



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 ARANJUEZ

CÓDIGO: EMM-07

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	24.8	18.9	14.4	4.5	1.4	814.9	86.0	63.5	37.0	0.0	1014.0	470.5	4.2
2	23.7	17.6	12.4	4.5	1.4	816.3	83.0	67.4	37.0	0.0	1222.0	428.8	3.8
3	21.5	16.7	12.9	4.5	1.0	817.4	86.0	76.2	62.0	0.0	1058.0	269.7	2.3
4	22.9	16.8	12.1	4.5	1.3	817.1	84.0	72.9	54.0	0.0	1076.0	282.1	2.5
5	25.1	17.9	12.1	4.5	1.7	815.9	85.0	67.1	35.0	0.0	1236.0	556.5	4.9
6	23.9	17.6	12.9	4.5	1.2	815.5	86.0	73.1	48.0	0.0	1174.0	358.0	3.1
7	21.7	17.2	14.1	4.0	0.9	816.2	89.0	78.4	61.0	0.6	1190.0	247.4	2.2
8	20.7	16.1	13.8	6.7	0.9	818.2	96.0	84.7	71.0	21.8	1297.0	286.0	1.9
9	23.7	16.3	13.2	4.5	1.2	817.9	96.0	82.1	56.0	18.4	954.0	345.2	2.7
10	24.7	17.3	12.7	6.3	1.2	816.2	95.0	81.4	55.0	5.2	1201.0	610.2	4.4
11	22.2	17.0	13.7	2.7	0.7	817.7	96.0	83.1	62.0	2.0	891.0	310.2	2.4
12	23.1	17.7	14.7	4.5	0.9	818.1	96.0	77.2	53.0	1.6	956.0	258.2	2.2
13	24.8	18.6	14.2	4.5	1.4	816.5	82.0	67.8	43.0	0.0	1311.0	467.3	4.2
14	24.8	18.0	13.1	5.8	1.5	815.1	85.0	73.3	49.0	0.0	1208.0	469.2	3.9
15	24.4	18.4	14.1	4.9	1.0	815.3	86.0	70.1	46.0	0.0	1099.0	335.2	2.9
16	21.4	17.0	14.4	3.6	0.7	816.3	93.0	82.5	65.0	11.0	969.0	252.0	2.0
17	22.3	17.2	14.1	3.1	0.7	816.2	95.0	82.1	57.0	7.6	1297.0	327.7	2.5
18	20.4	16.3	14.7	3.1	0.5	817.8	97.0	89.9	69.0	36.4	752.0	275.0	1.9
19	22.1	16.9	13.4	4.0	0.7	816.7	96.0	85.7	66.0	1.0	1253.0	294.2	2.2
20	22.2	17.1	13.7	4.5	0.7	816.4	97.0	83.5	60.0	15.8	1297.0	266.0	2.0
21	24.1	18.3	13.3	4.0	1.1	815.7	87.0	73.8	53.0	0.0	1209.0	460.9	3.8
22	22.8	18.2	15.2	4.9	0.9	815.2	92.0	81.3	59.0	5.4	1111.0	364.5	2.8
23	24.8	17.8	15.1	6.7	1.4	815.7	93.0	81.7	55.0	12.0	1220.0	409.0	3.3
24	22.6	16.6	13.4	4.5	1.2	815.6	95.0	86.0	65.0	12.8	1215.0	321.1	2.5
25	20.0	16.8	13.4	4.0	0.8	816.4	92.0	84.4	71.0	3.4	793.0	222.2	1.8
26	22.3	17.4	14.1	4.9	0.9	816.6	95.0	83.8	63.0	5.2	1378.0	303.7	2.5
27	24.8	18.2	12.6	4.5	1.4	816.6	86.0	69.7	45.0	0.0	1232.0	499.7	4.4
28	23.9	18.3	14.3	4.0	1.3	815.2	84.0	73.5	50.0	0.0	1150.0	371.4	3.2
29	22.6	17.3	13.2	4.5	1.0	814.8	91.0	78.9	61.0	0.8	1099.0	285.3	2.4
30	24.6	18.1	12.8	3.6	1.2	814.4	89.0	75.1	50.0	0.0	1144.0	431.9	3.7
Mensual	25.1	17.5	12.1	6.7	1.1	816.3	97.0	77.7	35.0	161.0	1378.0	359.3	88.5

