



UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MANIZALES

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES



ESTACIÓN METEOROLÓGICA POSGRADOS

CÓDIGO: EMM-02

AGOSTO DE 2011

RESUMEN DIARIO Y MENSUAL DE VARIABLES METEOROLÓGICAS

Variables Día	Temperatura del Aire (°C)			V.V. (m/s)		P.B. (HPa)	Humedad Relativa (%)			LI. (mm)	Radiación Solar (W/m ²)		ET. (mm)
	Máxima	Media	Mínima	Máxima	Media	Media	Máxima	Media	Mínima	Suma	Máxima	Media	Suma
1	26.4	17.3	11.9	4.5	0.9	793.9	100.0	85.3	57.0	0.0	1257.0	522.8	3.8
2	23.6	16.0	13.1	3.6	1.1	793.4	100.0	91.2	66.0	15.2	1197.0	297.7	2.0
3	25.4	16.2	13.3	3.6	1.0	793.5	100.0	92.7	64.0	2.5	1224.0	317.8	2.0
4	24.5	17.4	12.0	4.0	1.0	793.6	100.0	87.7	63.0	0.0	1182.0	413.7	3.1
5	28.9	19.1	13.6	4.5	0.9	794.3	100.0	77.9	46.0	7.6	1199.0	530.7	4.3
6	29.2	18.8	13.2	4.0	1.3	793.9	90.0	71.2	37.0	0.0	1229.0	470.2	3.8
7	26.1	18.3	13.3	4.9	1.4	794.4	94.0	76.4	45.0	0.0	1127.0	403.7	3.6
8	27.8	19.2	12.7	6.7	1.3	794.5	92.0	70.1	42.0	0.0	1158.0	575.2	5.1
9	26.6	18.0	13.7	3.6	0.9	794.3	94.0	78.6	46.0	0.0	1281.0	297.5	2.3
10	28.0	19.1	13.1	4.0	1.1	793.7	97.0	76.7	42.0	0.0	1290.0	555.0	4.6
11	25.4	17.5	13.5	3.1	0.8	793.5	94.0	82.3	53.0	0.0	1081.0	281.0	2.3
12	21.8	16.1	14.1	3.1	0.4	793.6	100.0	94.4	70.0	1.5	808.0	205.9	1.5
13	25.9	16.8	12.7	3.1	0.9	793.2	100.0	91.9	68.0	2.5	979.0	315.1	2.3
14	25.6	17.3	13.1	3.1	0.6	792.8	100.0	88.3	56.0	0.8	1127.0	336.0	2.5
15	22.9	17.3	13.9	2.7	0.4	793.3	100.0	92.8	73.0	6.9	1107.0	220.1	1.5
16	24.4	17.2	14.1	3.1	0.7	794.2	100.0	90.1	62.0	5.3	803.0	302.2	2.3
17	25.6	16.8	13.1	3.6	0.8	794.3	99.0	86.9	55.0	2.0	973.0	350.1	2.5
18	27.2	17.8	12.8	4.5	1.2	793.8	100.0	86.4	46.0	9.1	1274.0	588.8	4.3
19	24.3	17.0	12.4	4.5	0.9	793.5	100.0	88.0	54.0	2.0	1243.0	447.4	3.3
20	20.9	15.4	12.7	4.0	0.6	793.9	100.0	96.8	79.0	16.3	1083.0	233.8	1.5
21	22.3	15.6	11.8	3.1	1.0	794.3	100.0	97.6	73.0	1.5	1234.0	331.2	2.3
22	25.6	17.3	12.8	3.1	0.7	794.3	100.0	88.6	55.0	0.0	1173.0	379.5	2.8
23	24.6	16.3	13.5	6.7	0.7	794.1	100.0	93.5	67.0	24.1	1261.0	298.6	2.0
24	22.2	15.5	12.4	3.6	0.5	794.6	100.0	95.4	72.0	2.5	847.0	296.3	1.8
25	26.4	17.5	12.3	3.6	1.1	795.0	100.0	84.2	57.0	0.0	1371.0	432.0	3.3
26	24.7	17.3	13.1	4.0	1.3	795.4	96.0	82.6	50.0	0.5	1073.0	389.0	3.0
27	27.0	18.1	12.8	3.1	0.8	794.7	100.0	83.3	49.0	1.5	1335.0	392.3	3.0
28	23.7	16.5	13.6	3.6	0.8	794.4	100.0	91.4	69.0	25.4	1275.0	361.5	2.5
29	26.2	17.5	13.3	3.6	1.0	794.1	100.0	86.1	58.0	0.0	1229.0	381.7	2.8
30	28.0	19.0	12.8	4.0	1.2	793.6	97.0	75.0	40.0	0.0	1169.0	586.7	4.8
31	28.3	19.0	14.2	4.5	1.3	793.9	96.0	76.1	44.0	0.0	1323.0	414.4	3.3
Mensual	29.2	17.4	11.8	6.7	0.9	794.0	100.0	85.8	37.0	127.5	1371.0	384.8	90.5

Convenciones: V.V.: Velocidad del Viento P.B.: Presión Barométrica LI.: Lluvia diaria ET.: Evapotranspiración. Nota: Datos resaltados en rojo están incompletos.



