



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

NOVIEMBRE 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	22.3	17.1	13.5	3.1	0.6	783.3	91.0	81.7	63.0	0.0	1292.0	434.8	3.3
2	23.6	18.2	14.6	3.6	0.8	781.9	94.0	83.0	63.0	0.4	1308.0	454.5	3.6
3	20.8	17.0	15.0	3.6	0.9	782.3	93.0	87.8	78.0	0.0	773.0	307.1	2.3
4	22.7	17.4	14.2	3.1	0.9	782.9	95.0	84.6	65.0	11.8	1206.0	390.8	3.1
5	21.8	17.0	13.4	4.5	0.9	782.2	95.0	85.7	70.0	3.4	1253.0	451.9	3.4
6	20.6	16.9	14.7	4.0	0.6	782.7	95.0	87.2	75.0	0.2	1241.0	300.5	2.3
7	21.1	16.4	14.6	3.1	0.7	782.7	95.0	89.0	77.0	31.0	1160.0	318.1	2.4
8	16.4	15.0	14.1	2.2	0.4	784.1	96.0	95.0	91.0	12.0	320.0	139.4	0.9
9	19.8	16.0	13.3	3.1	0.7	784.3	96.0	92.3	80.0	1.6	1039.0	278.7	2.0
10	19.0	15.8	14.1	3.1	0.7	783.4	96.0	93.4	87.0	13.2	1399.0	232.4	1.7
11	16.7	15.0	13.8	2.7	0.4	784.4	96.0	94.1	90.0	6.0	425.0	136.0	0.9
12	15.1	14.2	13.3	3.1	0.5	785.6	97.0	96.1	94.0	34.8	209.0	87.7	0.6
13	20.4	15.4	12.6	3.1	0.5	785.3	96.0	92.4	76.0	1.4	1223.0	339.1	2.3
14	22.0	16.9	13.4	3.6	0.7	783.4	94.0	86.3	71.0	0.0	1241.0	453.1	3.4
15	20.4	16.1	13.8	5.4	0.8	782.4	95.0	88.0	73.0	1.4	1218.0	330.0	2.4
16	19.7	15.4	13.2	3.6	0.5	783.4	96.0	91.4	78.0	2.0	1083.0	261.1	1.8
17	19.8	15.7	13.4	4.5	1.0	783.4	96.0	90.1	77.0	20.6	1165.0	437.3	3.0
18	20.1	15.1	13.3	4.9	0.9	784.5	96.0	92.3	79.0	22.6	1392.0	416.0	2.8
19	20.8	15.7	12.2	3.6	0.8	784.9	96.0	89.9	64.0	10.2	1188.0	346.9	2.5
20	16.8	15.0	13.4	3.1	0.5	784.6	97.0	94.7	88.0	6.6	1109.0	181.6	1.2
21	21.2	16.1	12.6	4.5	0.9	784.0	96.0	89.8	72.0	6.0	1183.0	510.1	3.7
22	19.2	15.1	13.8	3.6	0.7	784.4	96.0	93.1	84.0	15.8	1255.0	251.8	1.7
23	21.3	16.2	13.4	3.1	0.6	784.9	95.0	88.2	62.0	2.2	1220.0	328.1	2.3
24	17.4	14.9	13.1	2.2	0.4	786.0	96.0	94.3	87.0	12.2	650.0	177.5	1.2
25	19.8	16.2	13.1	3.1	0.5	785.4	94.0	87.9	75.0	0.0	1164.0	357.8	2.5
26	18.9	16.1	13.8	4.5	0.6	784.6	93.0	86.6	79.0	1.8	977.0	248.5	1.8
27	21.3	15.8	13.8	4.9	0.7	785.4	94.0	88.5	75.0	8.0	1267.0	305.0	2.2
28	19.1	15.8	13.6	3.6	0.8		95.0	89.4	81.0	34.8	921.0	345.9	2.4
29	17.9	14.7	13.7	5.4	0.5		96.0	94.4	88.0	14.8	1020.0	192.2	1.2
30	19.7	15.6	13.4	3.6	0.9		96.0	93.0	82.0	10.4	1257.0	300.7	2.0
31													
Mensual	23.6	15.9	12.2	5.4	0.7	783.9	97.0	90.0	62.0	285.2	1399.0	310.5	66.9

