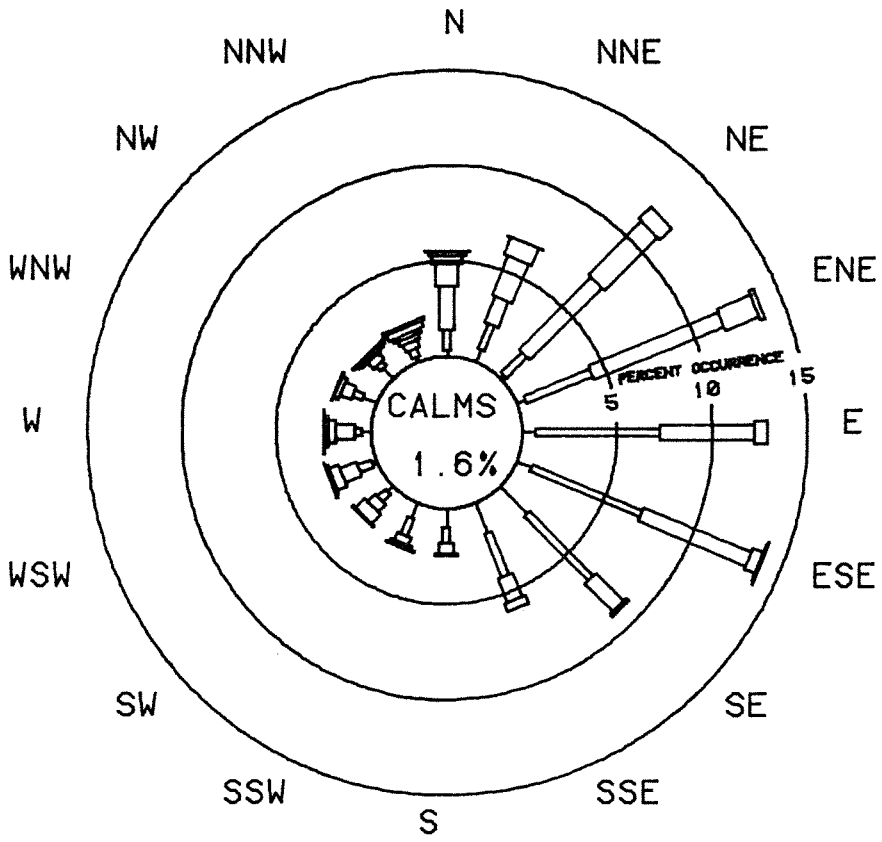
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

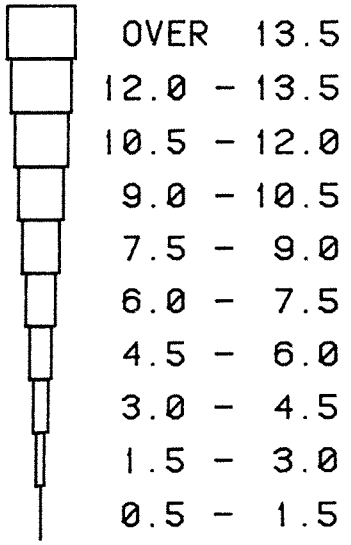
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5															0.1	0.2	0.4
7.5 - 9.0	0.2														0.1	0.3	0.8
6.0 - 7.5	0.4	1.0	0.9	0.3							0.1	0.1	0.2		0.1	0.2	3.3
4.5 - 6.0	1.1	2.2	3.9	1.9	0.7	0.6	0.2	0.4	0.1	0.2	0.7	0.6	0.4	0.3		0.3	13.5
3.0 - 4.5	2.3	1.5	5.4	7.4	5.0	6.2	2.1	1.3	0.5	0.4	0.5	1.0	1.0	0.6	0.5	0.4	36.0
1.5 - 3.0	1.1	1.4	1.6	3.8	6.5	6.3	4.8	2.5	0.9	1.0	0.6	0.8	0.3	0.6	0.3	0.4	32.8
0.5 - 1.5	0.3	0.7	0.2	0.5	0.7	0.8	2.0	1.7	1.0	0.8	0.4	0.2	0.5	0.7	0.7	0.3	11.6
TOTALS	5.5	6.8	12.0	13.8	12.9	13.9	9.0	5.9	2.4	2.5	2.3	2.6	2.5	2.3	1.9	2.1	

CALMS (LESS THAN 0.5 M/S): 1.6%
DATA RECOVERY: 99.7%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.3	1.5	10.4
NORTHERLY COMPONENT	0.6	2.4	9.6
EASTERLY COMPONENT	1.5	2.2	9.2





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/84 TO 30/4/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.7%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 4.84 TO 30. 4.84 INCLUSIVE.
DATA RECOVERY: 99.7%

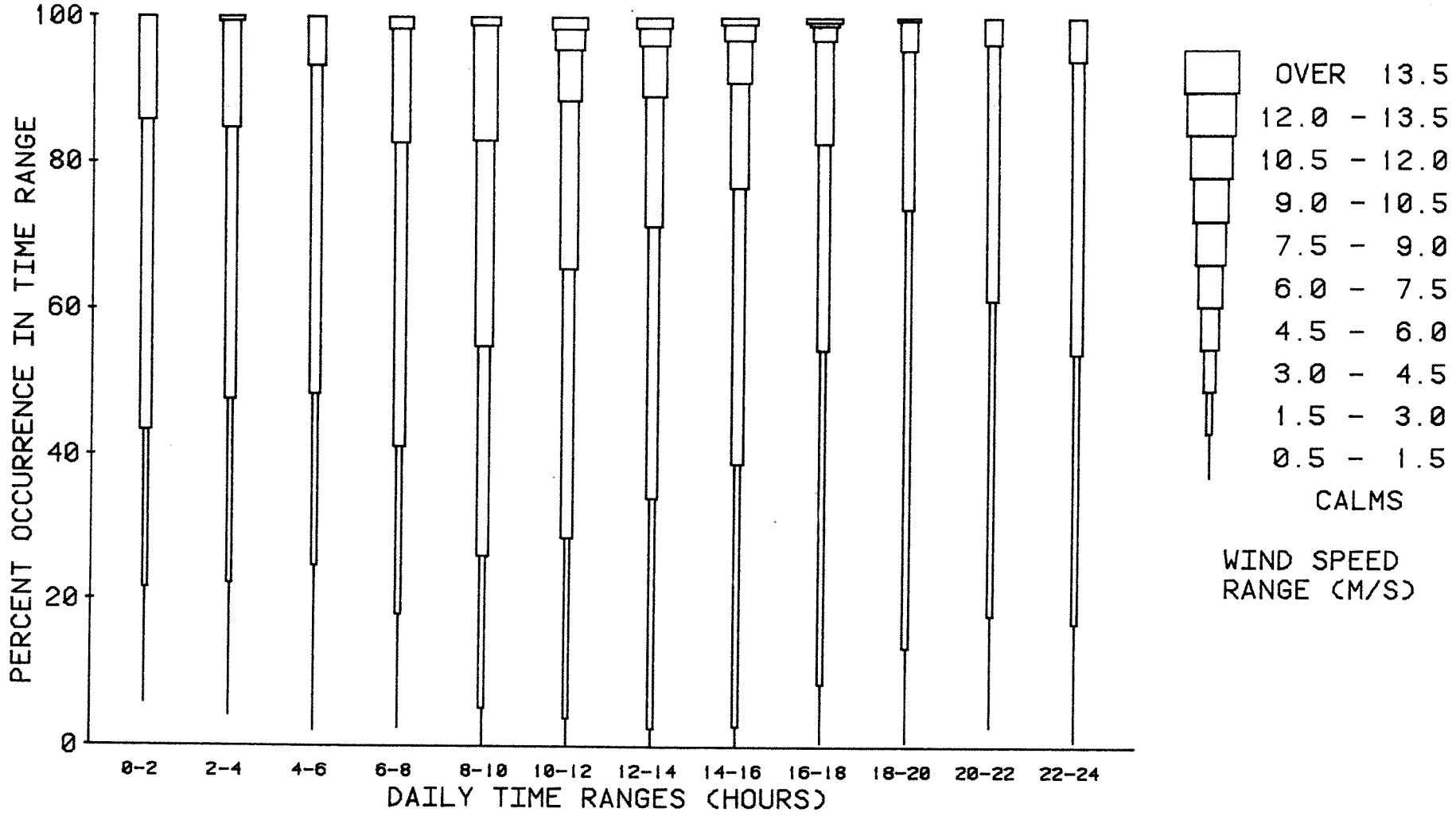
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

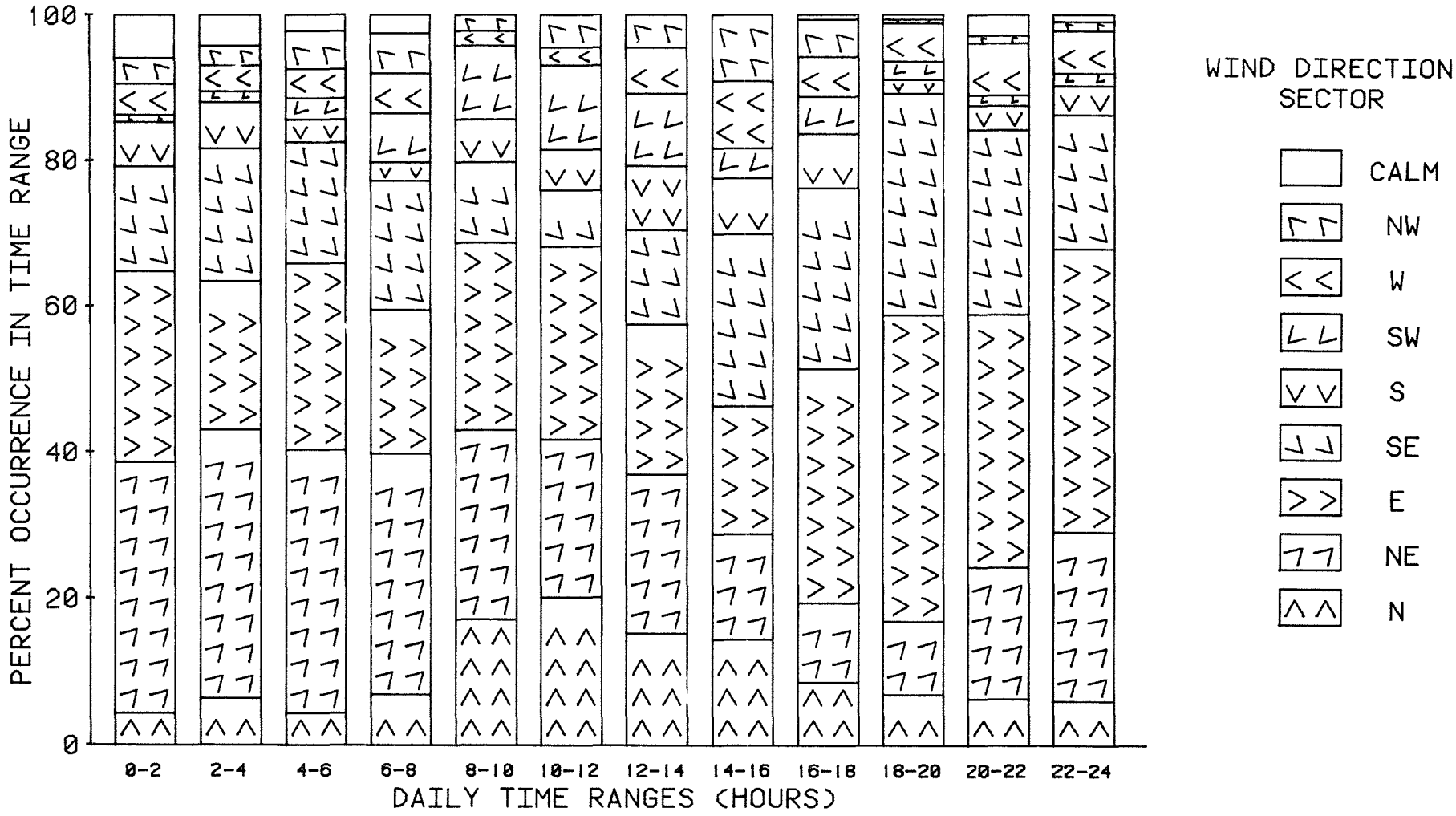
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	5.8	4.2	2.2	2.5					0.6	0.6	2.8	0.8
NW	3.6	2.8	5.3	5.6	2.2	4.4	4.4	9.2	5.2	0.6	1.1	1.4
W	4.4	3.6	3.9	5.6	1.9	2.5	6.4	9.2	5.5	5.3	7.2	5.8
SW	0.8	1.4	3.1	6.7	10.3	11.7	10.0	4.2	5.2	2.5	1.4	1.7
S	6.1	6.4	3.1	2.5	5.8	5.6	8.9	7.8	7.5	1.9	3.3	4.2
SE	14.4	18.3	16.7	17.8	11.1	7.8	12.8	23.3	24.7	30.4	25.3	18.3
E	26.1	20.3	25.6	19.7	25.6	26.4	20.6	17.5	31.9	41.8	34.4	38.6
NE	34.2	36.7	35.8	32.8	25.8	21.4	21.7	14.4	10.9	10.0	18.1	23.1
N	4.4	6.4	4.4	6.9	17.2	20.3	15.3	14.4	8.6	7.0	6.4	6.1

DAILY TIME RANGES (HOURS)

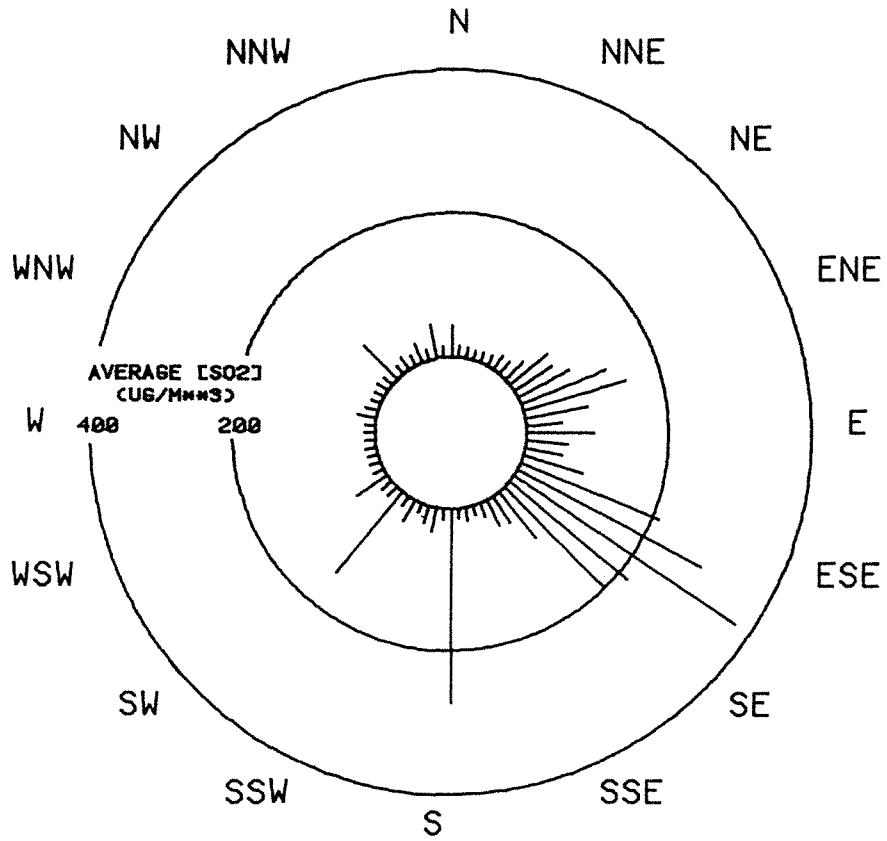
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5						1.7	1.4	0.8	0.6			
7.5-9.0					1.1	2.8	2.5	2.2	0.6			
6.0-7.5		0.6		1.7	15.8	6.9	6.9	5.8	2.0	0.3		
4.5-6.0	14.2	14.7	6.7	15.6	28.1	23.1	17.8	14.4	14.1	4.2	3.6	5.8
3.0-4.5	42.5	37.2	45.0	41.7	28.9	36.9	37.2	37.8	28.2	21.7	35.0	40.0
1.5-3.0	21.7	25.3	23.6	23.1	20.8	24.7	31.7	36.1	46.0	60.2	43.3	37.2
0.5-1.5	15.8	18.1	22.5	15.6	5.3	3.9	2.5	2.8	8.0	13.1	15.3	16.1
CALMS	5.8	4.2	2.2	2.5					0.6	0.6	2.8	0.8



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/84 TO 30/4/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.7%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/84 TO 30/4/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.7%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/84 TO 30/4/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 61.7%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 5.84 TO 31. 5.84 INCLUSIVE.

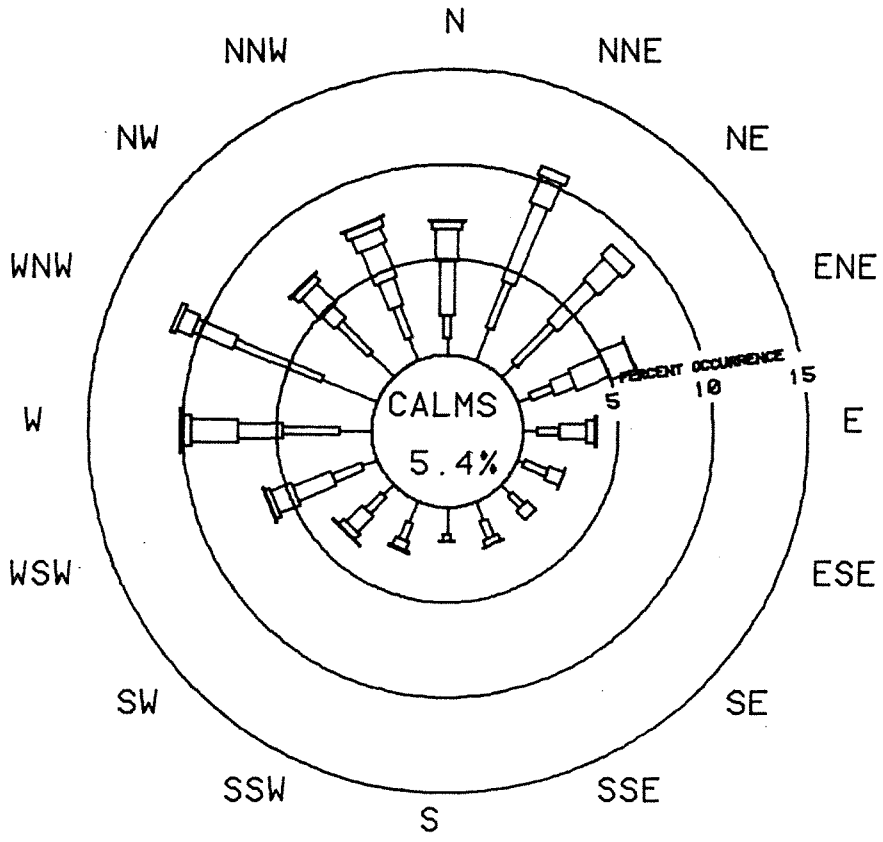
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

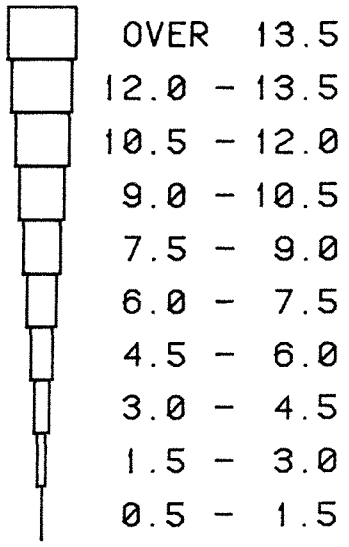
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.1
7.5 - 9.0												0.1			0.1	0.5	0.8
6.0 - 7.5	0.4	0.5	0.8	1.4	0.1							0.3	0.6	0.3	0.4	0.8	5.6
4.5 - 6.0	1.7	1.5	1.5	1.8	0.5					0.1	0.4	1.2	2.4	0.8	1.4	1.9	15.3
3.0 - 4.5	2.8	4.3	2.9	1.2	1.4	0.9	0.6	0.4		0.5	1.2	2.2	2.4	2.3	0.9	1.5	25.4
1.5 - 3.0	1.2	2.6	2.8	1.2	1.2	1.3	0.9	1.0	0.4	1.0	1.1	1.7	3.0	5.0	2.3	1.7	28.3
0.5 - 1.5	0.9	1.8	1.0	0.7	0.7	0.4	0.7	1.1	1.4	1.2	0.8	0.8	1.6	3.1	1.7	1.3	19.1
TOTALS	7.0	10.8	9.0	6.4	3.9	2.5	2.2	2.4	1.8	2.7	3.5	6.2	10.1	11.5	6.8	7.7	

CALMS (LESS THAN 0.5 M/S): 5.4%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.1	1.8	9.6
NORTHERLY COMPONENT	1.1	2.1	8.9
EASTERLY COMPONENT	-0.3	2.6	-9.3





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/84 TO 31/5/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 5.84 TO 31. 5.84 INCLUSIVE.
DATA RECOVERY: 100.0%

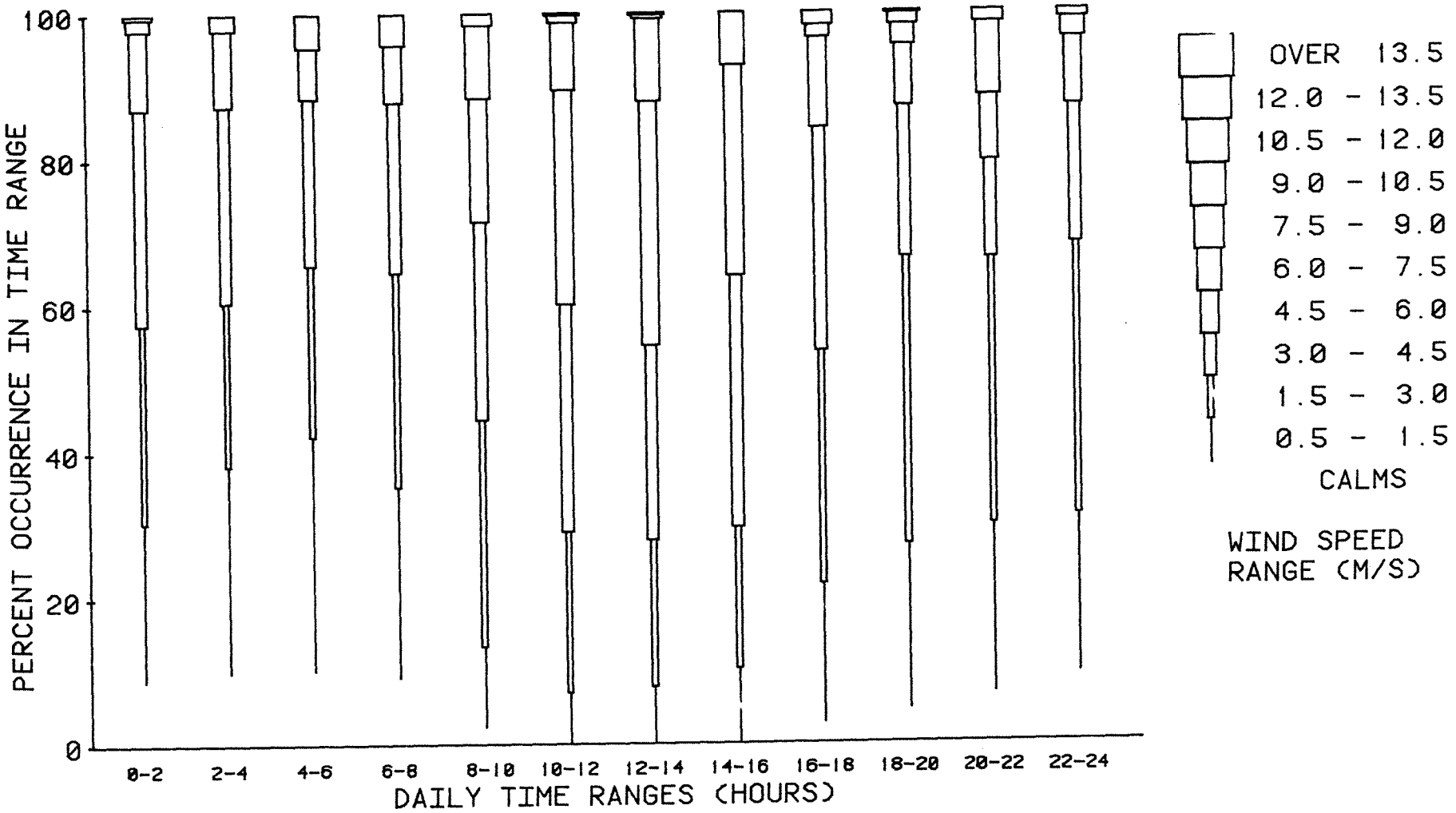
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

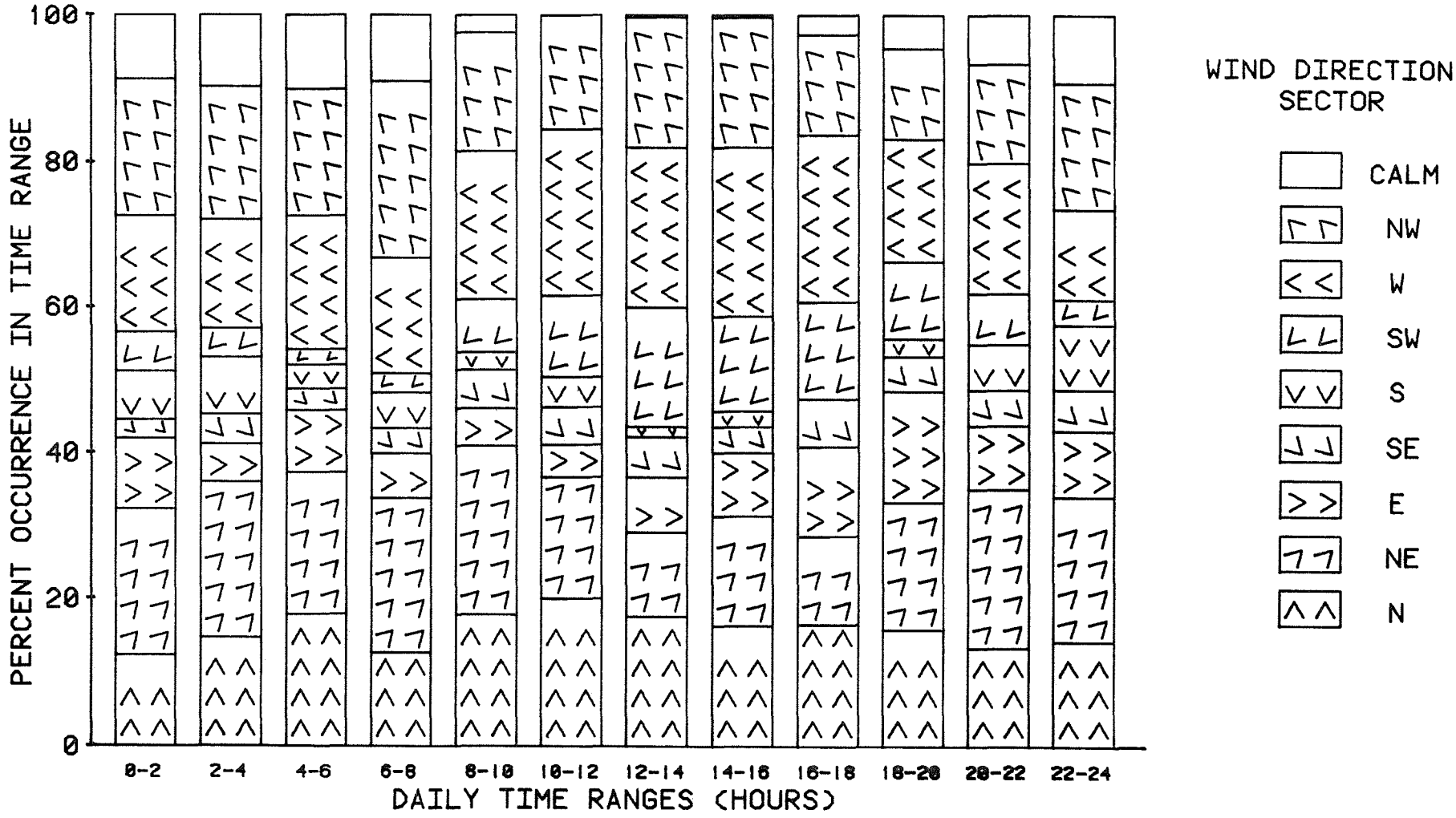
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	8.9	9.9	10.2	9.1	2.4		0.3	0.3	2.7	4.6	6.7	9.4
NW	18.5	18.0	17.2	24.2	16.1	15.6	17.7	17.7	13.7	12.4	13.4	17.2
W	16.1	15.1	18.5	15.9	20.4	22.8	22.0	23.4	22.8	16.9	18.0	12.4
SW	5.4	4.0	2.2	2.7	7.3	11.3	16.4	12.9	13.4	10.5	7.0	3.5
S	6.7	7.8	3.2	4.8	2.4	4.0	1.3	2.2		2.4	6.2	8.9
SE	2.4	4.0	3.0	3.5	5.4	5.1	5.4	3.5	6.5	4.8	4.8	5.6
E	9.7	5.1	8.3	5.9	5.1	4.3	7.5	8.6	12.1	15.1	8.6	8.9
NE	19.9	21.2	19.4	21.2	22.8	16.7	11.6	15.1	12.1	17.5	21.8	19.9
N	12.4	14.8	18.0	12.6	18.0	20.2	17.7	16.4	16.7	15.9	13.4	14.2

DAILY TIME RANGES (HOURS)

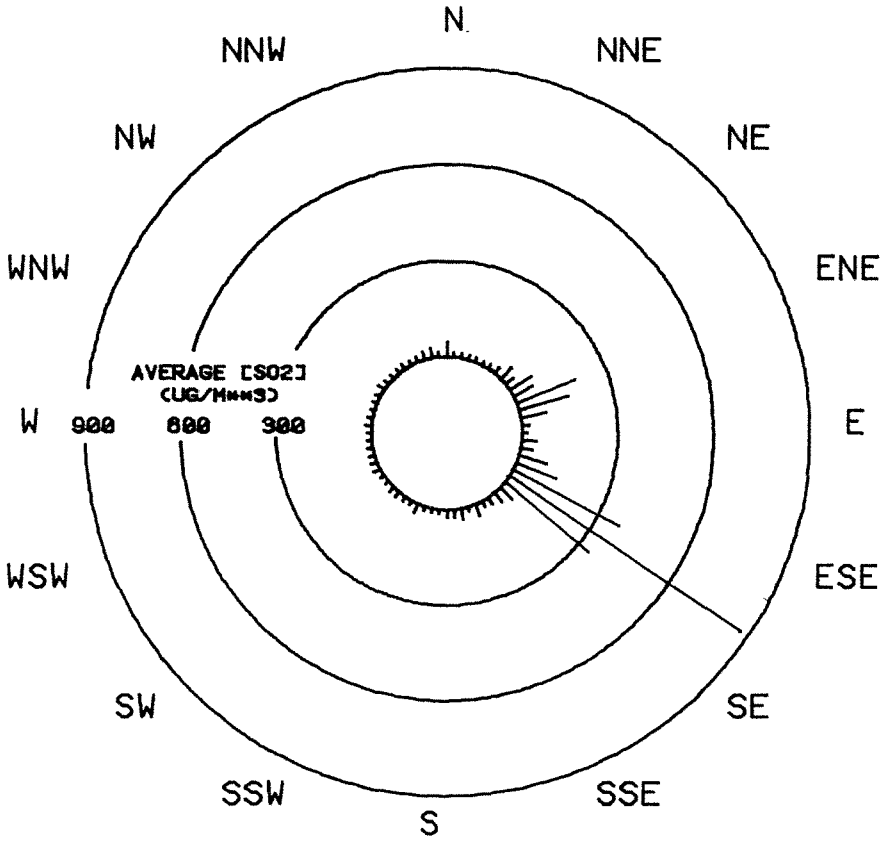
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5						0.3	0.3			0.3		
7.5-9.0	0.5				1.6	1.1	0.5		1.9	1.6	1.6	1.1
6.0-7.5	1.6	2.2	4.6	4.3	9.9	9.1	11.3	7.3	1.6	2.7	9.9	2.7
4.5-6.0	10.8	10.5	7.0	7.8	16.9	29.3	33.3	28.8	12.4	8.3	8.9	9.1
3.0-4.5	29.6	26.9	22.8	23.4	27.2	31.2	26.6	34.4	30.4	20.7	13.4	18.8
1.5-3.0	27.2	22.3	23.4	29.3	30.9	22.0	20.2	19.4	32.0	39.2	36.3	37.4
0.5-1.5	21.5	28.2	32.0	26.1	11.0	7.0	7.5	9.9	19.1	22.6	23.1	21.5
CALMS	8.9	9.9	10.2	9.1	2.4		0.3	0.3	2.7	4.6	6.7	9.4



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/84 TO 31/5/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/84 TO 31/5/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/84 TO 31/5/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 6.84 TO 30. 6.84 INCLUSIVE.