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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CÓDIGO: EMM-07

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	0%	1%	3%	3%	5%	3%	6%	1%	6%	21%	23%	8%	8%	10%	3%	1%
2	1%	2%	6%	6%	3%	3%	3%	1%	6%	21%	22%	6%	10%	6%	2%	2%
3	1%	8%	4%	1%	3%	5%	8%	0%	2%	10%	18%	10%	9%	13%	7%	1%
4	3%	6%	1%	3%	6%	10%	10%	2%	1%	10%	11%	5%	6%	17%	3%	7%
5	1%	1%	5%	4%	6%	3%	1%	0%	5%	15%	20%	8%	13%	15%	3%	1%
6	0%	3%	3%	1%	2%	2%	6%	0%	3%	12%	33%	13%	8%	10%	5%	0%
7	0%	3%	6%	4%	3%	9%	12%	2%	2%	12%	13%	5%	6%	15%	6%	3%
8	1%	2%	7%	2%	7%	2%	15%	0%	2%	13%	14%	6%	8%	15%	5%	1%
9	1%	1%	5%	2%	13%	8%	12%	3%	1%	4%	5%	1%	4%	13%	26%	1%
10	1%	1%	4%	5%	7%	8%	3%	2%	1%	9%	10%	8%	11%	19%	7%	3%
11	0%	0%	0%	12%	7%	0%	0%	1%	2%	22%	22%	6%	7%	15%	8%	0%
12	4%	8%	19%	8%	1%	9%	3%	1%	4%	10%	8%	3%	4%	8%	5%	3%
13	0%	10%	5%	3%	6%	7%	0%	0%	6%	11%	10%	9%	8%	17%	5%	3%
14	1%	3%	13%	7%	7%	12%	1%	1%	2%	10%	12%	8%	6%	10%	6%	1%
15	3%	1%	7%	1%	1%	3%	1%	1%	5%	14%	10%	6%	13%	10%	8%	17%
16	0%	3%	2%	10%	1%	7%	21%	1%	1%	10%	8%	5%	8%	10%	10%	2%
17	1%	3%	4%	6%	8%	19%	6%	1%	1%	13%	11%	13%	4%	3%	4%	1%
18	0%	2%	4%	1%	0%	11%	16%	3%	3%	17%	18%	6%	8%	9%	1%	0%
19	0%	3%	10%	3%	15%	15%	3%	1%	5%	17%	10%	3%	6%	8%	1%	0%
20	5%	1%	1%	1%	6%	8%	6%	2%	6%	19%	23%	3%	4%	4%	3%	6%
21	0%	0%	1%	12%	1%	3%	1%	0%	6%	24%	20%	6%	8%	13%	4%	1%
22	0%	1%	1%	6%	8%	12%	8%	1%	1%	19%	19%	7%	3%	10%	4%	1%
23	1%	4%	6%	6%	8%	10%	6%	1%	1%	9%	12%	8%	11%	10%	6%	1%
24	1%	2%	10%	4%	6%	22%	3%	0%	2%	13%	12%	5%	3%	10%	7%	0%
25	1%	2%	6%	8%	5%	13%	4%	17%	1%	5%	5%	6%	8%	16%	5%	0%
26	1%	1%	3%	1%	10%	10%	8%	1%	1%	15%	11%	5%	6%	21%	6%	1%
27	1%	1%	1%	3%	8%	2%	2%	0%	3%	16%	22%	13%	10%	12%	6%	0%
28	0%	3%	4%	4%	6%	3%	6%	1%	2%	19%	17%	8%	13%	8%	5%	0%
29	1%	3%	8%	8%	10%	10%	16%	0%	3%	8%	10%	7%	4%	10%	2%	0%
30	0%	1%	1%	0%	10%	10%	5%	3%	8%	8%	21%	5%	9%	10%	10%	0%
Mensual	1%	3%	5%	5%	6%	8%	6%	2%	3%	13%	15%	7%	8%	12%	6%	2%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SO	SSO	ONO	ESE	O	OSO	SE	E	NO	NE	ENE	S	NNE	NNO	SSE	N
F. R.	15%	13%	12%	8%	8%	7%	6%	6%	6%	5%	5%	3%	3%	2%	2%	1%