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-12

NOVIEMBRE 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	4%	1%	0%	0%	0%	1%	25%	0%	0%	1%	6%	3%	6%	15%	26%	10%
2	10%	0%	0%	0%	1%	10%	1%	3%	0%	3%	1%	6%	7%	24%	17%	17%
3	3%	0%	0%	0%	3%	3%	15%	17%	1%	1%	1%	3%	5%	17%	22%	10%
4	4%	1%	0%	1%	1%	0%	7%	3%	0%	6%	1%	10%	13%	8%	24%	19%
5	8%	1%	3%	7%	2%	1%	10%	2%	9%	1%	7%	3%	9%	10%	20%	7%
6	3%	0%	4%	0%	3%	4%	13%	4%	6%	3%	3%	3%	10%	14%	19%	10%
7	12%	3%	1%	0%	3%	8%	10%	4%	1%	1%	3%	3%	3%	19%	12%	17%
8	8%	1%	13%	0%	3%	1%	10%	13%	1%	0%	1%	3%	8%	3%	22%	13%
9	3%	5%	3%	0%	8%	5%	0%	0%	0%	0%	1%	4%	8%	17%	32%	13%
10	6%	1%	7%	0%	0%	8%	0%	0%	0%	1%	1%	1%	6%	14%	33%	24%
11	8%	7%	5%	0%	7%	0%	14%	3%	1%	0%	1%	1%	1%	6%	24%	23%
12	4%	1%	2%	0%	0%	0%	0%	0%	1%	2%	3%	5%	11%	12%	43%	16%
13	3%	0%	0%	0%	2%	9%	8%	1%	1%	1%	0%	1%	18%	17%	26%	13%
14	11%	1%	1%	0%	10%	8%	3%	2%	3%	2%	1%	3%	2%	10%	20%	23%
15	4%	1%	0%	1%	15%	19%	14%	3%	2%	1%	1%	1%	2%	3%	14%	18%
16	10%	1%	1%	0%	2%	10%	14%	9%	1%	2%	2%	6%	4%	13%	17%	8%
17	10%	7%	1%	0%	13%	0%	5%	4%	1%	0%	1%	5%	8%	6%	22%	19%
18	1%	0%	1%	2%	8%	10%	3%	7%	2%	3%	0%	7%	3%	13%	26%	15%
19	11%	6%	3%	3%	1%	6%	10%	6%	7%	3%	0%	6%	6%	7%	15%	11%
20	6%	0%	0%	0%	0%	14%	16%	4%	0%	7%	0%	1%	1%	12%	31%	9%
21	3%	0%	0%	0%	1%	6%	11%	0%	2%	1%	3%	3%	8%	10%	36%	14%
22	8%	3%	3%	1%	1%	7%	3%	1%	1%	0%	1%	2%	0%	10%	39%	19%
23	3%	1%	1%	3%	8%	13%	5%	1%	1%	4%	1%	8%	4%	15%	24%	8%
24	1%	0%	0%	0%	0%	0%	28%	3%	1%	7%	1%	3%	7%	10%	22%	17%
25	1%	0%	0%	0%	10%	1%	3%	1%	1%	1%	5%	7%	12%	19%	23%	17%
26	1%	0%	4%	3%	10%	23%	13%	8%	1%	1%	0%	1%	7%	11%	13%	3%
27	3%	0%	0%	11%	7%	22%	7%	1%	8%	1%	1%	3%	4%	10%	15%	7%
28	3%	0%	0%	0%	0%	13%	8%	1%	1%	3%	6%	8%	7%	17%	24%	11%
29	10%	1%	4%	0%	1%	15%	1%	0%	1%	4%	2%	3%	6%	14%	20%	17%
30	12%	1%	0%	0%	6%	0%	8%	0%	3%	3%	2%	3%	11%	13%	22%	16%
31																
Mensual	6%	1%	2%	1%	4%	7%	9%	3%	2%	2%	2%	4%	7%	12%	23%	14%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	NNO	ONO	SE	ESE	O	N	E	OSO	SSE	SSO	SO	NE	S	NNE	ENE
F. R.	23%	14%	12%	9%	7%	7%	6%	4%	4%	3%	2%	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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NOVIEMBRE 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	2%	17%	8%	6%	49%	0%	17%	0%	0%	0%	0%	0%	1%	0%	1%	0%