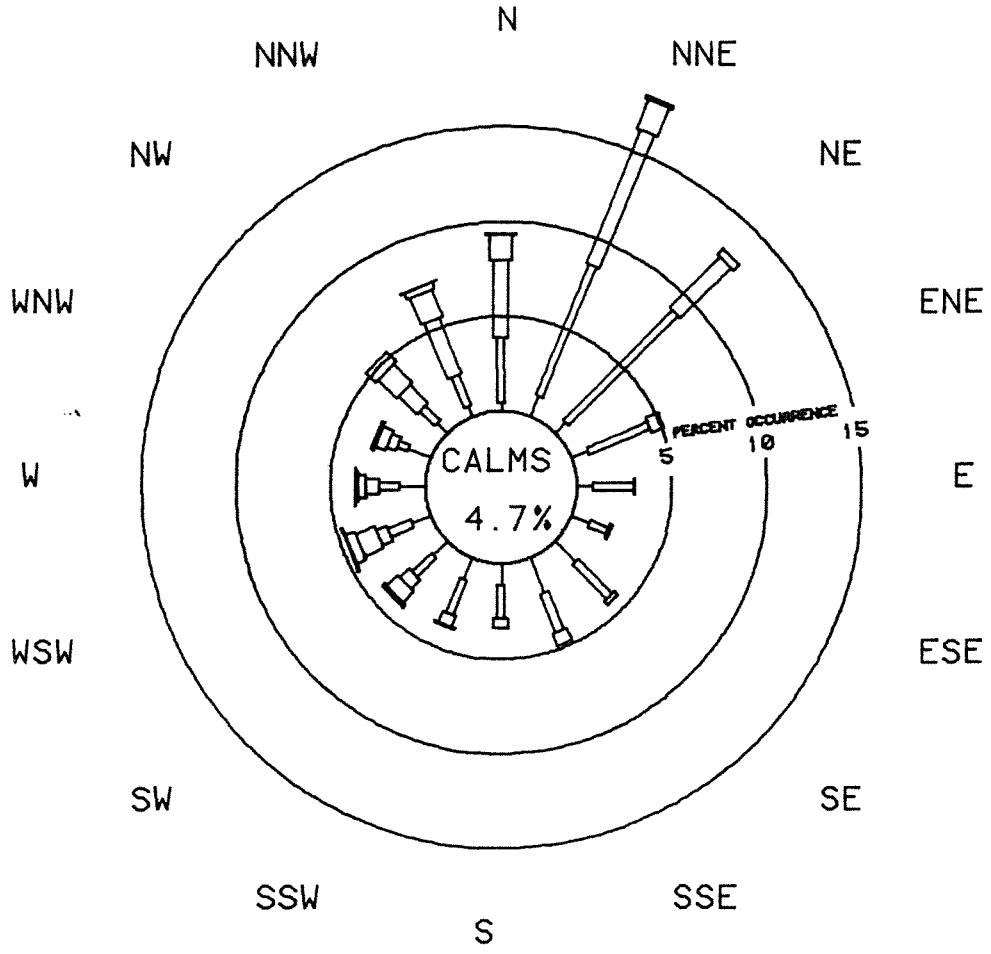
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

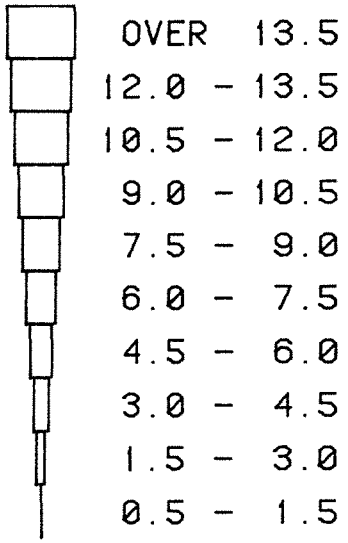
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.0
7.5 - 9.0																	0.1
6.0 - 7.5		0.2									0.2	0.5	0.1	0.2	0.7	0.3	2.3
4.5 - 6.0	1.4	1.6	0.4							0.1	0.8	1.1	0.4	0.6	1.4	1.5	9.3
3.0 - 4.5	4.1	7.6	3.8	0.7	0.1	0.1	0.3	0.7	0.5	0.6	0.6	0.6	0.7	0.5	1.4	3.2	25.4
1.5 - 3.0	3.4	7.4	8.1	3.5	2.2	1.0	2.5	2.1	1.7	1.9	1.4	1.3	1.1	0.6	1.1	1.8	41.2
0.5 - 1.5	0.4	1.2	0.8	0.9	0.8	1.0	1.5	2.0	1.1	1.2	1.0	1.0	1.3	1.2	0.7	0.6	17.0
TOTALS	9.4	18.0	13.1	5.1	3.1	2.2	4.3	4.8	3.3	3.8	4.1	4.6	3.7	3.1	5.3	7.4	

CALMS (LESS THAN 0.5 M/S): 4.7%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	2.7	1.5	9.7
NORTHERLY COMPONENT	1.1	2.2	6.9
EASTERLY COMPONENT	0.1	1.9	-9.4





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/6/84 TO 30/6/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 6.84 TO 30. 6.84 INCLUSIVE.
DATA RECOVERY: 100.0%

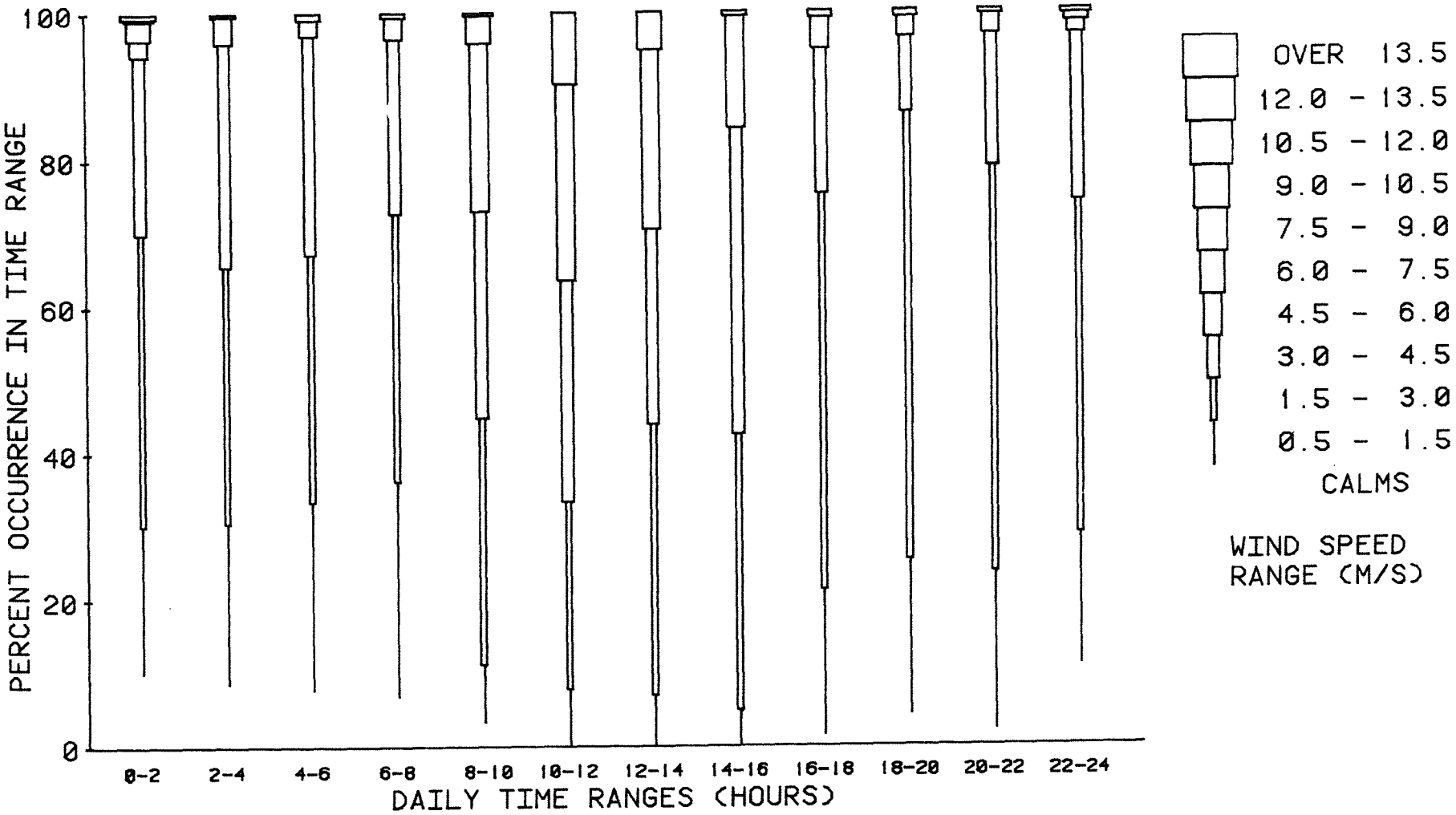
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

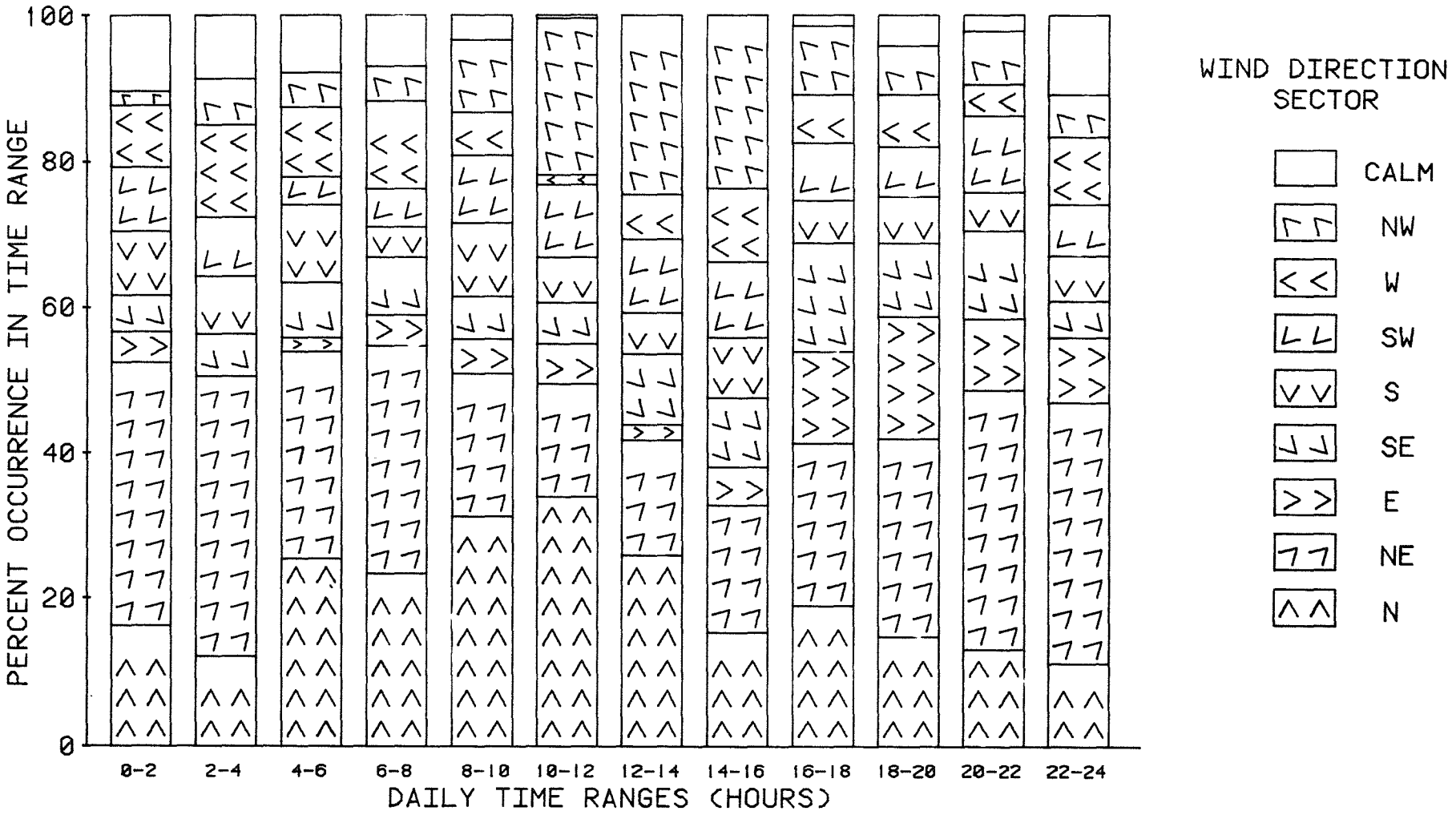
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	10.3	8.6	7.8	6.9	3.3	0.3			1.4	4.2	2.2	10.8
NW	1.9	6.4	4.7	4.7	10.0	21.7	24.7	23.9	9.4	6.7	7.2	5.8
W	8.6	12.8	9.7	12.2	5.8	1.4	6.1	10.0	6.7	7.2	4.4	9.4
SW	8.9	8.1	3.9	5.3	9.4	10.0	10.0	10.3	8.1	6.9	10.6	6.9
S	8.6	7.8	10.6	4.2	10.0	6.1	5.6	8.3	5.8	6.4	5.3	6.1
SE	5.0	5.8	7.5	7.8	5.8	5.6	9.7	9.4	14.7	10.0	11.9	5.0
E	4.2		1.9	4.2	4.7	5.6	2.2	5.3	12.5	16.7	9.7	8.9
NE	36.1	38.3	28.6	31.4	19.7	15.6	15.8	17.2	22.2	26.9	35.3	35.6
N	16.4	12.2	25.3	23.3	31.1	33.9	25.8	15.6	19.2	15.0	13.3	11.4

DAILY TIME RANGES (HOURS)

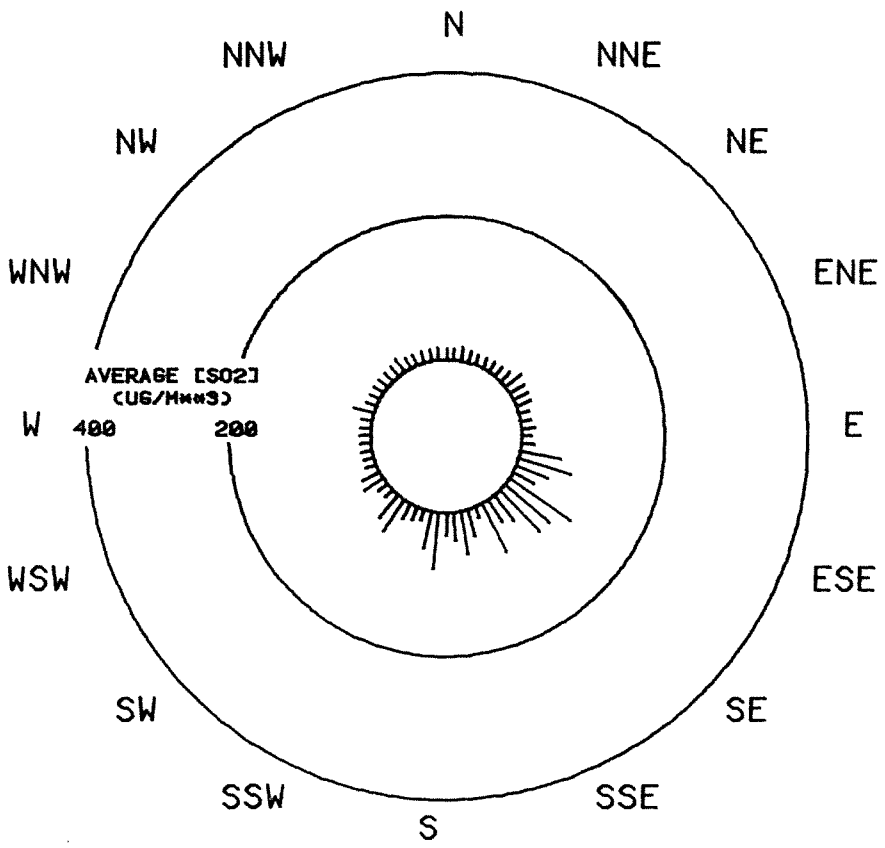
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5	0.6											
7.5-9.0	0.3				0.3							0.6
6.0-7.5	2.8	0.3	0.8	0.6	3.9	9.7	5.3	0.6	0.8	0.8	0.6	1.1
4.5-6.0	2.2	3.9	2.2	3.1	22.8	26.7	24.2	15.3	4.4	2.8	2.8	1.7
3.0-4.5	24.2	30.3	29.7	23.6	28.3	30.3	26.7	41.7	19.4	10.3	17.8	22.5
1.5-3.0	39.7	35.0	33.9	36.7	33.6	25.6	36.9	37.5	53.9	60.8	55.3	45.3
0.5-1.5	20.0	21.9	25.6	29.2	7.8	7.5	6.9	5.0	20.0	21.1	21.4	18.1
CALMS	10.3	8.6	7.8	6.9	3.3	0.3			1.4	4.2	2.2	10.8



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/6/84 TO 30/6/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/6/84 TO 30/6/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/6/84 TO 30/6/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 97.6%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 7.84 TO 31. 7.84 INCLUSIVE.

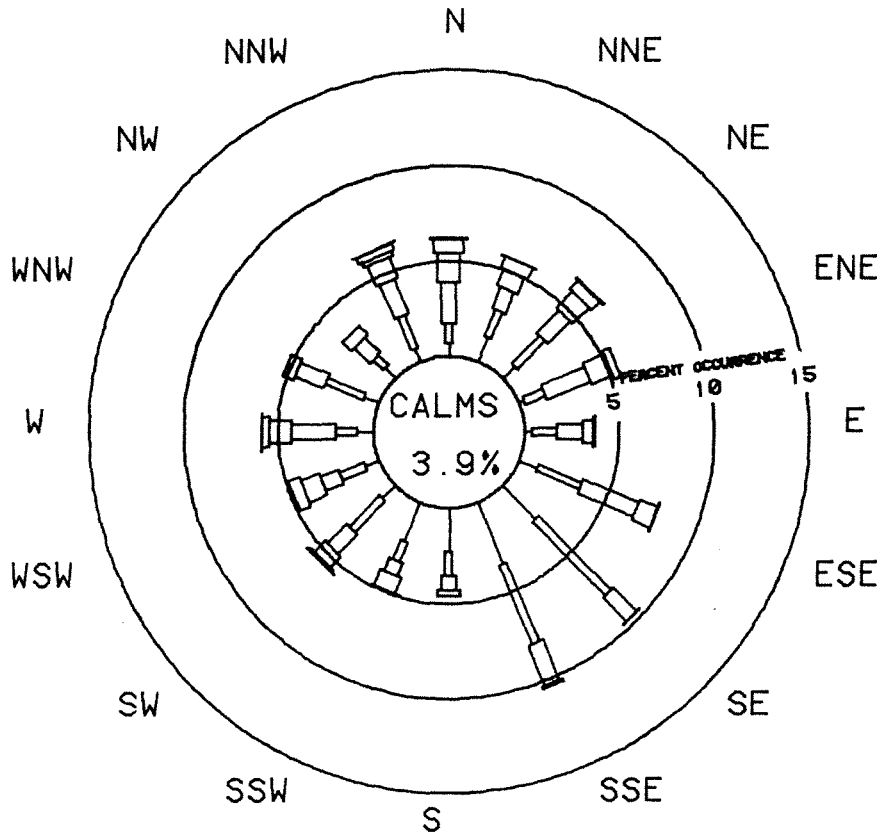
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

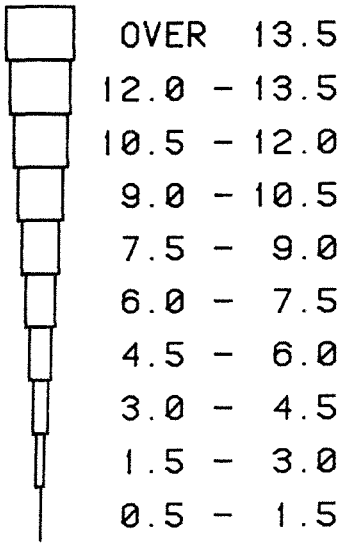
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.0
7.5 - 9.0	0.1		0.1													0.4	0.6
6.0 - 7.5	0.7	0.6	0.6	0.4	0.1						0.1	0.6	0.4			0.2	3.9
4.5 - 6.0	1.5	0.9	1.2	1.2	0.5	1.1		0.1	0.3	0.9	0.8	1.0	1.2	0.6	0.6	1.2	13.3
3.0 - 4.5	2.1	1.3	1.7	2.5	1.4	3.2	1.7	2.3	0.8	0.7	1.4	1.0	2.3	1.6	1.1	2.0	27.2
1.5 - 3.0	1.0	1.5	2.1	1.1	1.3	2.5	5.5	4.5	1.3	1.1	2.3	1.4	1.1	2.2	0.8	1.9	31.4
0.5 - 1.5	0.7	1.4	0.9	0.3	0.3	1.0	2.4	3.5	2.2	2.2	1.0	0.8	0.8	0.8	0.8	0.7	19.8
TOTALS	6.2	5.7	6.5	5.5	3.7	7.8	9.7	10.4	4.6	4.9	5.5	4.8	5.9	5.2	3.3	6.4	

CALMS (LESS THAN 0.5 M/S): 3.9%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.0	1.7	10.0
NORTHERLY COMPONENT	0.2	2.4	9.0
EASTERLY COMPONENT	0.2	2.4	-7.8





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/7/84 TO 31/7/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 7.84 TO 31. 7.84 INCLUSIVE.
DATA RECOVERY: 100.0%

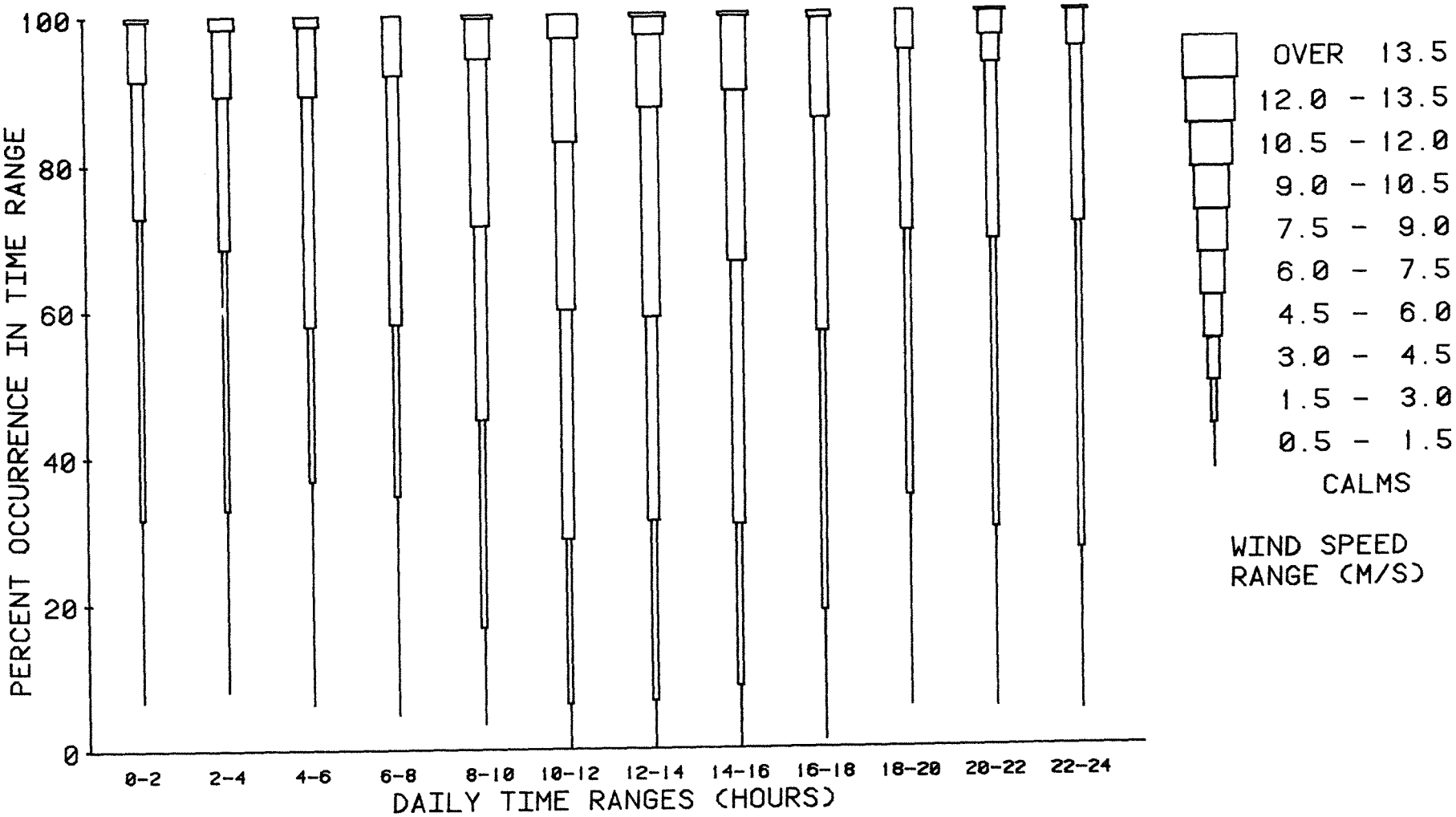
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

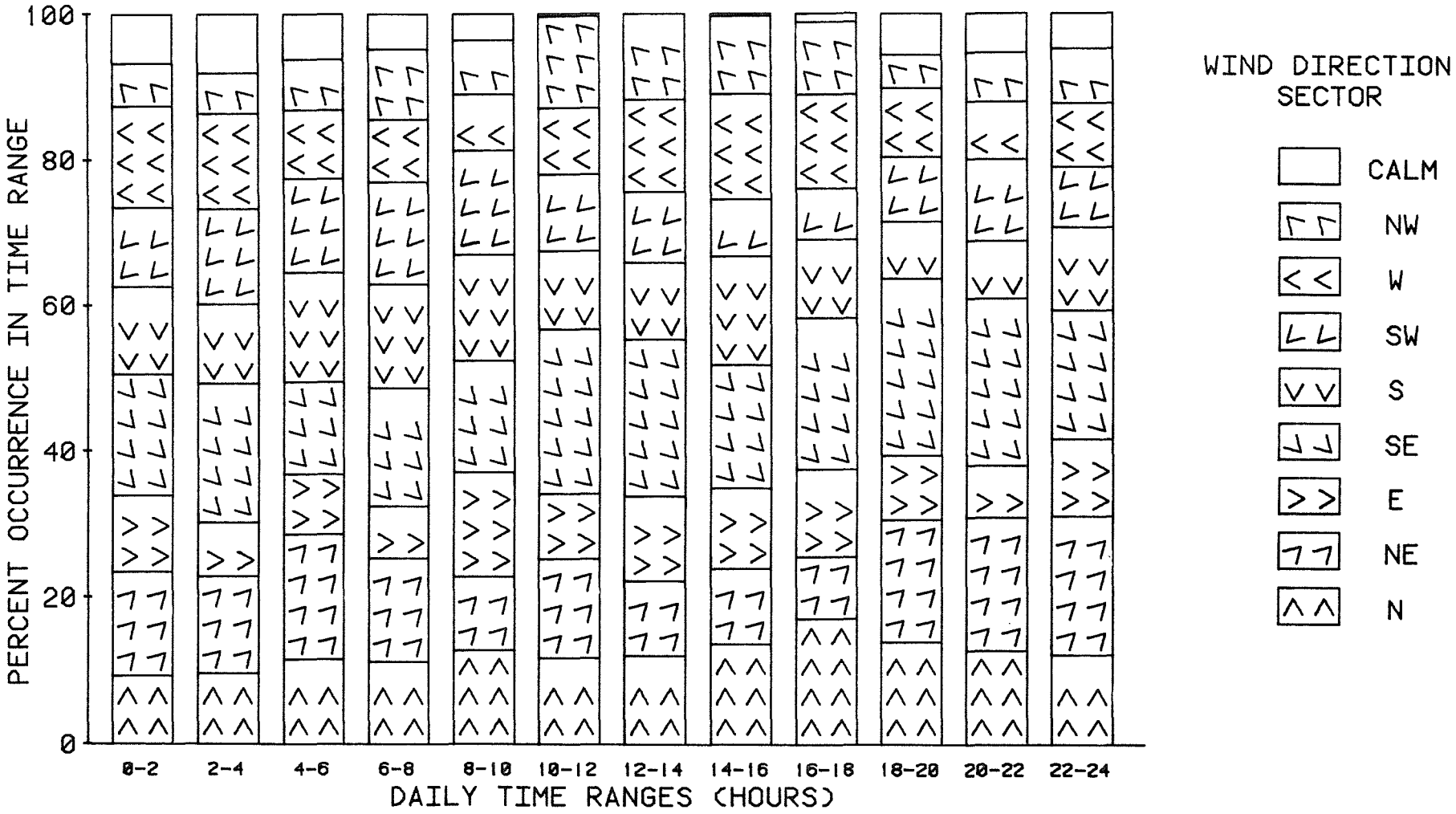
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	6.7	8.1	6.2	4.8	3.5	0.3		0.3	1.1	5.6	5.4	4.8
NW	5.9	5.6	7.0	9.7	7.5	12.6	11.8	10.8	9.9	4.6	6.7	7.5
W	14.0	13.2	9.4	8.6	7.8	9.1	12.6	14.5	12.9	9.4	7.8	8.6
SW	10.8	12.9	12.9	14.0	14.2	10.5	9.7	7.8	7.0	8.9	11.3	8.3
S	12.1	11.0	15.1	14.2	14.5	10.8	10.5	14.8	10.8	7.8	7.8	11.3
SE	16.7	19.1	12.6	16.4	15.3	22.6	21.5	16.9	20.7	24.2	22.8	17.5
E	10.5	7.3	8.3	7.0	14.2	8.9	11.6	11.0	12.1	8.9	7.3	10.8
NE	14.0	13.2	16.9	14.0	9.9	13.4	10.2	10.2	8.3	16.7	18.0	18.8
N	9.4	9.7	11.6	11.3	12.9	11.8	12.1	13.7	17.2	14.0	12.9	12.4

DAILY TIME RANGES (HOURS)

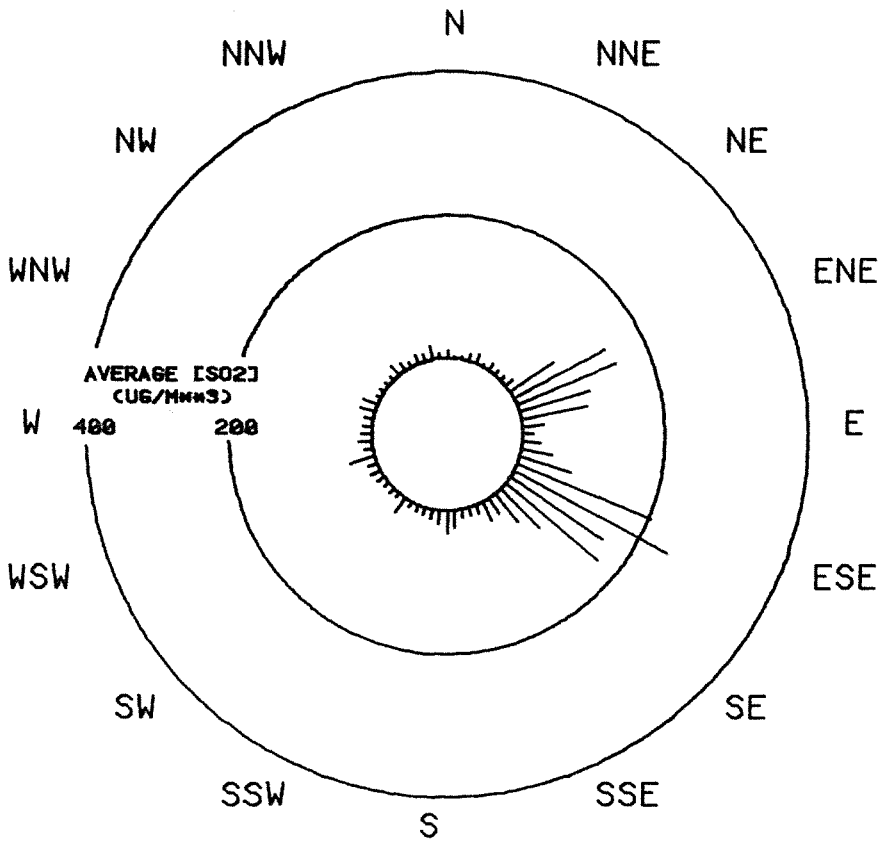
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5							0.5					
7.5-9.0					0.5	3.2	2.4	0.5			0.3	
6.0-7.5	0.5	1.6	1.3		5.4	14.0	9.7	9.9	0.8		3.2	0.3
4.5-6.0	8.1	9.1	9.4	8.1	22.6	22.8	28.5	23.1	13.4	5.4	3.8	4.8
3.0-4.5	18.5	20.7	31.5	33.9	26.6	31.2	27.7	35.8	29.0	24.2	23.7	23.7
1.5-3.0	41.1	35.8	21.0	23.4	28.2	22.6	24.7	22.0	37.9	36.0	39.2	44.4
0.5-1.5	25.0	24.7	30.6	29.8	13.2	5.9	6.5	8.3	17.7	28.8	24.5	22.0
CALMS	6.7	8.1	6.2	4.8	3.5	0.3		0.3	1.1	5.6	5.4	4.8



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/7/84 TO 31/7/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/7/84 TO 31/7/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/7/84 TO 31/7/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 98.9%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 8.84 TO 31. 8.84 INCLUSIVE.

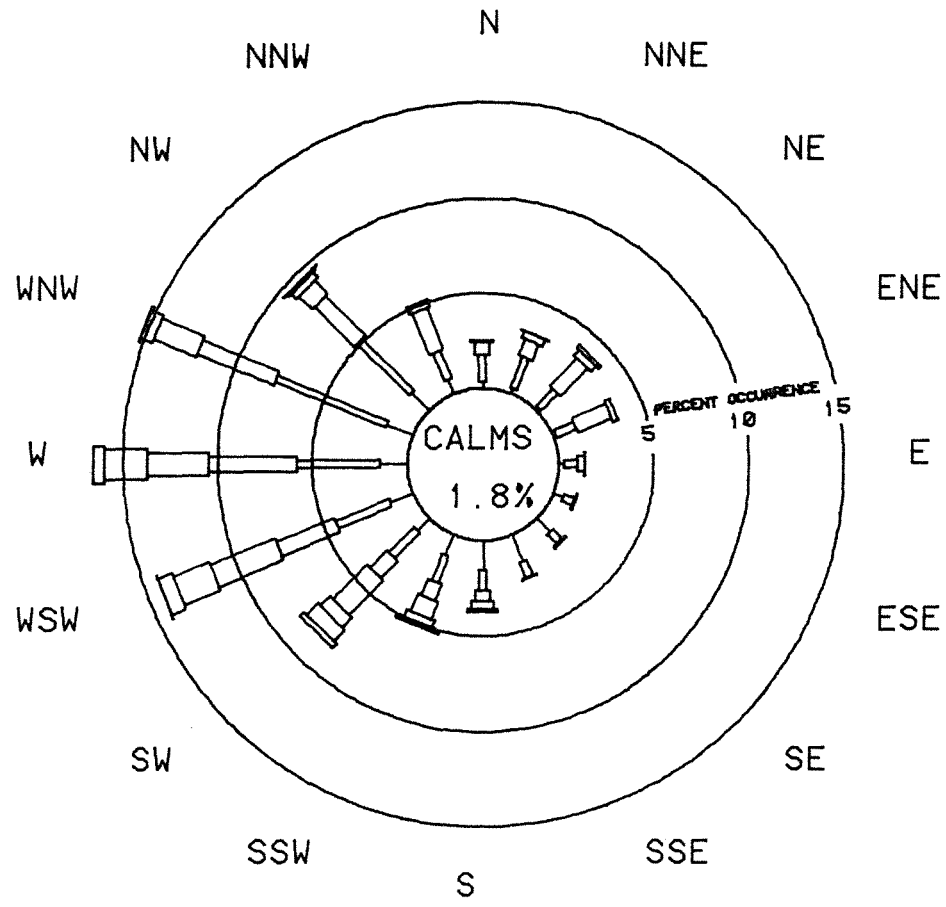
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

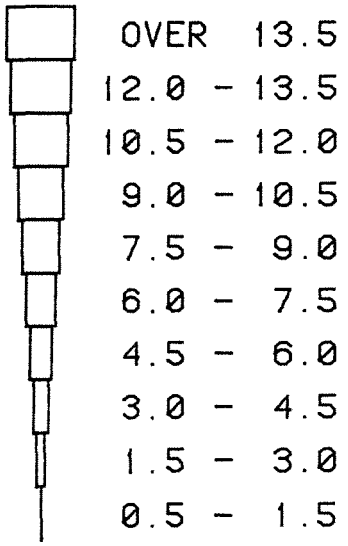
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5											0.3						0.4
7.5 - 9.0										0.1	0.8	0.8	0.6		0.1		2.6
6.0 - 7.5			0.2						0.1	0.4	0.7	2.1	2.3	0.7	0.4		6.9
4.5 - 6.0	0.1	0.4	0.4	0.3					0.4	1.0	2.5	3.7	3.2	2.5	1.0	0.4	15.9
3.0 - 4.5	0.7	0.9	2.0	1.9	0.4	0.1	0.1		0.6	0.9	1.3	3.3	4.7	4.3	3.0	2.4	26.5
1.5 - 3.0	1.4	1.8	1.3	1.1	0.7	0.6	0.7	0.9	1.1	1.5	1.9	3.0	4.4	6.3	3.8	1.6	32.0
0.5 - 1.5	0.3	0.3	0.2	0.1	0.2	0.5	1.0	1.5	1.5	1.1	0.9	1.3	1.4	1.4	1.3	0.8	13.9
TOTALS	2.5	3.3	4.1	3.5	1.4	1.2	1.8	2.4	3.7	5.1	8.4	14.2	16.6	15.3	9.6	5.2	

CALMS (LESS THAN 0.5 M/S): 1.8%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.4	1.9	10.2
NORTHERLY COMPONENT	0.0	2.2	-8.2
EASTERLY COMPONENT	-2.0	2.6	-8.8





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 8.84 TO 31. 8.84 INCLUSIVE.
DATA RECOVERY: 100.0%

