



# 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

ABRIL DE 2011

### RESUMEN DIARIO Y MENSUAL DE VARIABLES METEOROLÓGICAS

Variables Dia	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	22.1	18.3	15.1	4.9	1.5	803.6	95.0	82.1	72.0	1.2	1243.0	280.7	2.5
2	21.4	18.0	14.9	4.0	1.2	804.4	95.0	81.2	63.0	0.0	1116.0	312.4	2.6
3	21.3	17.9	15.4	4.9	1.3	804.0	90.0	81.4	70.0	0.0	1127.0	269.9	2.3
4	20.3	17.3	15.3	3.6	0.7	803.9	97.0	90.2	80.0	1.8	1109.0	223.7	1.7
5	19.6	16.8	14.9	4.9	1.1	805.2	95.0	89.3	80.0	6.2	830.0	222.9	1.8
6	22.7	17.5	14.7	5.8	0.9	805.7	97.0	87.2	67.0	18.8	1290.0	405.5	3.0
7	21.0	16.8	14.7	4.9	0.8	805.2	97.0	91.6	75.0	22.0	1280.0	323.4	2.3
8	19.8	17.0	13.8	4.5	0.8	805.2	98.0	87.2	71.0	5.6	1194.0	306.4	2.4
9	19.9	16.2	14.3	3.6	0.7	806.0	97.0	92.3	80.0	8.0	636.0	206.2	1.5
10	18.9	16.0	14.4	3.1	0.8	807.7	96.0	93.5	89.0	17.6	998.0	222.7	1.6
11	20.9	16.5	13.8	4.0	1.0	806.5	98.0	89.4	72.0	3.6	1190.0	289.7	2.2
12	18.6	15.3	14.2	2.7	0.5	806.5	98.0	94.2	86.0	18.0	1238.0	174.4	1.2
13	20.1	16.3	13.8	3.6	0.9	806.7	98.0	89.7	79.0	3.2	1301.0	271.1	2.1
14	20.9	17.2	14.3	4.9	1.4	804.5	89.0	82.3	70.0	0.4	1125.0	277.6	2.5
15	19.1	15.8	14.6	2.7	0.4	804.5	98.0	94.1	85.0	16.0	997.0	143.9	1.0
16	18.1	15.8	14.1	3.6	0.6	805.9	98.0	92.6	81.0	5.0	1034.0	170.0	1.3
17	17.8	16.0	14.6	3.6	0.9	805.5	97.0	92.1	87.0	0.6	990.0	171.9	1.2
18	18.0	15.7	14.4	3.6	1.2	806.6	97.0	90.1	80.0	15.4	448.0	139.0	1.1
19	20.9	16.4	13.8	4.0	1.4	807.1	96.0	86.8	69.0	34.8	1158.0	348.7	2.7
20	19.9	15.3	13.7	4.9	0.9	807.0	97.0	92.9	77.0	56.2	1397.0	216.2	1.6
21	19.4	16.1	14.0	4.5	1.0	806.2	94.0	88.7	80.0	3.8	1281.0	254.6	1.9
22	19.9	16.2	13.7	4.0	0.6	806.2	97.0	91.4	81.0	26.6	1313.0	302.2	2.2
23	18.9	16.7	15.1	4.5	1.2	806.2	95.0	87.4	78.0	0.4	1107.0	192.5	1.5
24	21.8	17.2	14.2	3.1	1.0	805.4	96.0	87.1	74.0	0.0	1310.0	272.0	2.1
25	19.7	16.6	15.2	4.0	0.9	804.9	98.0	90.4	80.0	8.8	631.0	145.6	1.2
26	21.3	17.6	15.4	4.9	0.9	804.8	96.0	87.4	79.0	0.0	1294.0	292.9	2.2
27	20.5	16.7	14.6	4.5	1.0	806.1	97.0	90.8	80.0	7.0	1171.0	280.8	2.1
28	22.2	17.2	13.8	4.0	0.7	807.2	97.0	89.2	74.0	7.0	958.0	332.2	2.5
29	23.8	18.2	14.9	5.4	1.1	804.3	95.0	85.6	65.0	11.6	1093.0	404.8	3.3
30	22.4	18.6	15.8	3.6	1.0	802.1	94.0	83.6	67.0	0.0	1134.0	330.6	2.7
<b>Mensual</b>	<b>23.8</b>	<b>16.8</b>	<b>13.7</b>	<b>5.8</b>	<b>0.9</b>	<b>805.5</b>	<b>98.0</b>	<b>88.7</b>	<b>63.0</b>	<b>299.6</b>	<b>1397.0</b>	<b>259.5</b>	<b>60.2</b>

