



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

JUNIO 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	17.1	16.0	15.3	2.7	0.6	784.5	98.0	97.0	91.0	14.0	624.0	139.3	1.0
2	16.9	15.3	14.2	2.2	0.5	786.4	98.0	96.8	92.0	36.0	497.0	140.9	1.0
3	18.9	15.8	13.4	2.7	0.5	786.9	98.0	94.0	83.0	6.8	506.0	238.9	1.7
4	19.3	15.6	13.9	2.7	0.4	786.7	97.0	94.2	89.0	23.2	831.0	232.2	1.6
5	21.4	17.0	13.8	3.1	0.7	786.2	97.0	89.1	78.0	0.2	1146.0	314.6	2.4
6	21.8	17.0	14.6	3.6	0.5	785.3	98.0	91.3	76.0	0.0	1158.0	258.2	2.0
7	19.4	16.6	14.9	3.1	0.6	785.5	98.0	92.9	78.0	4.8	1325.0	270.6	2.0
8	22.7	18.1	14.8	4.5	0.7	785.0	92.0	84.0	57.0	0.0	1172.0	447.3	3.4
9	22.3	18.5	15.0	3.6	0.6	783.8	93.0	84.5	67.0	0.0	1215.0	405.9	3.1
10	23.2	18.8	15.6	3.1	0.7	782.5	95.0	84.5	64.0	0.0	1299.0	388.7	3.2
11	23.6	18.9	15.4	3.1	0.6	781.1	96.0	80.0	57.0	0.0	907.0	454.2	3.7
12	24.9	19.3	16.1	3.6	0.8	780.2	92.0	80.9	56.0	0.0	1197.0	447.0	3.7
13	23.1	19.2	15.7	4.0	0.9	780.8	93.0	82.0	58.0	0.4	1216.0	476.3	3.8
14	20.4	17.5	15.6	3.1	0.5	781.8	94.0	87.5	75.0	1.0	1215.0	246.8	1.9
15	21.7	17.6	15.0	3.1	0.6	782.7	92.0	82.3	71.0	0.0	1137.0	358.4	2.8
16	20.6	16.8	14.7	3.1	0.4	783.5	98.0	87.1	71.0	0.0	963.0	243.7	1.8
17	20.0	16.9	14.8	3.1	0.4	784.5	95.0	89.9	76.0	0.0	548.0	218.8	1.7
18	20.6	17.0	14.7	3.1	0.7	785.5	94.0	88.9	77.0	0.0	1113.0	264.4	2.0
19	19.1	16.5	14.7	3.6	0.4	784.7	95.0	89.9	81.0	0.4	675.0	185.8	1.4
20	20.2	16.4	14.2	4.0	0.6	784.3	93.0	86.6	77.0	1.6	997.0	310.2	2.3
21	22.9	17.9	13.5	3.6	0.8	783.5	89.0	79.6	59.0	1.0	1222.0	534.9	4.3
22	22.8	17.7	14.9	3.6	0.7	783.1	94.0	86.0	70.0	1.2	1187.0	329.4	2.7
23	20.6	16.4	15.0	3.6	0.5	783.6	96.0	93.2	77.0	0.8	1274.0	212.6	1.6
24	19.2	16.4	14.4	2.7	0.4	783.3	96.0	91.4	81.0	5.0	708.0	210.8	1.5
25	16.4	15.1	13.8	2.2	0.4	785.0	98.0	94.5	89.0	2.2	418.0	122.5	0.9
26	20.4	16.8	13.8	4.0	0.7	784.8	97.0	88.6	73.0	0.0	1129.0	431.5	3.3
27	20.4	16.8	14.3	3.6	0.8	784.1	97.0	87.2	70.0	0.0	1160.0	264.8	2.0
28	22.8	17.9	14.6	4.0	0.7	783.2	88.0	79.4	62.0	0.0	1201.0	459.4	3.8
29	20.1	16.9	14.7	4.0	0.4	782.8	94.0	86.1	76.0	1.8	858.0	278.2	2.1
30	19.2	15.7	14.1	3.1	0.7	783.4	95.0	89.4	82.0	3.6	759.0	199.1	1.6
Mensual	24.9	17.1	13.4	4.5	0.6	784.0	98.0	88.0	56.0	104.0	1325.0	302.9	70.2

