



# 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 ALCÁZARES

CÓDIGO: EMM-13

FEBRERO 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 <sup>2</sup> )		ET. (mm)
	Máxima	Media	Mínima	Máxima	Media	Media	Máxima	Media	Mínima	Suma	Máxima	Media	Suma
1	22.5	18.3	14.9	4.5	1.3	803.5	94.0	81.2	60.0	0.6	1007.0	393.6	3.2
2	23.7	19.2	14.8	5.4	1.7	803.1	90.0	73.2	54.0	0.0	1129.0	458.6	4.0
3	23.6	19.2	15.2	4.9	1.8	802.3	77.0	68.9	58.0	0.0	1106.0	447.8	3.9
4	22.6	18.3	16.2	3.6	0.9	801.9	93.0	80.9	64.0	0.0	1051.0	308.6	2.6
5	21.9	17.6	15.2	3.6	0.8	801.7	96.0	85.2	69.0	0.0	1257.0	302.3	2.4
6	21.9	17.5	14.9	4.9	1.4	802.2	95.0	84.9	72.0	59.0	1158.0	327.9	2.5
7	16.3	15.2	14.2	3.6	0.4	806.0	98.0	93.5	85.0	7.6	343.0	110.3	0.7
8	20.3	16.4	14.3	4.0	0.8	806.9	98.0	90.1	77.0	18.2	1236.0	226.7	1.6
9	19.7	15.9	14.1	3.1	0.6	805.2	98.0	92.8	79.0	5.2	1306.0	211.0	1.5
10	22.0	17.2	14.9	4.0	1.2	804.0	94.0	85.4	63.0	1.4	1097.0	339.2	2.5
11	20.2	17.0	14.7	3.1	0.7	804.5	95.0	87.6	74.0	0.2	1179.0	260.7	1.8
12	23.7	18.4	14.9	3.6	1.3	805.0	95.0	80.4	56.0	0.0	1113.0	496.2	3.9
13	21.3	16.9	15.1	4.0	0.9	805.2	97.0	89.7	73.0	23.2	1158.0	321.8	2.1
14	20.2	16.8	14.0	2.7	0.6	806.0	97.0	89.3	76.0	2.8	1018.0	244.3	1.8
15	21.6	17.4	15.0	3.6	0.9	805.1	95.0	88.8	76.0	1.8	1121.0	322.6	2.4
16	19.6	15.9	14.3	4.0	0.9	805.8	97.0	93.8	84.0	54.2	1223.0	163.0	1.2
17	18.9	15.9	14.3	3.6	0.6	807.1	97.0	92.7	79.0	31.8	919.0	218.9	1.5
18	19.7	16.3	14.3	5.8	1.9	806.3	94.0	86.5	82.0	11.0	1234.0	238.3	2.0
19	20.7	16.6	14.4	4.0	1.0	805.0	98.0	89.4	78.0	1.4	1264.0	318.1	2.4
20	22.8	17.8	14.4	3.6	1.2	803.6	95.0	82.7	59.0	4.0	1223.0	433.5	3.4
21	23.3	18.0	13.6	5.4	1.5	803.2	93.0	78.0	57.0	8.4	1118.0	561.1	4.4
22	23.1	18.2	14.3	5.8	1.4	803.3	90.0	77.7	57.0	0.0	1187.0	509.7	4.0
23	19.2	16.2	14.8	3.6	0.8	803.8	96.0	90.9	82.0	16.0	483.0	139.4	1.0
24	16.6	15.0	13.7	5.4	0.8	806.7	98.0	94.5	84.0	16.2	624.0	128.9	0.8
25	21.7	16.7	14.0	4.0	1.3	806.6	92.0	84.7	70.0	0.0	1290.0	276.6	2.3
26	23.2	18.2	14.7	4.9	1.6	804.4	89.0	77.7	60.0	0.0	1192.0	460.4	3.9
27	19.9	16.9	14.9	3.1	0.8	804.0	98.0	89.3	81.0	0.0	526.0	169.0	1.3
28	20.8	16.9	14.3	4.5	1.2	804.8	96.0	85.4	72.0	52.8	1063.0	284.9	2.2
<b>MENSUAL</b>	<b>23.7</b>	<b>17.1</b>	<b>13.6</b>	<b>5.8</b>	<b>1.1</b>	<b>804.5</b>	<b>98.0</b>	<b>85.5</b>	<b>54.0</b>	<b>315.8</b>	<b>1306.0</b>	<b>309.8</b>	<b>67.4</b>