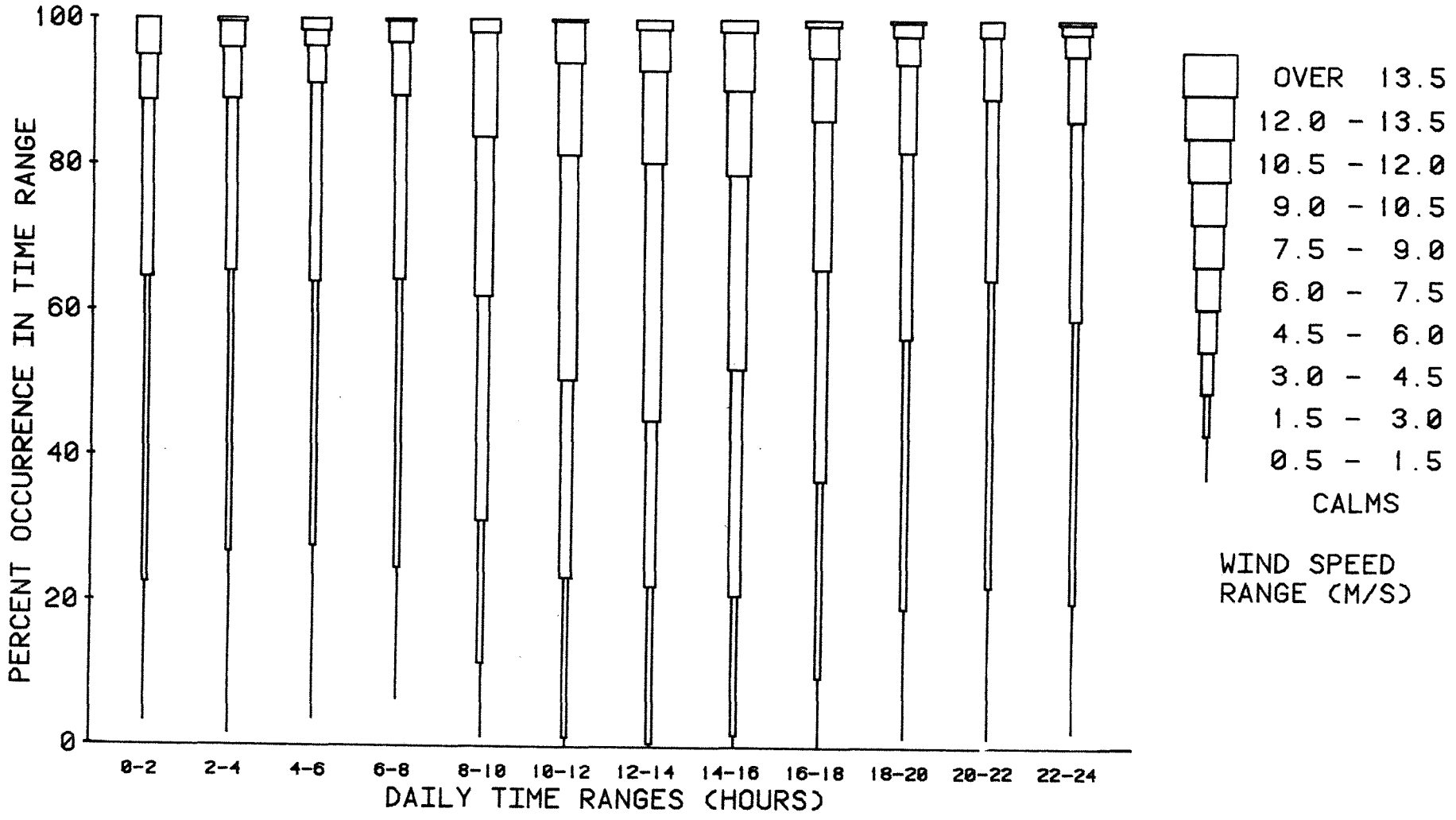
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

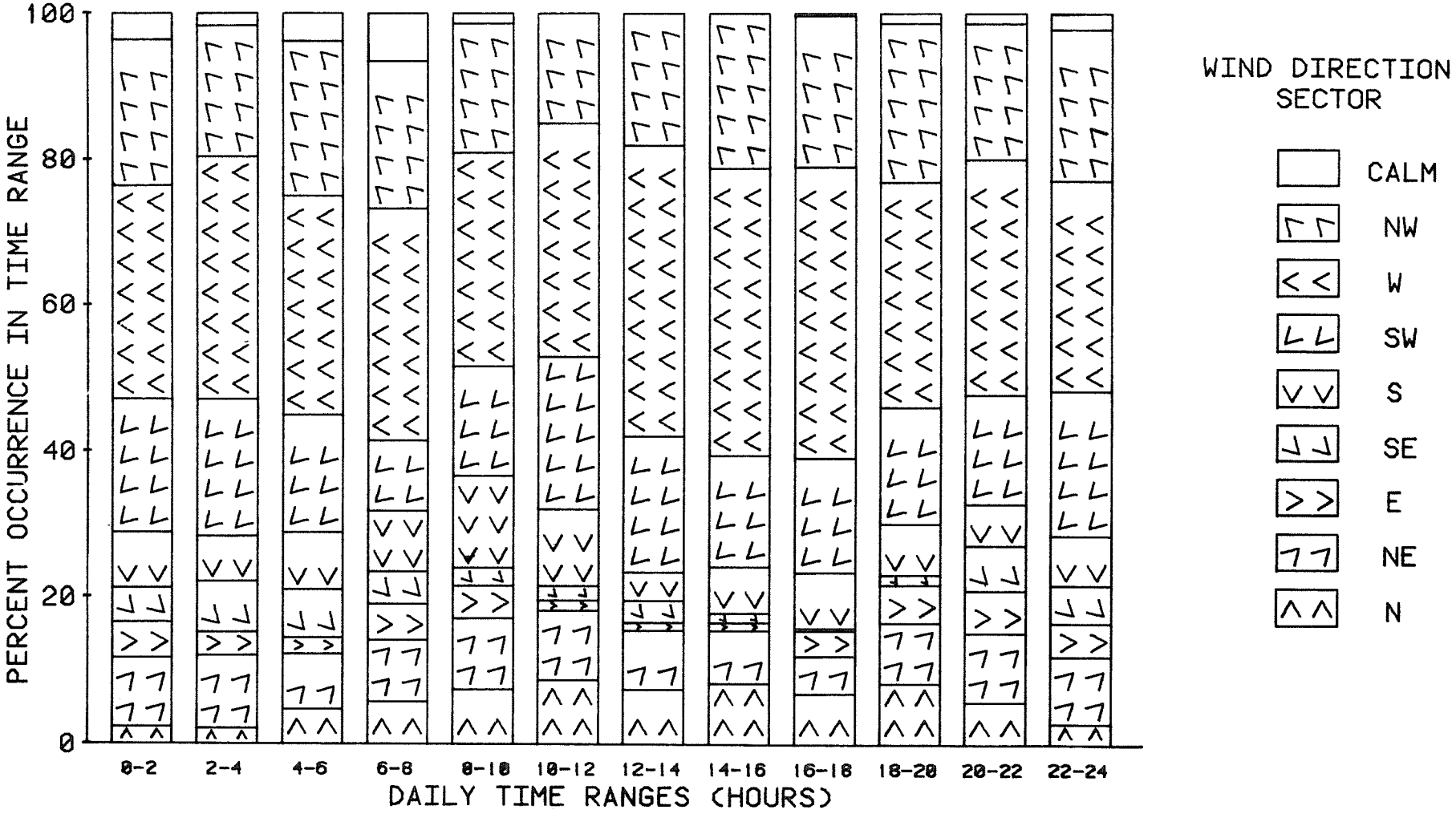
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	3.5	1.6	3.8	6.5	1.3				0.3	1.3	1.3	2.2
NW	20.2	18.0	21.2	20.4	17.7	15.1	18.0	21.2	20.7	21.8	18.5	20.7
W	29.3	33.3	30.1	31.7	29.3	32.0	39.8	39.2	39.8	30.6	32.3	28.8
SW	18.3	18.8	16.1	9.7	15.1	21.0	18.8	15.3	15.9	16.1	15.1	19.9
S	7.5	6.2	7.8	8.3	12.6	10.5	3.8	6.2	7.5	7.0	5.6	6.7
SE	4.6	6.7	6.5	4.3	2.4	1.9	3.0	1.3	0.3	1.3	6.2	5.1
E	4.8	3.2	2.2	4.8	4.3	1.3	1.1	1.1	3.5	5.1	5.6	4.6
NE	9.4	9.9	7.5	8.3	9.7	9.4	8.1	7.3	5.1	8.3	9.4	9.1
N	2.4	2.2	4.8	5.9	7.5	8.9	7.5	8.3	7.0	8.3	5.9	3.0

DAILY TIME RANGES (HOURS)

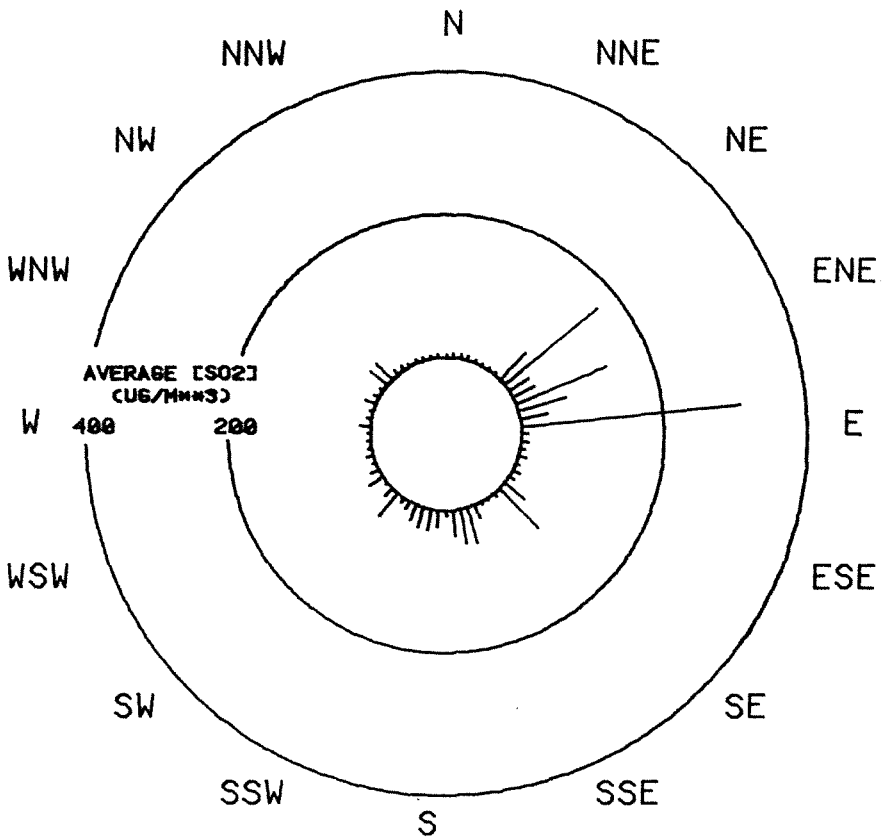
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5						0.3	1.3	1.6	0.8	0.3		0.5
7.5-9.0		0.5	1.6	0.3	1.9	5.6	5.6	8.1	4.3	1.9		1.3
6.0-7.5	5.1	3.5	2.2	3.0	14.2	12.6	12.6	11.6	8.6	3.8	2.2	3.0
4.5-6.0	6.2	7.0	5.1	7.3	21.8	30.9	35.5	26.6	20.4	12.1	8.6	8.9
3.0-4.5	24.2	23.7	27.2	25.3	30.9	27.2	22.6	31.2	29.0	25.5	24.7	27.2
1.5-3.0	41.9	38.4	36.3	39.5	19.6	22.0	21.8	19.4	27.2	37.1	42.2	39.0
0.5-1.5	19.1	25.3	23.9	18.3	10.2	1.3	0.5	1.6	9.4	18.0	21.0	18.0
CALMS	3.5	1.6	3.8	6.5	1.3				0.3	1.3	1.3	2.2



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 97.6%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 9.84 TO 30. 9.84 INCLUSIVE.

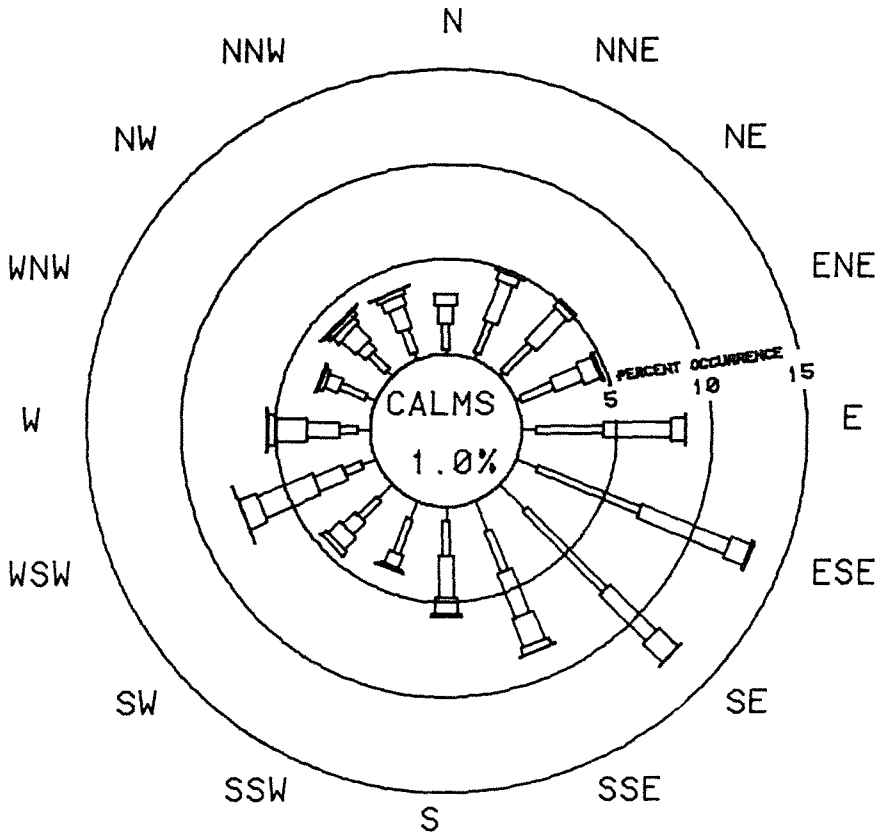
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

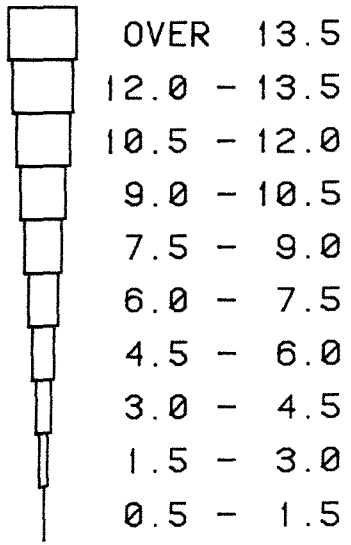
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5															0.1		0.1
7.5 - 9.0															0.3		0.3
6.0 - 7.5				0.2	0.1	0.1		0.4	0.2		0.3	1.0	0.4	0.1	0.4	0.3	3.6
4.5 - 6.0	0.6	0.4	0.5	0.9	0.7	1.1	1.4	1.6	0.9	0.1	0.9	3.1	1.6	0.3	1.0	0.6	15.7
3.0 - 4.5	1.0	2.2	2.3	1.6	3.6	5.0	3.4	2.5	2.2	0.7	0.9	1.6	1.8	0.7	0.6	1.2	31.5
1.5 - 3.0	1.4	1.8	2.0	1.8	3.5	5.9	6.0	2.3	1.8	1.9	1.4	1.0	0.9	1.5	1.2	1.3	35.7
0.5 - 1.5	0.2	0.3	0.3	0.3	0.7	1.2	1.8	1.7	0.7	1.0	1.0	0.8	0.6	0.5	0.4	0.4	12.0
TOTALS	3.2	4.9	5.1	4.7	8.6	13.2	12.7	8.5	5.8	3.8	4.5	7.6	5.5	3.2	4.0	3.8	

CALMS (LESS THAN 0.5 M/S): 1.0%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.2	1.5	12.5
NORTHERLY COMPONENT	-0.5	2.3	9.4
EASTERLY COMPONENT	0.4	2.7	-12.2





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 9.84 TO 30. 9.84 INCLUSIVE.
DATA RECOVERY: 100.0%

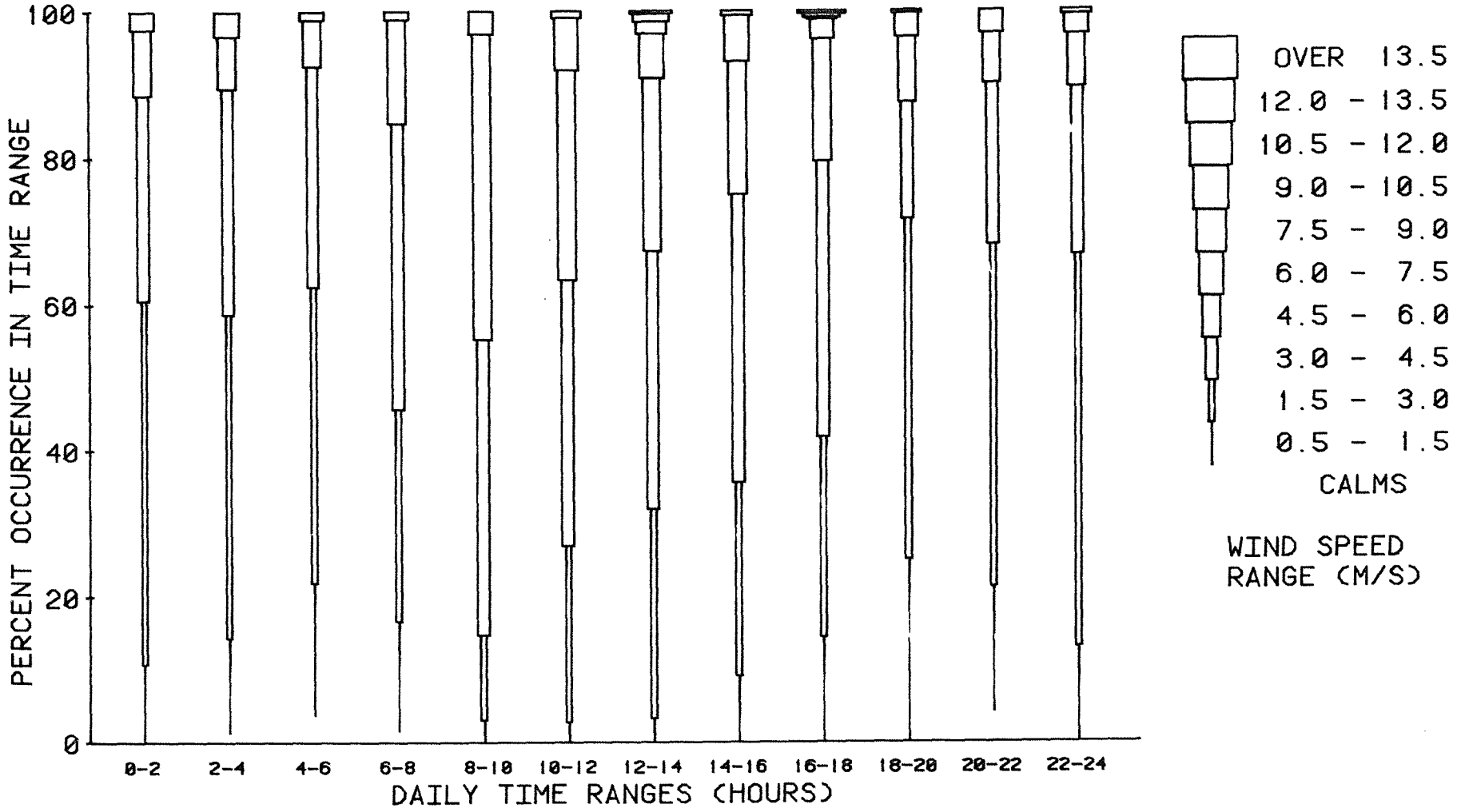
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

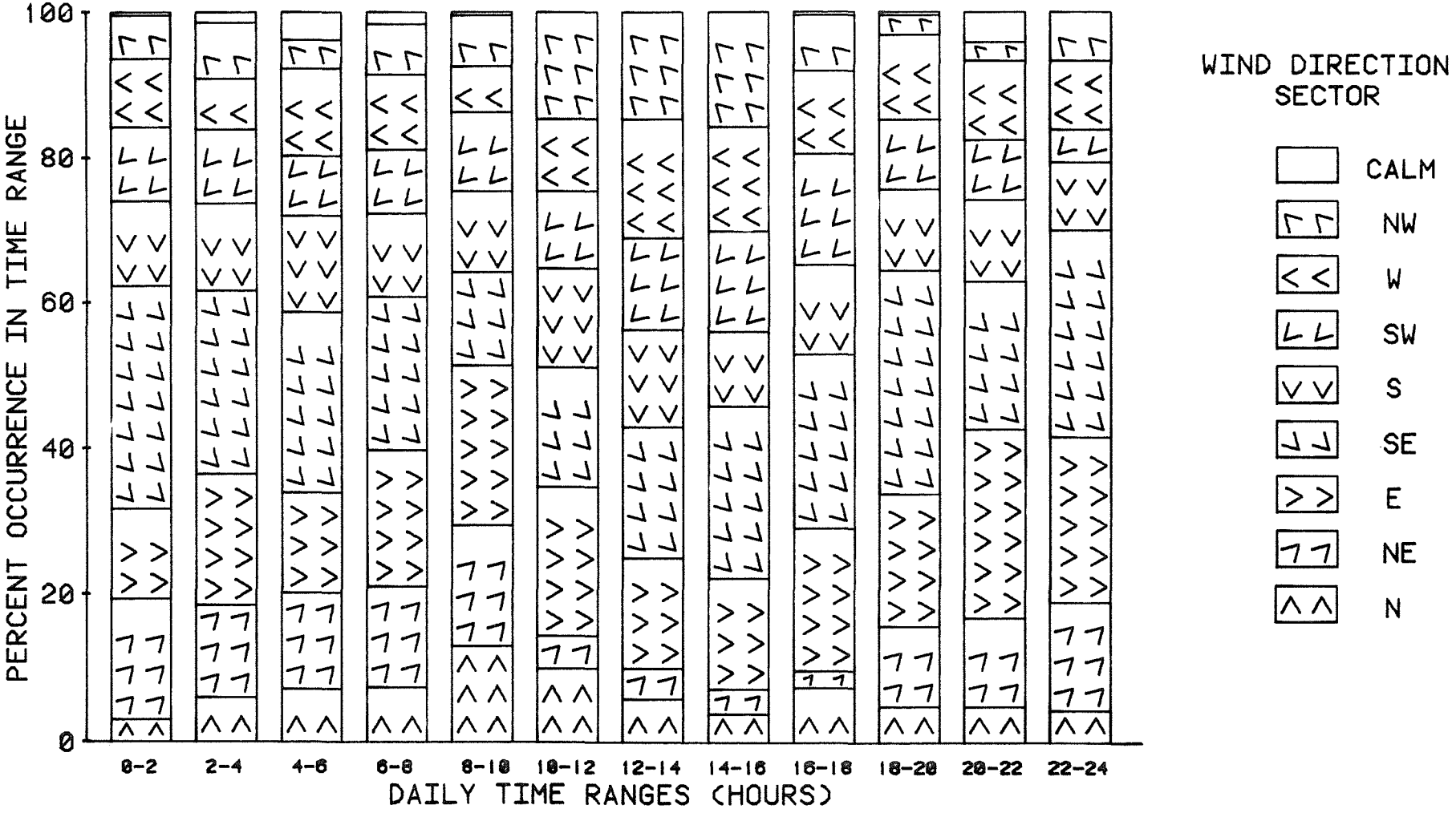
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	0.3	1.4	3.9	1.7	0.3				0.3	0.3	4.2	
NW	6.1	7.8	3.9	6.9	7.2	14.7	14.7	15.8	7.8	2.8	2.5	6.7
W	9.4	6.9	11.9	10.3	6.4	10.0	16.4	14.4	11.4	11.7	10.8	9.4
SW	10.3	10.3	8.3	8.9	10.8	10.6	12.5	13.6	15.3	9.7	8.3	4.4
S	11.7	11.9	13.3	11.4	11.1	13.6	13.3	10.3	12.2	11.1	11.1	9.4
SE	30.6	25.3	24.7	21.1	12.8	16.4	18.1	23.6	23.9	30.6	20.3	28.3
E	12.2	17.8	13.6	18.6	21.9	20.3	15.0	15.0	19.4	18.1	25.8	22.5
NE	16.4	12.5	13.1	13.6	16.4	4.4	4.2	3.3	2.2	10.8	11.9	14.7
N	3.1	6.1	7.2	7.5	13.1	10.0	5.8	3.9	7.5	5.0	5.0	4.4

DAILY TIME RANGES (HOURS)

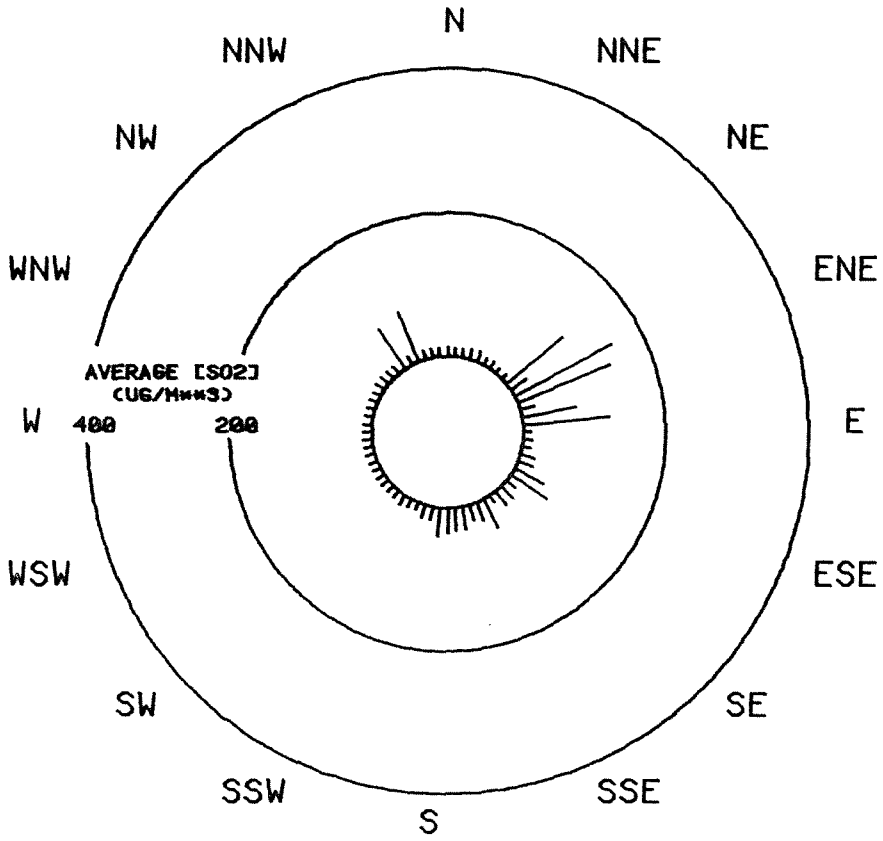
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5									0.3			
10.5-12							0.3					
9.-10.5							1.1		0.6			
7.5-9.0						0.8	1.7	0.6	0.3	0.3		0.6
6.0-7.5	2.5	3.3	1.1	1.1	3.1	7.2	6.1	6.4	2.8	3.3	3.1	2.8
4.5-6.0	8.9	7.2	6.4	14.2	41.7	28.6	23.6	18.1	16.7	8.9	6.9	7.2
3.0-4.5	28.1	30.8	30.0	39.2	40.6	36.4	35.3	39.4	37.8	15.8	21.9	22.8
1.5-3.0	49.7	44.2	40.6	28.9	11.7	24.2	28.6	26.4	27.2	46.7	46.7	53.6
0.5-1.5	10.6	13.1	18.1	15.0	2.8	2.8	3.3	9.2	14.2	24.7	17.2	13.1
CALMS	0.3	1.4	3.9	1.7	0.3				0.3	0.3	4.2	



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 57.7%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.10.84 TO 31.10.84 INCLUSIVE.

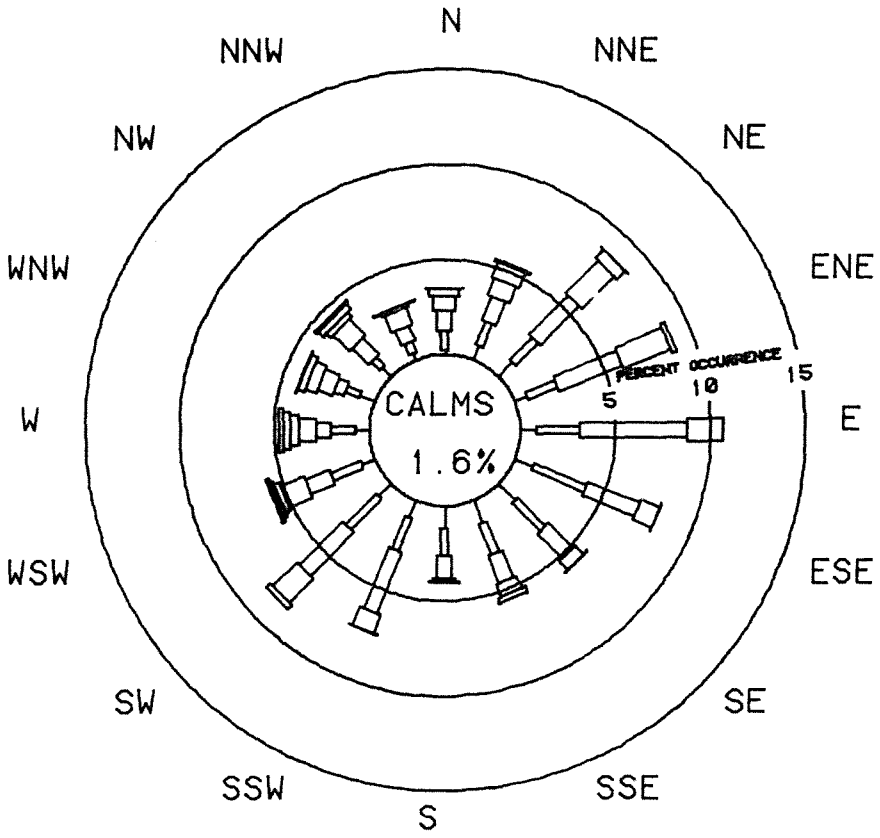
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

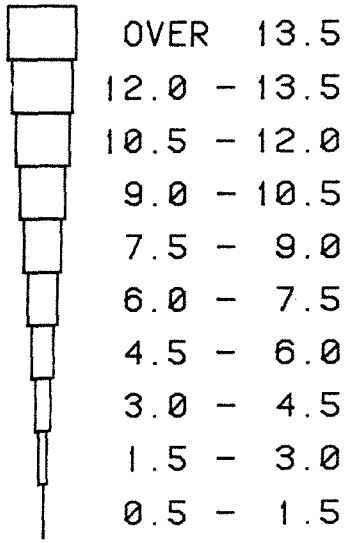
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5												0.2	0.2		0.1		0.6
7.5 - 9.0		0.1										0.2	0.3	0.4	0.4		1.4
6.0 - 7.5	0.4	0.9	0.6	0.3				0.3			0.3	0.3	0.4	0.6	0.4	0.2	4.7
4.5 - 6.0	0.8	0.9	2.4	2.7	1.9	1.1	0.6	0.7	0.2	1.0	1.8	1.3	1.0	0.9	1.2	1.0	19.4
3.0 - 4.5	1.1	1.4	2.9	3.6	5.7	2.9	1.8	1.6	1.2	3.4	3.2	1.4	0.7	0.5	1.2	0.8	33.4
1.5 - 3.0	1.0	1.3	1.7	1.7	2.3	3.0	2.1	1.7	1.4	1.9	2.3	1.7	1.3	0.8	0.7	0.6	25.5
0.5 - 1.5	0.2	0.8	1.1	0.7	0.8	1.0	1.3	1.3	1.2	0.9	0.9	0.7	0.7	0.8	0.6	0.4	13.4
TOTALS	3.5	5.4	8.7	8.9	10.7	8.0	5.8	5.5	4.0	7.3	8.5	5.8	4.7	4.0	4.5	3.0	

CALMS (LESS THAN 0.5 M/S): 1.6%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.5	1.7	10.5
NORTHERLY COMPONENT	0.0	2.5	8.0
EASTERLY COMPONENT	0.4	3.0	-10.2





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.10.84 TO 31.10.84 INCLUSIVE.
DATA RECOVERY: 100.0%

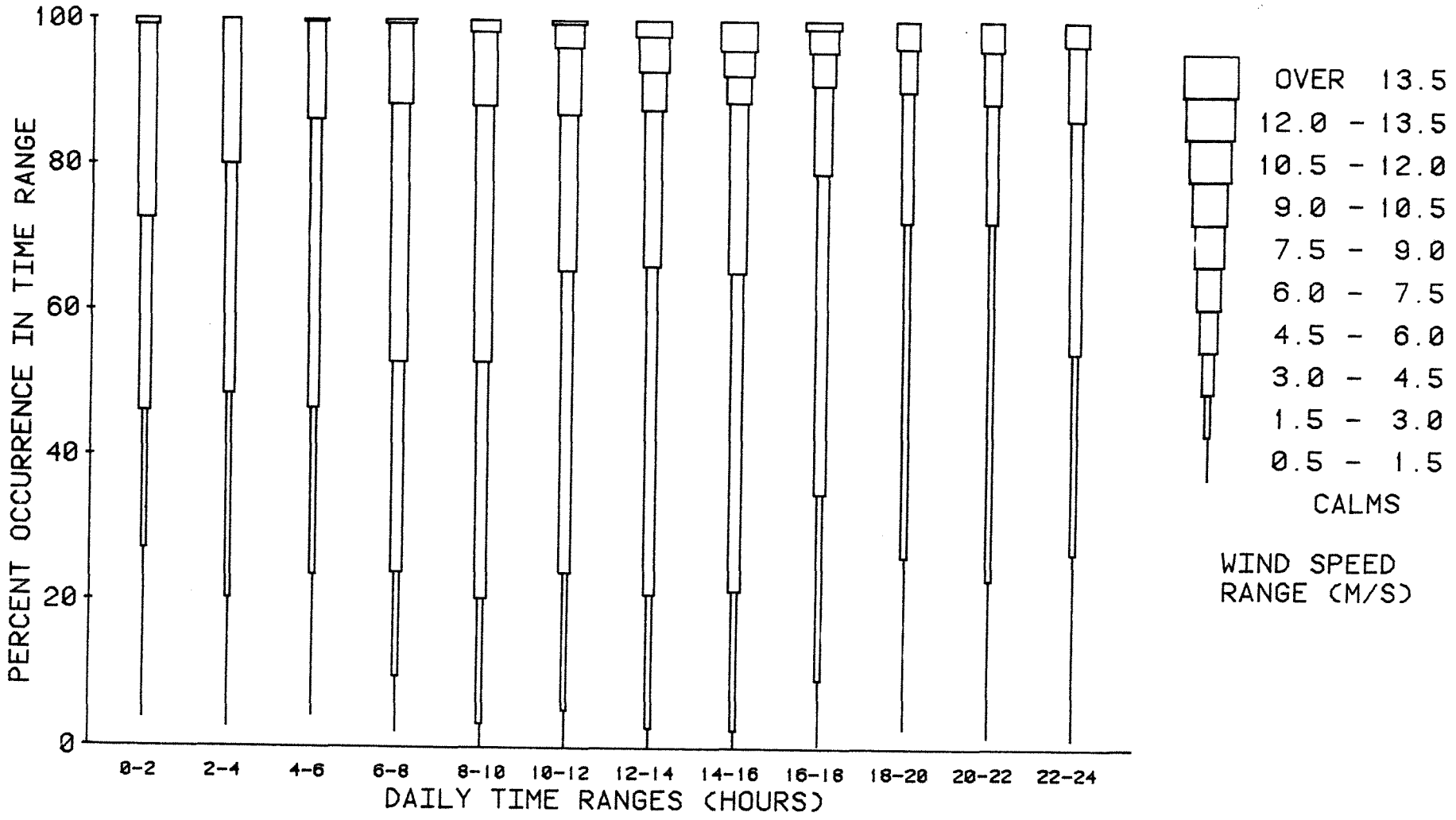
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

