



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 ENEA

CÓDIGO: EMM-04

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	20.3	15.2	11.4	7.2	1.0	801.7	100.0	89.2	68.0	0.5	1069.0	472.1	3.3
2	20.6	15.0	12.1	3.6	0.4	801.1	100.0	91.2	68.0	16.3	1092.0	361.6	2.5
3	20.9	15.5	12.5	6.7	0.5	801.2	100.0	98.8	91.0	4.3	1020.0	349.6	2.0
4	21.6	16.4	11.9	5.4	0.8	801.3	100.0	85.5	66.0	0.0	1135.0	453.9	3.6
5	23.7	17.9	13.5	1.8	0.0	802.2	100.0	78.5	56.0	0.5	1099.0	490.7	3.8
6	24.0	17.2	12.2	4.5	0.4	801.8	88.0	72.7	45.0	0.0	1186.0	470.7	3.8
7	23.3	17.3	12.8	4.0	0.7	802.3	89.0	76.0	50.0	0.0	1024.0	371.1	3.0
8	23.9	17.3	12.2	5.4	0.7	802.3	91.0	72.6	47.0	0.0	1157.0	520.0	4.1
9	21.9	16.4	12.2	4.0	0.5	802.1	92.0	78.3	55.0	0.0	868.0	220.8	2.0
10	23.2	17.0	12.1	6.3	1.0	801.5	92.0	76.4	48.0	0.0	1137.0	523.0	4.1
11	22.6	16.3	12.2	6.7	0.6	801.2	90.0	79.6	57.0	0.0	1117.0	312.0	2.5
12	18.4	14.9	12.8	3.6	0.4	801.3	95.0	88.7	76.0	0.5	960.0	200.9	1.3
13	21.7	15.3	12.2	4.5	0.6	801.0	95.0	86.9	66.0	4.1	1108.0	329.0	2.3
14	19.7	15.6	12.8	5.8	0.6	800.5	98.0	87.0	65.0	2.5	1191.0	299.9	2.0
15	19.4	15.4	13.4	3.6	0.6	801.1	100.0	89.7	70.0	5.8	1121.0	234.2	1.8
16	20.9	15.3	12.7	3.6	0.5	802.0	97.0	86.9	61.0	1.3	792.0	264.8	2.0
17	22.2	15.4	12.3	4.9	0.9	802.0	98.0	86.1	59.0	7.6	1017.0	347.4	2.5
18	21.8	16.5	13.1	5.4	0.9	801.6	100.0	84.7	53.0	14.7	1328.0	465.4	3.5
19	21.8	16.2	12.4	5.8	1.0	801.3	100.0	85.0	57.0	10.2	1074.0	459.7	3.6
20	18.9	15.1	12.6	3.6	0.4	801.7	99.0	91.6	76.0	4.6	1026.0	233.8	1.5
21	18.4	14.8	11.4	4.9	0.7	801.9	99.0	91.3	72.0	3.3	959.0	305.3	2.3
22	20.2	16.3	12.4	5.4	0.6	801.9	97.0	87.1	69.0	0.0	850.0	293.6	2.3
23	21.6	15.8	13.4	5.4	0.5	801.8	100.0	92.2	71.0	8.6	1163.0	325.8	2.3
24	19.3	15.1	12.7	4.5	0.4	802.2	100.0	92.6	73.0	2.3	902.0	300.5	1.8
25	21.4	16.4	11.6	5.8	1.1	802.7	97.0	83.8	62.0	0.0	1140.0	395.3	3.3
26	22.2	16.3	12.2	4.9	1.0	803.2	93.0	80.9	55.0	0.3	1093.0	406.9	3.3
27	22.3	16.7	12.3	4.0	0.8	802.4	97.0	82.7	59.0	0.3	1129.0	342.9	2.8
28	20.9	16.1	13.4	4.5	0.4	802.2	100.0	90.1	69.0	2.5	1233.0	400.7	2.8
29	22.3	16.5	13.1	6.3	0.7	801.9	97.0	84.2	59.0	0.0	1144.0	419.5	3.3
30	23.6	17.1	11.6	6.3	1.1	801.4	90.0	76.1	47.0	0.0	975.0	579.1	4.6
31	23.3	17.9	14.4	4.0	0.6	801.8	92.0	75.4	47.0	0.0	1250.0	414.2	3.6
Mensual	24.0	16.1	11.4	7.2	0.7	801.8	100.0	84.6	45.0	90.2	1328.0	373.0	87.7