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	1%	2%	13%	16%	28%	26%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	1%	4%	8%	17%	24%	38%	3%	1%	0%	0%	6%	0%	0%	0%	0%	0%
3	1%	3%	11%	15%	24%	25%	11%	0%	0%	0%	10%	0%	0%	0%	0%	0%
4	1%	4%	15%	17%	23%	28%	7%	0%	0%	6%	0%	0%	0%	0%	0%	0%
5	0%	2%	7%	15%	31%	38%	4%	0%	0%	1%	2%	0%	0%	0%	0%	1%
6	1%	1%	13%	13%	24%	38%	8%	1%	0%	0%	2%	0%	0%	0%	0%	0%
7	0%	1%	19%	13%	11%	42%	5%	1%	0%	1%	3%	0%	1%	3%	0%	0%
8	0%	1%	13%	27%	13%	40%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9	1%	3%	24%	13%	12%	38%	8%	1%	0%	0%	0%	0%	0%	0%	1%	1%
10	10%	5%	10%	6%	22%	35%	2%	0%	1%	1%	0%	1%	1%	6%	1%	1%
11	0%	0%	18%	18%	15%	31%	13%	0%	0%	5%	0%	0%	0%	0%	0%	0%
12	7%	2%	14%	15%	24%	33%	3%	0%	0%	0%	0%	0%	0%	0%	0%	1%
13	1%	1%	17%	15%	33%	26%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14	0%	3%	15%	11%	22%	36%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%
15	0%	3%	15%	15%	26%	35%	6%	0%	0%	0%	0%	0%	0%	0%	0%	1%
16	0%	3%	15%	19%	27%	29%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17	0%	0%	13%	9%	22%	35%	13%	0%	0%	4%	0%	2%	2%	0%	0%	0%
18	0%	2%	17%	8%	22%	4%	22%	0%	0%	0%	0%	1%	1%	18%	0%	5%
19	1%	2%	24%	10%	24%	19%	6%	1%	0%	4%	0%	0%	0%	0%	0%	9%
20	1%	1%	5%	6%	20%	41%	2%	0%	0%	0%	0%	14%	3%	1%	1%	5%
21	2%	3%	10%	11%	22%	23%	19%	3%	0%	0%	8%	0%	0%	0%	0%	0%
22	0%	1%	10%	10%	17%	22%	3%	5%	0%	6%	19%	6%	0%	0%	1%	0%
23	1%	6%	17%	19%	25%	26%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24	0%	3%	13%	13%	20%	44%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25	3%	8%	8%	19%	12%	40%	8%	0%	0%	0%	0%	0%	3%	0%	0%	0%
26	0%	1%	8%	14%	15%	33%	29%	1%	0%	0%	0%	0%	0%	0%	0%	0%
27	1%	4%	8%	11%	32%	35%	8%	0%	0%	0%	0%	0%	0%	1%	0%	0%
28	1%	6%	12%	21%	28%	29%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29	0%	1%	24%	13%	19%	25%	3%	0%	0%	0%	0%	0%	9%	3%	1%	1%
30	1%	1%	13%	12%	27%	31%	15%	1%	0%	0%	0%	0%	0%	0%	0%	1%
Mensual	1%	3%	14%	14%	22%	31%	9%	0%	0%	1%	2%	1%	1%	1%	0%	1%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	ESE	E	ENE	NE	SE	NNE	SO	ONO	N	SSO	NNO	OSO	O	SSE	NO	S
F. R.	31%	22%	14%	14%	9%	3%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%

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