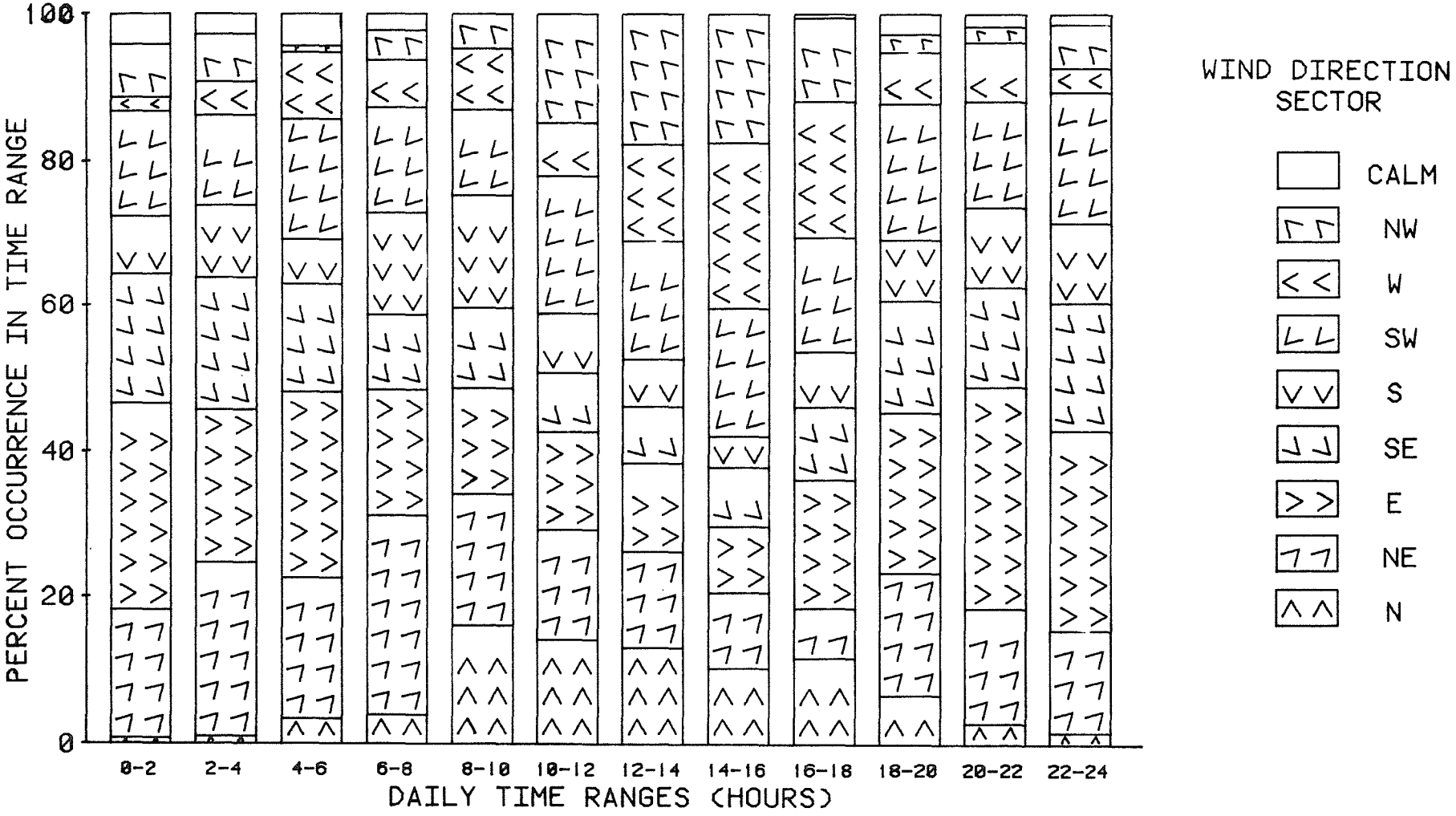
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	4.0	2.7	4.3	2.2					0.5	2.7	1.6	1.3
NW	7.3	6.5	0.8	4.0	4.6	14.8	17.7	17.5	11.3	2.4	2.2	5.9
W	1.9	4.6	9.1	6.5	8.3	7.3	13.4	22.8	18.8	7.0	8.1	3.2
SW	14.5	12.4	16.7	14.5	11.8	19.1	16.1	17.5	15.6	18.8	14.5	18.0
S	8.1	10.2	6.2	14.2	15.6	8.1	6.5	4.3	7.5	8.3	11.0	11.0
SE	17.7	18.0	14.8	10.2	11.0	8.1	7.8	8.1	9.9	15.3	13.7	17.5
E	28.2	21.0	25.5	17.2	14.5	13.4	12.1	9.1	17.7	22.0	30.4	27.4
NE	17.5	23.7	19.1	27.2	18.0	15.1	13.2	10.2	6.7	16.7	15.6	14.0
N	0.8	1.1	3.5	4.0	16.1	14.2	13.2	10.5	11.8	6.7	3.0	1.6

DAILY TIME RANGES (HOURS)

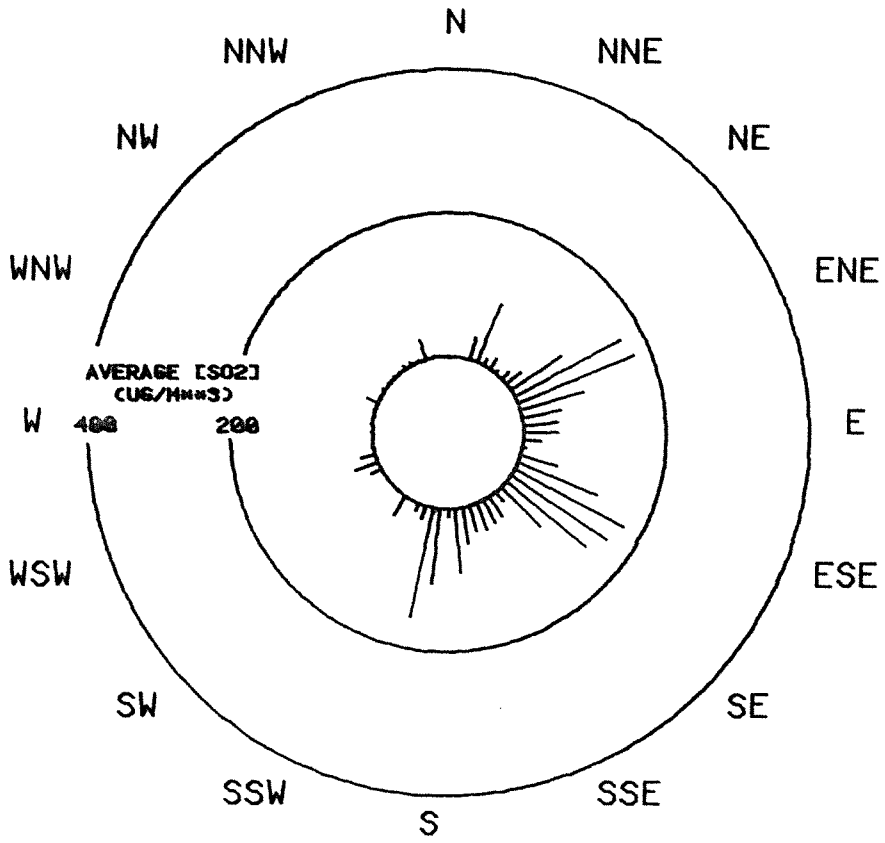
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5						0.5	2.2	4.0	1.1			
7.5-9.0				0.5	1.6	3.2	4.8	3.5	3.2			
6.0-7.5	0.8		0.3	11.0	10.2	9.1	5.4	3.8	4.6	3.8	4.0	3.2
4.5-6.0	26.6	19.9	13.4	35.5	35.2	21.5	21.5	23.4	12.1	5.9	7.3	10.2
3.0-4.5	26.6	31.7	39.8	29.0	32.5	41.7	45.2	43.8	44.1	18.0	16.4	32.0
1.5-3.0	18.8	28.0	22.8	14.2	17.2	18.8	18.3	19.1	25.5	46.0	49.2	27.7
0.5-1.5	23.1	17.7	19.4	7.5	3.2	5.1	2.7	2.4	8.9	23.7	21.5	25.5
CALMS	4.0	2.7	4.3	2.2					0.5	2.7	1.6	1.3



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 94.3%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.11.84 TO 1.12.84 INCLUSIVE.

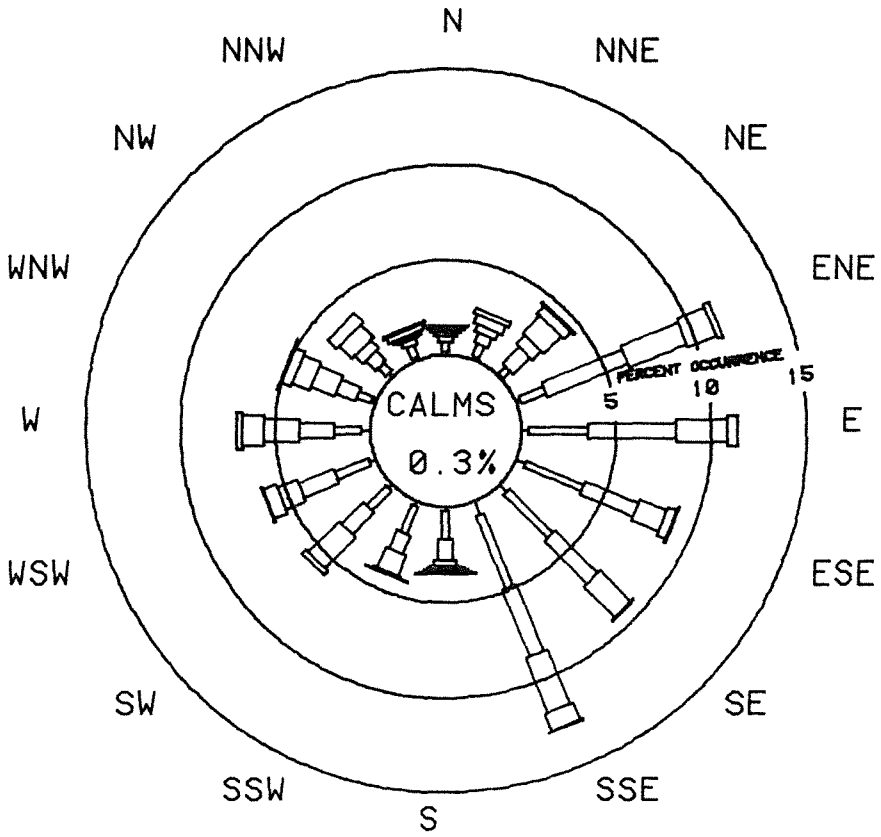
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

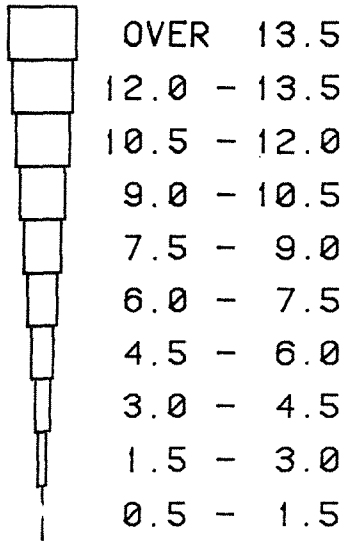
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0									0.1								0.1
9.0 - 10.5			0.1						0.2							0.1	0.5
7.5 - 9.0	0.2	0.3	0.5	0.3					0.1			0.1	0.3	0.6	0.7	0.3	3.3
6.0 - 7.5	0.2	0.5	1.3	1.6	0.5	0.5	0.1	1.0		0.1	0.3	0.7	1.1	1.0	0.9	0.2	10.1
4.5 - 6.0	0.2	0.4	0.6	3.2	2.7	1.5	2.3	3.1	0.3	1.2	2.3	1.1	1.9	1.4	0.6	0.1	22.9
3.0 - 4.5	0.3	0.5	1.3	4.6	4.6	3.0	3.2	3.7	1.1	1.0	1.6	2.0	1.8	1.1	0.7	0.3	31.0
1.5 - 3.0	0.5	0.7	0.5	1.4	3.2	3.3	3.2	4.1	1.4	1.5	1.4	1.9	1.4	0.8	0.6	0.7	26.7
0.5 - 1.5	0.1	0.2	0.1	0.2	0.4	0.5	0.5	0.8	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.2	5.1
TOTALS	1.5	2.6	4.5	11.4	11.4	8.9	9.3	12.7	3.5	4.1	5.9	6.2	7.0	5.1	3.8	1.8	

CALMS (LESS THAN 0.5 M/S): 0.3%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	4.1	1.8	12.1
NORTHERLY COMPONENT	-0.5	2.7	-12.0
EASTERLY COMPONENT	0.7	3.4	-11.2





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/11/84 TO 1/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.11.84 TO 30.11.84 INCLUSIVE.
DATA RECOVERY: 100.0%

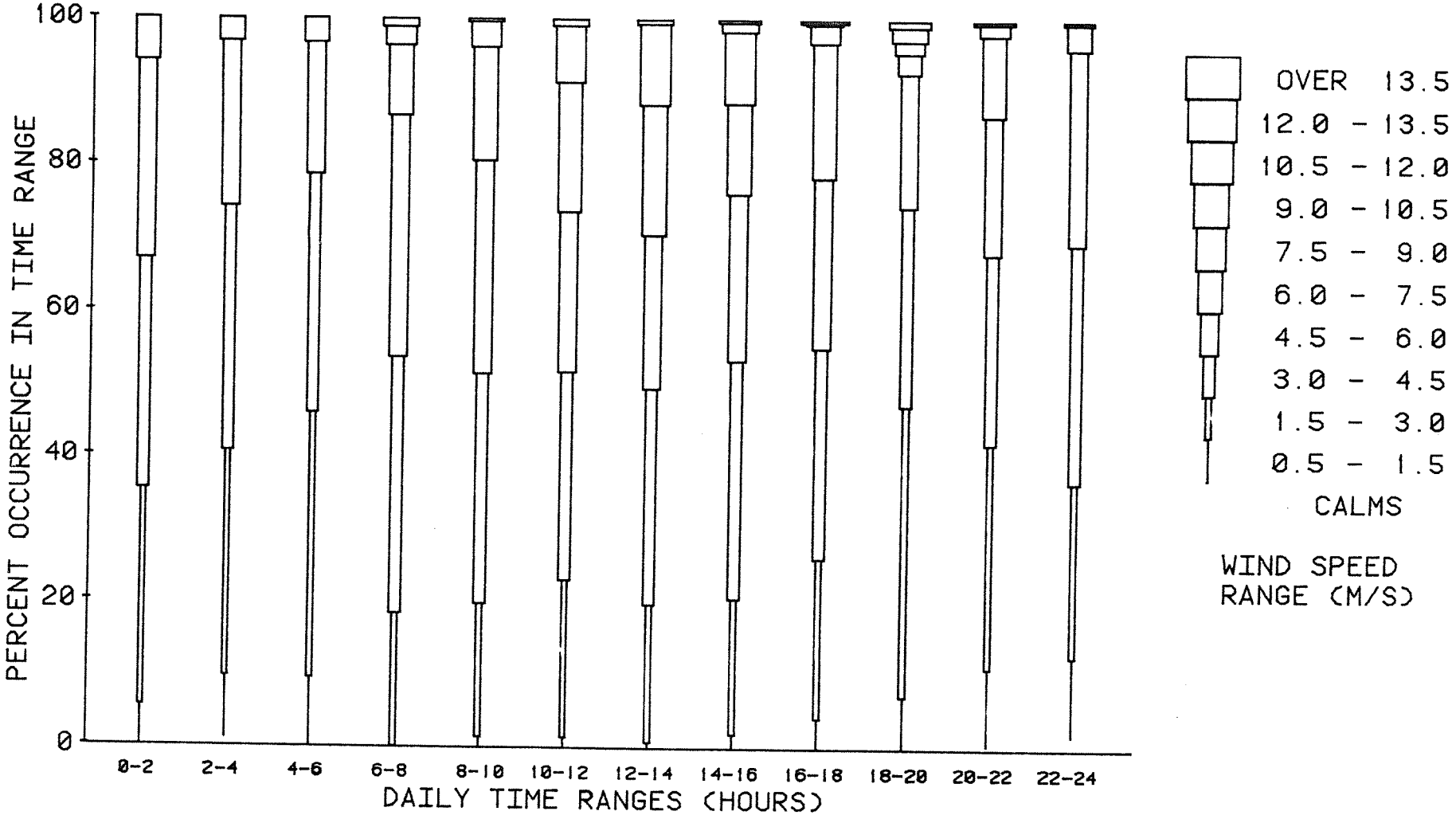
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

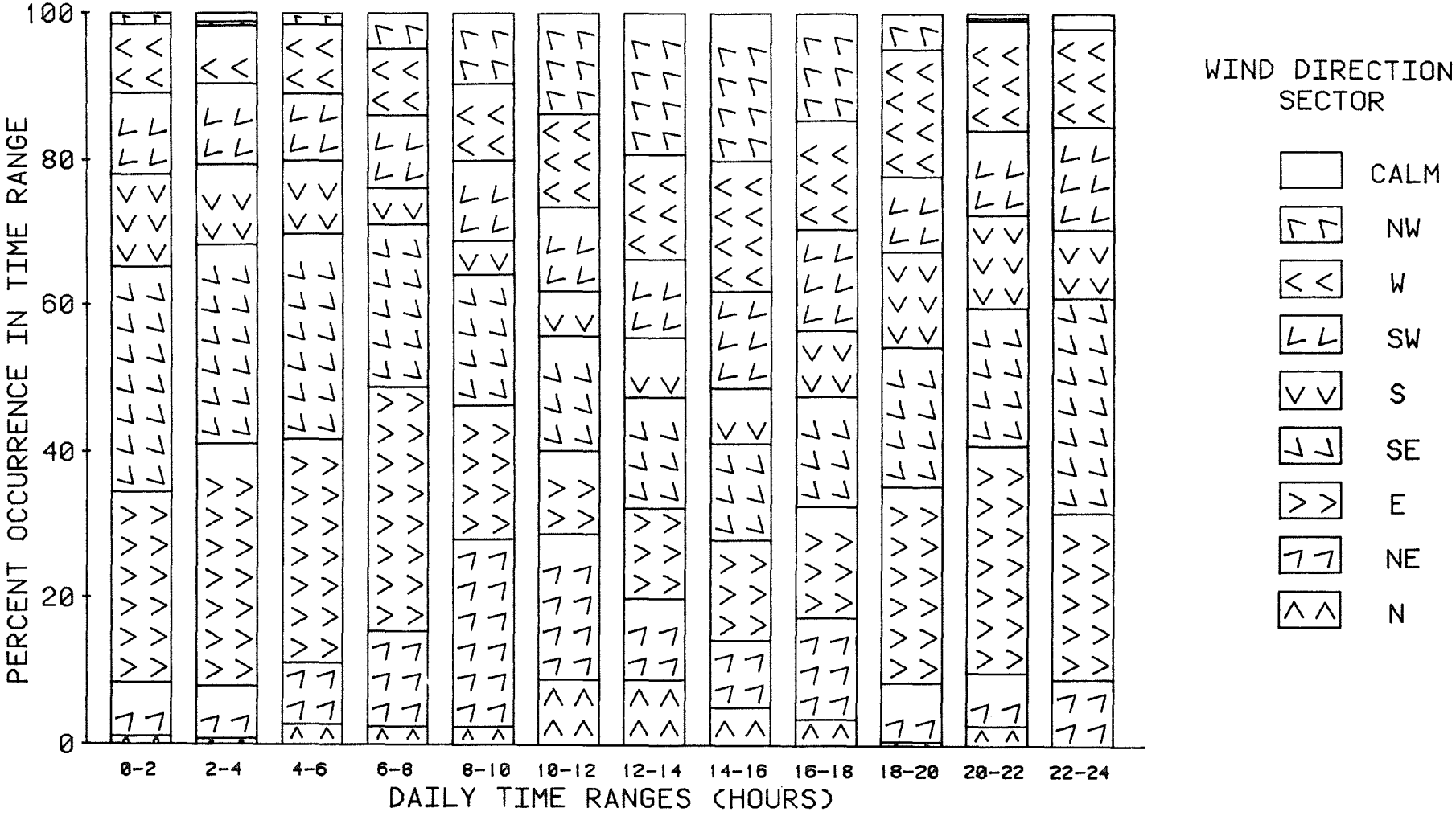
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM		1.1									0.6	1.9
NW	1.4	0.6	1.4	4.7	9.4	13.6	19.2	20.0	14.4	4.7	0.3	
W	9.4	7.8	9.4	9.2	10.6	12.8	14.4	18.1	15.0	17.5	15.0	13.3
SW	11.1	11.1	9.2	10.0	11.1	11.7	10.8	13.1	13.9	10.3	11.7	14.2
S	12.8	11.1	10.3	5.0	4.7	6.1	8.1	7.5	8.9	13.1	12.8	9.4
SE	30.8	27.2	28.1	22.2	17.8	15.6	15.0	13.3	15.0	18.9	18.6	29.2
E	26.1	33.1	30.6	33.3	18.3	11.4	12.5	13.6	15.3	26.9	31.1	22.8
NE	7.2	7.2	8.3	13.1	25.6	20.0	11.1	9.2	13.9	8.1	7.2	9.2
N	1.1	0.8	2.8	2.5	2.5	8.9	8.9	5.3	3.6	0.6	2.8	

DAILY TIME RANGES (HOURS)

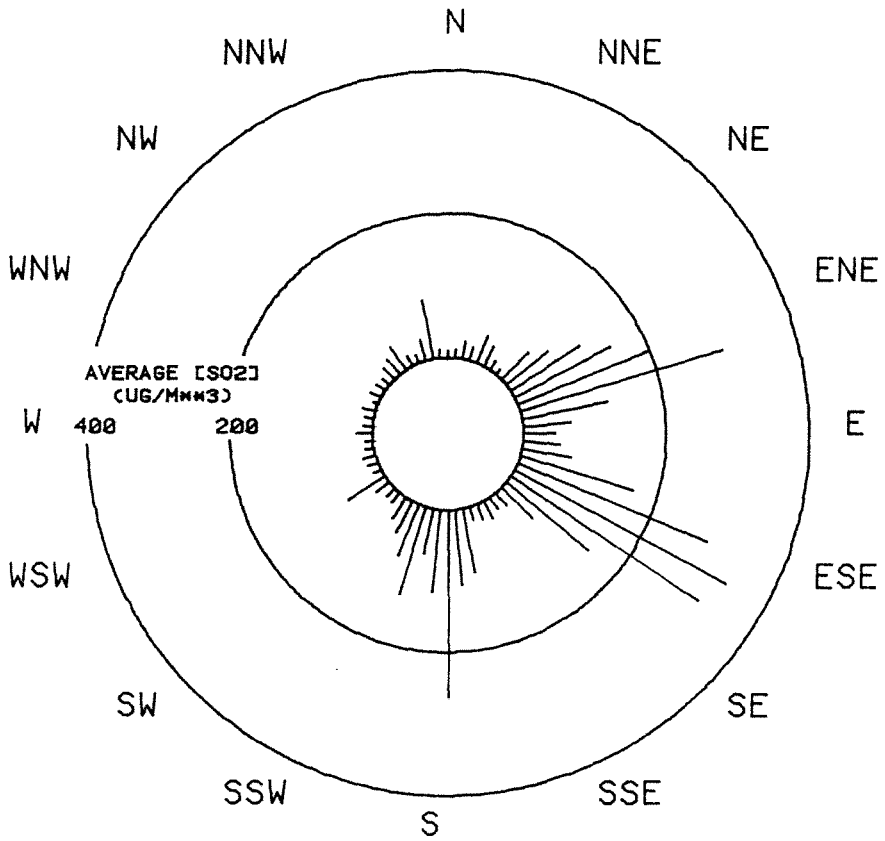
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5									0.3			
10.5-12								0.3		0.8	0.3	
9.-10.5				1.1	0.3	0.8	0.6	1.4	0.3	1.9		
7.5-9.0				2.5	3.6	7.8	11.1	9.7	2.5	1.7	1.7	0.3
6.0-7.5	5.8	3.1	3.3	9.7	15.6	17.8	17.8	12.5	18.6	2.8	11.1	3.6
4.5-6.0	27.2	22.8	18.1	33.1	29.2	21.9	21.1	22.8	23.1	18.3	18.9	26.7
3.0-4.5	31.7	33.6	32.8	35.3	31.7	28.6	29.7	32.8	29.2	27.2	26.1	32.8
1.5-3.0	29.7	30.8	36.4	18.3	18.3	21.7	18.9	18.6	21.9	40.0	30.8	23.9
0.5-1.5	5.6	8.6	9.4		1.4	1.4	0.8	1.9	4.2	7.2	10.6	10.8
CALMS		1.1									0.6	1.9



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/11/84 TO 30/11/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/11/84 TO 30/11/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/11/84 TO 30/11/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.3%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.12.84 TO 31.12.84 INCLUSIVE.

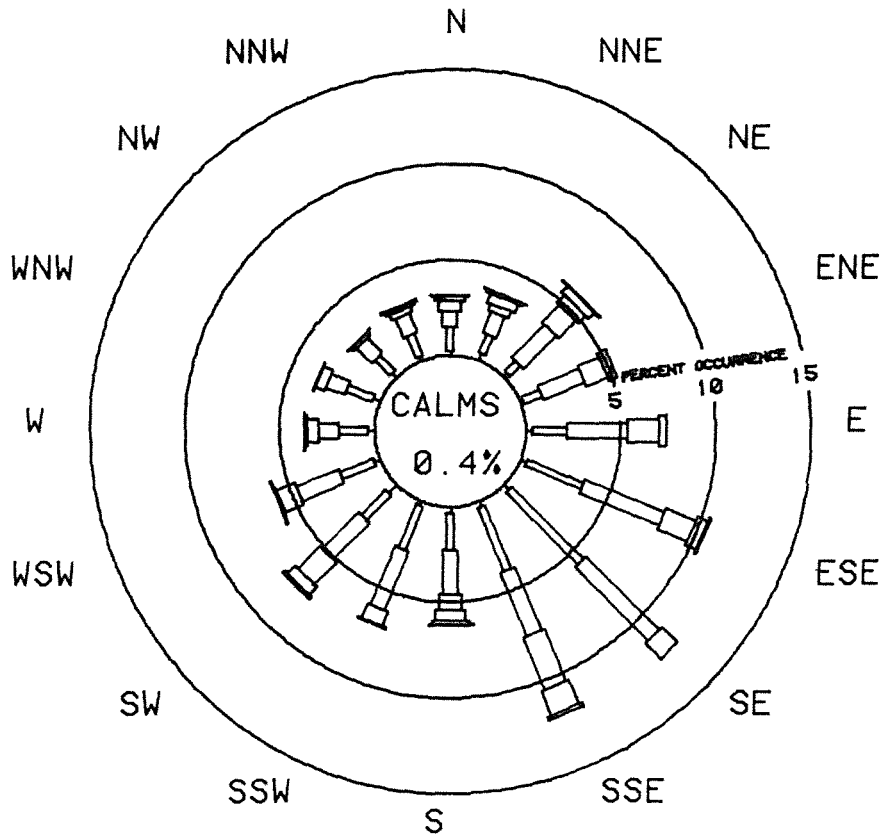
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

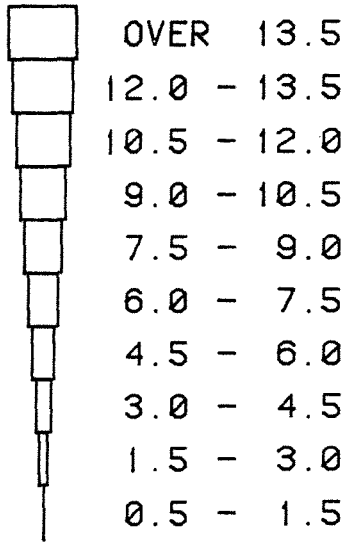
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.1
7.5 - 9.0		0.2	0.4			0.1		0.2	0.2		0.2						1.3
6.0 - 7.5	0.3	0.5	0.6	0.5	0.4	0.6		1.4	0.6	0.1	0.6	0.1	0.1			0.2	5.8
4.5 - 6.0	0.6	0.4	1.3	1.2	1.7	1.7	1.2	2.9	0.8	0.8	1.7	1.0	0.6	0.5	0.2	0.3	16.9
3.0 - 4.5	0.8	1.2	2.4	2.4	3.2	4.5	5.5	3.6	2.4	3.3	2.7	2.4	1.1	1.1	1.1	1.1	38.8
1.5 - 3.0	1.3	1.0	0.8	1.0	1.8	3.2	5.4	3.6	2.0	2.4	1.8	1.9	1.5	1.5	1.1	1.2	31.5
0.5 - 1.5	0.2	0.4	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.2	0.6	0.3	0.3	0.4	0.3	0.2	5.0
TOTALS	3.2	3.7	5.8	5.2	7.4	10.4	12.4	12.0	6.2	6.9	7.5	5.8	3.7	3.5	2.8	3.1	

CALMS (LESS THAN 0.5 M/S): 0.4%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.7	1.5	11.0
NORTHERLY COMPONENT	-0.9	2.7	-9.1
EASTERLY COMPONENT	0.7	2.6	-8.9





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1.12.84 TO 31.12.84 INCLUSIVE.
DATA RECOVERY: 100.0%

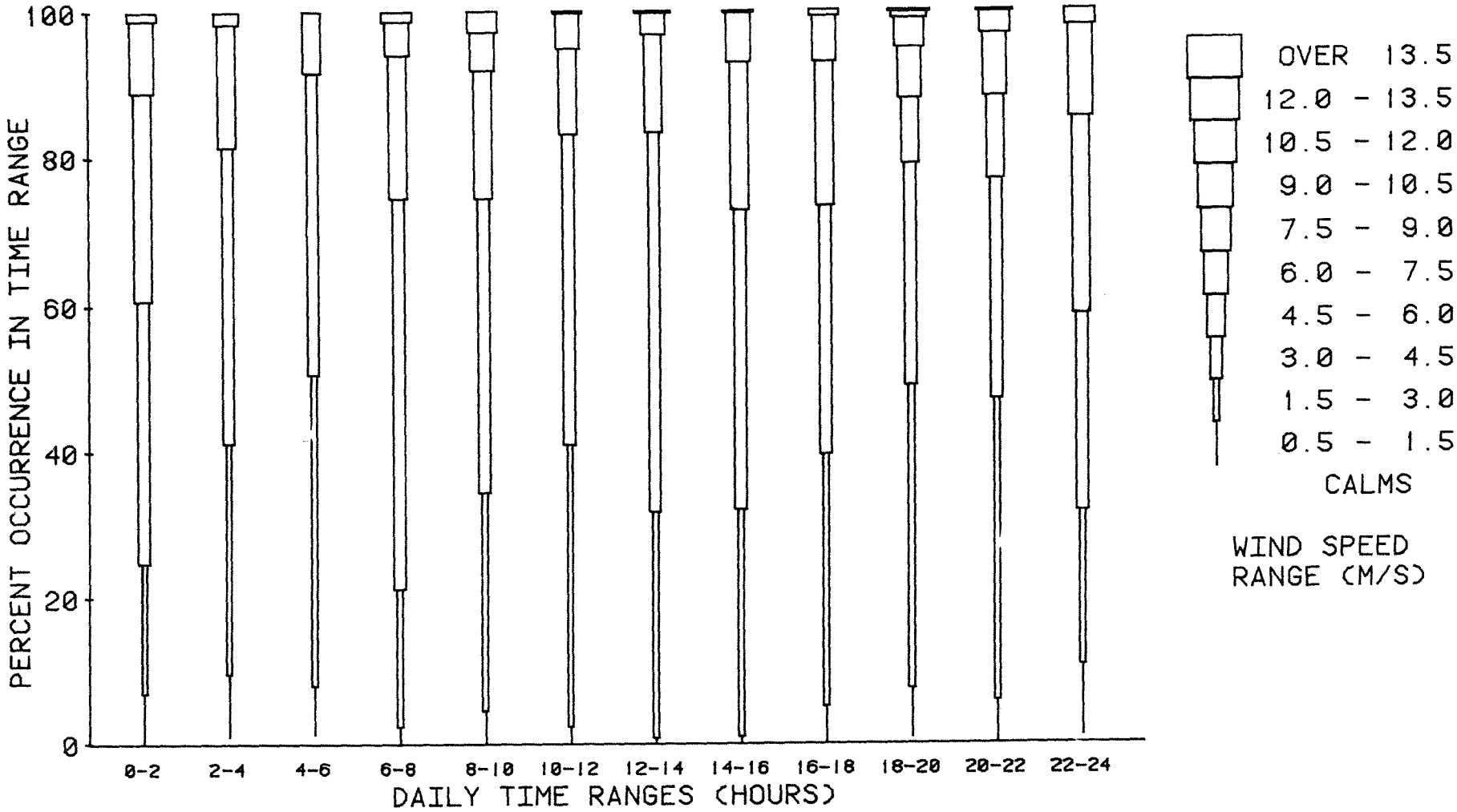
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

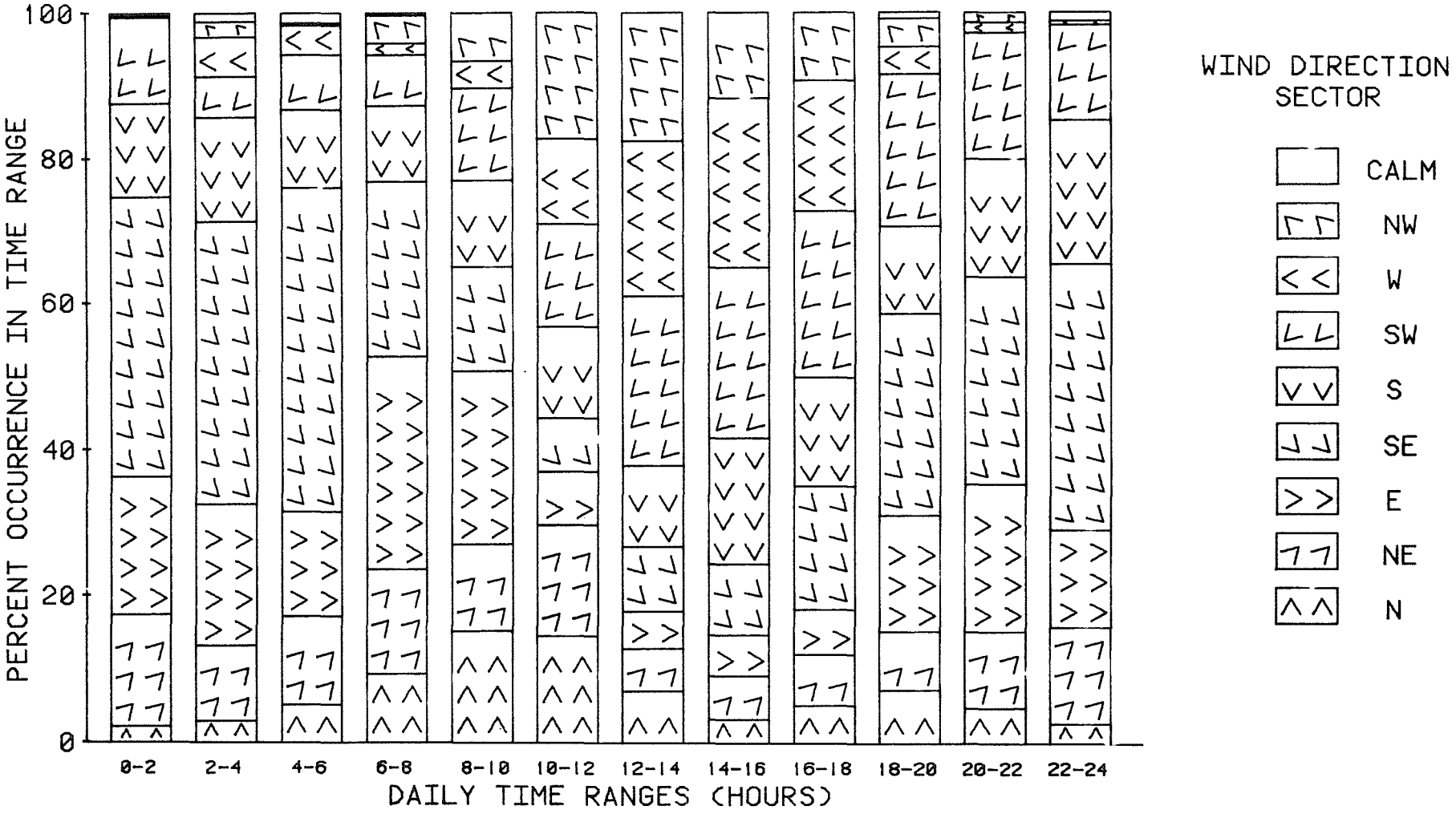
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	0.3	1.1	1.3	0.3						0.8		1.1
NW		2.2	0.3	3.8	6.5	17.2	17.5	11.6	9.1	3.8	1.3	
W	0.3	5.4	4.0	1.6	3.8	11.8	21.5	23.4	18.0	3.8	1.3	0.5
SW	11.8	5.6	7.5	7.0	12.6	14.2	23.1	23.4	22.8	21.0	17.2	12.9
S	12.9	14.5	10.8	10.5	12.1	12.4	11.0	17.2	14.8	12.1	16.4	19.9
SE	38.4	38.7	44.6	24.2	14.2	7.3	8.9	9.7	16.9	27.4	28.2	36.3
E	18.8	19.4	14.2	29.0	23.7	7.3	5.1	5.6	6.2	15.9	20.2	13.4
NE	15.3	10.2	12.1	14.2	11.8	15.3	5.9	5.9	7.0	8.1	10.5	13.2
N	2.2	3.0	5.1	9.4	15.3	14.5	7.0	3.2	5.1	7.3	4.8	2.7

DAILY TIME RANGES (HOURS)

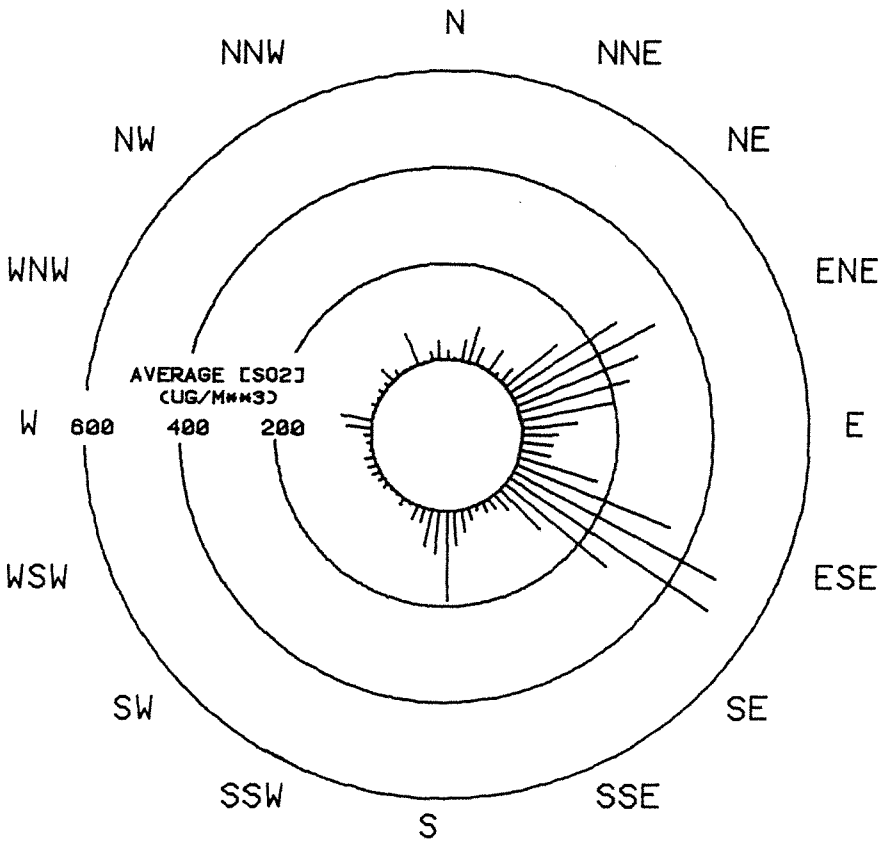
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12										0.3		
9.-10.5							0.3			0.8	0.3	
7.5-9.0	1.1			1.3	3.0	0.3		0.3	0.8	4.0	3.0	2.2
6.0-7.5	9.9	1.6		4.6	5.1	4.8	3.0	6.7	6.2	7.0	8.6	12.6
4.5-6.0	28.2	16.9	8.3	19.6	17.5	11.8	13.4	20.2	19.6	8.9	11.3	26.6
3.0-4.5	36.0	40.3	41.1	53.2	40.1	42.2	51.6	40.9	33.9	30.1	29.8	26.9
1.5-3.0	17.7	31.5	42.5	18.8	29.8	38.4	30.9	30.9	34.4	41.4	41.1	21.0
0.5-1.5	6.7	8.6	6.7	2.2	4.6	2.4	0.8	1.1	5.1	6.7	5.9	9.7
CALMS	0.3	1.1	1.3	0.3						0.8		1.1



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.7%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 1.85 TO 31. 1.85 INCLUSIVE.