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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JUNIO 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	1%	1%	7%	1%	1%	12%	5%	1%	0%	0%	1%	0%	6%	6%	24%	35%
2	14%	6%	1%	0%	0%	1%	1%	6%	3%	1%	1%	10%	3%	3%	25%	24%
3	1%	0%	2%	0%	0%	0%	0%	0%	15%	4%	1%	5%	3%	10%	28%	17%
4	2%	0%	1%	1%	1%	9%	1%	2%	1%	1%	11%	3%	10%	8%	37%	13%
5	19%	3%	0%	1%	6%	0%	0%	0%	0%	0%	1%	3%	3%	17%	28%	20%
6	8%	0%	0%	0%	0%	0%	8%	3%	0%	1%	6%	11%	8%	8%	31%	15%
7	5%	0%	1%	0%	0%	0%	0%	3%	2%	1%	3%	3%	6%	21%	38%	17%
8	1%	0%	1%	0%	14%	3%	3%	2%	1%	3%	3%	10%	12%	15%	17%	15%
9	1%	0%	0%	0%	11%	2%	0%	1%	1%	1%	6%	8%	12%	10%	31%	15%
10	3%	0%	1%	0%	1%	6%	11%	0%	2%	5%	8%	12%	6%	12%	18%	15%
11	3%	7%	2%	1%	8%	3%	7%	0%	4%	5%	10%	7%	8%	15%	13%	6%
12	5%	1%	0%	0%	1%	19%	3%	0%	2%	2%	3%	9%	8%	8%	21%	19%
13	9%	2%	0%	0%	0%	3%	4%	0%	1%	2%	3%	5%	10%	14%	34%	13%
14	3%	14%	0%	0%	0%	0%	0%	0%	0%	1%	5%	6%	12%	27%	25%	8%
15	3%	1%	0%	0%	13%	0%	5%	0%	3%	7%	15%	3%	10%	14%	17%	8%
16	2%	6%	0%	0%	0%	0%	13%	3%	1%	5%	10%	6%	6%	19%	22%	8%
17	3%	8%	2%	7%	7%	0%	1%	1%	1%	2%	5%	10%	13%	11%	22%	7%
18	7%	0%	0%	0%	0%	15%	0%	0%	0%	0%	3%	3%	10%	15%	22%	26%
19	5%	17%	0%	1%	1%	12%	6%	19%	1%	2%	0%	3%	8%	4%	14%	6%
20	3%	0%	1%	2%	12%	11%	19%	2%	1%	1%	1%	2%	3%	8%	21%	14%
21	4%	11%	0%	3%	5%	1%	0%	0%	0%	1%	6%	3%	13%	23%	22%	10%
22	2%	8%	3%	0%	2%	4%	3%	1%	0%	4%	7%	6%	10%	12%	27%	11%
23	13%	16%	0%	0%	0%	0%	0%	1%	0%	6%	3%	3%	5%	16%	15%	22%
24	4%	12%	1%	9%	8%	7%	6%	0%	0%	0%	0%	6%	2%	9%	24%	12%
25	12%	0%	1%	0%	0%	19%	0%	9%	0%	0%	2%	1%	8%	8%	22%	17%
26	1%	0%	0%	0%	10%	1%	6%	10%	3%	0%	4%	6%	6%	18%	19%	16%
27	8%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	6%	8%	25%	29%	16%
28	6%	0%	3%	0%	12%	1%	2%	1%	3%	1%	3%	6%	13%	12%	22%	16%
29	3%	5%	8%	3%	10%	13%	3%	1%	1%	8%	9%	5%	4%	10%	9%	9%
30	2%	2%	3%	3%	6%	17%	9%	4%	2%	1%	2%	5%	3%	10%	17%	13%
Mensual	5%	4%	1%	1%	4%	5%	4%	2%	2%	2%	4%	6%	8%	14%	23%	15%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	NNO	ONO	O	OSO	N	ESE	SO	E	NNE	SE	SSE	SSO	S	NE	ENE
F. R.	23%	15%	14%	8%	6%	5%	5%	4%	4%	4%	4%	2%	2%	2%	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)