2	14%	3%	0%	22%	4%	24%	6%	11%	8%	0%	0%	1%	1%	3%	1%	2%
3	9%	10%	0%	3%	24%	22%	17%	6%	3%	0%	0%	0%	0%	0%	1%	4%
4	10%	3%	1%	9%	10%	26%	9%	3%	3%	0%	9%	1%	1%	1%	3%	10%
5	4%	4%	28%	4%	16%	18%	22%	1%	0%	0%	0%	0%	0%	0%	1%	2%
6	9%	1%	11%	10%	11%	42%	11%	0%	0%	0%	0%	0%	0%	1%	4%	1%
7	0%	9%	24%	13%	10%	15%	18%	7%	2%	0%	0%	1%	0%	1%	0%	0%
8	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	1%	43%	1%	0%	6%
9	6%	0%	0%	0%	1%	10%	0%	2%	0%	0%	0%	0%	38%	0%	1%	42%
10	20%	25%	3%	16%	7%	15%	2%	1%	2%	0%	0%	0%	0%	1%	1%	6%
11	0%	9%	1%	22%	35%	3%	0%	0%	0%	0%	0%	5%	0%	0%	21%	6%
12	0%	0%	0%	12%	8%	17%	0%	0%	0%	0%	0%	0%	4%	27%	21%	10%
13	0%	31%	0%	4%	0%	3%	12%	0%	0%	0%	0%	0%	1%	45%	3%	1%
14	1%	8%	3%	11%	0%	25%	0%	0%	0%	0%	0%	0%	0%	4%	21%	27%
15	6%	11%	3%	10%	37%	23%	0%	0%	0%	0%	0%	0%	0%	0%	7%	4%
16	21%	1%	8%	0%	0%	40%	1%	0%	0%	0%	0%	0%	1%	0%	22%	8%
17	3%	3%	1%	0%	13%	46%	18%	8%	0%	1%	0%	0%	2%	0%	3%	2%
18	20%	1%	2%	18%	4%	33%	15%	0%	1%	0%	0%	0%	0%	0%	0%	6%
19	11%	1%	18%	11%	4%	36%	6%	0%	1%	0%	3%	0%	2%	1%	1%	4%
20	28%	1%	0%	0%	3%	21%	0%	0%	0%	0%	1%	2%	13%	7%	3%	22%
21	17%	1%	6%	0%	8%	35%	10%	8%	0%	0%	0%	1%	0%	1%	1%	13%
22	0%	6%	1%	28%	1%	40%	17%	0%	6%	0%	0%	0%	0%	0%	0%	3%
23	0%	5%	0%	18%	1%	51%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24	16%	2%	1%	0%	30%	7%	3%	11%	0%	0%	0%	0%	0%	0%	4%	26%
25	0%	8%	15%	1%	51%	11%	1%	0%	0%	0%	0%	0%	0%	0%	0%	13%
26	1%	1%	3%	7%	60%	24%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%
27	12%	1%	7%	6%	10%	28%	9%	6%	2%	1%	0%	0%	0%	0%	0%	19%
28	21%	16%	22%	3%	3%	12%	10%	6%	0%	0%	0%	0%	1%	1%	3%	2%
29	12%	1%	48%	0%	23%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
30	17%	6%	0%	3%	30%	14%	5%	3%	0%	0%	0%	0%	0%	0%	6%	17%
31																
Mensual	9%	6%	9%	8%	15%	22%	8%	3%	1%	0%	0%	0%	4%	3%	4%	9%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	ESE	E	NE	N	NNO	SE	ENE	NNE	NO	O	ONO	SSE	S	SO	OSO	SSO
F. R.	22%	15%	9%	9%	9%	8%	8%	6%	4%	4%	3%	3%	1%	0%	0%	0%

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