



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

AGOSTO 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	20.7	16.6	13.2	3.1	0.6	784.7	96.0	85.5	73.0	0.2	1241.0	480.6	3.6
2	20.6	16.3	14.1	4.0	0.7	783.8	94.0	85.4	75.0	17.2	1151.0	254.3	2.0
3	20.9	16.6	14.8	3.6	0.5	783.8	95.0	86.8	76.0	2.6	1273.0	311.8	2.3
4	21.6	17.6	14.0	3.1	0.6	783.8	91.0	82.9	74.0	0.0	1278.0	381.6	3.0
5	23.9	18.5	14.8	4.0	1.0	783.7	95.0	77.5	57.0	1.0	1187.0	559.5	4.5
6	23.8	18.6	14.8	4.0	0.7	783.3	80.0	69.1	53.0	0.0	1179.0	416.9	3.6
7	23.5	18.4	14.9	3.6	0.8	783.7	86.0	75.1	53.0	0.0	1287.0	397.9	3.6
8	23.7	18.6	14.3	4.9	0.8	783.9	84.0	70.3	51.0	0.0	1246.0	565.5	4.7
9	22.2	17.7	15.1	2.7	0.4	783.7	90.0	77.8	57.0	0.0	993.0	243.0	2.1
10	23.6	18.3	14.3	3.6	0.8	782.9	92.0	77.5	52.0	0.0	1283.0	533.9	4.4
11	21.8	17.5	14.8	3.1	0.6	782.7	89.0	79.5	60.0	0.0	1218.0	255.4	2.2
12	18.9	16.0	14.6	2.2	0.4	783.5	95.0	90.9	79.0	2.2	998.0	184.4	1.3
13	20.8	16.8	13.7	3.1	0.4	783.5	92.0	85.7	70.0	2.8	1060.0	330.3	2.5
14	20.5	16.9	14.1	4.0	0.6	782.5	96.0	86.8	69.0	0.6	1218.0	306.4	2.3
15	19.4	16.2	14.5	3.1	0.4	783.6	97.0	92.8	79.0	2.2	1095.0	196.9	1.6
16	20.7	16.3	13.4	3.6	0.5	784.8	97.0	89.4	69.0	1.2	881.0	303.8	2.3
17	21.8	16.6	14.4	3.6	0.5	784.8	94.0	84.8	67.0	4.2	1062.0	331.0	2.6
18	22.9	17.1	13.6	4.0	1.0	783.9	96.0	83.7	61.0	8.8	1287.0	490.0	3.9
19	21.1	16.2	13.6	3.6	0.9	783.8	95.0	86.9	68.0	5.4	1301.0	368.6	2.7
20	18.5	15.5	14.0	2.2	0.3	784.7	95.0	91.2	82.0	7.8	1086.0	206.7	1.5
21	18.9	15.8	13.7	3.6	0.4	785.5	94.0	88.6	80.0	2.0	1311.0	310.6	2.3
22	20.7	17.0	14.1	3.6	0.6	784.9	95.0	86.7	70.0	0.2	1044.0	334.1	2.5
23	20.7	15.9	13.7	3.6	0.8	784.4	97.0	92.1	79.0	22.4	1245.0	265.8	1.9
24	19.1	15.5	13.1	3.1	0.5	786.0	96.0	90.7	81.0	2.2	844.0	254.7	1.8
25	20.8	17.3	14.3	3.6	0.5	785.9	93.0	82.6	71.0	0.0	1111.0	372.0	2.9
26	21.9	17.6	14.7	3.1	0.8	785.6	87.0	77.6	58.0	0.6	1176.0	354.3	3.1
27	22.4	17.6	14.1	3.6	0.6	784.7	95.0	82.6	65.0	1.0	1327.0	329.4	2.8
28	20.0	16.2	14.0	3.6	0.7	784.5	97.0	90.2	77.0	11.6	1311.0	313.3	2.3
29	22.1	17.3	14.4	3.6	0.6	784.5	94.0	83.5	68.0	0.0	1093.0	282.4	2.5
30	23.8	18.6	14.3	4.0	0.9	783.2	86.0	73.0	48.0	0.0	1252.0	576.9	4.7
31	23.6	18.6	15.7	4.0	0.7	782.9	92.0	75.4	53.0	0.0	1339.0	335.0	3.0
Mensual	23.9	17.1	13.1	4.9	0.6	784.1	97.0	83.3	48.0	96.2	1339.0	349.9	86.3

