



# 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 CHEC URIBE

CÓDIGO: EMM-14

OCTUBRE 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	23.1	18.5	15.8	3.6	1.0	816.0	96.0	89.9	75.0	14.4	1325.0	199.5	1.6
2	23.3	18.8	15.9	4.0	1.0	817.2	94.0	85.6	70.0	1.4	1371.0	308.7	2.4
3	24.4	19.3	16.6	2.7	0.7	816.8	98.0	87.0	66.0	23.2	1176.0	333.1	2.6
4	20.2	17.4	15.8	3.6	0.6	817.9	99.0	94.6	86.0	13.2	425.0	174.3	1.3
5	26.4	19.6	15.6	3.6	1.2	816.7	91.0	81.5	52.0	1.0	1190.0	431.6	3.6
6	25.3	19.6	15.8	3.1	0.9	815.2	98.0	84.8	54.0	13.8	1144.0	406.6	3.2
7	26.2	20.4	16.4	3.6	1.1	814.7	96.0	82.8	57.0	2.0	1171.0	425.0	3.5
8	20.1	18.0	16.5	4.0	0.9	815.7	98.0	93.2	83.0	7.4	508.0	154.2	1.1
9	23.0	19.2	16.6	3.1	0.8	816.4	97.0	86.0	68.0	0.0	1071.0	215.0	1.8
10	21.3	18.4	16.2	3.6	0.8	817.3	98.0	90.2	67.0	14.4	1146.0	248.4	1.9
11	23.3	18.4	16.2	3.1	0.9	817.5	98.0	89.2	70.0	64.2	1002.0	235.0	1.7
12	22.2	17.4	15.8	4.5	0.9	818.9	98.0	93.4	76.0	20.8	851.0	245.4	1.7
13	24.3	18.8	15.1	5.4	1.3	817.3	98.0	84.1	61.0	1.2	1150.0	455.8	3.6
14	24.3	17.7	15.1	3.6	1.2	816.7	97.0	89.1	71.0	23.0	1225.0	385.8	2.9
15	21.1	17.5	15.2	5.4	0.9	818.1	98.0	90.2	77.0	32.8	633.0	274.5	2.0
16	22.3	17.1	14.8	4.0	0.7	818.6	98.0	91.5	72.0	26.6	1150.0	279.2	2.1
17	19.0	16.0	15.1	2.7	0.5	819.2	99.0	96.8	92.0	30.8	589.0	140.2	0.9
18	19.3	16.1	14.5	3.6	0.5	820.5	99.0	95.5	86.0	7.4	1004.0	227.0	1.5
19	23.0	17.6	14.1	4.9	1.7	821.1	92.0	78.0	59.0	0.2	1187.0	386.3	3.2
20	21.2	17.7	14.9	4.0	1.2	820.9	85.0	69.7	50.0	0.0	745.0	241.6	2.3
21	23.1	18.1	15.1	4.0	0.9	819.2	89.0	74.7	54.0	0.0	1202.0	327.0	2.8
22	23.9	18.5	15.2	4.0	1.4	817.5	96.0	75.9	45.0	0.0	1130.0	377.4	3.2
23	24.6	18.9	14.5	3.6	1.3	816.7	96.0	79.0	57.0	7.0	1192.0	313.9	2.7
24	24.3	19.0	16.7	2.7	0.4	816.7	98.0	86.2	58.0	1.4	1107.0	377.8	2.8
25	23.2	18.8	15.9	3.1	0.5	816.0	98.0	88.1	68.0	3.4	1241.0	342.4	2.6
26	22.4	18.8	16.1	3.1	0.7	814.0	98.0	88.4	71.0	0.4	728.0	235.5	1.9
27	25.2	19.9	15.9	3.6	1.2	813.0	95.0	82.3	65.0	0.8	1153.0	334.4	2.8
28	20.4	18.0	16.4	2.2	0.4	814.6	99.0	94.4	80.0	24.6	445.0	171.2	1.2
29	20.2	17.3	16.2	3.1	0.7	816.7	98.0	94.7	87.0	13.0	450.0	129.8	0.9
30	18.3	16.7	15.2	3.1	0.5	817.8	98.0	95.9	91.0	19.6	427.0	125.5	0.8
31	22.3	17.4	13.9	4.0	1.7	817.4	94.0	86.3	70.0	0.0	1239.0	279.7	2.2
<b>Mensual</b>	<b>26.4</b>	<b>18.2</b>	<b>13.9</b>	<b>5.4</b>	<b>0.9</b>	<b>817.2</b>	<b>99.0</b>	<b>87.1</b>	<b>45.0</b>	<b>368.0</b>	<b>1371.0</b>	<b>283.3</b>	<b>68.6</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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CÓDIGO: EMM-14

