



# 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 NIZA

CÓDIGO: EMM-12

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	18.2	15.9	14.2	2.7	0.4	783.1	95.0	91.0	83.0	15.4	448.0	144.0	1.1
2	20.1	16.2	14.1	3.6	0.6	784.2	96.0	89.9	78.0	1.6	1336.0	298.3	2.1
3	20.8	16.5	13.9	3.1	0.6	784.1	96.0	89.9	73.0	4.2	1317.0	336.5	2.6
4	17.6	15.0	13.9	2.7	0.4	785.0	97.0	93.9	85.0	7.2	376.0	168.6	1.1
5	22.3	17.1	13.9	4.0	0.8	783.8	93.0	85.0	62.0	0.0	1299.0	454.3	3.5
6	22.3	16.9	13.3	6.7	1.2	782.4	96.0	87.7	68.0	22.2	1201.0	474.4	3.5
7	23.3	17.4	13.8	3.6	0.8	782.3	96.0	87.9	67.0	0.8	1354.0	416.7	3.1
8	18.2	15.7	14.0	3.6	0.9	783.1	96.0	93.7	84.0	4.6	715.0	195.6	1.4
9	19.7	16.1	14.1	4.0	0.6	783.8	96.0	91.2	80.0	1.4	1041.0	196.9	1.4
10	18.4	15.8	13.7	3.1	0.4	784.8	96.0	92.1	84.0	8.0	1055.0	226.7	1.6
11	18.9	15.9	14.3	3.6	0.6	784.8	96.0	91.8	83.0	8.8	974.0	248.0	1.7
12	18.9	15.1	13.1	4.0	0.9	786.1	97.0	93.3	82.0	15.0	777.0	263.3	1.8
13	21.7	16.6	12.5	5.4	1.1	784.4	96.0	85.3	65.0	0.6	1042.0	585.1	4.4
14	22.2	15.2	12.8	4.9	1.1	783.8	96.0	90.0	73.0	19.8	1387.0	349.3	2.3
15	18.9	15.4	13.2	4.9	0.8	785.4	96.0	89.2	79.0	24.0	691.0	290.5	2.1
16	19.6	14.8	12.5	3.1	0.8	785.7	96.0	92.0	80.0	17.0	1194.0	287.0	2.1
17	17.7	13.8	12.7	3.1	0.8	786.5	97.0	95.1	86.0	20.6	1352.0	210.6	1.4
18	16.7	13.6	11.8	3.1	0.7	787.8	97.0	94.8	87.0	10.2	700.0	212.9	1.4
19	20.6	15.2	11.6	4.0	0.8	788.9	92.0	76.2	50.0	0.4	1392.0	451.8	3.5
20	18.8	15.2	12.8	4.5	0.7	788.5	90.0	69.6	50.0	0.0	865.0	299.9	2.5
21	20.9	15.4	12.9	4.9	0.7	787.0	91.0	78.9	51.0	0.0	1352.0	447.0	3.3
22	20.6	15.8	13.2	5.4	0.9	785.3	91.0	78.8	64.0	0.0	1253.0	414.8	3.3
23	23.7	16.4	12.4	3.6	0.9	784.1	93.0	74.7	51.0	3.0	1137.0	345.6	3.0
24	22.8	16.6	12.9	3.6	0.6	784.4	95.0	79.9	53.0	0.6	1277.0	450.1	3.0
25	20.1	16.2	13.1	3.1	0.8	784.1	95.0	89.2	75.0	3.2	1355.0	365.4	2.7
26	19.7	16.4	13.3	3.6	0.5	782.0	96.0	89.4	76.0	0.6	902.0	298.1	2.2
27	22.1	17.4	13.7	4.0	0.8	780.9	94.0	85.3	71.0	0.0	1164.0	444.8	3.4
28	17.8	15.6	14.3	4.0	0.6	782.3	96.0	93.5	85.0	7.0	554.0	171.9	1.2
29	16.9	14.8	13.8	3.1	0.4	784.2	96.0	94.3	91.0	11.8	638.0	143.3	0.9
30	15.7	14.2	13.0	3.1	0.3	785.2	96.0	95.4	91.0	13.8	299.0	109.0	0.7
31	19.4	15.3	12.7	4.0	0.8	784.6	94.0	87.5	81.0	1.2	1174.0	482.4	3.4
<b>Mensual</b>	<b>23.7</b>	<b>15.7</b>	<b>11.6</b>	<b>6.7</b>	<b>0.7</b>	<b>784.6</b>	<b>97.0</b>	<b>87.9</b>	<b>50.0</b>	<b>223.0</b>	<b>1392.0</b>	<b>315.6</b>	<b>71.6</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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**ESTACIÓN METEOROLÓGICA NIZA**