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



# 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 ALCÁZARES

CÓDIGO: EMM-13

FEBRERO 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	3%	1%	1%	0%	0%	0%	0%	0%	11%	6%	7%	8%	14%	30%	12%	6%
2	5%	1%	0%	1%	0%	3%	4%	6%	1%	3%	2%	6%	11%	26%	26%	6%
3	6%	3%	1%	0%	0%	1%	7%	10%	2%	1%	1%	6%	15%	19%	16%	12%
4	4%	2%	0%	0%	1%	2%	6%	1%	0%	1%	6%	12%	17%	15%	29%	3%
5	6%	2%	0%	0%	0%	0%	1%	0%	11%	2%	1%	11%	13%	33%	13%	8%
6	1%	0%	0%	0%	1%	8%	1%	1%	6%	2%	8%	2%	19%	19%	24%	8%
7	0%	0%	1%	1%	2%	1%	14%	0%	3%	4%	1%	3%	3%	49%	13%	3%
8	6%	9%	0%	0%	0%	9%	0%	2%	3%	10%	0%	4%	14%	21%	17%	6%
9	6%	1%	3%	1%	0%	0%	1%	0%	1%	2%	6%	6%	8%	14%	47%	7%
10	7%	1%	0%	0%	1%	1%	15%	11%	5%	2%	1%	11%	10%	15%	14%	7%
11	6%	1%	1%	3%	2%	6%	2%	13%	2%	3%	3%	5%	8%	22%	10%	14%
12	4%	3%	0%	1%	1%	3%	7%	6%	0%	0%	2%	16%	15%	25%	15%	4%
13	6%	0%	0%	0%	1%	0%	6%	3%	4%	6%	5%	7%	11%	24%	19%	9%
14	1%	0%	0%	0%	0%	0%	3%	13%	2%	1%	1%	5%	10%	38%	18%	8%
15	2%	2%	0%	0%	0%	0%	6%	2%	6%	3%	2%	8%	16%	34%	14%	6%
16	3%	1%	5%	1%	1%	2%	3%	6%	17%	1%	1%	4%	13%	10%	20%	11%
17	3%	0%	0%	1%	11%	24%	3%	3%	2%	6%	5%	2%	10%	19%	7%	2%
18	2%	1%	0%	1%	1%	6%	13%	19%	6%	1%	3%	1%	12%	15%	12%	6%
19	3%	0%	0%	0%	0%	0%	0%	0%	10%	0%	3%	8%	27%	22%	15%	13%
20	8%	1%	0%	0%	0%	1%	4%	10%	3%	0%	2%	7%	13%	26%	15%	9%
21	1%	1%	0%	0%	2%	8%	4%	4%	2%	0%	2%	9%	24%	14%	19%	9%
22	9%	1%	1%	1%	0%	2%	6%	5%	2%	3%	4%	6%	17%	20%	9%	15%
23	5%	2%	1%	1%	4%	1%	3%	4%	3%	13%	3%	6%	8%	28%	8%	13%
24	6%	0%	0%	1%	0%	0%	0%	0%	6%	0%	5%	1%	15%	19%	25%	21%
25	5%	0%	1%	2%	1%	3%	9%	6%	6%	1%	1%	3%	10%	27%	13%	11%
26	3%	0%	1%	1%	0%	1%	6%	13%	2%	1%	4%	3%	13%	23%	19%	10%
27	1%	0%	0%	0%	0%	0%	1%	3%	5%	1%	5%	1%	11%	46%	15%	11%
28	1%	1%	0%	1%	0%	3%	2%	17%	6%	3%	8%	1%	10%	26%	11%	9%
<b>MENSUAL</b>	<b>4%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>3%</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>	<b>3%</b>	<b>3%</b>	<b>6%</b>	<b>13%</b>	<b>24%</b>	<b>17%</b>	<b>9%</b>

DIRECCION DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	ONO	NO	O	NNO	OSO	SSE	S	SE	N	SO	ESE	SSO	NNE	E	ENE	NE
F. R.	24%	17%	13%	9%	6%	6%	5%	4%	4%	3%	3%	3%	1%	1%	1%	1%