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

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	ONO	NNO	SE	O	N	ESE	SSE	NNE	OSO	E	NE	S	SO	ENE	SSO
F. R.	24%	14%	12%	10%	7%	7%	6%	6%	4%	3%	2%	2%	1%	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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**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%	0%	0%	1%	6%	21%	42%	16%	1%	0%	0%	0%	0%	0%	13%	0%
2	2%	1%	1%	0%	0%	20%	33%	23%	0%	1%	0%	0%	0%	2%	10%	8%
3	5%	3%	0%	1%	17%	15%	28%	8%	1%	0%	1%	1%	1%	2%	7%	10%
4	1%	0%	1%	0%	0%	8%	65%	15%	0%	1%	0%	1%	6%	1%	0%	1%
5	0%	0%	0%	1%	8%	19%	45%	26%	0%	0%	0%	0%	0%	0%	0%	0%
6	0%	2%	0%	1%	8%	21%	31%	20%	3%	1%	1%	0%	1%	6%	4%	1%
7	5%	1%	2%	0%	9%	11%	36%	13%	0%	0%	0%	1%	2%	6%	9%	3%
8	17%	0%	3%	0%	6%	17%	32%	7%	1%	0%	1%	2%	2%	2%	7%	3%
9	0%	0%	0%	1%	7%	17%	35%	20%	1%	0%	0%	0%	1%	1%	13%	4%
10	1%	1%	1%	1%	0%	23%	47%	6%	1%	0%	1%	1%	1%	4%	10%	3%
11	2%	0%	1%	0%	1%	16%	48%	20%	1%	0%	0%	0%	0%	4%	3%	3%
12	0%	1%	0%	0%	6%	21%	35%	16%	3%	3%	1%	2%	0%	1%	8%	3%
13	8%	4%	1%	1%	10%	26%	21%	5%	1%	3%	0%	0%	0%	3%	5%	12%
14	0%	0%	0%	0%	5%	26%	38%	9%	0%	0%	0%	0%	1%	0%	21%	0%
15	3%	3%	0%	0%	5%	16%	44%	19%	2%	1%	0%	0%	2%	2%	1%	2%
16	15%	10%	2%	1%	3%	7%	26%	6%	1%	0%	1%	3%	6%	5%	6%	8%
17	8%	0%	0%	0%	1%	6%	34%	37%	0%	0%	0%	3%	3%	3%	0%	5%
18	6%	5%	1%	0%	3%	10%	12%	31%	1%	0%	0%	1%	2%	13%	11%	5%
19	0%	0%	1%	1%	8%	34%	41%	13%	1%	0%	0%	0%	0%	0%	1%	0%
20	7%	0%	0%	1%	4%	22%	33%	19%	0%	0%	0%	0%	0%	0%	11%	3%
21	2%	1%	0%	0%	1%	17%	40%	16%	0%	0%	3%	1%	7%	2%	8%	3%
22	5%	1%	2%	1%	8%	21%	40%	8%	1%	1%	1%	1%	3%	3%	3%	1%
23	1%	3%	1%	2%	0%	18%	40%	31%	0%	0%	0%	0%	0%	0%	2%	2%
24	10%	6%	1%	15%	3%	7%	9%	8%	0%	0%	0%	0%	1%	28%	6%	3%
25	11%	30%	3%	3%	1%	4%	10%	2%	0%	0%	1%	0%	7%	13%	8%	6%
26	14%	5%	1%	1%	2%	11%	22%	13%	1%	1%	2%	0%	3%	20%	2%	1%
27	1%	0%	0%	0%	10%	21%	47%	17%	1%	0%	0%	0%	0%	0%	1%	3%
28	10%	6%	1%	0%	6%	6%	8%	3%	7%	1%	3%	4%	7%	3%	13%	22%
29	0%	0%	0%	0%	3%	6%	28%	63%	0%	0%	0%	0%	0%	0%	0%	0%
30	0%	0%	0%	0%	4%	3%	46%	40%	0%	0%	0%	0%	0%	0%	6%	0%
31	0%	0%	0%	0%	0%	11%	45%	42%	1%	0%	0%	0%	0%	0%	0%	0%
Mensual	4%	3%	1%	1%	5%	16%	34%	19%	1%	0%	1%	1%	2%	4%	6%	4%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SE	SSE	ESE	NO	E	N	ONO	NNO	NNE	O	ENE	S	NE	OSO	SO	SSO
F. R.	34%	19%	16%	6%	5%	4%	4%	4%	3%	2%	1%	1%	1%	1%	1%	0%

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