CÓDIGO: EMM-12

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

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	NNO	ONO	SE	O	ESE	OSO	N	SSE	E	SO	NNE	NE	S	SSO	ENE
F. R.	22%	14%	11%	10%	8%	7%	5%	5%	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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**OCTUBRE 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	11%	12%	19%	44%	0%	1%	0%	0%	3%	0%	0%	1%	0%	0%	0%	7%
2	14%	24%	17%	0%	15%	14%	3%	0%	0%	0%	0%	0%	0%	0%	1%	13%
3	25%	3%	38%	2%	16%	4%	1%	0%	1%	0%	1%	2%	7%	1%	0%	0%
4	0%	0%	5%	10%	6%	24%	0%	0%	0%	0%	6%	0%	0%	0%	44%	5%
5	1%	4%	1%	0%	43%	40%	4%	1%	0%	0%	0%	0%	0%	0%	0%	6%
6	3%	5%	2%	1%	30%	33%	15%	3%	0%	1%	0%	0%	0%	0%	0%	9%
7	3%	8%	2%	8%	5%	20%	15%	9%	3%	3%	1%	1%	0%	4%	7%	9%
8	13%	1%	2%	3%	7%	22%	13%	8%	1%	0%	0%	1%	1%	4%	3%	20%
9	0%	0%	32%	0%	13%	12%	5%	28%	0%	0%	0%	0%	0%	0%	0%	10%
10	10%	5%	7%	0%	0%	13%	35%	1%	7%	0%	15%	0%	1%	1%	1%	6%
11	0%	0%	0%	36%	14%	31%	0%	0%	4%	0%	0%	0%	10%	5%	1%	0%
12	1%	1%	1%	3%	10%	30%	17%	15%	1%	1%	0%	0%	0%	5%	3%	11%
13	5%	0%	5%	0%	8%	22%	10%	3%	8%	0%	1%	0%	4%	4%	8%	21%
14	17%	1%	8%	8%	18%	17%	6%	5%	1%	0%	0%	0%	0%	0%	3%	15%
15	2%	0%	1%	1%	7%	62%	6%	3%	5%	0%	1%	1%	1%	1%	7%	1%
16	3%	0%	3%	0%	2%	19%	3%	6%	0%	12%	1%	3%	1%	5%	19%	23%
17	6%	0%	0%	0%	6%	18%	11%	31%	1%	0%	0%	1%	1%	1%	8%	17%
18	30%	1%	0%	4%	2%	11%	20%	6%	1%	1%	2%	1%	4%	8%	8%	1%
19	3%	10%	0%	3%	15%	30%	12%	9%	7%	3%	1%	1%	1%	3%	1%	1%
20	3%	22%	0%	1%	49%	13%	3%	1%	2%	0%	0%	0%	0%	3%	3%	0%
21	1%	0%	0%	0%	55%	15%	7%	23%	0%	0%	0%	0%	0%	0%	0%	0%
22	4%	4%	0%	1%	67%	8%	1%	10%	0%	0%	0%	0%	0%	0%	6%	0%
23	10%	0%	6%	3%	40%	32%	2%	0%	1%	1%	0%	0%	0%	0%	0%	3%
24	13%	0%	3%	1%	12%	0%	0%	0%	1%	0%	0%	3%	1%	1%	48%	18%
25	21%	0%	0%	0%	0%	3%	20%	0%	0%	0%	0%	0%	1%	3%	26%	26%
26	29%	17%	0%	0%	3%	20%	1%	26%	0%	3%	1%	0%	0%	0%	0%	0%
27	15%	4%	6%	6%	38%	18%	1%	0%	1%	1%	0%	0%	0%	0%	6%	3%
28	6%	0%	3%	1%	12%	0%	0%	0%	1%	0%	0%	3%	1%	1%	45%	27%
29	23%	15%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	6%	4%	1%	1%
30	3%	1%	4%	45%	13%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%
31	0%	0%	1%	60%	12%	27%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mensual	9%	4%	5%	8%	18%	18%	7%	6%	2%	1%	1%	1%	1%	2%	8%	9%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ESE	NNO	N	NO	ENE	SE	SSE	NE	NNE	ONO	S	O	SO	SSO	OSO
F. R.	18%	18%	9%	9%	8%	8%	7%	6%	5%	4%	2%	2%	1%	1%	1%	1%

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