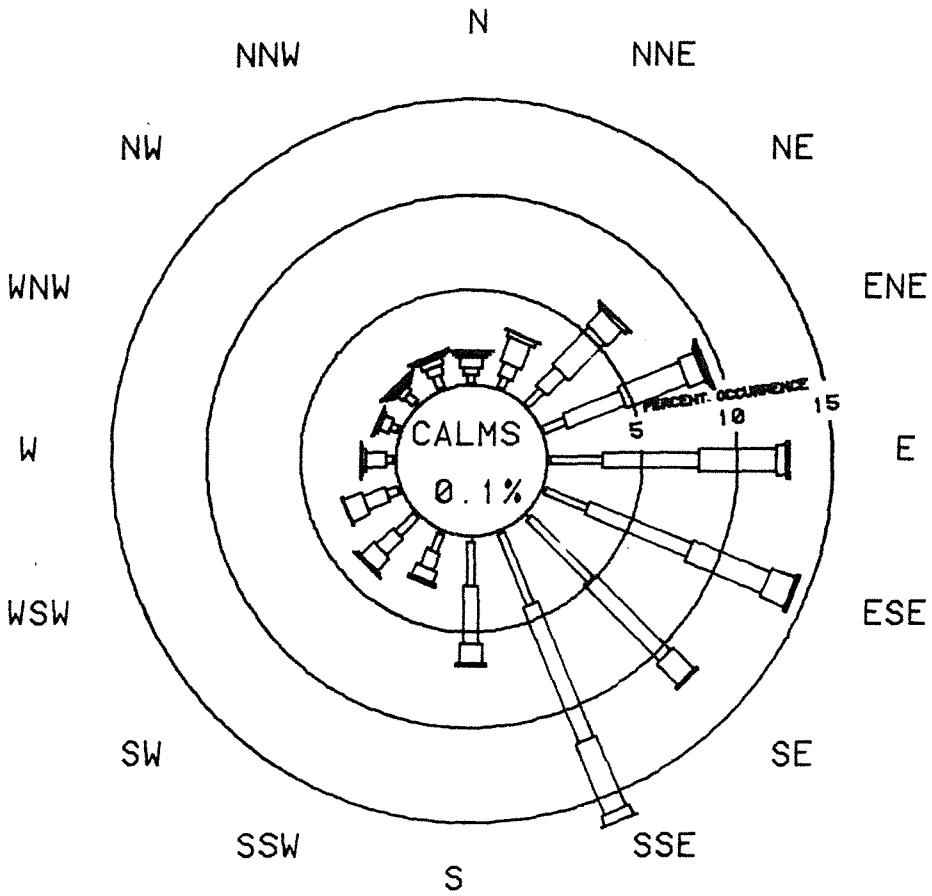
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

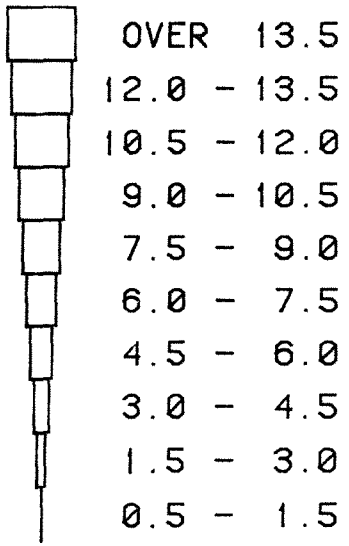
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0				0.1													0.1
9.0 - 10.5				0.1											0.1		0.3
7.5 - 9.0	0.2		0.2	0.1	0.2	0.2									0.1	0.2	1.3
6.0 - 7.5	0.1	0.3	1.1	0.9	0.5	1.3	0.2	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.9
4.5 - 6.0	0.6	1.4	2.7	3.5	4.1	4.4	1.5	4.0	1.0	0.6	0.9	1.1	0.2	0.2	0.1	0.4	26.6
3.0 - 4.5	0.4	0.7	1.4	3.3	5.1	5.8	5.6	7.7	3.0	0.9	1.2	1.2	1.0	0.5	0.4	0.5	38.7
1.5 - 3.0	0.4	0.6	1.1	1.3	2.7	2.4	4.6	4.0	2.3	1.0	1.3	0.6	0.4	0.4	0.6	0.7	24.4
0.5 - 1.5	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	2.7
TOTALS	1.8	3.1	6.7	9.3	12.8	14.3	12.2	16.5	6.7	2.9	3.8	3.1	1.8	1.3	1.6	1.9	

CALMS (LESS THAN 0.5 M/S): 0.1%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	4.0	1.5	11.9
NORTHERLY COMPONENT	-0.9	2.7	9.3
EASTERLY COMPONENT	1.9	2.6	10.7





WIND SPEED
RANGE (M/S)

WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 1.85 TO 31. 1.85 INCLUSIVE.
DATA RECOVERY: 100.0%

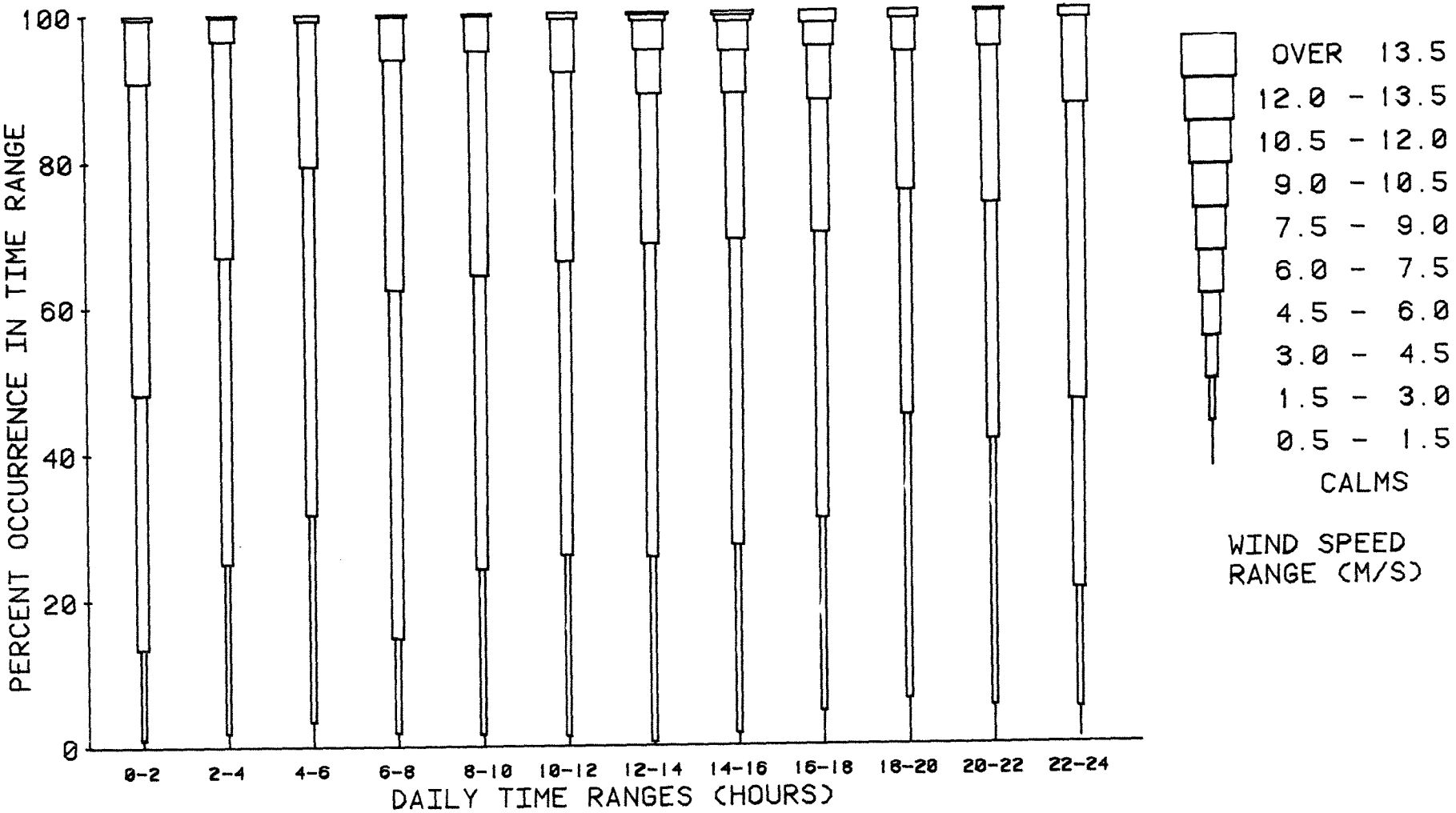
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

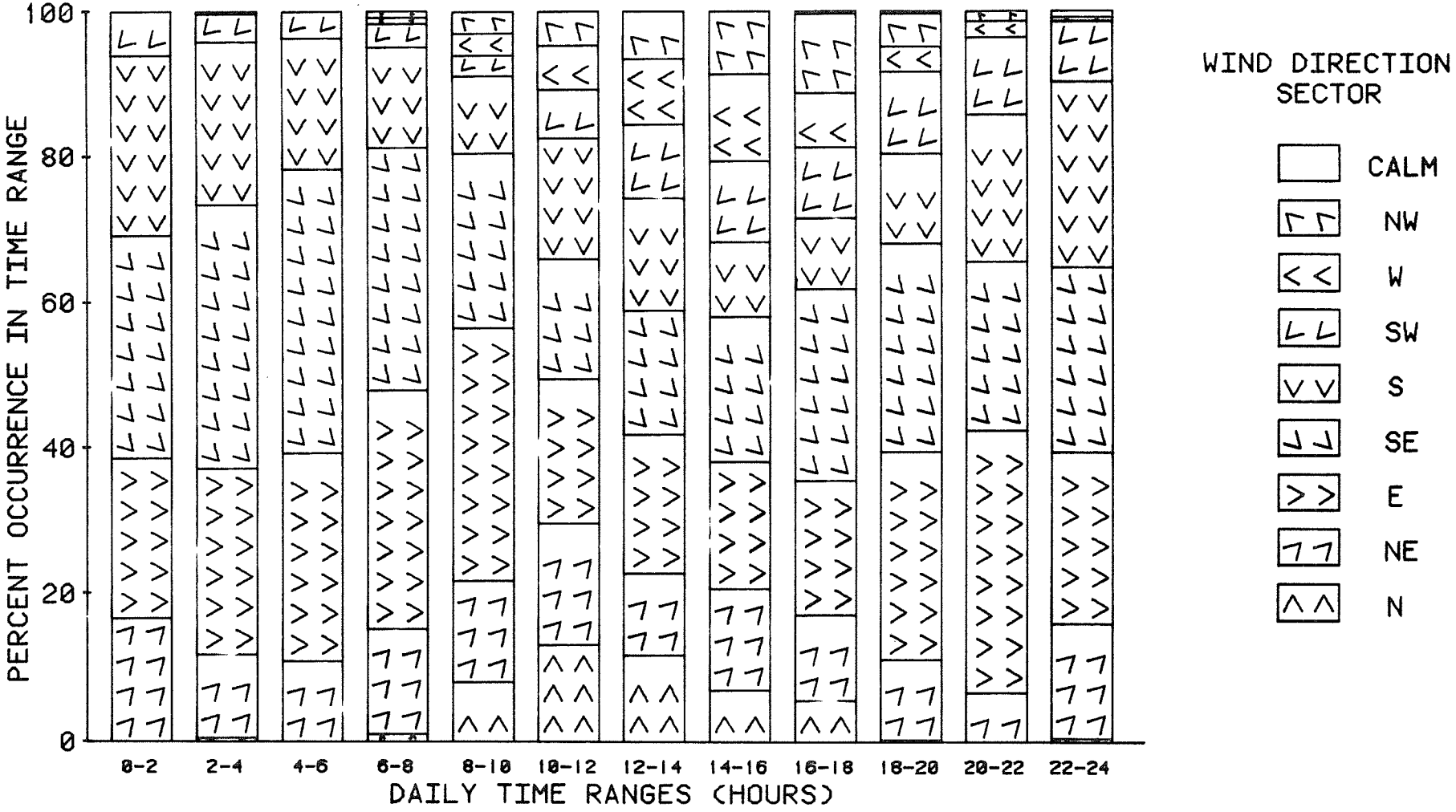
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM									0.3	0.3		0.8
NW				0.8	3.0	4.6	6.5	8.6	11.0	4.6	1.3	
W		0.3		0.8	3.0	6.2	9.1	12.1	7.5	3.5	2.2	0.5
SW	5.9	3.8	3.5	3.2	3.0	6.7	10.2	11.0	9.7	11.3	10.8	8.3
S	25.0	22.6	18.3	14.0	10.8	16.7	15.3	10.2	9.7	12.4	20.2	25.5
SE	30.6	36.3	39.0	33.3	23.9	16.4	16.9	19.9	26.3	28.5	23.1	25.3
E	21.8	25.3	28.2	32.5	34.7	19.9	19.1	17.5	18.3	28.2	35.8	23.4
NE	16.7	11.3	11.0	14.2	13.7	16.4	11.0	13.7	11.6	11.0	6.7	15.6
N		0.5		1.1	8.1	13.2	11.8	7.0	5.6	0.3		0.5

DAILY TIME RANGES (HOURS)

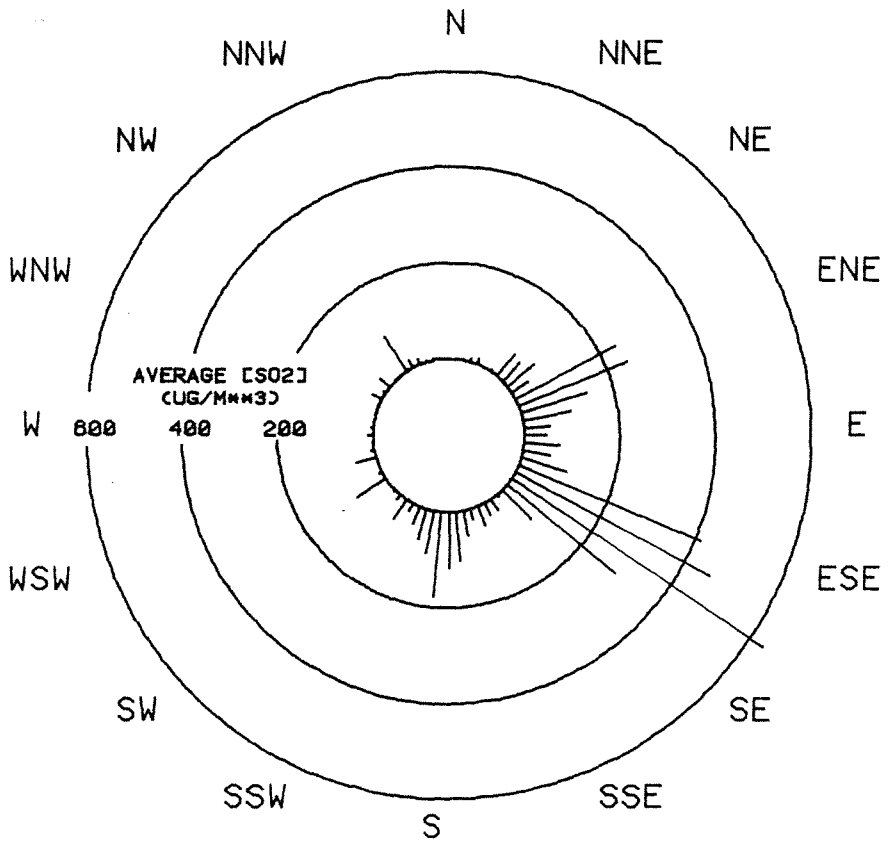
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12							0.3	0.5				
9.-10.5							0.8	0.8	1.6			
7.5-9.0	0.5	0.3		0.3	0.3	0.8	4.0	4.0	3.2	1.1	0.3	1.3
6.0-7.5	8.6	3.2	0.8	5.9	4.8	7.3	5.9	5.6	7.3	4.6	4.8	11.6
4.5-6.0	42.7	29.6	19.9	31.5	30.6	25.8	20.4	19.9	18.0	18.8	21.2	40.3
3.0-4.5	34.7	41.9	47.6	47.6	40.1	40.1	42.7	41.7	39.0	30.6	32.3	25.8
1.5-3.0	12.4	23.1	28.2	12.9	22.6	24.7	25.3	25.8	26.3	38.7	36.3	16.1
0.5-1.5	1.1	1.9	3.5	1.9	1.6	1.3	0.5	1.6	4.3	5.9	5.1	4.0
CALMS									0.3	0.3		0.8



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 69.4%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 2.85 TO 28. 2.85 INCLUSIVE.

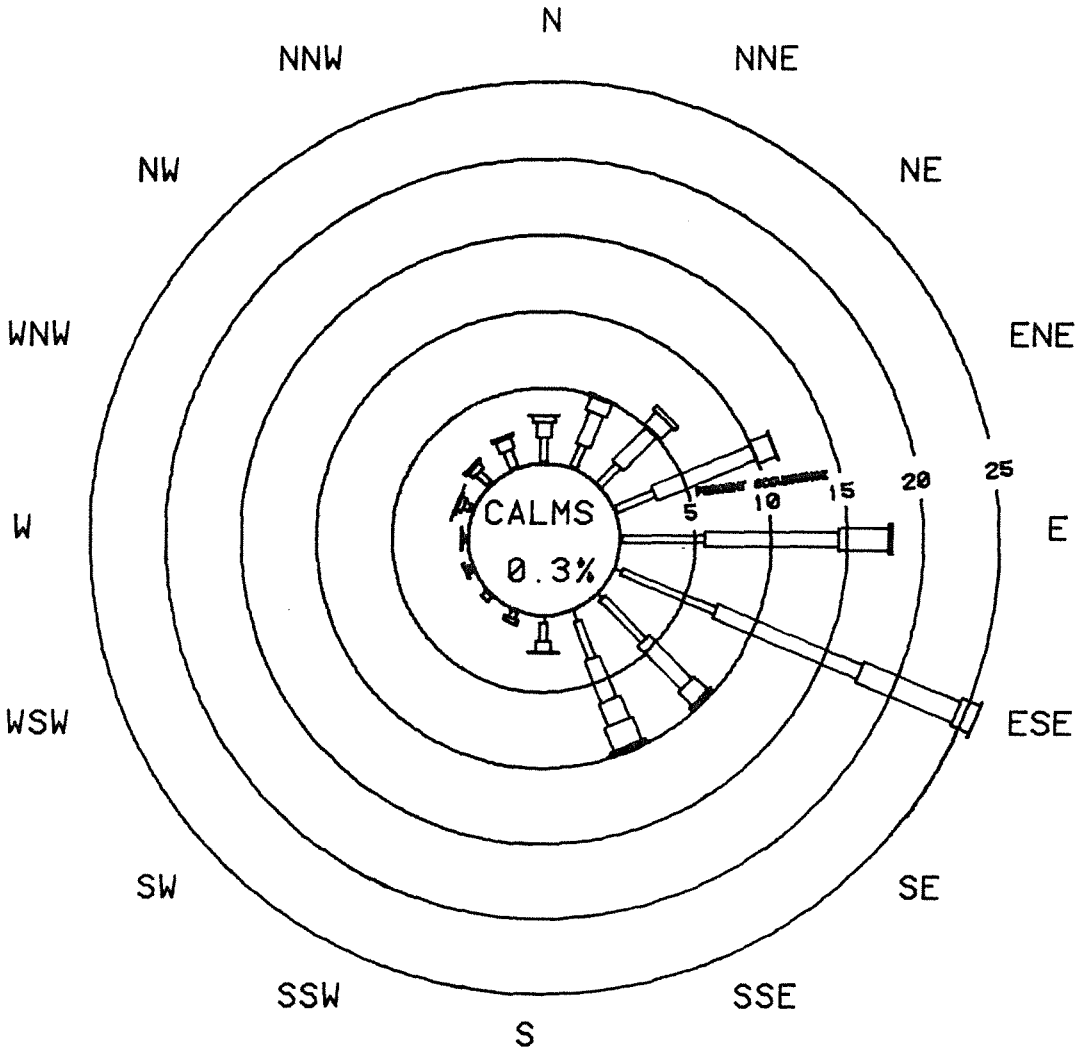
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

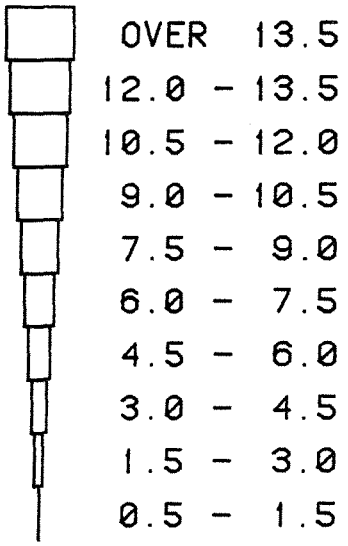
WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																TOTALS
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5	-																0.0
7.5 - 9.0								0.2									0.2
6.0 - 7.5		0.2	0.3		0.2	1.3	0.1	1.7									4.0
4.5 - 6.0	0.4	0.9	1.0	1.4	3.3	6.9	1.2	1.6						0.1	0.2	0.2	17.4
3.0 - 4.5	1.0	2.3	3.2	7.1	8.8	10.3	4.0	3.0	0.7	0.3		0.1		0.4	0.4	0.8	42.5
1.5 - 3.0	1.6	1.6	1.8	2.7	5.5	6.7	3.9	2.6	1.2	0.5	0.4	0.3	0.2	0.4	1.0	1.2	31.6
0.5 - 1.5	0.1	0.1		0.1	0.1	0.5	0.4	0.8	0.5	0.1	0.1	0.2	0.2	0.2	0.2	0.1	4.0
TOTALS	3.2	5.1	6.5	11.3	17.9	25.8	9.7	9.8	2.4	0.9	0.5	0.6	0.5	1.2	1.8	2.3	

CALMS (LESS THAN 0.5 M/S): 0.3%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.6	1.3	9.3
NORTHERLY COMPONENT	-0.4	2.2	-9.0
EASTERLY COMPONENT	2.5	1.9	7.5





WIND SPEED
RANGE (M/S)

WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 2.85 TO 28. 2.85 INCLUSIVE.
DATA RECOVERY: 100.0%

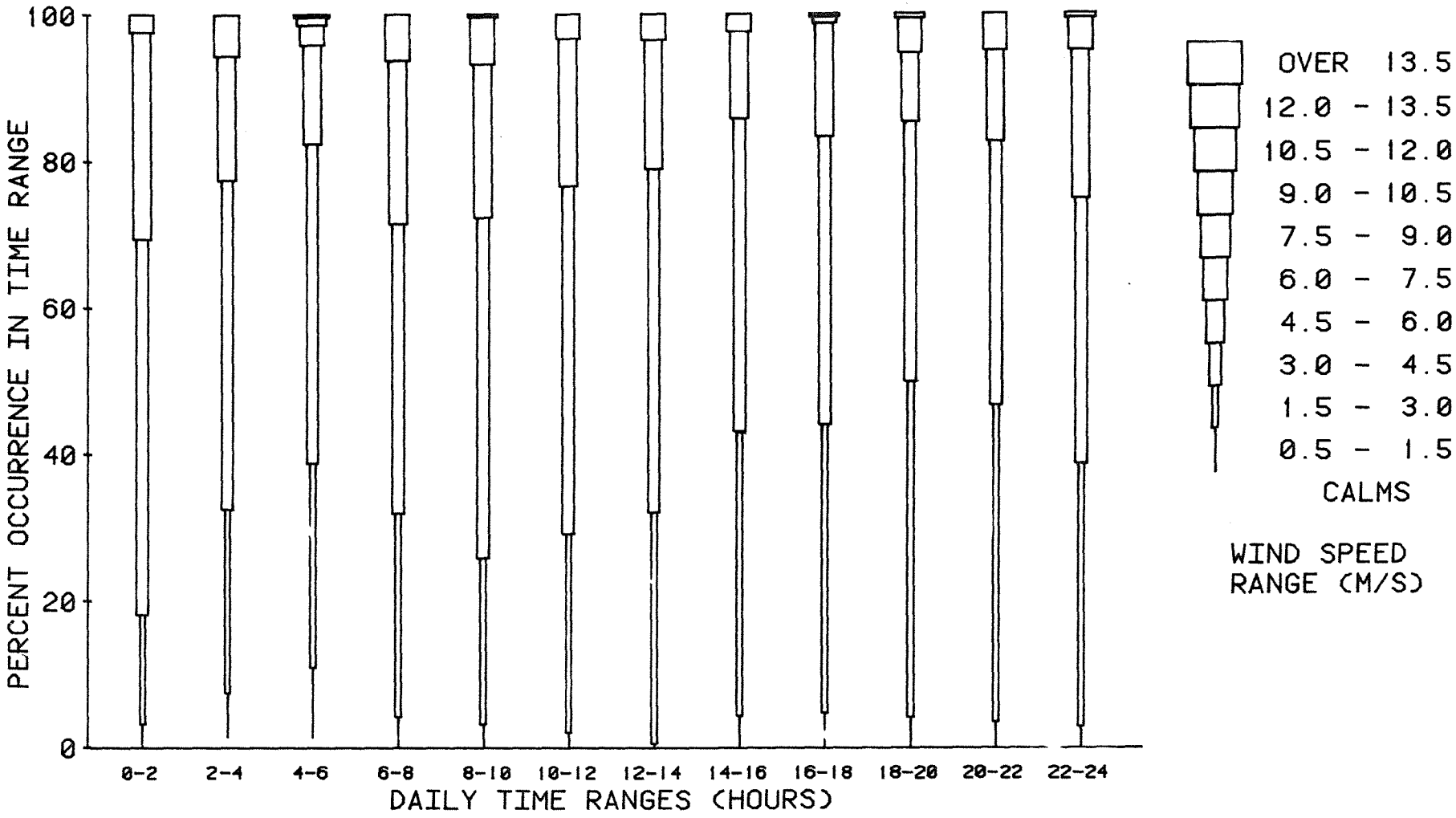
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

DAILY TIME RANGES (HOURS)

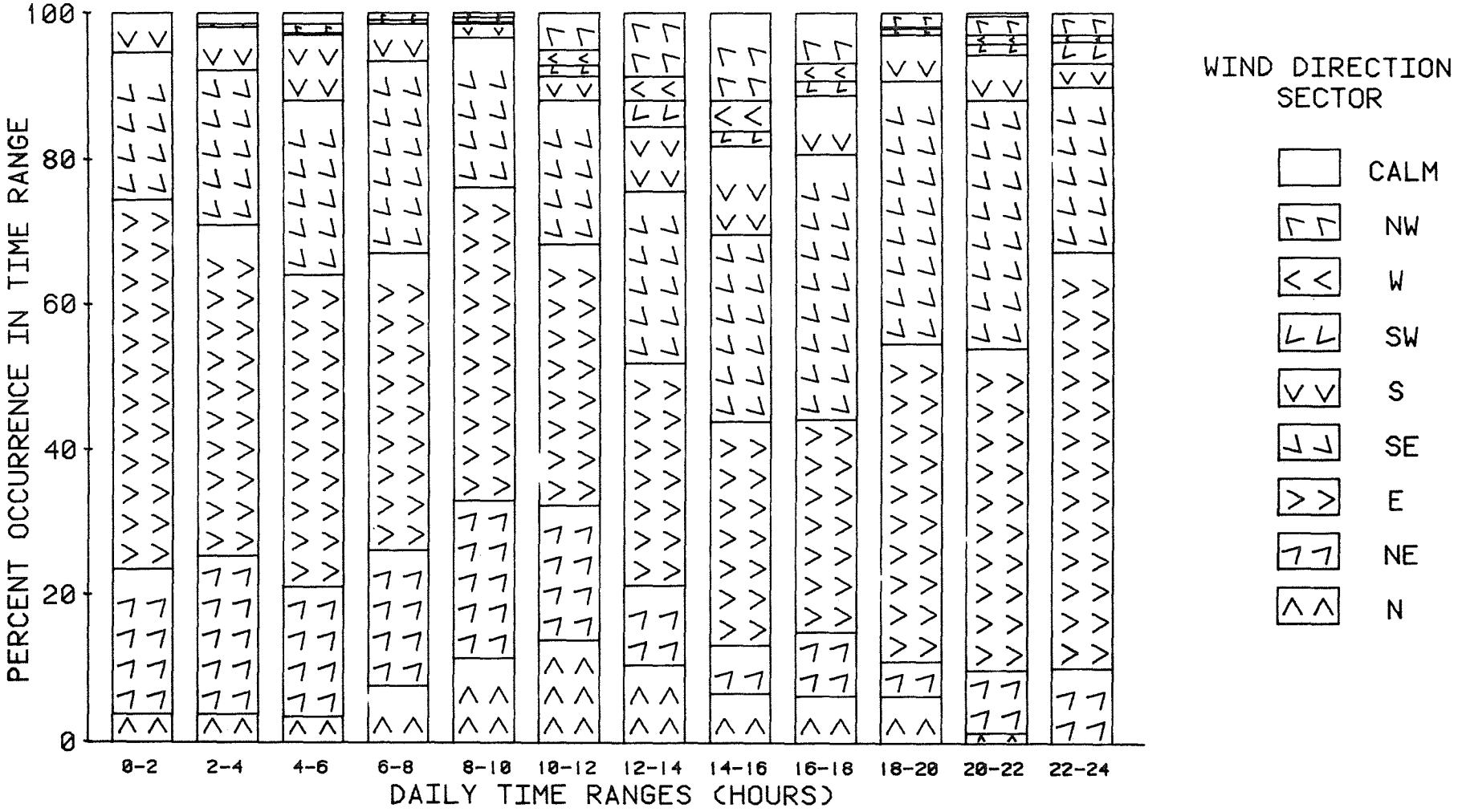
DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM		1.5	1.5								0.3	
NW			1.2	0.9	0.6	5.1	8.6	11.9	6.8	1.8	2.7	3.0
W				0.6	0.6	2.1	3.3	4.2	2.4	0.3	1.2	0.9
SW		0.3	0.3		0.3	1.5	3.6	2.1	2.1	0.9	1.5	3.0
S	5.4	6.0	8.9	5.1	1.8	3.3	8.9	12.2	8.0	6.2	6.3	3.3
SE	20.2	21.4	24.1	26.5	20.5	19.9	23.5	25.6	36.3	36.0	33.9	22.6
E	50.9	45.5	42.9	40.8	43.2	35.7	30.7	30.7	29.2	43.5	44.0	56.8
NE	19.6	21.4	17.6	18.5	21.4	18.5	10.7	6.5	8.6	4.8	8.6	10.4
N	3.9	3.9	3.6	7.7	11.6	14.0	10.7	6.8	6.5	6.5	1.5	

DAILY TIME RANGES (HOURS)

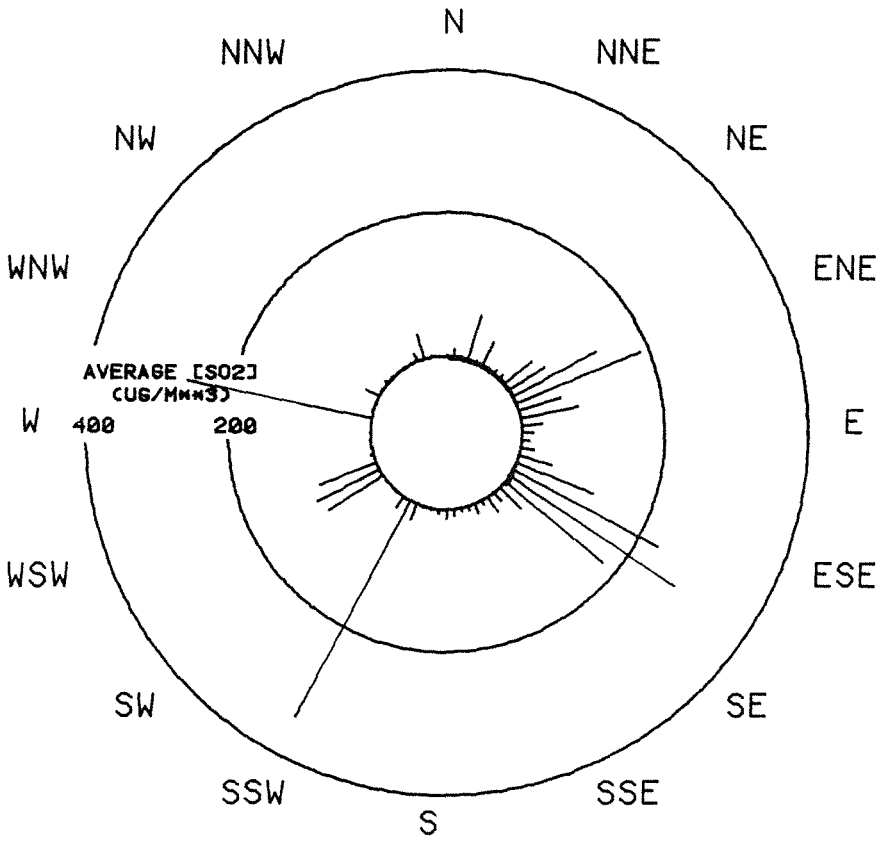
WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5			0.3									
7.5-9.0			1.2		0.3				0.3	0.6		0.6
6.0-7.5	2.4	5.7	2.7	6.2	6.5	3.3	3.6	2.4	0.9	4.8	5.1	4.5
4.5-6.0	28.3	17.0	13.4	22.3	20.8	20.2	17.6	11.9	15.5	9.2	12.2	19.9
3.0-4.5	51.2	44.9	43.8	39.6	46.4	47.3	46.7	42.6	39.3	35.4	36.0	36.3
1.5-3.0	14.9	25.0	27.7	27.7	22.6	27.1	31.5	38.7	39.3	45.8	43.2	35.7
0.5-1.5	3.3	6.0	9.5	4.2	3.3	2.1	0.6	4.5	4.8	4.2	3.3	3.0
CALMS		1.5	1.5								0.3	



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.2%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.85 TO 31. 3.85 INCLUSIVE.