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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## ESTACIÓN METEOROLÓGICA ALCÁZARES

CÓDIGO: EMM-13

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

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	ONO	NO	O	NNO	OSO	N	SE	SSE	S	SO	SSO	ESE	E	NNE	NE	ENE
F. R.	24%	17%	13%	9%	6%	4%	4%	4%	4%	3%	3%	3%	2%	1%	1%	1%

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



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CÓDIGO: EMM-13

ABRIL 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%	5%	1%	0%	8%	27%	30%	10%	3%	2%	4%	3%	3%	3%	0%
2	0%	0%	3%	1%	10%	7%	25%	18%	3%	0%	3%	1%	0%	22%	4%	3%
3	0%	0%	0%	5%	3%	4%	29%	32%	8%	6%	1%	1%	12%	0%	0%	0%
4	10%	0%	0%	0%	1%	1%	21%	19%	12%	6%	0%	0%	19%	3%	0%	10%
5	1%	6%	1%	5%	12%	24%	31%	14%	3%	1%	0%	3%	0%	0%	0%	0%
6	1%	0%	1%	4%	1%	2%	13%	22%	3%	6%	1%	0%	3%	23%	8%	13%
7	1%	0%	0%	1%	6%	6%	3%	10%	19%	13%	3%	6%	8%	3%	0%	20%
8	28%	9%	8%	3%	3%	1%	14%	11%	4%	1%	0%	0%	0%	0%	1%	16%
9	1%	8%	0%	21%	3%	8%	12%	15%	6%	1%	2%	6%	0%	5%	6%	8%
10	1%	0%	0%	3%	8%	13%	13%	14%	3%	0%	0%	0%	0%	45%	0%	0%
11	0%	0%	0%	1%	6%	19%	12%	3%	3%	1%	16%	6%	1%	30%	3%	0%
12	1%	0%	0%	13%	0%	0%	3%	0%	0%	6%	0%	0%	0%	15%	49%	13%
13	4%	0%	0%	46%	1%	21%	12%	17%	0%	0%	0%	0%	0%	0%	0%	0%
14	0%	0%	0%	0%	0%	0%	50%	35%	1%	10%	0%	4%	0%	0%	0%	0%
15	0%	0%	0%	0%	20%	1%	1%	6%	42%	1%	22%	7%	0%	0%	0%	0%
16	0%	0%	0%	0%	0%	12%	27%	11%	14%	3%	23%	1%	6%	3%	0%	0%
17	0%	0%	0%	0%	1%	28%	24%	24%	10%	14%	0%	0%	0%	0%	0%	0%
18	0%	0%	5%	3%	3%	17%	47%	15%	1%	1%	8%	0%	0%	0%	0%	0%
19	0%	0%	0%	3%	5%	12%	42%	21%	6%	0%	0%	1%	1%	3%	8%	0%
20	0%	0%	1%	1%	6%	11%	21%	30%	14%	8%	1%	1%	5%	0%	0%	0%
21	0%	2%	0%	1%	20%	37%	12%	6%	1%	12%	0%	1%	2%	1%	6%	0%
22	4%	0%	0%	6%	24%	6%	7%	8%	10%	6%	7%	3%	0%	3%	13%	1%
23	0%	0%	0%	0%	5%	26%	32%	15%	8%	15%	0%	0%	0%	0%	0%	0%
24	0%	0%	0%	0%	1%	10%	40%	38%	13%	0%	0%	0%	0%	0%	0%	0%
25	0%	0%	0%	0%	15%	5%	22%	23%	6%	8%	1%	0%	16%	5%	0%	0%
26	3%	1%	7%	0%	1%	14%	17%	18%	0%	0%	0%	0%	0%	31%	8%	0%
27	2%	2%	3%	6%	6%	10%	13%	17%	8%	17%	7%	2%	1%	2%	0%	2%
28	18%	0%	2%	2%	0%	3%	22%	3%	17%	6%	3%	0%	5%	16%	1%	1%
29	4%	2%	6%	8%	10%	9%	17%	16%	6%	0%	0%	0%	4%	9%	9%	1%
30	1%	6%	8%	6%	1%	6%	15%	21%	9%	3%	1%	1%	21%	0%	0%	0%
Mensual	3%	1%	2%	5%	6%	11%	21%	17%	8%	5%	3%	2%	3%	7%	4%	3%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SE	SSE	ESE	S	ONO	E	SSO	ENE	NO	O	SO	NNO	N	NE	OSO	NNE
F. R.	21%	17%	11%	8%	7%	6%	5%	5%	4%	3%	3%	3%	3%	2%	2%	1%

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