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JORNADA DIURNA - DIRECCIÓN DEL VIENTO SEGÚN LA ROSA DE LOS VIENTOS (Frecuencia relativa)

Día	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	4%	1%	1%	3%	13%	2%	2%	1%	6%	11%	13%	13%	10%	6%	10%	5%
2	3%	2%	2%	6%	16%	12%	9%	4%	2%	6%	5%	10%	8%	6%	6%	3%
3	9%	3%	3%	3%	17%	10%	3%	5%	2%	2%	1%	5%	9%	7%	13%	8%
4	15%	6%	1%	3%	9%	3%	0%	1%	1%	1%	6%	5%	7%	8%	19%	14%
5	5%	2%	1%	1%	8%	6%	8%	4%	5%	2%	8%	13%	10%	5%	12%	10%
6	12%	2%	1%	11%	7%	3%	3%	3%	11%	2%	7%	6%	3%	8%	7%	14%
7	19%	10%	1%	1%	8%	1%	8%	2%	1%	3%	4%	6%	6%	8%	10%	14%
8	3%	1%	2%	4%	9%	5%	1%	3%	3%	4%	14%	17%	8%	9%	10%	6%
9	6%	7%	1%	1%	8%	3%	1%	2%	15%	15%	6%	6%	6%	8%	11%	6%
10	8%	5%	1%	4%	6%	2%	1%	1%	3%	3%	4%	12%	8%	15%	16%	11%
11	10%	3%	1%	3%	12%	3%	1%	2%	3%	3%	3%	10%	6%	7%	24%	9%
12	6%	8%	10%	1%	3%	1%	1%	1%	2%	1%	4%	9%	6%	16%	19%	10%
13	6%	1%	3%	5%	15%	4%	4%	5%	6%	12%	4%	6%	8%	6%	7%	8%
14	4%	0%	0%	1%	7%	4%	4%	4%	13%	6%	5%	11%	9%	8%	15%	9%
15	18%	5%	3%	1%	1%	2%	1%	1%	6%	8%	4%	8%	6%	15%	12%	10%
16	3%	1%	3%	6%	6%	3%	4%	5%	12%	7%	4%	3%	7%	12%	14%	9%
17	2%	0%	6%	1%	12%	7%	13%	6%	10%	5%	5%	5%	6%	9%	10%	3%
18	2%	1%	3%	3%	0%	5%	6%	1%	10%	8%	8%	10%	9%	8%	15%	11%
19	8%	1%	3%	1%	4%	3%	3%	2%	2%	2%	6%	10%	7%	13%	27%	8%
20	6%	1%	6%	1%	7%	0%	8%	2%	12%	12%	5%	5%	6%	8%	15%	8%
21	8%	2%	9%	6%	13%	3%	0%	1%	10%	5%	8%	6%	10%	6%	8%	5%
22	10%	3%	2%	2%	11%	5%	7%	1%	2%	5%	5%	8%	10%	9%	13%	8%
23	7%	10%	3%	8%	3%	1%	2%	1%	13%	3%	3%	10%	6%	6%	13%	11%
24	6%	0%	3%	3%	15%	8%	4%	0%	1%	10%	3%	6%	8%	12%	13%	7%
25	10%	3%	1%	2%	11%	6%	4%	0%	1%	1%	3%	10%	11%	10%	11%	16%
26	19%	6%	5%	0%	8%	8%	3%	1%	1%	3%	4%	3%	5%	3%	12%	19%
27	5%	3%	1%	4%	7%	10%	2%	6%	6%	4%	6%	8%	7%	11%	10%	10%
28	8%	4%	5%	1%	3%	3%	3%	2%	6%	8%	4%	8%	8%	12%	10%	15%
29	8%	1%	2%	1%	1%	3%	6%	4%	0%	8%	6%	13%	10%	7%	19%	12%
30	10%	1%	1%	0%	10%	6%	2%	1%	2%	7%	6%	9%	8%	9%	15%	12%
31	12%	4%	3%	7%	3%	1%	2%	1%	6%	7%	7%	8%	5%	8%	15%	12%
Mensual	8%	3%	3%	3%	8%	4%	4%	2%	6%	6%	6%	8%	8%	9%	13%	10%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	NNO	ONO	OSO	E	N	O	SSO	S	SO	ESE	SE	NNE	ENE	NE	SSE
F. R.	13%	10%	9%	8%	8%	8%	8%	6%	6%	6%	4%	4%	3%	3%	3%	2%

Convenciones: R. V.: Rosa de los Vientos F. R.: Frecuencia Relativa. Nota: Datos resaltados en rojo están incompletos.