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

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

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	NNO	ONO	O	ESE	OSO	N	E	SSE	SE	SO	S	NNE	SSO	NE	ENE
F. R.	20%	12%	11%	8%	7%	6%	6%	5%	5%	4%	3%	3%	3%	3%	2%	1%

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



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AGOSTO 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	0%	4%	11%	33%	35%	4%	3%	1%	3%	0%	0%	1%	0%	0%	5%	0%
2	3%	8%	10%	8%	26%	34%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%
3	1%	3%	9%	32%	31%	12%	6%	1%	1%	4%	0%	0%	0%	0%	0%	0%
4	27%	2%	10%	6%	20%	26%	6%	0%	0%	0%	0%	0%	0%	0%	0%	2%
5	9%	5%	1%	3%	22%	32%	12%	1%	0%	3%	0%	6%	2%	0%	1%	6%
6	5%	15%	15%	7%	37%	10%	6%	4%	0%	0%	0%	0%	0%	0%	0%	1%
7	16%	10%	7%	0%	33%	13%	7%	2%	1%	5%	1%	0%	0%	2%	0%	3%
8	6%	0%	0%	48%	16%	13%	2%	1%	0%	0%	1%	0%	1%	3%	5%	6%
9	23%	10%	8%	24%	27%	2%	1%	0%	0%	0%	0%	0%	2%	0%	0%	2%
10	2%	3%	1%	3%	28%	40%	8%	1%	1%	0%	0%	0%	1%	1%	0%	11%
11	24%	6%	3%	7%	10%	33%	3%	1%	9%	0%	0%	0%	1%	0%	0%	1%
12	1%	7%	9%	16%	0%	0%	3%	26%	0%	0%	0%	0%	0%	0%	38%	0%
13	37%	1%	1%	10%	21%	24%	0%	0%	1%	1%	1%	0%	0%	0%	0%	3%
14	9%	3%	1%	14%	1%	6%	1%	1%	0%	16%	0%	0%	5%	1%	1%	42%
15	11%	5%	0%	17%	0%	1%	8%	1%	19%	0%	7%	4%	6%	12%	5%	6%
16	28%	3%	4%	5%	10%	43%	0%	0%	0%	0%	0%	6%	0%	0%	0%	1%
17	0%	0%	3%	4%	13%	24%	11%	41%	4%	0%	0%	0%	0%	0%	0%	0%
18	11%	7%	5%	6%	3%	37%	6%	5%	0%	1%	0%	0%	0%	1%	4%	13%
19	17%	3%	6%	5%	21%	27%	2%	3%	1%	0%	0%	0%	0%	0%	1%	14%
20	8%	10%	17%	0%	47%	10%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%
21	0%	8%	0%	8%	47%	29%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22	22%	8%	3%	6%	8%	10%	2%	18%	0%	0%	0%	0%	0%	1%	10%	12%
23	6%	2%	1%	4%	6%	17%	13%	9%	2%	10%	0%	0%	6%	4%	3%	17%
24	14%	21%	31%	0%	11%	10%	1%	0%	1%	0%	1%	1%	1%	2%	2%	5%
25	0%	0%	17%	3%	44%	18%	0%	0%	0%	0%	0%	0%	0%	0%	2%	16%
26	0%	0%	0%	8%	28%	30%	24%	3%	6%	0%	0%	0%	0%	0%	0%	0%
27	15%	1%	0%	8%	30%	26%	2%	1%	0%	0%	1%	1%	3%	1%	3%	7%
28	10%	1%	16%	7%	8%	31%	3%	1%	2%	1%	1%	0%	1%	1%	3%	15%
29	0%	5%	18%	3%	8%	13%	19%	0%	1%	2%	0%	0%	22%	0%	0%	9%
30	0%	0%	0%	3%	44%	38%	3%	1%	0%	0%	1%	8%	1%	0%	0%	0%
31	10%	10%	0%	2%	65%	6%	2%	1%	0%	0%	1%	0%	1%	0%	0%	2%
Mensual	10%	5%	7%	10%	23%	20%	6%	4%	2%	1%	0%	1%	2%	1%	3%	6%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIAS																
R. V.	E	ESE	N	ENE	NE	NNO	SE	NNE	SSE	NO	S	O	SSO	ONO	OSO	SO
F. R.	23%	20%	10%	10%	7%	6%	6%	5%	4%	3%	2%	2%	1%	1%	1%	0%

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