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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AGOSTO 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	17%	0%	1%	3%	2%	6%	5%	6%	1%	6%	3%	8%	4%	1%	6%	31%
2	8%	2%	5%	6%	7%	11%	16%	3%	0%	1%	4%	4%	3%	3%	5%	21%
3	8%	1%	0%	6%	5%	13%	10%	6%	1%	1%	4%	10%	4%	2%	8%	22%
4	7%	0%	0%	1%	1%	6%	6%	6%	2%	8%	8%	3%	3%	5%	13%	31%
5	16%	1%	1%	3%	3%	5%	13%	1%	1%	0%	0%	3%	4%	4%	10%	35%
6	11%	3%	0%	0%	2%	6%	12%	6%	8%	1%	5%	6%	4%	3%	6%	26%
7	10%	1%	0%	1%	1%	1%	11%	1%	1%	1%	7%	14%	8%	9%	13%	19%
8	9%	0%	1%	1%	3%	7%	4%	5%	1%	1%	3%	12%	8%	6%	13%	29%
9	20%	1%	1%	1%	3%	3%	5%	1%	0%	0%	14%	5%	8%	5%	6%	25%
10	14%	1%	0%	2%	3%	4%	6%	3%	0%	1%	1%	3%	6%	4%	13%	40%
11	11%	2%	2%	2%	1%	7%	10%	0%	0%	0%	3%	5%	6%	5%	8%	38%
12	14%	0%	0%	0%	1%	7%	8%	1%	1%	3%	9%	11%	4%	1%	6%	34%
13	21%	1%	2%	6%	3%	8%	13%	3%	2%	2%	2%	1%	1%	3%	6%	27%
14	15%	0%	0%	1%	11%	6%	3%	4%	1%	3%	8%	5%	10%	4%	7%	22%
15	19%	0%	0%	0%	0%	3%	8%	1%	8%	1%	2%	3%	4%	6%	13%	33%
16	6%	1%	0%	0%	0%	0%	3%	3%	1%	7%	13%	8%	16%	8%	13%	23%
17	9%	0%	3%	4%	4%	3%	10%	15%	7%	3%	3%	2%	3%	3%	8%	22%
18	12%	2%	1%	4%	2%	13%	6%	1%	1%	0%	2%	3%	3%	3%	11%	36%
19	26%	0%	0%	1%	2%	7%	1%	1%	0%	0%	0%	1%	3%	3%	8%	45%
20	35%	2%	6%	1%	8%	7%	8%	1%	0%	1%	0%	3%	2%	1%	8%	17%
21	14%	2%	1%	2%	4%	13%	17%	13%	0%	0%	1%	2%	3%	0%	6%	22%
22	13%	1%	0%	1%	1%	17%	7%	1%	2%	4%	5%	3%	4%	3%	6%	31%
23	8%	1%	17%	2%	1%	1%	3%	4%	11%	3%	3%	10%	3%	1%	6%	24%
24	8%	0%	0%	0%	0%	30%	1%	9%	2%	5%	4%	1%	1%	2%	9%	28%
25	15%	0%	0%	0%	2%	4%	14%	3%	0%	1%	12%	1%	4%	3%	8%	33%
26	22%	1%	1%	1%	3%	3%	8%	8%	0%	1%	3%	3%	1%	1%	11%	31%
27	15%	2%	1%	3%	2%	7%	5%	3%	1%	0%	3%	6%	3%	8%	10%	31%
28	30%	0%	1%	1%	0%	1%	1%	3%	0%	6%	12%	4%	5%	2%	8%	27%
29	15%	3%	0%	0%	0%	1%	5%	8%	0%	1%	2%	6%	1%	13%	13%	32%
30	26%	1%	0%	0%	0%	5%	5%	3%	1%	3%	2%	5%	3%	5%	7%	34%
31	22%	1%	0%	0%	0%	3%	3%	3%	3%	0%	7%	6%	9%	8%	10%	26%
Mensual	15%	1%	1%	2%	2%	7%	7%	4%	2%	2%	5%	5%	5%	4%	9%	29%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NNO	N	NO	SE	ESE	OSO	SO	O	ONO	SSE	E	SSO	ENE	S	NE	NNE
F. R.	29%	15%	9%	7%	7%	5%	5%	5%	4%	4%	2%	2%	2%	2%	1%	1%