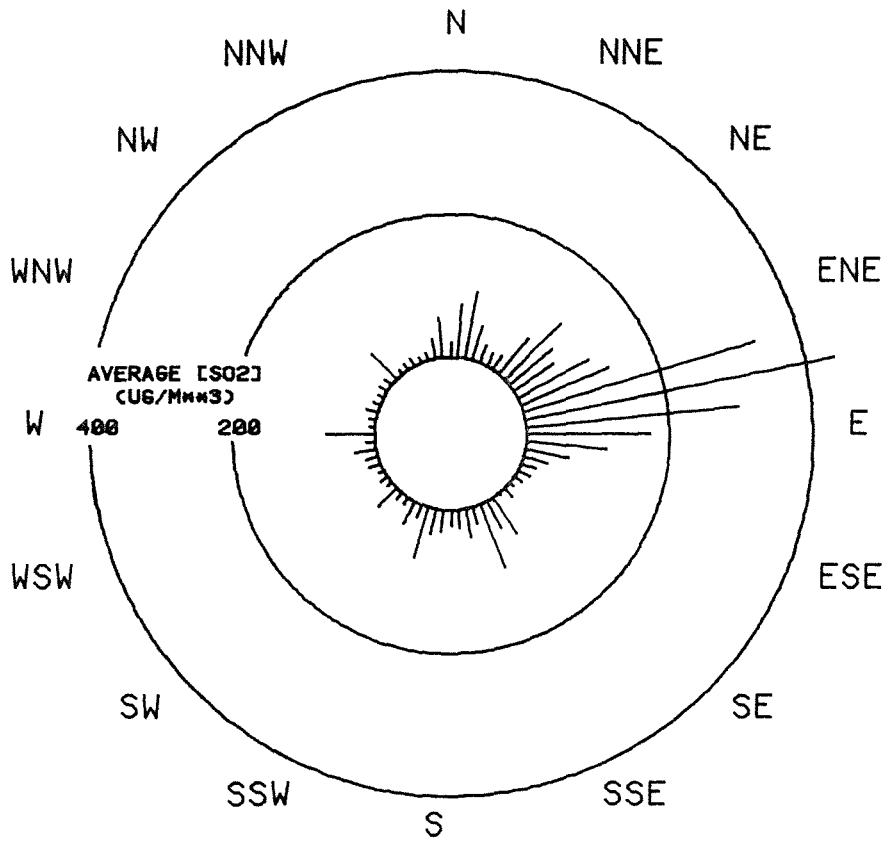
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.0
7.5 - 9.0																	0.1
6.0 - 7.5		0.2	0.9	0.6	0.1	0.4		0.5			0.1		0.1				2.9
4.5 - 6.0	0.5	1.4	3.7	5.3	2.2	1.9	0.6	5.2	0.1	0.2	0.1	0.2		0.2	0.1	0.1	21.6
3.0 - 4.5	0.6	1.2	4.0	9.0	9.0	7.2	4.3	5.1	1.0	0.6	1.3	1.0	0.3	0.2	0.2	0.2	45.1
1.5 - 3.0	0.8	0.6	1.0	2.6	5.5	4.0	3.5	3.1	1.6	0.9	0.5	0.4	0.4	0.6	0.4	0.6	26.5
0.5 - 1.5	0.1	0.1	0.1		0.2	0.2	0.3	0.6	0.7	0.3	0.1	0.3	0.2	0.1		0.1	3.5
TOTALS	2.0	3.5	9.6	17.6	17.0	13.7	8.6	14.6	3.5	1.9	2.1	1.9	1.0	1.1	0.7	1.1	

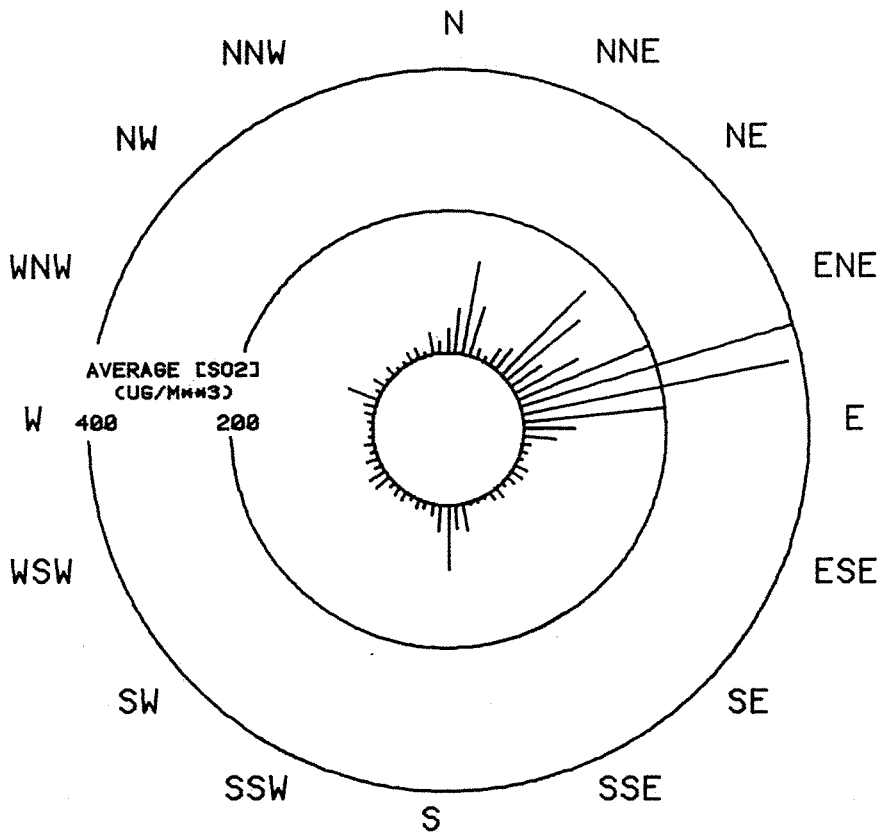
CALMS (LESS THAN 0.5 M/S): 0.3%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

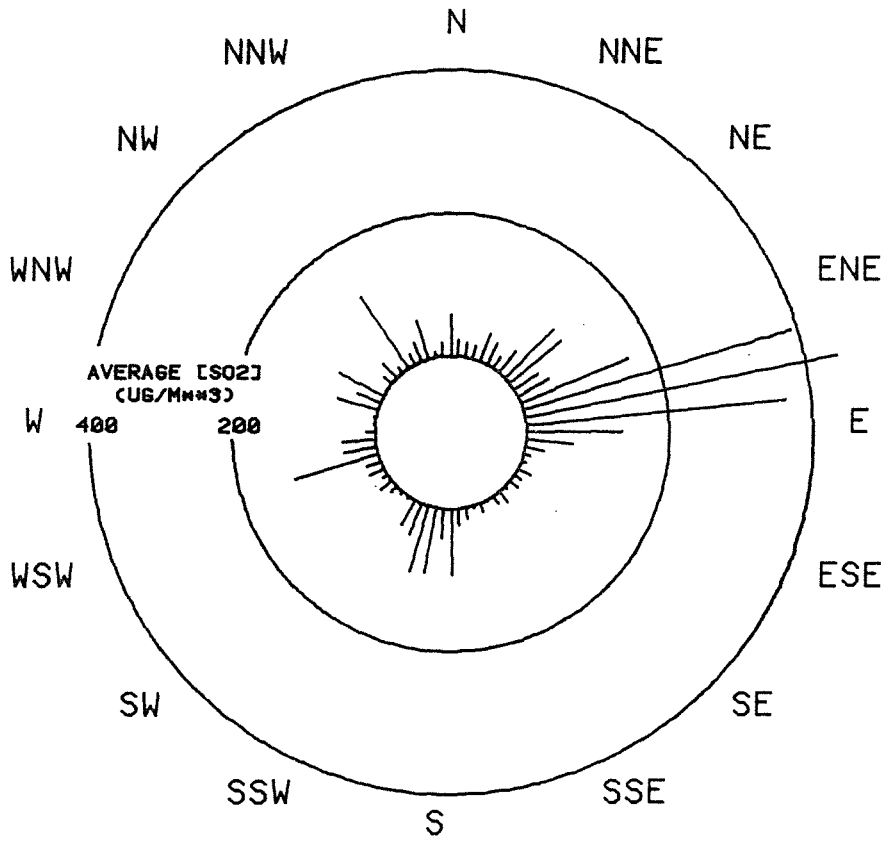
	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.7	1.2	9.7
NORTHERLY COMPONENT	-0.3	2.5	-7.7
EASTERLY COMPONENT	2.3	2.0	-8.1



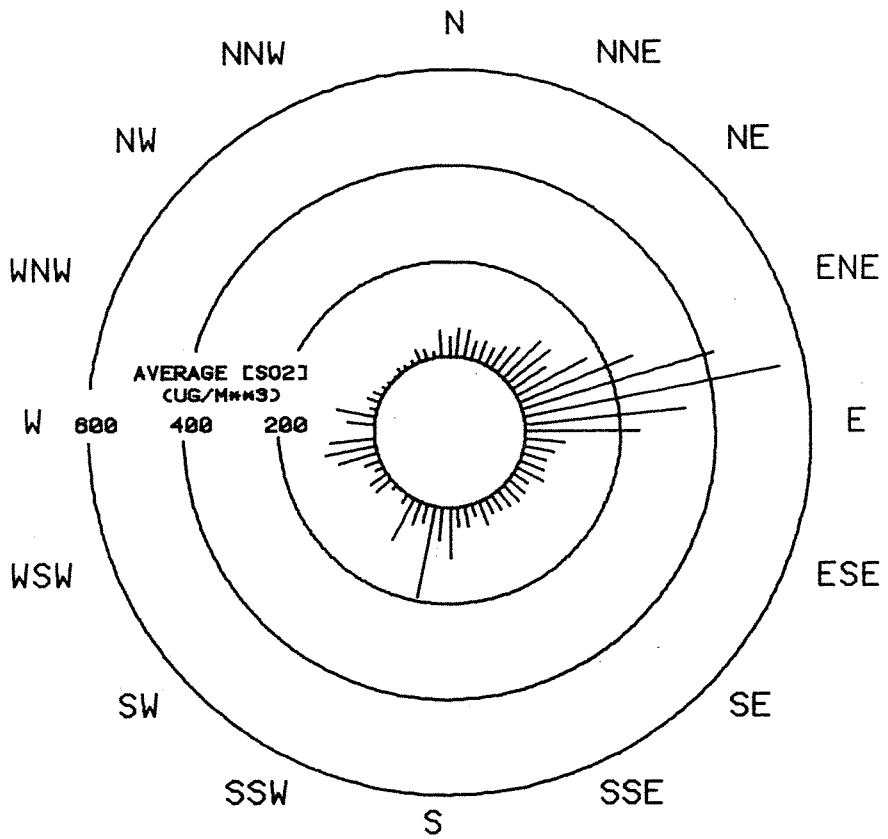
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/5/85 TO 31/5/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.8%



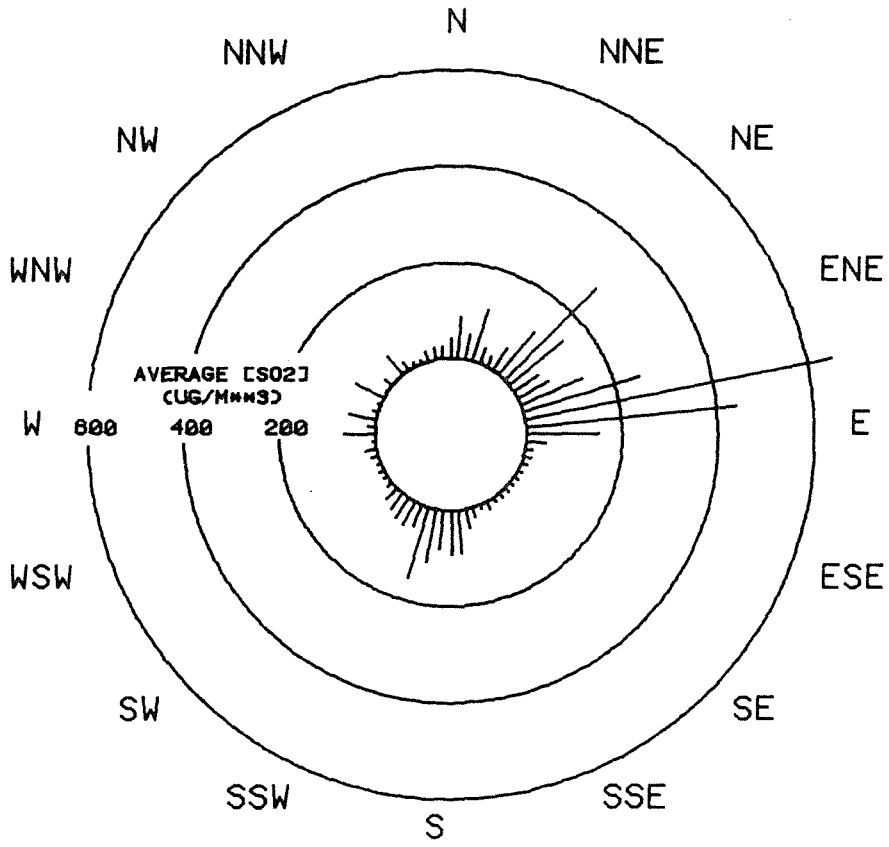
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/4/85 TO 30/4/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.5%



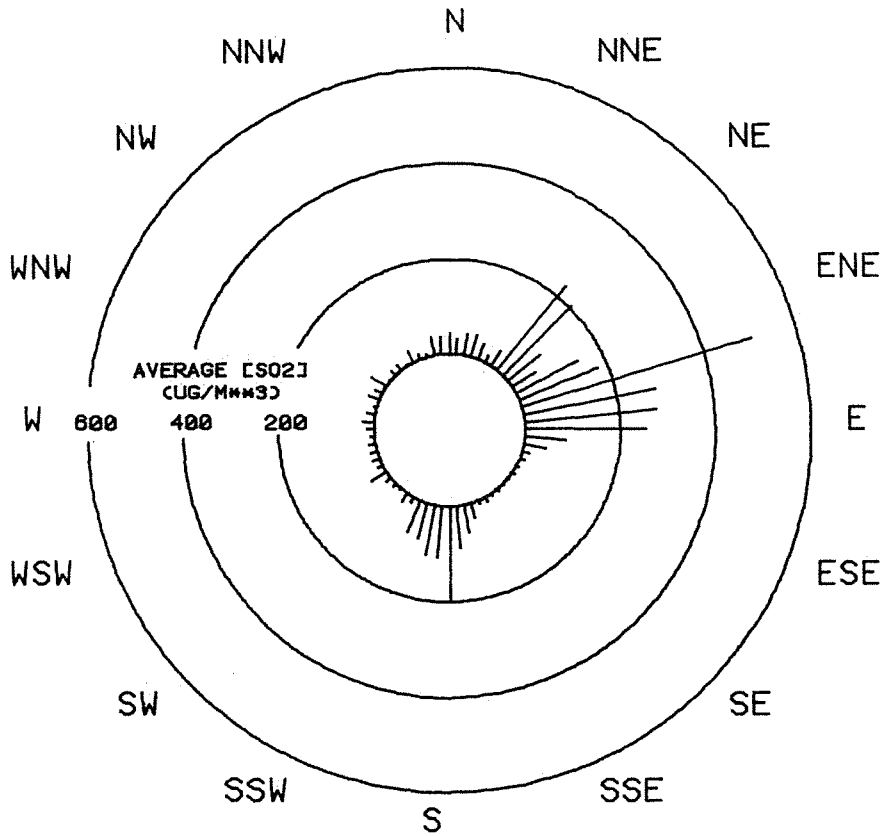
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 92.7%



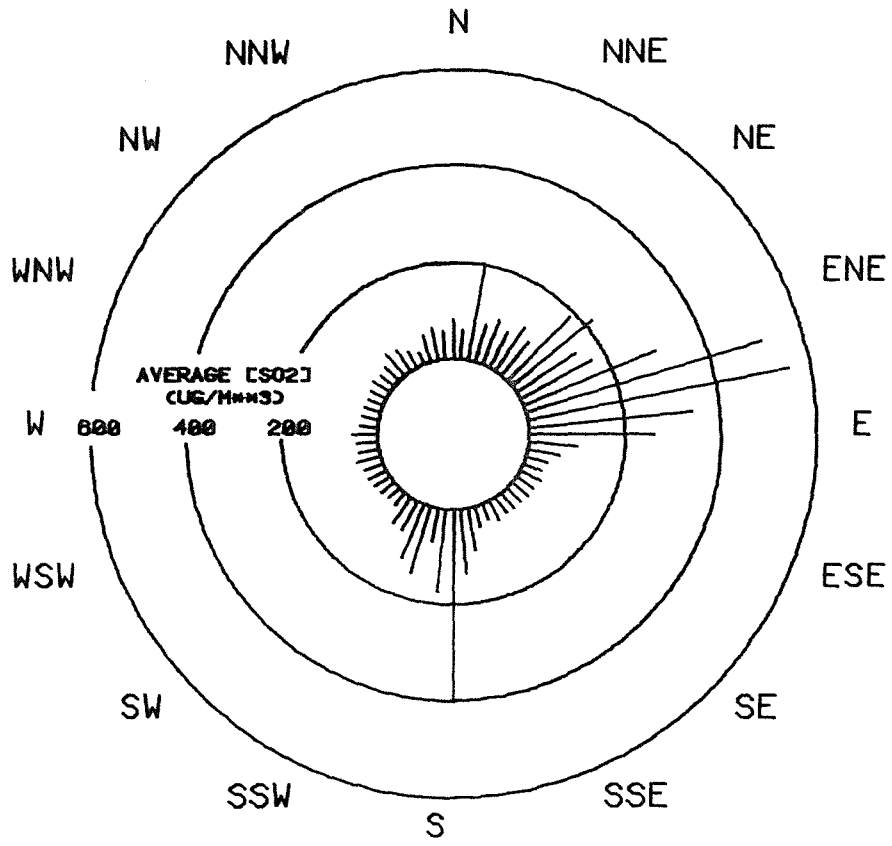
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.2%



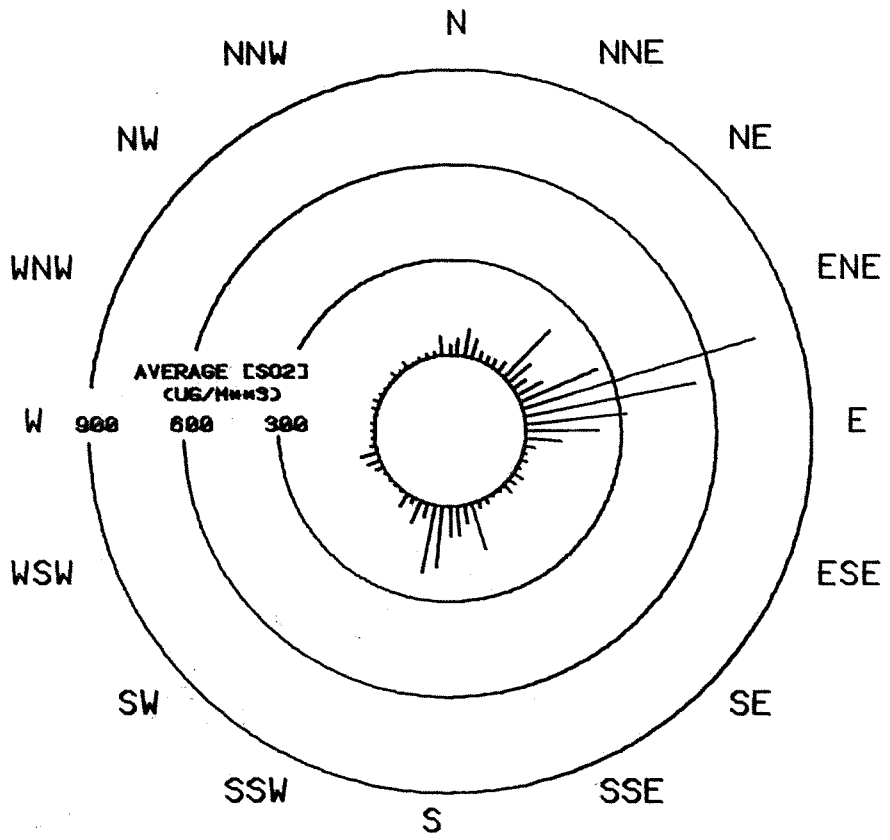
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 55.8%



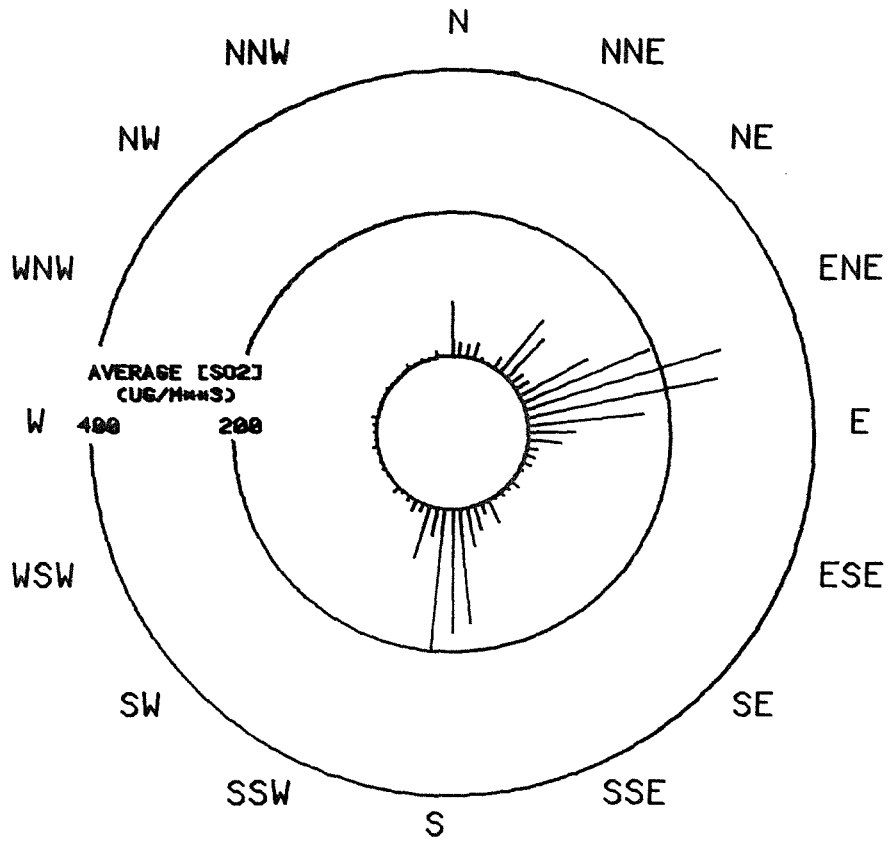
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 81.9%



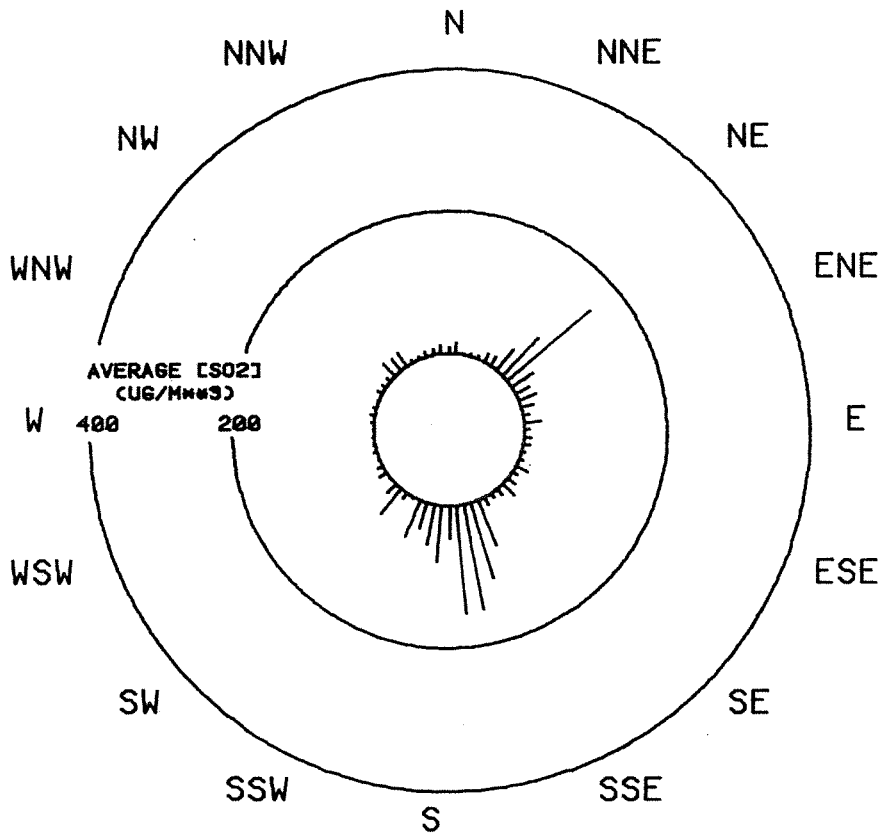
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/11/84 TO 30/11/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.5%



SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.6%



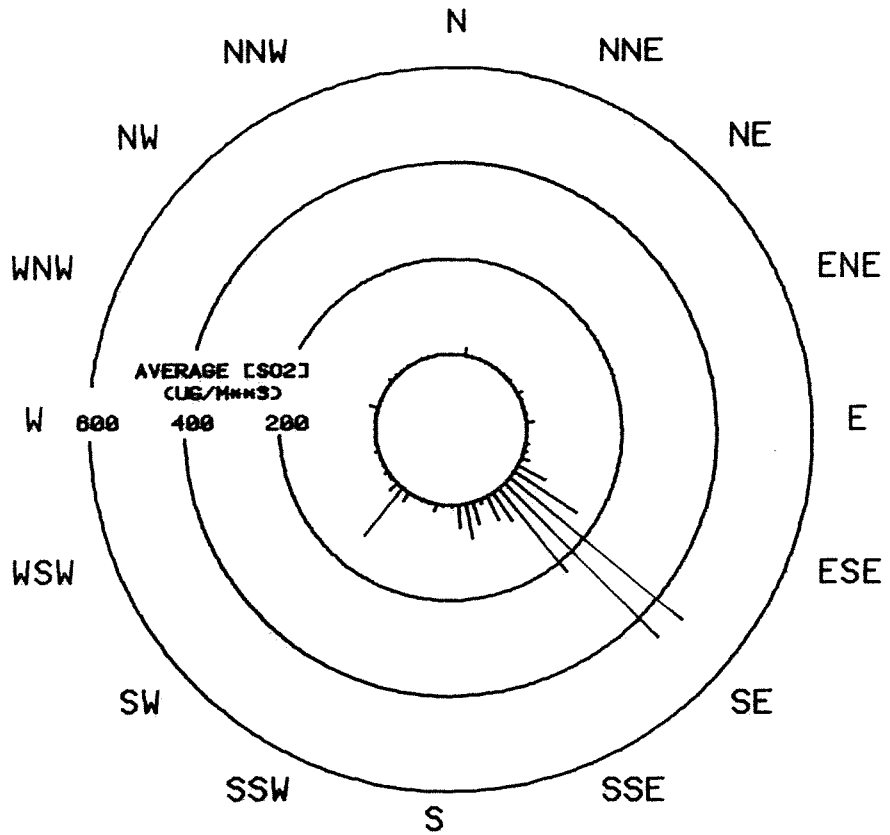
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.7%



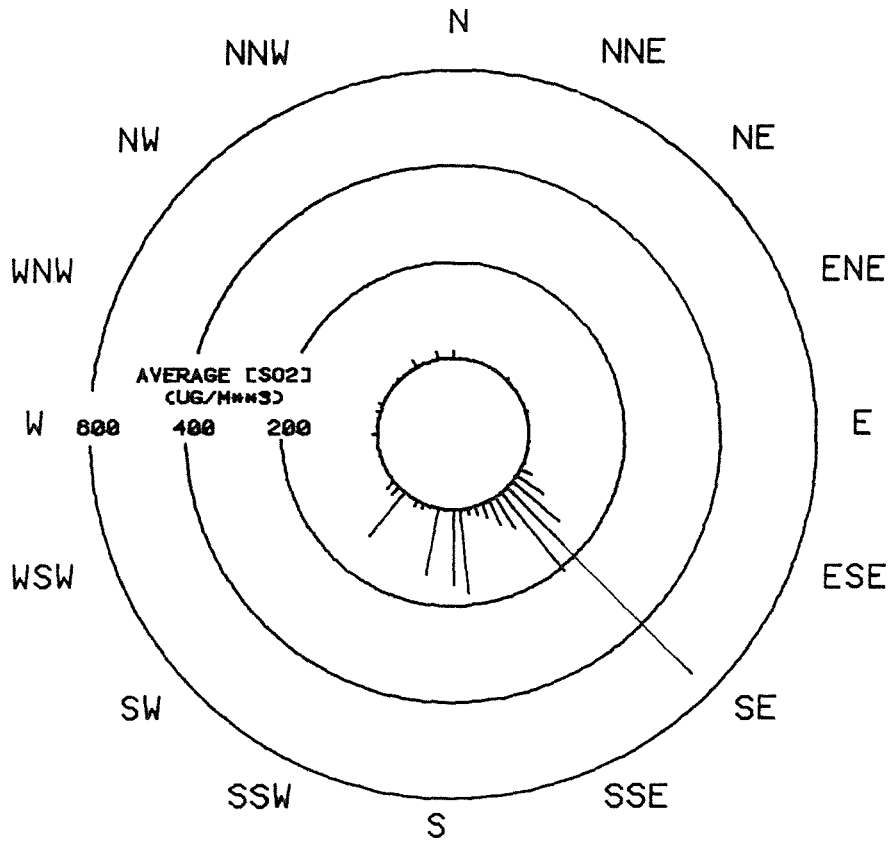
SO2 POLLUTION ROSE FOR SOUTH BOULDER PRIMARY SCHOOL
DATA PERIOD: 17/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 97.4%

APPENDIX F

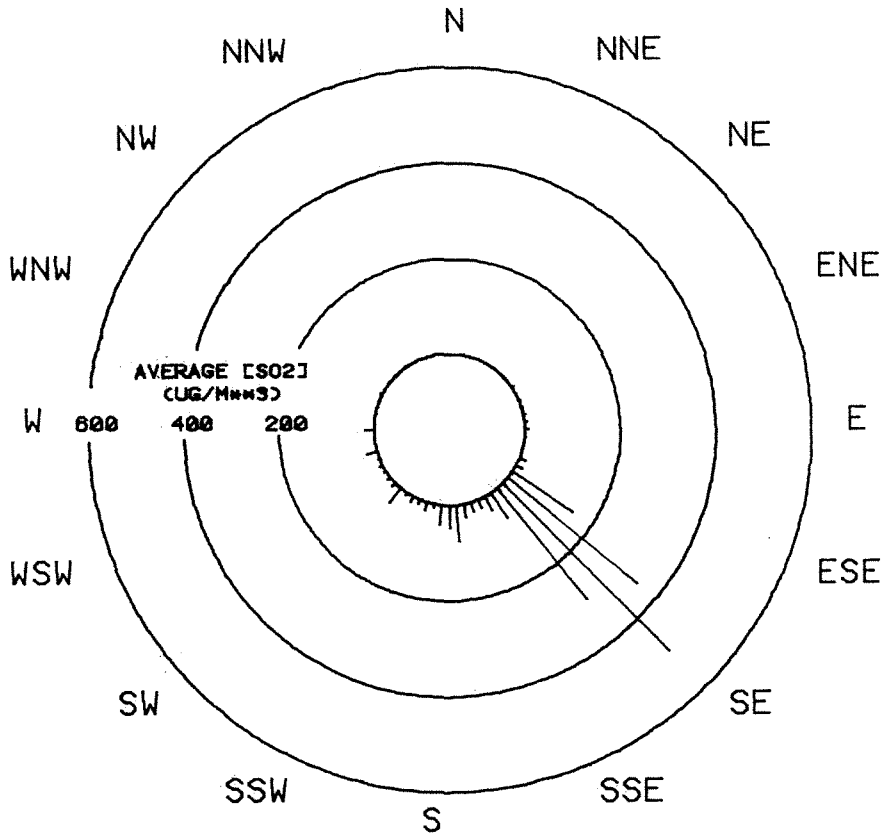
Monthly sulphur dioxide pollution roses for the South Boulder Primary School Base Station, August 1984 to May 1985.