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



# 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 ALCÁZARES

CÓDIGO: EMM-13

FEBRERO DE 2011

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%	3%	3%	4%	3%	24%	28%	13%	0%	1%	0%	1%	12%	0%	9%
2	0%	1%	1%	4%	1%	2%	44%	35%	3%	0%	0%	4%	0%	0%	5%	0%
3	10%	0%	0%	0%	0%	1%	36%	47%	6%	0%	0%	0%	0%	0%	0%	0%
4	0%	0%	10%	2%	3%	10%	19%	26%	5%	9%	0%	3%	1%	1%	11%	0%
5	0%	0%	0%	0%	0%	1%	24%	30%	19%	3%	8%	1%	1%	13%	0%	0%
6	0%	0%	1%	1%	3%	12%	26%	29%	8%	17%	1%	0%	0%	1%	0%	0%
7	1%	0%	4%	1%	2%	7%	49%	3%	3%	6%	2%	0%	22%	0%	0%	0%
8	0%	0%	1%	1%	2%	8%	20%	32%	1%	1%	2%	15%	1%	4%	13%	0%
9	2%	0%	0%	0%	28%	6%	12%	19%	1%	1%	0%	25%	0%	0%	7%	0%
10	1%	0%	1%	2%	2%	13%	53%	20%	2%	1%	0%	0%	0%	5%	0%	1%
11	2%	5%	1%	0%	6%	10%	23%	14%	3%	19%	3%	2%	5%	0%	6%	1%
12	0%	9%	0%	8%	4%	6%	22%	29%	6%	0%	0%	0%	0%	15%	0%	0%
13	11%	0%	0%	1%	1%	1%	3%	17%	20%	10%	10%	15%	1%	4%	1%	6%
14	0%	3%	0%	0%	1%	5%	7%	26%	9%	8%	3%	8%	6%	23%	0%	0%
15	0%	0%	7%	5%	8%	4%	13%	27%	6%	2%	1%	0%	0%	6%	4%	17%
16	0%	1%	3%	1%	10%	6%	28%	30%	4%	4%	1%	1%	5%	5%	0%	1%
17	12%	0%	0%	0%	0%	4%	14%	26%	0%	8%	16%	17%	0%	3%	0%	0%
18	0%	0%	0%	3%	2%	13%	51%	27%	3%	0%	0%	0%	0%	0%	0%	0%
19	1%	6%	22%	0%	0%	13%	19%	20%	15%	0%	0%	0%	0%	1%	2%	1%
20	0%	0%	0%	0%	0%	1%	24%	17%	8%	2%	5%	0%	27%	15%	1%	0%
21	0%	0%	0%	0%	0%	6%	30%	38%	8%	1%	1%	0%	16%	0%	0%	0%
22	0%	10%	0%	0%	1%	1%	13%	30%	14%	12%	3%	6%	1%	1%	8%	0%
23	1%	0%	28%	4%	9%	22%	10%	5%	5%	3%	0%	0%	2%	0%	9%	0%
24	1%	1%	0%	10%	0%	12%	18%	42%	12%	1%	0%	0%	0%	1%	2%	1%
25	3%	4%	4%	3%	3%	8%	29%	40%	6%	1%	0%	0%	0%	0%	0%	0%
26	0%	5%	0%	0%	1%	5%	40%	23%	8%	0%	1%	0%	0%	13%	5%	1%
27	2%	0%	0%	0%	8%	10%	16%	7%	24%	1%	1%	5%	1%	13%	6%	6%
28	7%	1%	10%	2%	6%	10%	16%	31%	5%	1%	1%	0%	0%	2%	1%	8%
<b>MENSUAL</b>	<b>2%</b>	<b>2%</b>	<b>3%</b>	<b>2%</b>	<b>4%</b>	<b>7%</b>	<b>24%</b>	<b>26%</b>	<b>8%</b>	<b>4%</b>	<b>2%</b>	<b>4%</b>	<b>3%</b>	<b>5%</b>	<b>3%</b>	<b>2%</b>

DIRECCION DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SSE	SE	S	ESE	ONO	SSO	E	OSO	NE	O	NO	SO	N	ENE	NNO	NNE
F. R.	26%	24%	8%	7%	5%	4%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%

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