DIA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	4%	0%	0%	1%	1%	13%	34%	0%	1%	1%	0%	13%	6%	6%	8%	11%
2	7%	1%	6%	0%	1%	23%	5%	0%	1%	3%	3%	0%	6%	4%	14%	26%
3	51%	1%	0%	0%	0%	13%	13%	0%	17%	0%	0%	0%	0%	0%	0%	4%
4	32%	15%	6%	1%	6%	9%	6%	13%	3%	0%	0%	1%	0%	1%	4%	3%
5	19%	9%	5%	13%	27%	22%	0%	0%	0%	0%	0%	0%	0%	1%	1%	3%
6	3%	3%	2%	2%	8%	17%	6%	8%	17%	2%	1%	2%	3%	3%	24%	0%
7	10%	19%	0%	0%	24%	17%	0%	0%	0%	0%	0%	0%	0%	11%	10%	9%
8	29%	0%	3%	22%	13%	8%	1%	0%	0%	0%	0%	0%	1%	0%	1%	22%
9	0%	14%	18%	6%	19%	17%	17%	0%	2%	0%	0%	0%	0%	0%	3%	4%
10	2%	8%	26%	8%	19%	4%	0%	0%	0%	0%	0%	1%	0%	3%	10%	19%
11	1%	6%	8%	5%	16%	10%	7%	1%	6%	3%	2%	1%	0%	15%	8%	13%
12	9%	6%	10%	15%	23%	19%	1%	2%	1%	1%	0%	0%	0%	1%	8%	3%
13	12%	3%	25%	19%	6%	6%	6%	1%	2%	5%	1%	1%	1%	1%	1%	10%
14	1%	5%	19%	9%	8%	13%	3%	0%	0%	0%	0%	0%	0%	39%	3%	1%
15	0%	6%	8%	0%	32%	15%	8%	1%	10%	0%	0%	0%	0%	0%	19%	0%
16	0%	0%	0%	0%	0%	0%	34%	0%	16%	0%	0%	0%	0%	38%	2%	10%
17	24%	58%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	1%
18	8%	13%	0%	0%	15%	40%	0%	0%	0%	0%	0%	0%	0%	0%	18%	8%
19	6%	35%	4%	3%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20	1%	1%	1%	24%	39%	26%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21	2%	8%	9%	2%	13%	29%	8%	1%	0%	0%	0%	0%	0%	2%	0%	26%
22	6%	8%	15%	5%	35%	9%	2%	0%	0%	1%	0%	1%	0%	1%	6%	12%
23	3%	9%	56%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	25%	1%
24	10%	31%	13%	1%	34%	2%	0%	6%	0%	0%	0%	0%	0%	0%	0%	2%
25	10%	51%	6%	0%	0%	8%	0%	6%	0%	0%	0%	0%	2%	1%	3%	12%
26	26%	40%	7%	1%	8%	0%	0%	1%	5%	0%	0%	1%	1%	0%	3%	7%
27	10%	10%	5%	0%	14%	24%	2%	0%	0%	0%	0%	0%	2%	4%	9%	19%
28	2%	3%	8%	24%	29%	24%	7%	0%	0%	0%	0%	0%	0%	0%	1%	1%
29	0%	7%	17%	10%	27%	28%	3%	8%	0%	0%	0%	0%	0%	0%	0%	0%
30	7%	9%	10%	8%	6%	28%	15%	1%	7%	1%	0%	0%	0%	1%	6%	1%
Mensual	10%	13%	10%	6%	16%	14%	6%	2%	3%	1%	0%	1%	1%	5%	6%	8%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ESE	NNE	NE	N	NNO	NO	SE	ENE	ONO	S	SSE	O	OSO	SSO	SO
F. R.	16%	14%	13%	10%	10%	8%	6%	6%	6%	5%	3%	2%	1%	1%	1%	0%

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