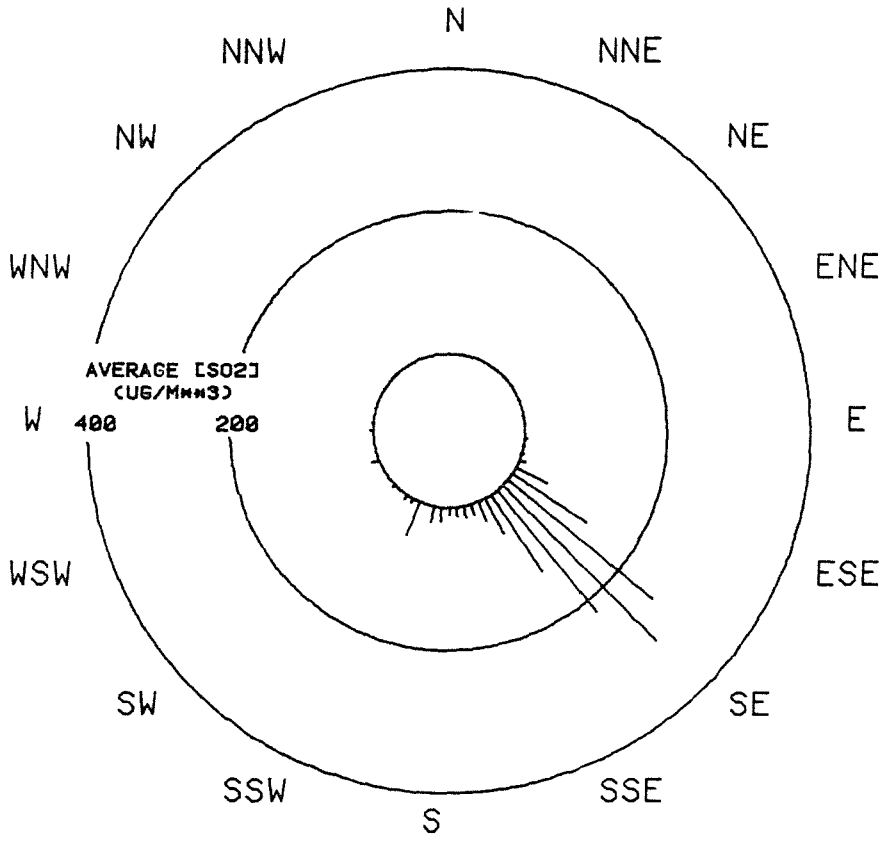
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/5/85 TO 31/5/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.6%



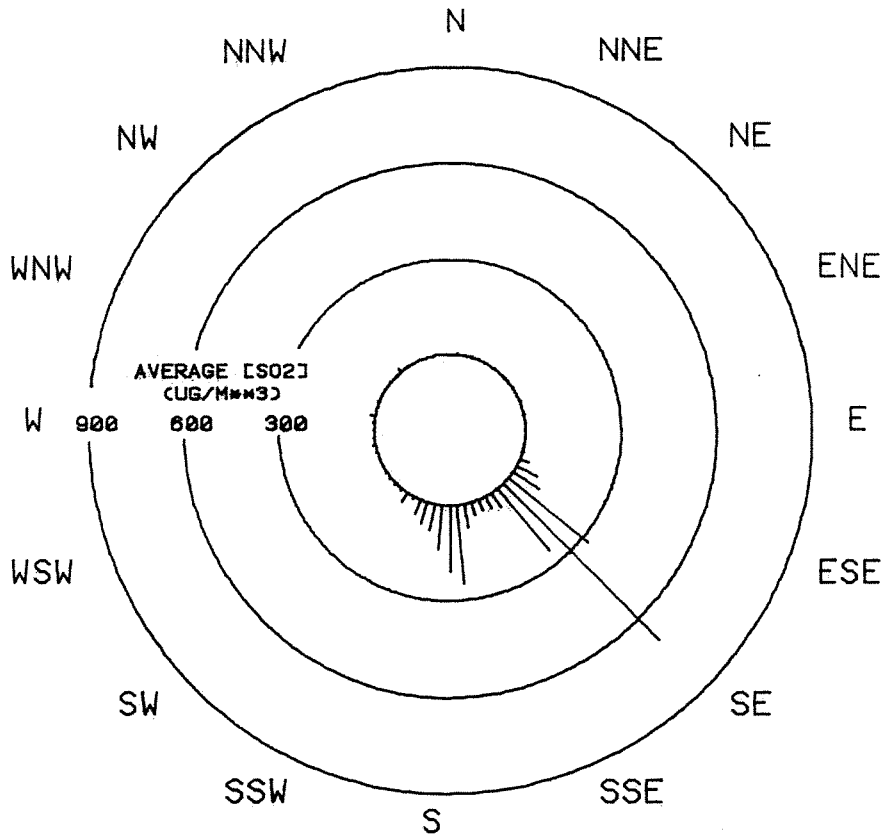
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/4/85 TO 30/4/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 98.8%



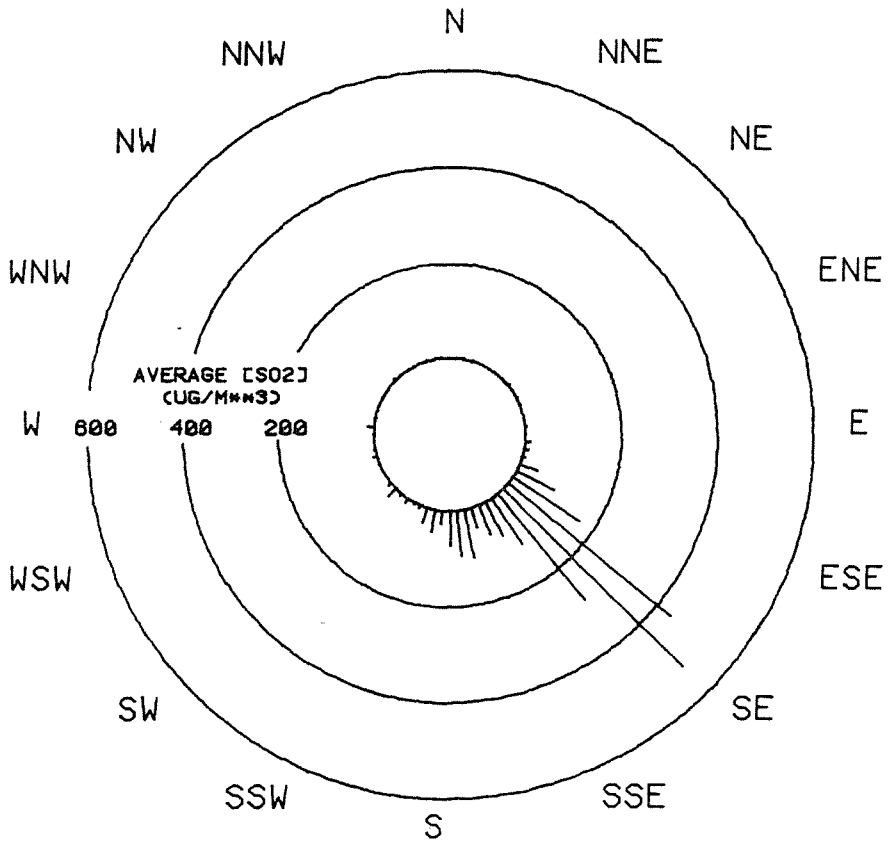
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 77.1%



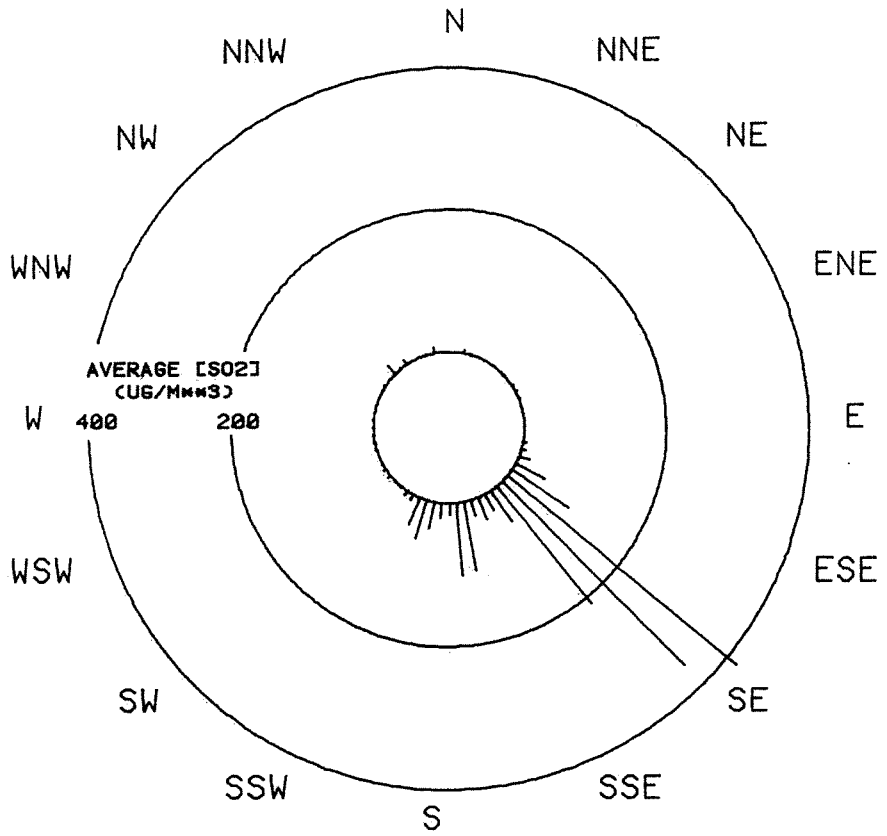
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/2/85 TO 28/2/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 87.6%



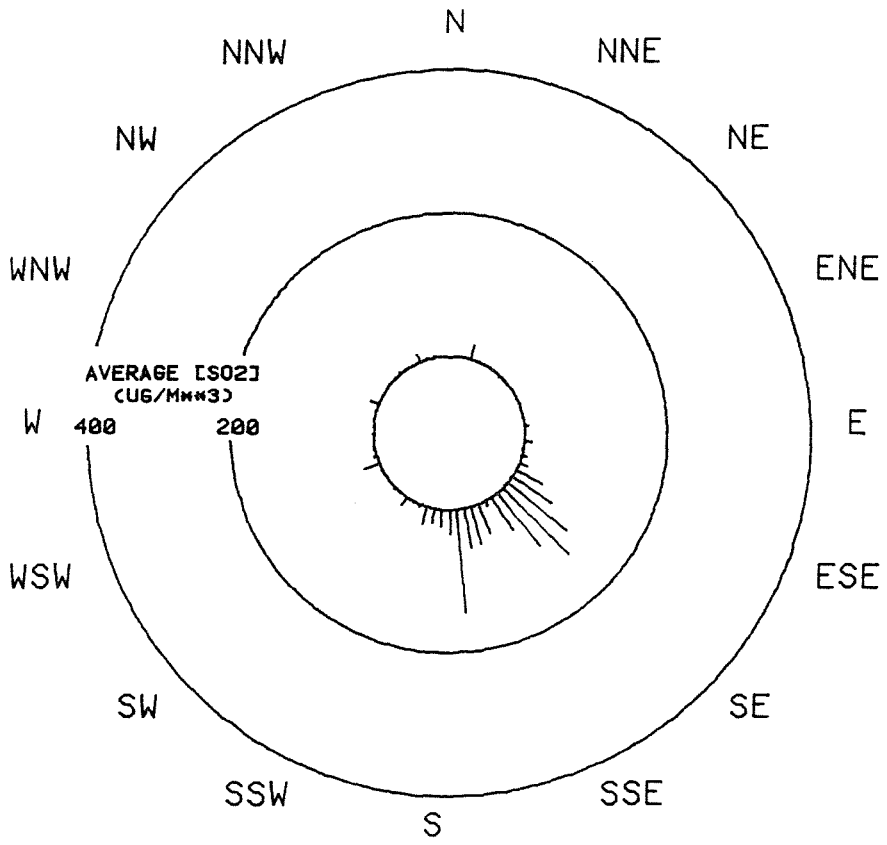
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/1/85 TO 31/1/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 97.8%



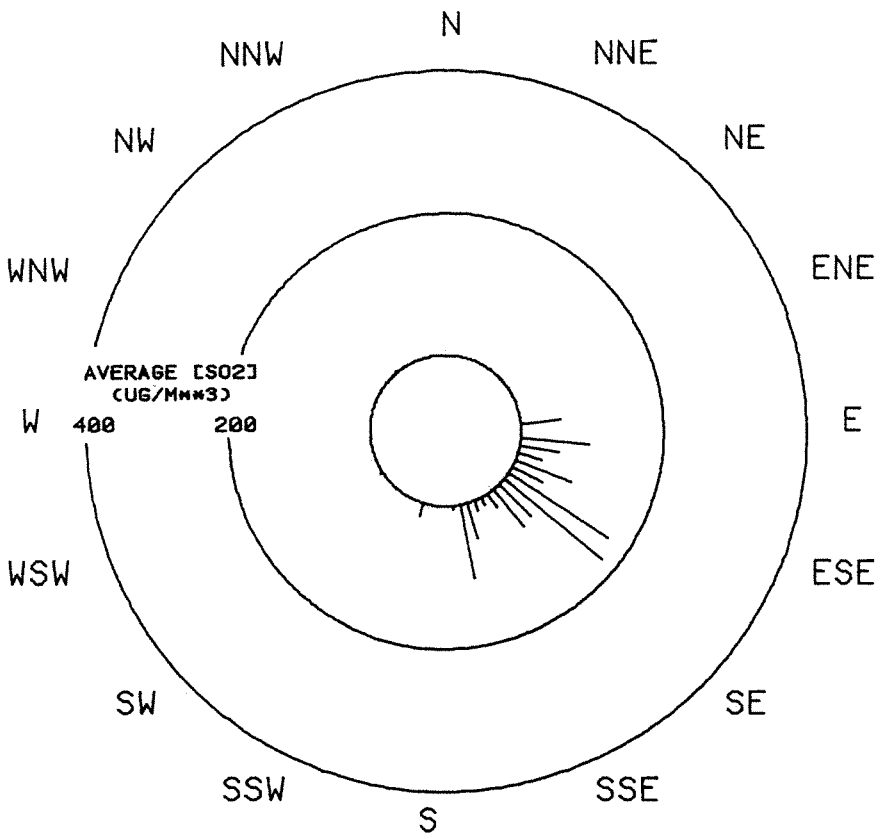
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/12/84 TO 31/12/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.8%



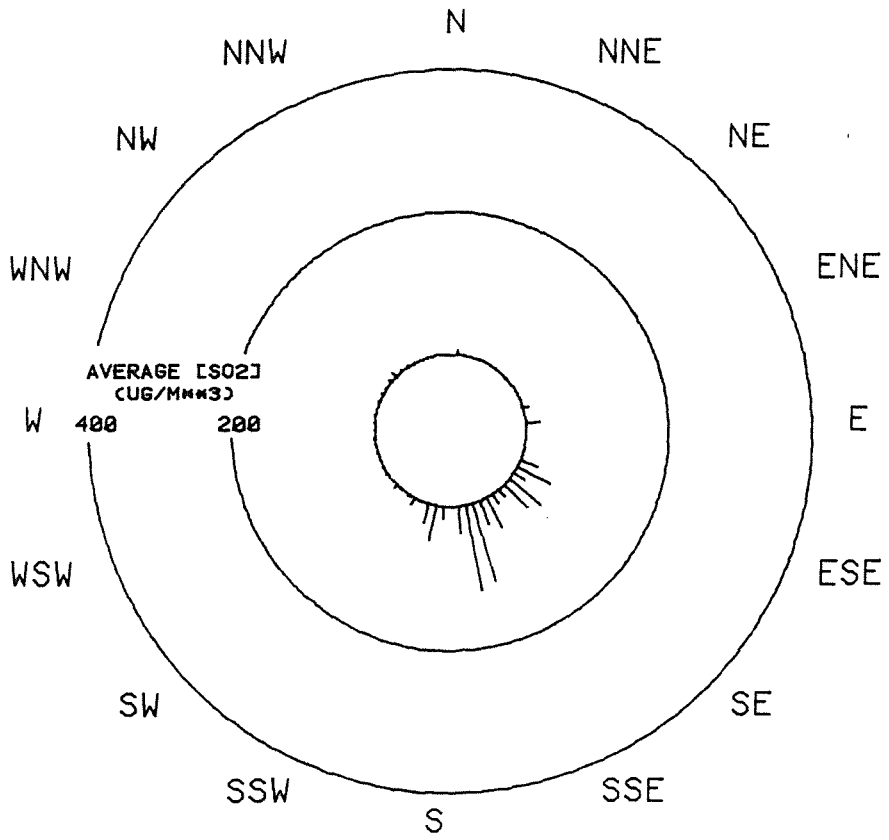
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/11/84 TO 30/11/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.1%



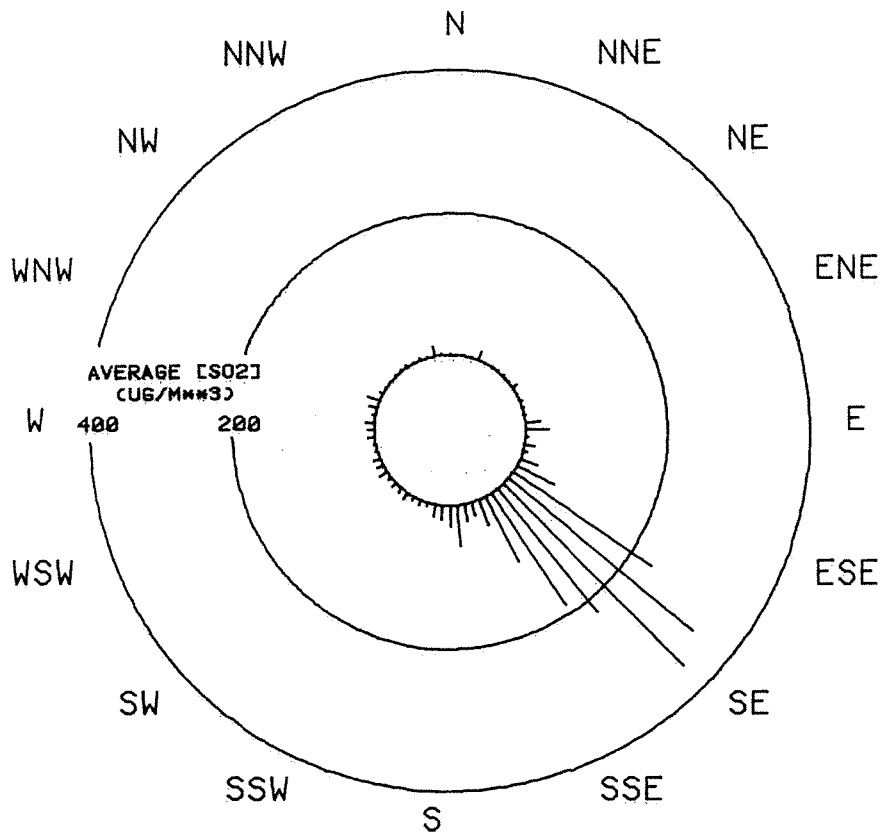
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/10/84 TO 31/10/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 72.1%



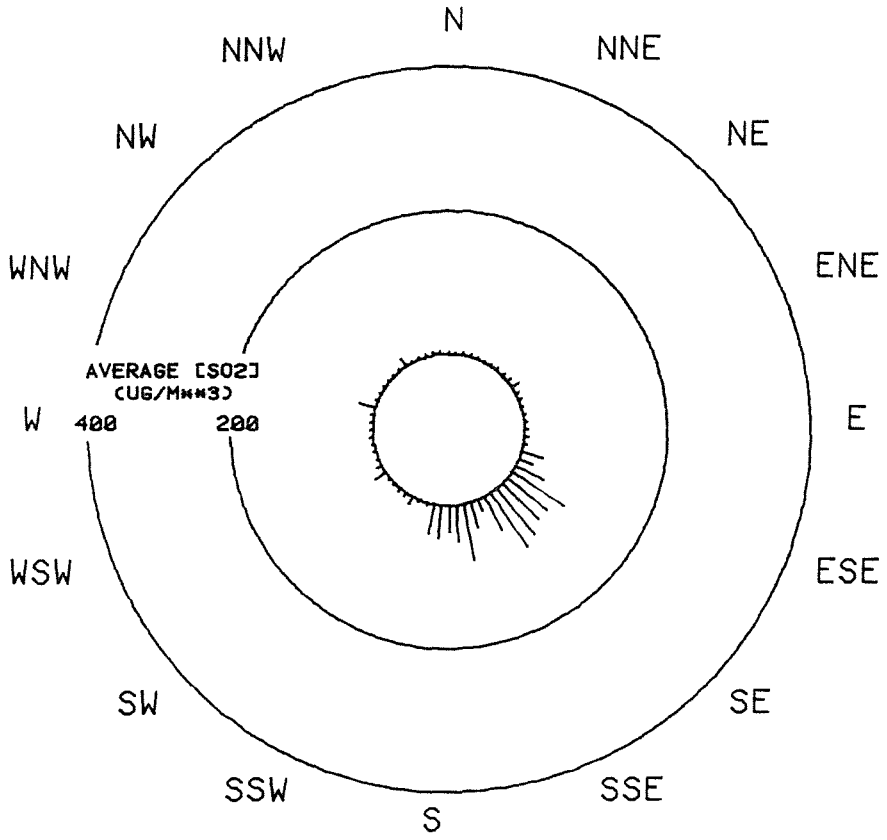
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/9/84 TO 30/9/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 22.1%



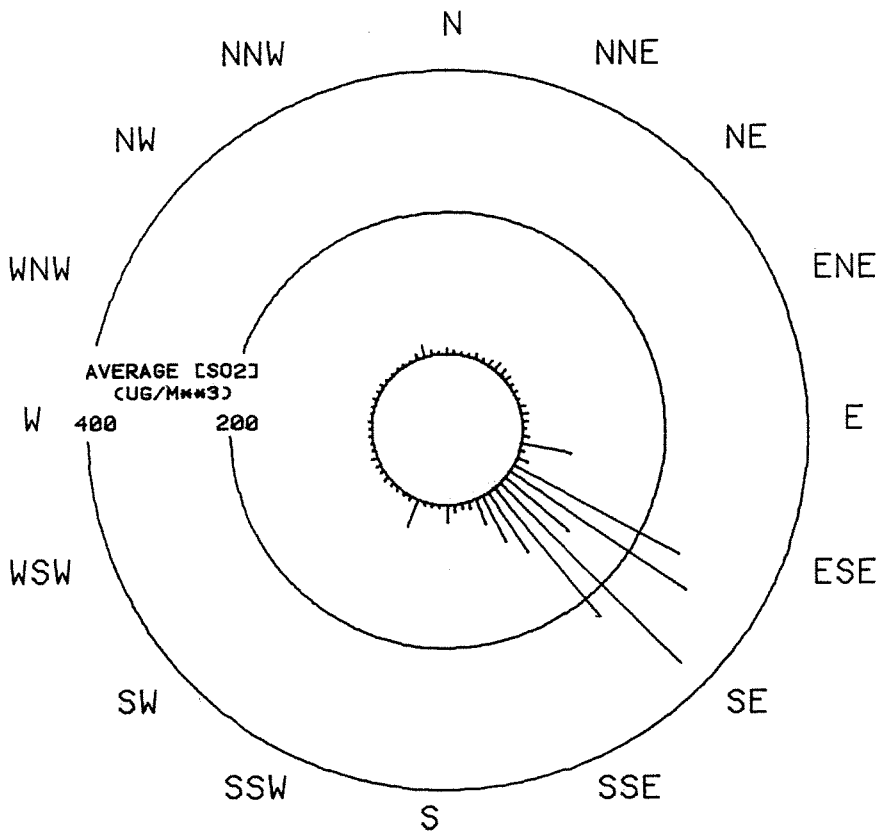
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/8/84 TO 31/8/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 90.0%



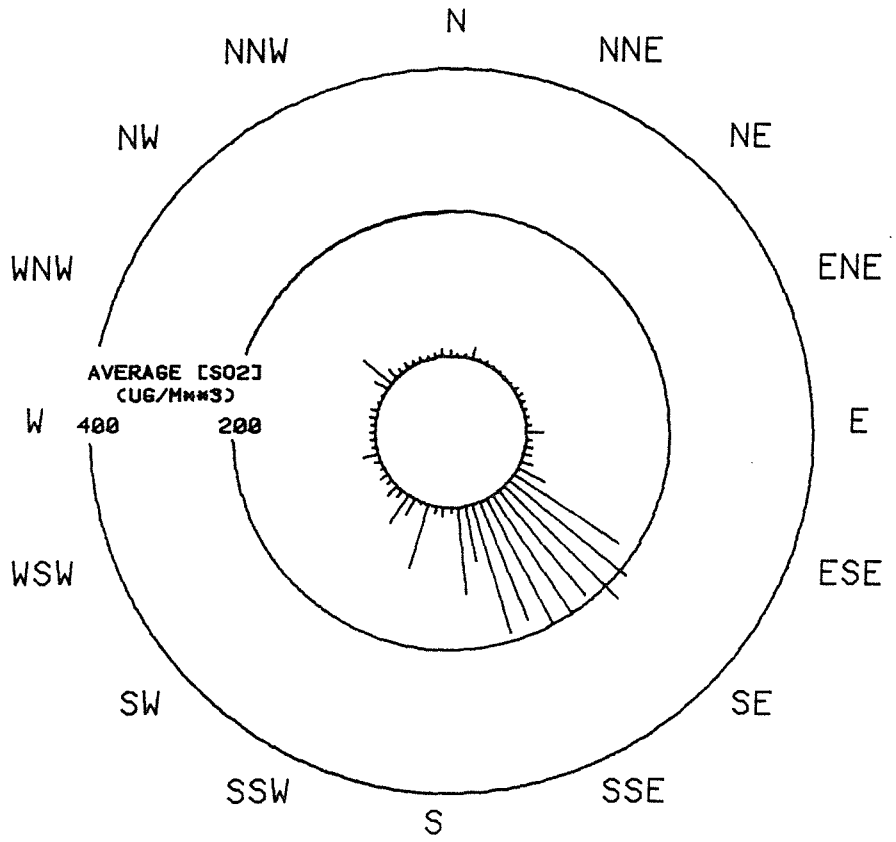
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/7/84 TO 31/7/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 93.1%



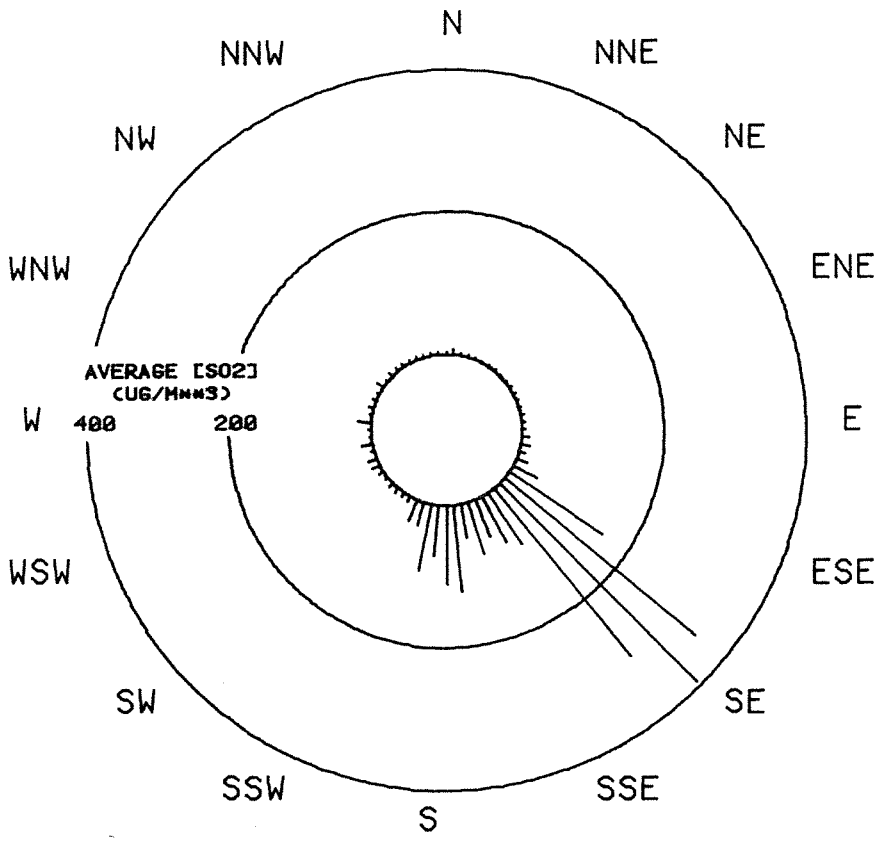
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/6/84 TO 30/6/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.4%



SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/5/84 TO 31/5/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 98.6%



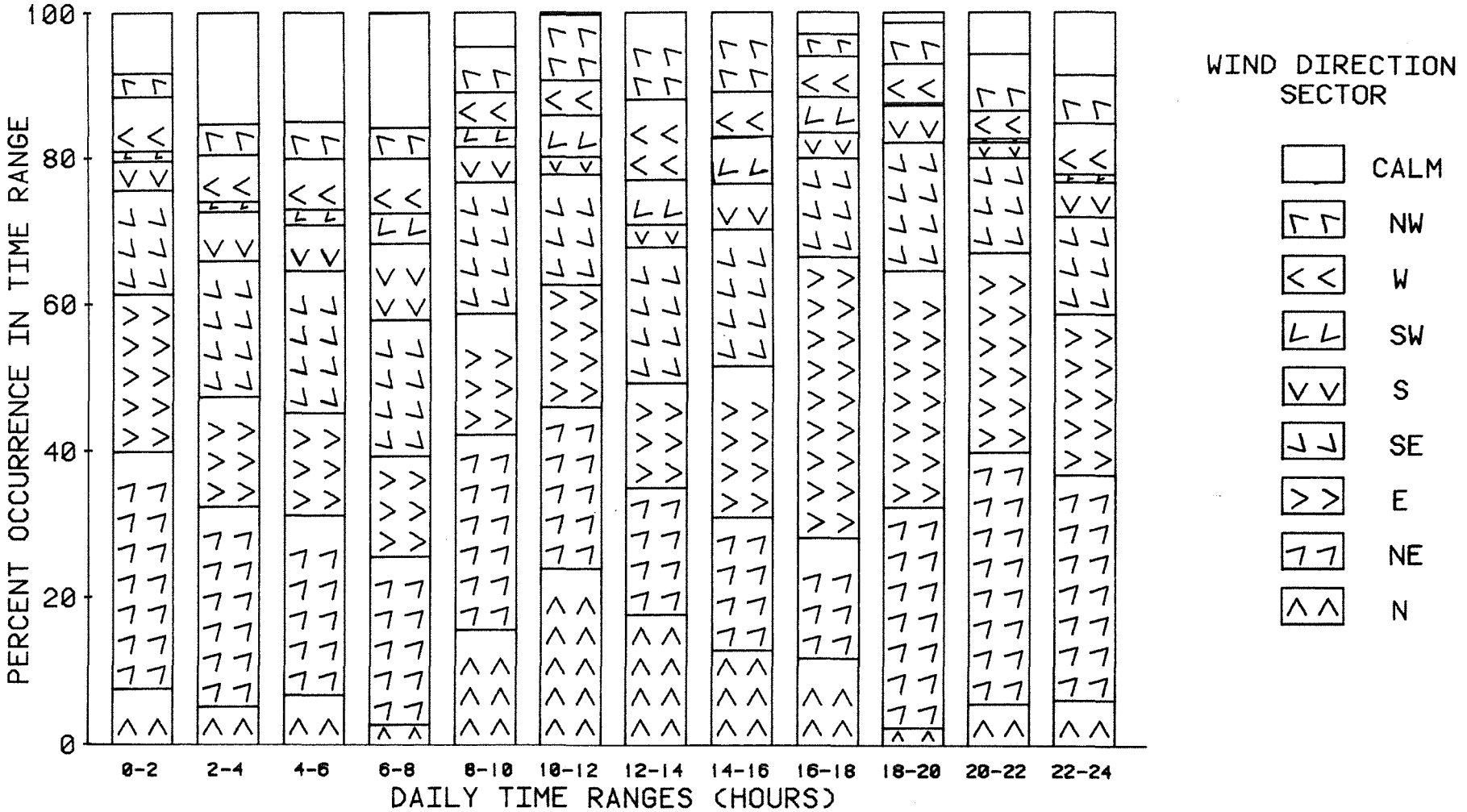
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/4/84 TO 30/4/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.0%



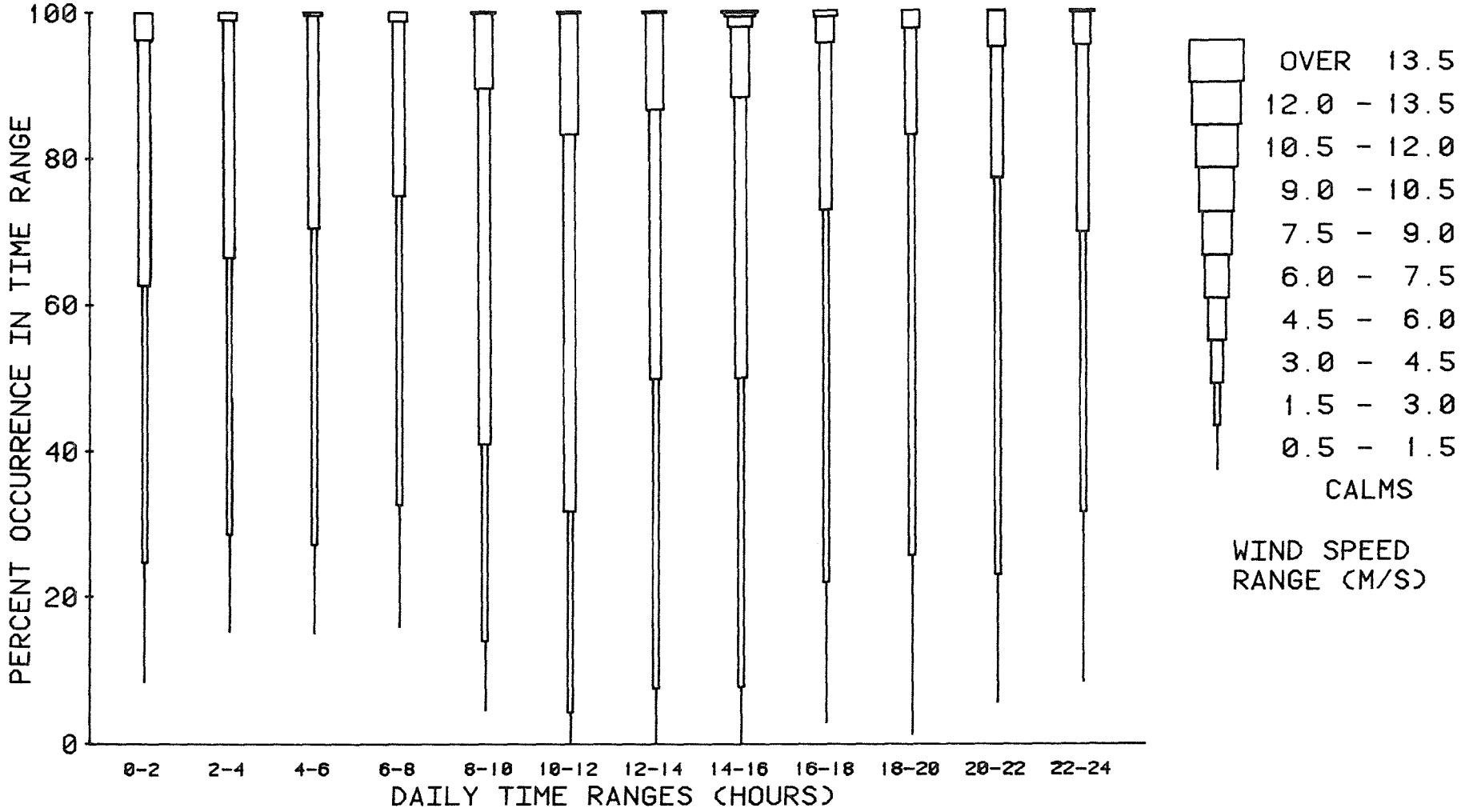
SO2 POLLUTION ROSE FOR KALGOORLIE REGIONAL HOSPITAL
DATA PERIOD: 1/3/84 TO 31/3/84
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 99.6%

APPENDIX E

Monthly sulphur dioxide pollution roses for the Kalgoorlie Regional Hospital Base Station, March 1984 to May 1985.