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



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AGOSTO DE 2011

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%	1%	1%	3%	7%	24%	35%	18%	3%	6%	1%	0%	0%	0%	0%	0%
2	0%	0%	1%	3%	7%	20%	58%	11%	0%	0%	0%	0%	0%	0%	0%	0%
3	0%	0%	0%	3%	15%	35%	35%	6%	3%	1%	1%	1%	0%	0%	0%	0%
4	0%	0%	1%	3%	13%	35%	33%	11%	2%	1%	0%	0%	0%	0%	0%	0%
5	0%	1%	3%	7%	17%	24%	24%	11%	3%	1%	1%	1%	1%	4%	2%	1%
6	1%	0%	1%	6%	17%	27%	29%	15%	4%	1%	0%	0%	0%	0%	0%	0%
7	0%	0%	1%	8%	10%	34%	31%	8%	1%	0%	0%	0%	0%	6%	0%	0%
8	0%	0%	1%	8%	15%	22%	33%	13%	3%	0%	0%	5%	0%	0%	0%	0%
9	0%	0%	1%	6%	15%	33%	29%	10%	1%	1%	0%	0%	0%	0%	3%	1%
10	0%	0%	1%	8%	15%	29%	29%	13%	1%	0%	0%	0%	2%	0%	1%	0%
11	0%	0%	1%	2%	13%	30%	33%	14%	1%	0%	0%	0%	0%	0%	6%	1%
12	3%	2%	0%	1%	21%	19%	46%	2%	0%	0%	0%	1%	0%	0%	5%	0%
13	0%	0%	0%	8%	18%	37%	34%	3%	0%	0%	0%	0%	0%	0%	0%	0%
14	0%	0%	1%	4%	13%	21%	42%	4%	5%	1%	1%	0%	0%	0%	0%	9%
15	6%	6%	2%	5%	22%	28%	17%	8%	1%	1%	2%	1%	0%	0%	0%	1%
16	13%	2%	2%	1%	5%	14%	17%	13%	1%	1%	1%	0%	10%	2%	1%	15%
17	0%	0%	2%	8%	9%	26%	33%	19%	3%	0%	0%	0%	0%	0%	0%	0%
18	1%	1%	4%	8%	15%	22%	28%	6%	3%	0%	1%	1%	3%	2%	4%	1%
19	2%	1%	1%	6%	5%	23%	34%	6%	4%	4%	0%	1%	0%	0%	3%	11%
20	0%	0%	3%	10%	19%	30%	31%	4%	3%	0%	0%	0%	0%	0%	0%	0%
21	0%	1%	0%	3%	9%	26%	41%	13%	5%	1%	1%	1%	0%	0%	0%	0%
22	0%	0%	2%	4%	14%	21%	28%	2%	4%	4%	3%	3%	0%	1%	8%	5%
23	5%	1%	4%	4%	21%	29%	18%	5%	0%	1%	1%	1%	0%	0%	1%	10%
24	2%	0%	0%	4%	1%	7%	8%	51%	8%	0%	4%	2%	1%	3%	2%	6%
25	0%	0%	0%	4%	19%	26%	35%	6%	2%	1%	0%	0%	1%	0%	5%	1%
26	0%	0%	0%	6%	15%	29%	33%	15%	1%	0%	0%	0%	0%	0%	0%	0%
27	6%	1%	3%	7%	13%	23%	29%	14%	0%	1%	1%	1%	0%	0%	0%	1%
28	6%	1%	1%	4%	8%	19%	21%	8%	1%	2%	1%	9%	3%	1%	9%	4%
29	0%	0%	0%	2%	15%	34%	30%	13%	1%	1%	3%	0%	0%	0%	0%	0%
30	1%	0%	0%	1%	8%	19%	14%	14%	20%	13%	6%	2%	1%	1%	0%	0%
31	1%	0%	0%	0%	3%	5%	18%	33%	35%	5%	1%	0%	0%	0%	0%	0%
Mensual	1%	1%	1%	5%	13%	25%	30%	12%	4%	2%	1%	1%	1%	1%	2%	2%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SE	ESE	E	SSE	ENE	S	NNO	NO	SSO	N	NE	SO	OSO	O	ONO	NNE
F. R.	30%	25%	13%	12%	5%	4%	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.