



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

SEPTIEMBRE 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	27.2	18.8	13.7	4.0	1.1	794.3	95.0	70.4	37.0	0.0	1001.0	432.9	3.5
2	23.4	17.0	12.2	4.9	1.4	794.7	94.0	76.2	47.0	0.0	1360.0	378.0	3.3
3	22.6	15.9	12.4	3.6	0.9	795.0	96.0	86.8	63.0	0.5	1019.0	292.5	2.0
4	25.7	16.4	11.9	3.1	1.0	794.6	97.0	82.6	51.0	0.5	1319.0	316.6	2.5
5	28.2	18.4	11.9	3.6	1.2	794.1	96.0	74.7	40.0	0.0	1247.0	597.2	4.6
6	25.6	17.4	12.8	3.6	0.9	794.1	98.0	83.0	51.0	0.0	1154.0	360.1	2.8
7	23.9	16.7	13.6	3.1	0.6	794.4	100.0	88.6	65.0	3.0	976.0	262.9	2.0
8	22.5	15.3	12.4	3.6	0.5	795.5	100.0	94.6	71.0	16.0	805.0	309.7	1.8
9	27.7	16.4	12.0	4.0	0.9	794.8	100.0	86.9	53.0	26.9	936.0	401.0	2.8
10	27.6	16.8	11.6	4.0	0.9	794.2	100.0	89.1	55.0	19.8	1235.0	562.6	3.8
11	25.7	16.0	12.4	3.1	0.7	795.4	100.0	93.5	61.0	2.3	1170.0	305.7	2.3
12	25.3	16.7	13.4	3.6	1.0	796.0	100.0	88.7	59.0	4.6	1007.0	276.2	1.8
13	26.3	18.2	13.4	4.5	1.3	795.1	93.0	76.8	45.0	0.0	1317.0	440.3	4.1
14	26.6	17.8	12.9	3.6	1.1	793.9	97.0	83.1	54.0	0.3	1302.0	411.5	3.0
15	25.4	17.7	13.3	3.6	0.9	794.2	98.0	81.7	51.0	0.3	1296.0	320.9	2.8
16	20.9	16.0	13.6	4.0	0.7	794.5	100.0	94.4	82.0	1.8	1201.0	232.4	1.5
17	23.6	16.2	13.1	2.7	0.5	794.3	100.0	94.4	65.0	3.8	1296.0	315.7	2.0
18	21.1	15.3	13.2	2.2	0.5	795.2	100.0	97.8	84.0	25.4	1065.0	272.1	1.5
19	22.7	16.2	12.3	2.7	0.5	794.3	100.0	95.8	77.0	1.3	1329.0	316.2	2.0
20	23.9	16.4	13.4	4.0	0.7	794.4	100.0	91.4	61.0	17.8	1342.0	295.2	2.0
21	24.8	18.0	12.7	3.6	0.9	794.3	100.0	84.9	57.0	0.0	1254.0	414.9	3.0
22	24.4	17.7	14.0	4.0	0.7	794.4	100.0	89.5	65.0	1.0	1109.0	345.9	2.3
23	25.6	17.0	14.2	4.0	1.1	794.5	100.0	91.5	60.0	15.5	1146.0	308.6	2.3
24	24.3	15.8	13.2	4.9	1.0	793.9	100.0	97.1	69.0	16.8	1199.0	308.1	2.3
25	20.8	15.8	13.2	2.7	0.5	794.0	100.0	96.2	79.0	4.8	850.0	210.5	1.3
26	25.4	17.3	13.4	4.5	0.8	794.8	100.0	89.0	55.0	0.5	1376.0	375.5	2.8
27	28.4	19.1	12.7	3.6	1.2	794.8	98.0	75.2	43.0	0.0	1226.0	570.7	4.8
28	27.6	18.2	13.5	3.1	0.9	794.3	97.0	83.6	51.0	0.0	1127.0	432.0	3.3
29	25.1	16.7	13.2	4.5	0.9	793.4	100.0	90.8	63.0	1.5	1085.0	307.5	2.0
30	26.2	17.9	12.6	4.0	1.0	793.2	98.0	84.2	55.0	0.0	1199.0	430.0	3.0
Mensual	28.4	17.0	11.6	4.9	0.9	794.5	100.0	87.1	37.0	164.3	1376.0	360.1	79.5