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/85 TO 31/5/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/85 TO 31/5/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 5.85 TO 31. 5.85 INCLUSIVE.
DATA RECOVERY: 100.0%

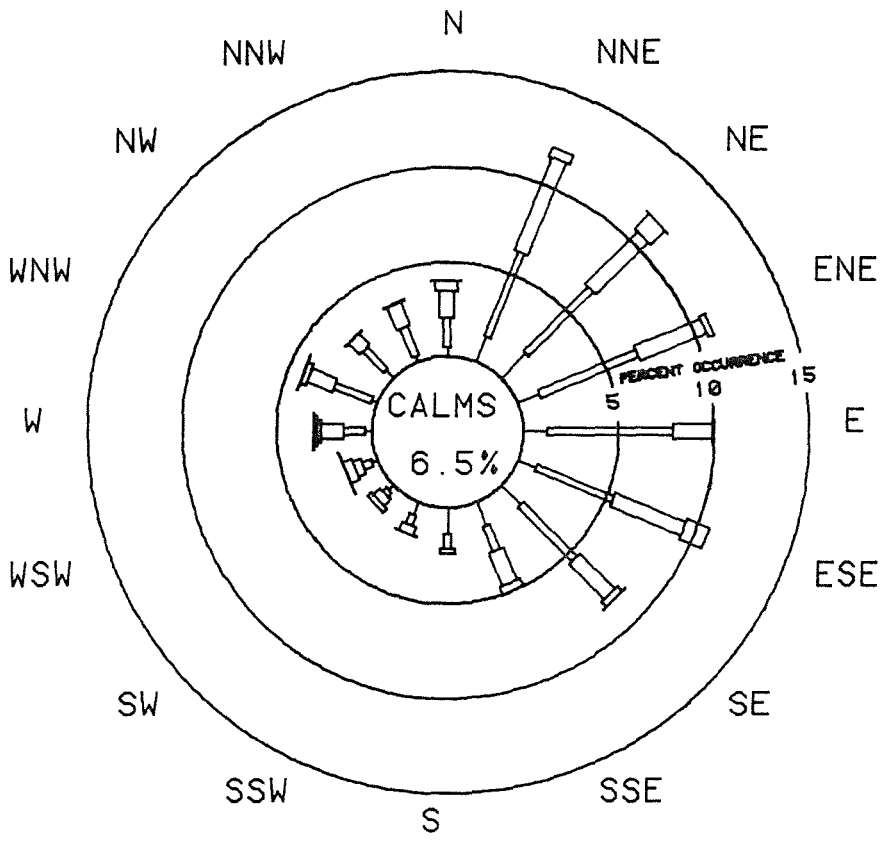
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

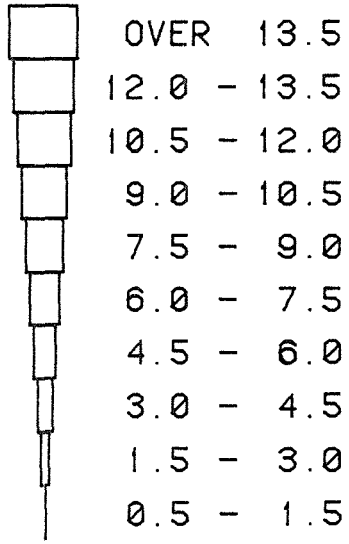
DAILY TIME RANGES (HOURS)

DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	8.3	15.3	15.1	15.9	4.6	0.3			3.0	1.3	5.6	8.6
NW	3.2	4.3	5.1	4.3	6.5	9.1	12.1	11.0	3.0	5.6	8.1	6.7
W	7.5	6.5	7.0	7.5	4.8	4.8	11.0	6.2	5.9	5.6	3.8	7.0
SW	1.3	1.3	2.2	4.0	2.7	5.6	6.2	6.5	4.8	0.3	0.5	1.1
S	4.0	6.7	6.2	10.5	4.8	2.4	3.0	6.2	3.5	5.1	2.2	4.8
SE	14.2	18.5	19.4	18.5	18.0	15.1	18.5	18.5	13.4	17.5	12.9	13.2
E	21.5	15.1	14.0	13.7	16.4	16.7	14.2	20.7	38.2	32.3	27.2	21.8
NE	32.3	27.2	24.5	22.8	26.6	22.0	17.2	18.0	16.4	29.8	34.1	30.6
N	7.5	5.1	6.7	2.7	15.6	23.9	17.7	12.9	11.8	2.4	5.6	6.2

DAILY TIME RANGES (HOURS)

WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5								0.3				
7.5-9.0								0.5				
6.0-7.5					0.3	0.3	0.3	1.3	0.8			0.3
4.5-6.0	3.8	1.1	0.5	1.3	10.2	16.7	13.2	9.7	3.5	2.4	4.8	4.3
3.0-4.5	33.6	32.5	29.0	23.9	48.7	51.3	36.8	38.2	22.8	14.5	18.0	25.5
1.5-3.0	37.9	37.9	43.3	42.2	26.9	27.4	42.2	42.2	50.8	57.3	54.0	38.2
0.5-1.5	16.4	13.2	12.1	16.7	9.4	4.0	7.5	7.8	19.1	24.5	17.5	23.1
CALMS	8.3	15.3	15.1	15.9	4.6	0.3			3.0	1.3	5.6	8.6





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/5/85 TO 31/5/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 5.85 TO 31. 5.85 INCLUSIVE.

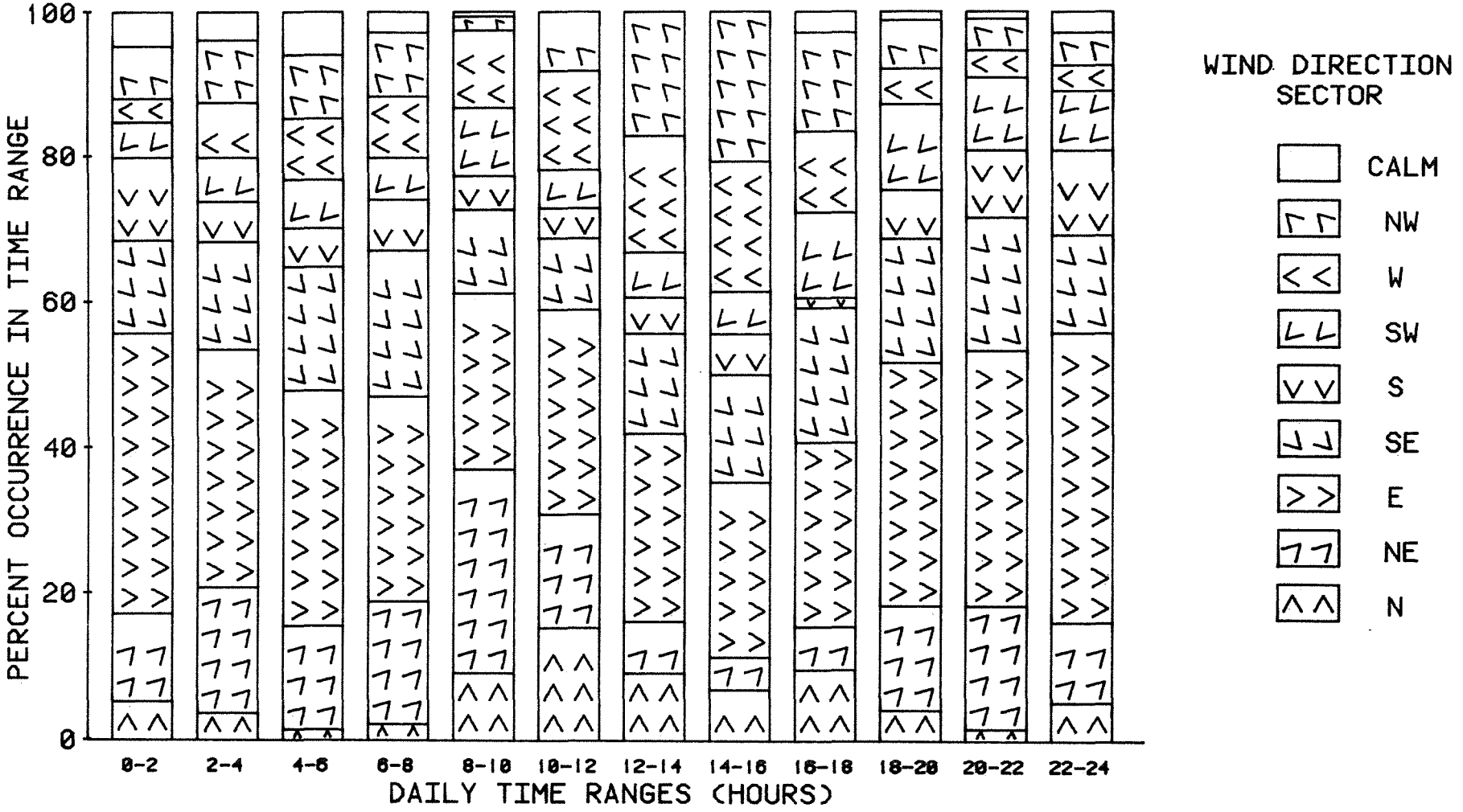
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0																	0.0
9.0 - 10.5																	0.0
7.5 - 9.0																	0.0
6.0 - 7.5													0.2				0.3
4.5 - 6.0	0.6	0.5	1.1	0.3	0.1	1.3	0.3	0.4			0.2	0.5	0.2	0.3	0.1	0.1	6.0
3.0 - 4.5	1.4	5.2	3.9	3.8	2.0	4.0	2.6	1.8	0.2	0.5	0.5	0.4	1.2	1.4	0.8	1.3	31.2
1.5 - 3.0	1.6	4.8	4.8	5.6	6.6	4.4	4.0	1.4	0.7	0.5	0.3	0.5	1.1	2.1	1.6	1.7	41.7
0.5 - 1.5	0.5	1.4	1.9	1.2	1.2	1.0	1.4	1.4	1.4	0.7	0.4	0.3	0.3	0.3	0.6	0.3	14.3
TOTALS	4.1	12.0	11.6	10.9	10.0	10.6	8.4	5.0	2.4	1.7	1.4	1.7	3.1	4.2	3.0	3.4	

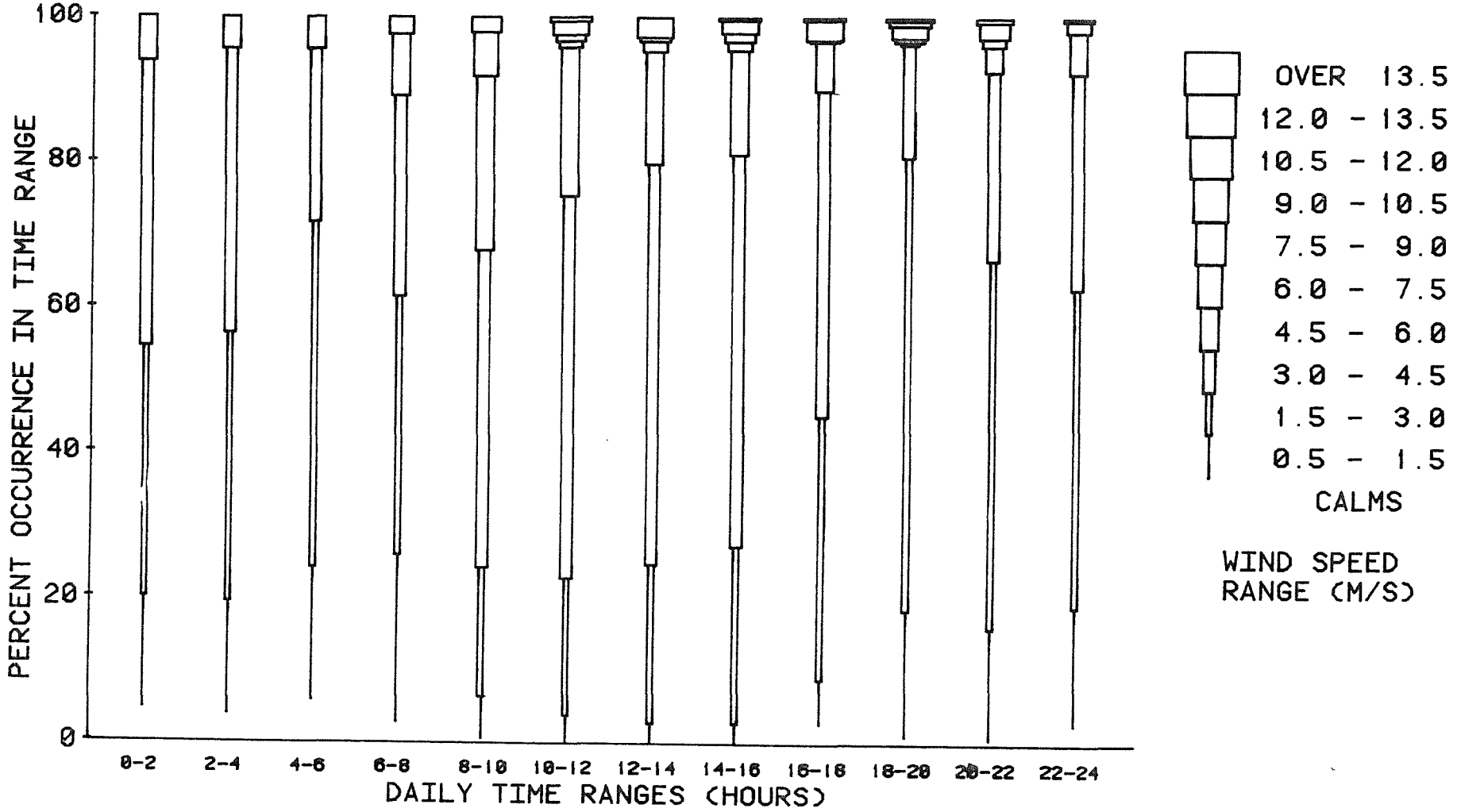
CALMS (LESS THAN 0.5 M/S): 6.5%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	2.6	1.3	9.7
NORTHERLY COMPONENT	0.5	1.9	6.3
EASTERLY COMPONENT	1.0	1.9	-9.2



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/85 TO 30/4/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/85 TO 30/4/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 4.85 TO 30. 4.85 INCLUSIVE.
DATA RECOVERY: 100.0%

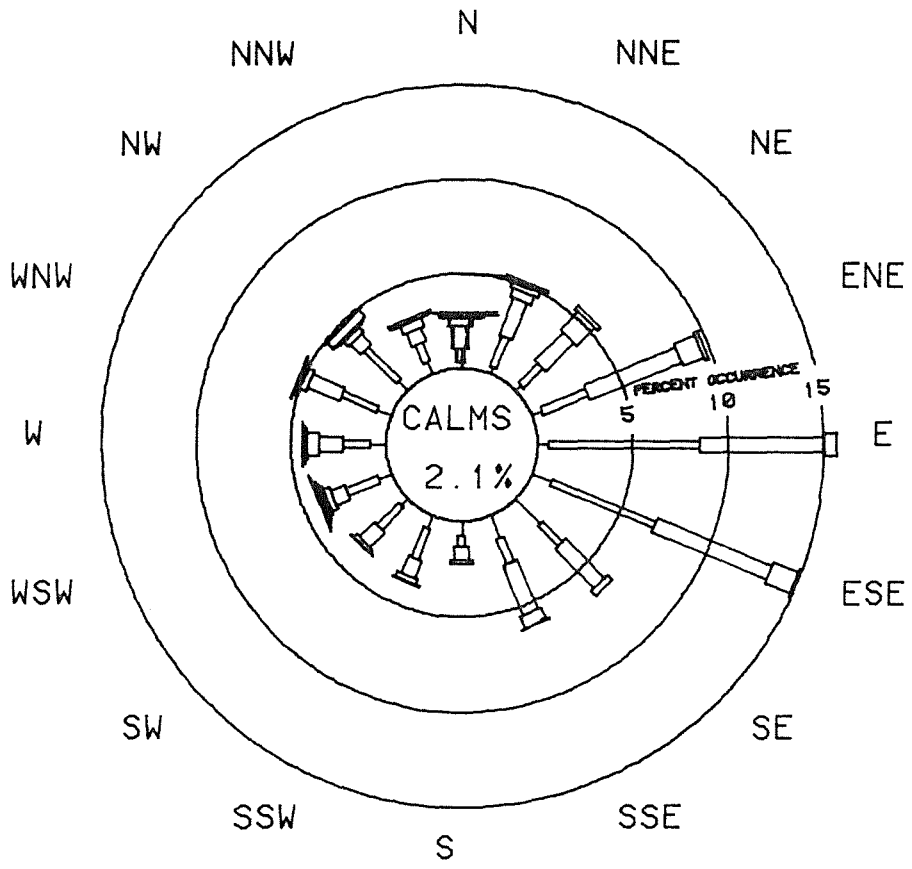
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

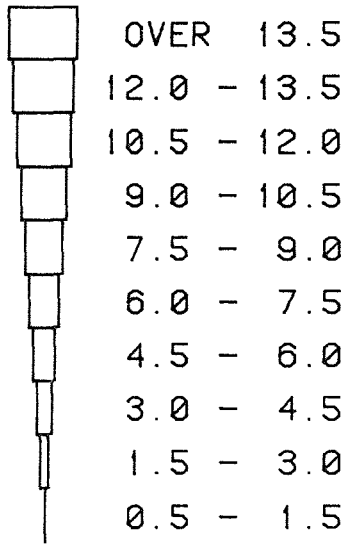
DAILY TIME RANGES (HOURS)

DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	4.7	3.9	5.8	2.8	0.6				2.8	1.1	0.8	2.8
NW	7.2	8.6	8.9	8.9	1.9	8.1	17.2	20.8	13.9	6.7	4.4	4.4
W	3.3	7.8	8.6	8.6	10.8	13.9	16.1	17.8	11.1	5.0	3.6	3.6
SW	5.0	6.1	6.7	5.8	9.4	5.3	6.1	5.8	11.7	11.9	10.3	8.3
S	11.4	5.6	5.3	6.9	4.7	4.2	5.0	5.6	1.4	6.7	9.2	11.7
SE	12.8	14.7	16.9	20.0	11.4	9.7	13.6	14.7	18.3	16.9	18.3	13.3
E	38.3	32.5	32.2	28.1	24.2	28.1	25.8	23.9	25.3	33.3	35.0	39.7
NE	11.9	17.2	14.2	16.7	27.8	15.6	6.9	4.4	5.8	14.2	16.7	10.8
N	5.3	3.6	1.4	2.2	9.2	15.3	9.2	6.9	9.7	4.2	1.7	5.3

DAILY TIME RANGES (HOURS)

WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5										0.3		
10.5-12						0.6		0.3	0.3	0.8		
9.-10.5						1.9	2.8	1.9	2.8	1.7	0.6	
7.5-9.0					2.2	0.8	0.6	1.1	0.3	0.6	2.2	0.3
6.0-7.5				2.5	5.8	0.8	1.4	1.1			1.1	1.7
4.5-6.0	6.1	4.4	4.4	8.3	24.2	20.6	15.6	14.4	6.7	0.3	3.3	5.6
3.0-4.5	39.4	39.2	23.9	27.8	43.6	52.5	55.0	53.9	44.7	15.6	26.1	29.7
1.5-3.0	34.4	36.9	47.5	35.6	17.8	18.9	21.9	24.4	36.4	62.2	50.6	43.6
0.5-1.5	15.3	15.6	18.3	23.1	5.8	3.9	2.8	2.8	6.1	17.5	15.3	16.4
CALMS	4.7	3.9	5.8	2.8	0.6				2.8	1.1	0.8	2.8





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/4/85 TO 30/4/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 4.85 TO 30. 4.85 INCLUSIVE.

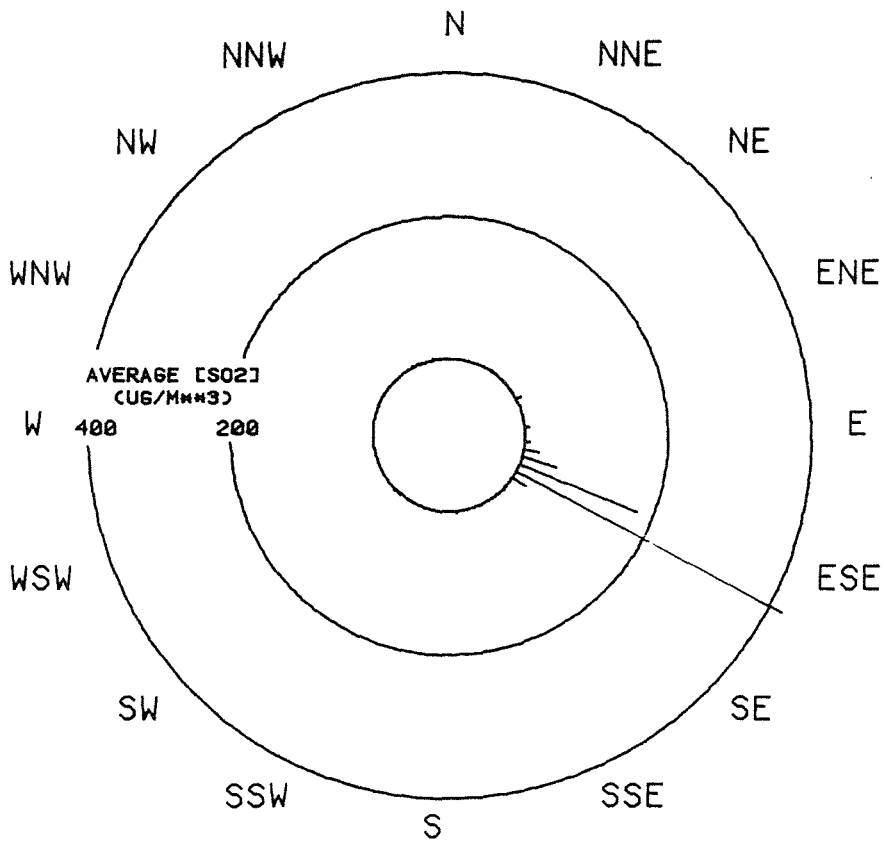
*** WIND SPEED - WIND DIRECTION PERCENTAGE OCCURRENCE MATRIX ***

WIND SPEED RANGE (M/S)	WIND DIRECTION SECTOR																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
OVER 13.5																	0.0
12.0 - 13.5																	0.0
10.5 - 12.0												0.1					0.2
9.0 - 10.5	0.2											0.1			0.4	0.2	1.0
7.5 - 9.0		0.2										0.1	0.2		0.1		0.7
6.0 - 7.5		0.3	0.2	0.2		0.1						0.2	0.1				1.2
4.5 - 6.0	0.4	0.5	1.3	1.2	0.7	1.4	0.3	0.6	0.2	0.3	0.2	0.4	0.6	0.5	0.4	0.5	9.5
3.0 - 4.5	1.2	2.1	2.1	5.2	6.5	6.5	2.9	2.8	0.7	1.0	1.1	0.8	1.2	1.9	0.8	0.8	37.6
1.5 - 3.0	0.7	1.7	1.4	2.6	8.0	5.9	1.5	1.4	0.6	1.7	1.6	1.8	1.4	2.0	2.4	1.1	35.9
0.5 - 1.5	0.3	0.3	0.4	0.6	0.5	1.1	1.9	1.3	0.8	0.7	0.5	0.7	0.8	0.7	0.6	0.7	11.9
TOTALS	3.0	5.2	5.5	9.7	15.7	14.9	6.6	6.2	2.2	3.7	3.4	4.1	4.4	5.2	4.8	3.2	

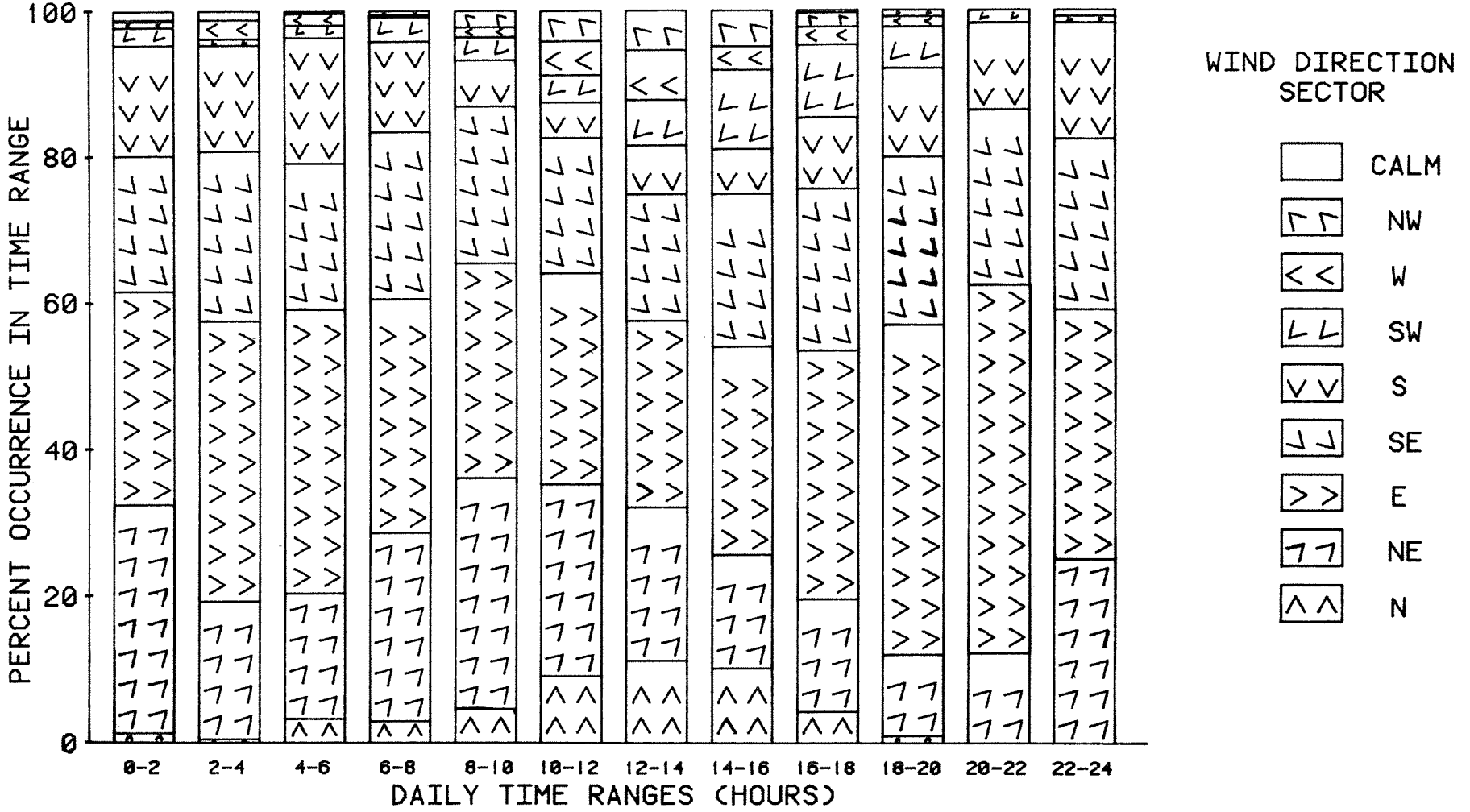
CALMS (LESS THAN 0.5 M/S): 2.1%
DATA RECOVERY: 100.0%

*** SUMMARY STATISTICS ***

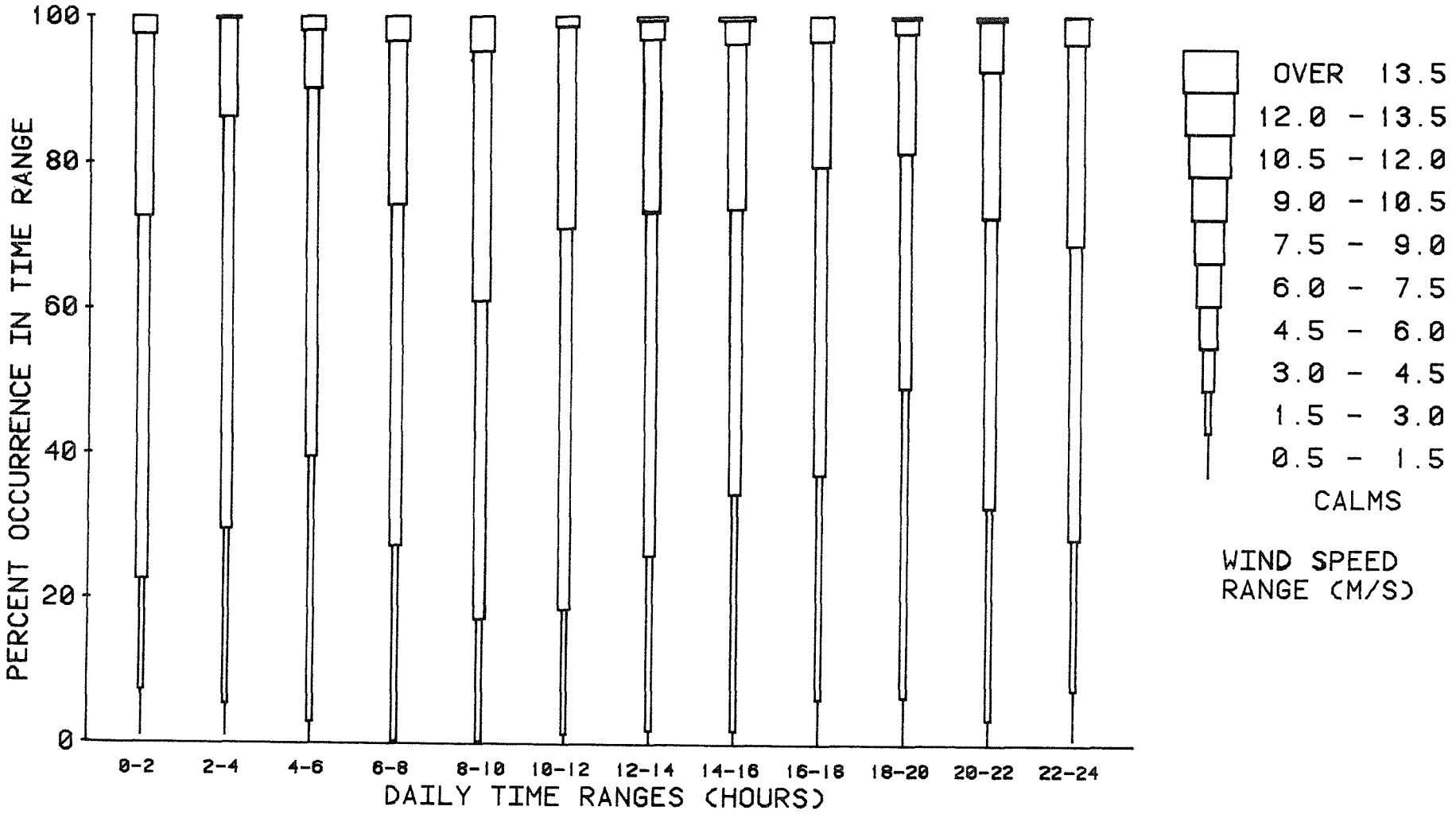
	MEAN (M/S)	STD. DEV. (M/S)	MAX. (M/S)
SCALAR WIND SPEED	3.1	1.5	12.6
NORTHERLY COMPONENT	0.1	2.2	10.6
EASTERLY COMPONENT	1.0	2.5	-11.2



SO2 POLLUTION ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 17.7%



WIND DIRECTION TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%



WIND SPEED TIME HISTOGRAM FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%

SITE - KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1. 3.85 TO 31. 3.85 INCLUSIVE.
DATA RECOVERY: 100.0%

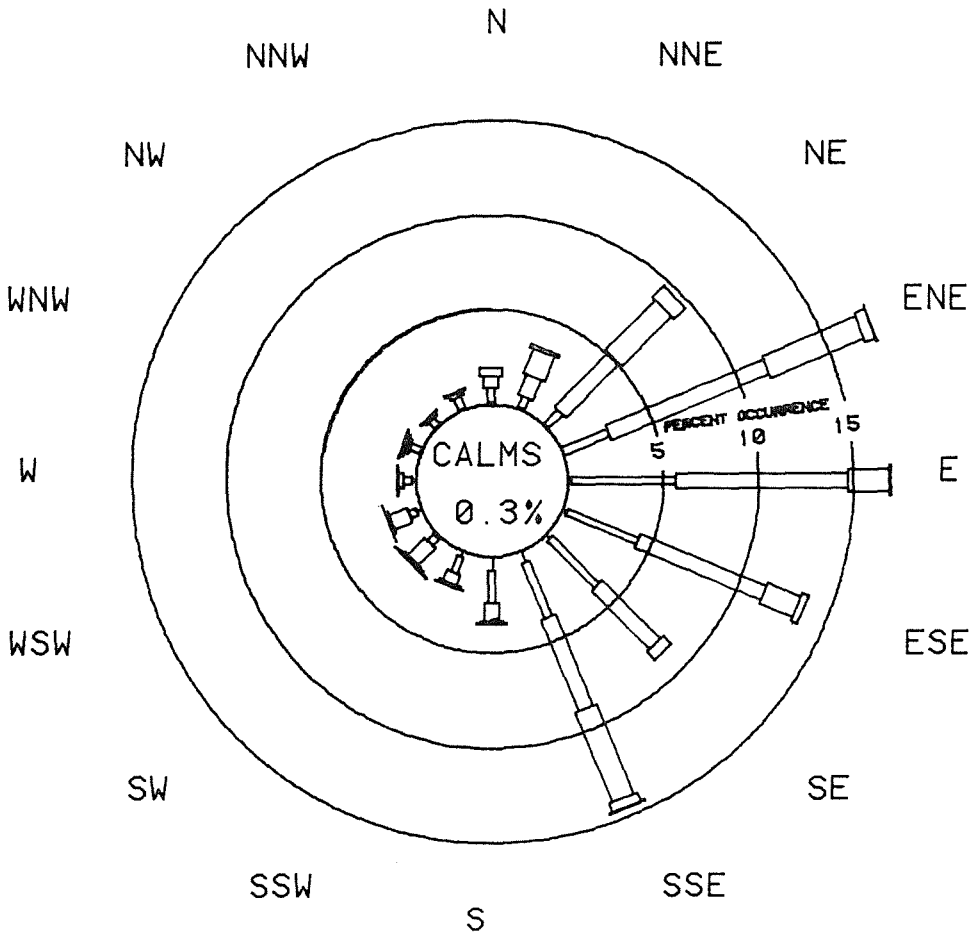
*** WIND DIRECTION AND WIND SPEED PERCENTAGE OCCURRENCE MATRICES ***
(RELATIVE FREQUENCY WITHIN TIME RANGE)

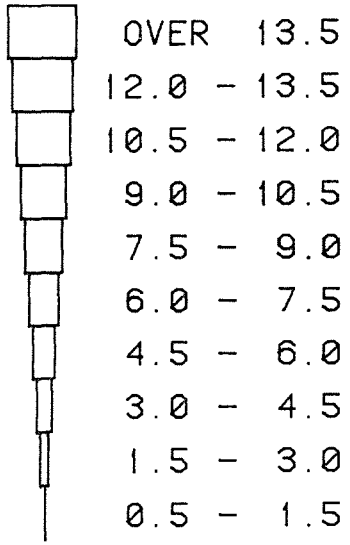
DAILY TIME RANGES (HOURS)

DIRECTION SECTOR	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
CALM	1.1	1.1							0.3			0.8
NW	0.3		0.3	0.5	2.2	4.0	5.4	4.8	1.9	0.8		
W	0.8	2.7	1.6	0.3	1.3	4.8	7.0	3.2	2.4	1.3		
SW	2.4	0.8	1.6	3.2	3.2	3.8	6.2	11.0	10.2	5.6	1.6	0.8
S	15.3	14.8	17.5	12.6	6.5	4.8	6.7	6.2	9.7	12.4	12.1	16.1
SE	18.5	23.1	19.9	22.8	21.5	18.5	17.2	20.7	22.0	22.8	23.9	23.1
E	29.3	38.2	38.7	32.0	29.3	28.8	25.5	28.5	33.9	44.9	50.0	34.1
NE	30.9	18.8	17.2	25.5	31.5	26.1	20.7	15.3	15.3	11.0	12.4	25.0
N	1.3	0.5	3.2	3.0	4.6	9.1	11.3	10.2	4.3	1.1		

DAILY TIME RANGES (HOURS)

WIND SPEED RANGE(M/S)	0- 2	2- 4	4- 6	6- 8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
> 13.5												
12-13.5												
10.5-12												
9.-10.5								0.5				
7.5-9.0							0.5			0.3	0.5	
6.0-7.5	2.4	0.3	1.9	3.2	4.6	1.3	2.4	3.0	3.2	1.9	6.7	3.5
4.5-6.0	25.0	13.4	7.8	22.6	34.4	27.7	23.9	22.8	17.2	16.4	20.2	27.7
3.0-4.5	50.0	56.7	50.8	46.8	43.8	52.4	47.0	39.0	42.2	32.3	39.8	40.3
1.5-3.0	15.3	24.2	36.6	27.2	16.9	17.2	24.2	32.8	31.2	42.7	29.3	21.0
0.5-1.5	6.2	4.3	3.0	0.3	0.3	1.3	1.9	1.9	5.9	6.5	3.5	6.7
CALMS	1.1	1.1							0.3			0.8





WIND ROSE FOR KALGOORLIE TECHNICAL SCHOOL
DATA PERIOD: 1/3/85 TO 31/3/85
SAMPLING TIME: 10 MINUTES
DATA RECOVERY: 100.0%