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JORNADA NOCTURNA - DIRECCIÓN DEL VIENTO SEGÚN LA ROSA DE LOS VIENTOS (Frecuencia relativa)

DÍA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	0%	0%	4%	25%	43%	15%	4%	0%	0%	0%	0%	8%	0%	1%	0%	0%
2	0%	0%	3%	11%	48%	28%	10%	0%	0%	0%	0%	0%	0%	0%	1%	0%
3	1%	1%	5%	15%	62%	14%	1%	0%	0%	0%	0%	1%	0%	0%	0%	1%
4	3%	1%	1%	10%	62%	21%	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%
5	1%	0%	3%	11%	19%	12%	23%	8%	8%	1%	1%	2%	6%	2%	3%	1%
6	0%	0%	2%	5%	63%	22%	7%	1%	1%	0%	0%	0%	0%	0%	0%	0%
7	1%	2%	2%	12%	63%	10%	6%	1%	0%	0%	0%	0%	0%	2%	2%	0%
8	0%	1%	2%	14%	53%	18%	6%	1%	0%	2%	1%	0%	0%	1%	0%	2%
9	0%	0%	3%	9%	56%	20%	3%	0%	0%	3%	1%	2%	1%	0%	3%	0%
10	0%	0%	3%	11%	53%	17%	8%	0%	1%	1%	0%	0%	1%	3%	0%	0%
11	1%	3%	3%	8%	56%	20%	4%	2%	0%	0%	1%	0%	0%	0%	1%	1%
12	1%	9%	13%	13%	36%	6%	1%	0%	2%	0%	0%	1%	3%	13%	3%	1%
13	0%	0%	5%	10%	67%	11%	1%	0%	0%	1%	0%	0%	5%	0%	0%	0%
14	4%	1%	1%	7%	46%	11%	4%	3%	1%	5%	3%	1%	1%	0%	9%	2%
15	3%	2%	3%	15%	26%	3%	1%	0%	2%	6%	1%	10%	5%	7%	10%	7%
16	0%	1%	7%	19%	47%	11%	1%	1%	6%	0%	0%	2%	1%	0%	3%	0%
17	0%	0%	1%	12%	51%	30%	5%	1%	0%	0%	0%	0%	0%	0%	0%	0%
18	10%	8%	10%	8%	23%	19%	9%	3%	1%	1%	2%	1%	1%	1%	1%	2%
19	14%	8%	4%	8%	21%	20%	6%	1%	0%	1%	0%	3%	3%	2%	4%	3%
20	0%	2%	6%	16%	61%	12%	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%
21	0%	0%	3%	12%	59%	18%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22	10%	6%	8%	12%	31%	15%	3%	0%	0%	3%	0%	1%	1%	3%	1%	6%
23	3%	8%	5%	3%	9%	13%	18%	6%	6%	13%	5%	3%	0%	2%	2%	3%
24	1%	0%	1%	11%	35%	19%	18%	1%	0%	3%	1%	3%	1%	1%	3%	1%
25	4%	5%	1%	10%	63%	16%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
26	0%	0%	2%	5%	72%	19%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%
27	6%	2%	1%	6%	34%	34%	8%	0%	0%	1%	2%	1%	3%	1%	1%	0%
28	12%	4%	2%	7%	30%	13%	3%	1%	0%	1%	1%	10%	1%	3%	6%	5%
29	0%	0%	2%	4%	60%	24%	3%	0%	6%	0%	0%	0%	1%	0%	0%	0%
30	0%	0%	1%	4%	54%	30%	6%	1%	0%	0%	0%	0%	0%	3%	1%	0%
31	2%	1%	3%	8%	67%	16%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Mensual	3%	2%	4%	10%	47%	17%	6%	1%	1%	1%	1%	2%	1%	1%	2%	1%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ESE	ENE	SE	NE	N	NNE	NO	OSO	ONO	SSO	NNO	O	S	SSE	SO
F. R.	47%	17%	10%	6%	4%	3%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%

Convenciones: R. V.: Rosa de los Vientos F. R.: Frecuencia Relativa. Nota: Datos resaltados en rojo están incompletos.