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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SEPTIEMBRE DE 2011

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	6%	0%	5%	1%	11%	0%	1%	2%	3%	5%	8%	7%	8%	11%	20%	11%
2	15%	6%	3%	6%	17%	5%	1%	0%	1%	1%	3%	6%	4%	9%	8%	15%
3	19%	10%	3%	4%	9%	1%	3%	0%	2%	8%	1%	8%	6%	10%	10%	6%
4	10%	5%	4%	3%	10%	5%	3%	1%	7%	6%	1%	6%	7%	5%	17%	13%
5	6%	2%	1%	1%	11%	6%	3%	3%	5%	8%	6%	7%	9%	14%	13%	6%
6	6%	1%	1%	3%	7%	3%	1%	3%	7%	8%	6%	10%	8%	15%	11%	10%
7	4%	4%	2%	3%	9%	3%	7%	1%	11%	11%	3%	6%	11%	4%	10%	9%
8	6%	1%	3%	2%	1%	1%	3%	8%	6%	12%	7%	17%	13%	3%	10%	7%
9	1%	1%	2%	3%	13%	9%	2%	3%	18%	10%	11%	6%	1%	9%	8%	4%
10	8%	2%	2%	1%	19%	3%	4%	3%	4%	3%	3%	10%	6%	7%	10%	13%
11	8%	6%	6%	9%	0%	1%	1%	4%	1%	1%	6%	6%	6%	14%	22%	10%
12	22%	8%	15%	1%	10%	2%	1%	4%	5%	4%	4%	2%	2%	3%	3%	13%
13	12%	6%	1%	5%	13%	6%	1%	1%	3%	4%	3%	3%	6%	9%	17%	10%
14	3%	3%	1%	3%	18%	8%	2%	7%	12%	5%	7%	7%	9%	5%	4%	4%
15	15%	10%	4%	6%	6%	1%	1%	1%	2%	7%	2%	4%	6%	8%	14%	14%
16	12%	16%	5%	1%	0%	1%	11%	1%	4%	6%	1%	8%	2%	7%	12%	12%
17	5%	1%	9%	3%	17%	6%	3%	0%	3%	14%	1%	6%	10%	3%	9%	8%
18	7%	1%	0%	2%	17%	4%	9%	2%	13%	6%	7%	6%	6%	8%	7%	7%
19	2%	2%	1%	4%	19%	3%	9%	1%	3%	8%	1%	11%	7%	8%	10%	10%
20	15%	8%	3%	1%	1%	0%	3%	2%	8%	3%	2%	9%	3%	9%	14%	19%
21	9%	1%	0%	4%	4%	6%	1%	1%	3%	1%	6%	13%	15%	12%	15%	11%
22	15%	1%	4%	1%	9%	4%	7%	5%	8%	6%	3%	5%	9%	8%	8%	8%
23	6%	1%	1%	5%	6%	10%	3%	6%	1%	1%	7%	6%	13%	8%	14%	10%
24	10%	1%	3%	3%	14%	7%	8%	9%	3%	3%	3%	8%	5%	7%	12%	4%
25	4%	0%	10%	10%	12%	6%	1%	0%	0%	3%	2%	12%	15%	8%	11%	6%
26	13%	10%	1%	0%	7%	1%	0%	3%	3%	6%	14%	10%	6%	8%	9%	9%
27	3%	1%	1%	1%	10%	4%	1%	0%	6%	5%	9%	12%	13%	11%	13%	10%
28	24%	5%	5%	1%	6%	4%	1%	1%	4%	3%	4%	3%	6%	12%	7%	14%
29	2%	6%	3%	3%	14%	10%	6%	5%	9%	5%	5%	7%	9%	3%	10%	3%
30	13%	5%	6%	6%	8%	3%	0%	0%	1%	6%	2%	6%	7%	15%	17%	6%
Mensual	9%	4%	3%	3%	10%	4%	3%	3%	5%	6%	5%	8%	8%	8%	12%	9%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	E	NNO	N	ONO	O	OSO	SSO	S	SO	NNE	ESE	NE	SE	ENE	SSE
F. R.	12%	10%	9%	9%	8%	8%	8%	6%	5%	5%	4%	4%	3%	3%	3%	3%

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)

DIA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	0%	0%	2%	7%	55%	21%	8%	0%	2%	1%	0%	0%	0%	0%	5%	0%
2	0%	0%	1%	6%	63%	21%	6%	0%	0%	0%	0%	1%	0%	0%	4%	0%
3	3%	2%	3%	9%	61%	19%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%
4	4%	1%	2%	3%	51%	33%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%
5	0%	0%	1%	3%	61%	24%	5%	0%	0%	0%	0%	0%	1%	5%	1%	0%
6	0%	1%	0%	6%	51%	26%	8%	0%	0%	0%	0%	6%	1%	1%	0%	0%
7	0%	2%	2%	6%	51%	17%	8%	0%	2%	0%	4%	6%	1%	1%	0%	1%
8	1%	1%	3%	3%	27%	2%	6%	9%	5%	2%	6%	4%	22%	6%	0%	3%
9	0%	6%	8%	13%	35%	18%	10%	3%	5%	1%	0%	0%	0%	0%	0%	0%
10	1%	1%	7%	11%	26%	17%	17%	3%	1%	4%	3%	3%	0%	1%	1%	1%
11	1%	2%	8%	6%	57%	13%	8%	1%	0%	0%	0%	0%	0%	0%	4%	0%
12	1%	0%	1%	6%	59%	24%	5%	0%	0%	0%	0%	1%	0%	0%	1%	3%
13	1%	1%	1%	13%	60%	24%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14	0%	1%	5%	9%	53%	31%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15	0%	0%	1%	11%	54%	23%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16	8%	3%	10%	10%	43%	10%	6%	1%	0%	0%	0%	3%	1%	1%	3%	2%
17	3%	2%	3%	6%	40%	14%	4%	0%	1%	12%	0%	7%	2%	0%	0%	6%
18	1%	6%	15%	8%	28%	6%	7%	2%	8%	4%	3%	3%	4%	0%	1%	3%
19	0%	1%	3%	8%	55%	4%	0%	0%	7%	2%	13%	0%	3%	0%	4%	0%
20	1%	0%	2%	3%	40%	11%	3%	0%	19%	3%	6%	7%	1%	1%	4%	0%
21	1%	4%	15%	6%	38%	16%	1%	1%	0%	1%	0%	1%	1%	6%	4%	4%
22	0%	0%	0%	6%	35%	14%	4%	1%	7%	22%	4%	3%	3%	0%	0%	0%
23	0%	1%	8%	10%	56%	19%	5%	1%	0%	0%	0%	0%	0%	0%	0%	0%
24	0%	3%	4%	16%	43%	19%	8%	1%	0%	6%	0%	0%	0%	0%	0%	0%
25	6%	1%	8%	8%	43%	19%	7%	4%	0%	0%	0%	0%	0%	0%	3%	1%
26	3%	6%	1%	6%	55%	23%	1%	0%	0%	1%	3%	0%	0%	0%	0%	3%
27	0%	0%	1%	3%	52%	35%	6%	0%	0%	0%	0%	0%	0%	0%	3%	0%
28	0%	0%	0%	7%	53%	30%	7%	0%	1%	0%	0%	0%	0%	1%	1%	0%
29	0%	13%	1%	6%	50%	13%	1%	0%	0%	0%	0%	1%	6%	8%	1%	1%
30	0%	0%	1%	6%	51%	25%	11%	0%	0%	6%	0%	0%	0%	0%	0%	0%
Mensual	1%	2%	4%	7%	48%	19%	6%	1%	2%	2%	1%	2%	1%	1%	1%	1%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ESE	ENE	SE	NE	SSO	S	NNE	OSO	O	SO	NO	ONO	N	NNO	SSE
F. R.	48%	19%	7%	6%	4%	2%	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.