



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 YARUMOS

CÓDIGO: EMM-05

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	23.8	16.3	10.7	4.5	1.0	793.5	96.0	79.7	54.0	0.3	1178.0	499.9	3.6
2	25.2	15.1	11.9	4.0	1.3	793.5	95.0	84.6	53.0	13.5	921.0	228.5	1.8
3	25.1	15.6	12.4	4.0	1.1	793.5	93.0	83.9	55.0	6.6	1123.0	314.2	2.3
4	24.7	17.0	10.9	3.1	1.1	793.5	94.0	78.0	53.0	0.0	1135.0	394.3	3.0
5	26.5	18.2	13.1	5.8	1.0	794.5	94.0	70.6	41.0	0.5	1264.0	529.0	4.6
6	29.4	17.6	11.7	4.5	1.5	794.5	87.0	67.3	33.0	0.0	1149.0	419.6	3.5
7	27.4	18.0	12.2	4.5	1.2	794.9	90.0	68.2	36.0	0.0	1279.0	388.6	3.3
8	26.6	17.9	11.6	6.7	1.7	795.1	87.0	65.5	39.0	0.0	1125.0	527.0	4.8
9	26.5	17.4	12.3	3.6	0.9	794.9	91.0	71.9	37.0	0.0	1293.0	286.0	2.5
10	26.3	17.7	11.8	4.9	1.4	794.7	94.0	72.7	38.0	0.0	1226.0	451.9	4.1
11	26.6	16.8	12.0	3.6	0.9	794.1	93.0	75.8	43.0	0.3	1047.0	274.6	2.3
12	21.1	15.4	13.4	2.7	0.3	793.8	96.0	85.8	62.0	4.3	915.0	191.4	1.3
13	30.2	16.3	11.6	4.0	0.9	793.2	94.0	81.1	39.0	3.6	1173.0	319.4	2.5
14	26.2	16.6	12.3	4.0	0.6	792.9	94.0	81.1	45.0	0.5	1134.0	339.8	2.5
15	23.9	16.9	13.8	5.4	1.0	792.8	97.0	85.6	57.0	1.8	1015.0	208.2	1.8
16	24.0	16.5	12.8	3.6	0.9	793.1	96.0	80.6	51.0	1.0	792.0	289.2	2.3
17	28.5	16.1	11.9	4.0	0.9	793.7	94.0	80.4	41.0	2.3	1009.0	354.2	2.5
18	25.0	17.0	12.4	4.5	1.1	793.6	96.0	77.3	45.0	13.2	1219.0	497.7	3.8
19	23.5	16.0	11.6	3.6	0.7	793.5	95.0	80.9	51.0	4.1	1120.0	361.6	2.8
20	23.7	14.8	11.7	2.7	0.6	793.5	96.0	88.1	53.0	15.0	1085.0	218.8	1.3
21	23.1	15.3	10.7	3.1	0.9	793.3	97.0	85.4	58.0	2.0	1034.0	323.3	2.5
22	24.7	16.7	11.8	4.5	0.7	793.5	95.0	79.9	52.0	0.3	1149.0	351.5	2.8
23	22.6	15.6	12.8	5.4	0.7	793.8	96.0	87.7	62.0	31.0	1390.0	283.5	2.0
24	21.6	14.9	11.9	3.1	0.5	793.7	96.0	86.6	62.0	2.3	908.0	261.4	1.8
25	23.3	16.4	11.2	3.6	1.1	794.1	95.0	79.3	55.0	0.0	1151.0	354.7	2.8
26	25.4	16.3	11.6	4.5	1.5	794.5	95.0	77.6	45.0	0.5	1231.0	372.7	3.0
27	25.8	17.0	11.6	4.9	1.0	794.2	94.0	77.7	46.0	2.3	1366.0	368.4	2.8
28	24.5	16.2	12.7	4.0	0.8	794.2	97.0	83.8	53.0	6.1	1305.0	353.6	2.5
29	23.3	16.5	12.2	3.1	1.1	793.8	94.0	79.9	53.0	0.0	1076.0	286.0	2.3
30	26.1	17.8	11.4	4.9	1.6	793.9	95.0	70.9	36.0	0.0	1367.0	567.9	4.6
31	26.5	17.8	13.3	3.6	1.3	794.7	92.0	70.5	35.0	0.0	1294.0	369.3	3.3
Mensual	30.2	16.6	10.7	6.7	1.0	793.9	97.0	78.7	33.0	111.3	1390.0	354.4	87.1

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

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	ONO	NNO	E	O	ENE	ESE	N	OSO	SE	SSO	SO	SSE	NNE	S	NE
F. R.	26%	17%	16%	15%	5%	5%	4%	2%	2%	2%	1%	1%	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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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	2%	0%	0%	28%	47%	17%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%
2	0%	0%	0%	24%	69%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3	0%	0%	2%	36%	60%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4	3%	0%	0%	23%	69%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5	2%	0%	0%	15%	40%	22%	1%	4%	3%	3%	1%	0%	0%	3%	5%	2%
6	0%	0%	1%	16%	71%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7	1%	0%	4%	31%	56%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	1%
8	0%	0%	1%	29%	59%	6%	1%	0%	0%	1%	0%	0%	0%	3%	0%	0%
9	1%	1%	1%	25%	61%	6%	1%	1%	0%	0%	0%	0%	0%	3%	1%	0%
10	0%	1%	1%	26%	65%	5%	0%	1%	0%	0%	0%	0%	0%	1%	0%	1%
11	0%	0%	1%	23%	69%	6%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
12	37%	0%	0%	6%	45%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13	0%	0%	0%	13%	74%	13%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
14	1%	0%	11%	48%	32%	0%	0%	0%	1%	0%	0%	0%	0%	6%	2%	0%
15	0%	0%	0%	1%	17%	24%	3%	1%	0%	1%	0%	1%	0%	25%	22%	6%
16	5%	3%	0%	15%	47%	26%	1%	0%	0%	0%	0%	0%	0%	0%	4%	0%
17	0%	0%	0%	20%	74%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18	7%	0%	3%	13%	55%	11%	1%	2%	0%	0%	0%	0%	0%	5%	1%	3%
19	13%	1%	3%	35%	40%	5%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%
20	0%	0%	0%	19%	81%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21	0%	0%	0%	14%	75%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22	8%	10%	4%	46%	19%	4%	3%	0%	0%	0%	0%	0%	0%	0%	3%	3%
23	2%	2%	0%	10%	49%	12%	4%	2%	3%	0%	0%	1%	7%	3%	3%	3%
24	0%	0%	1%	6%	73%	8%	0%	0%	0%	0%	0%	1%	1%	2%	5%	4%
25	5%	0%	0%	19%	69%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26	0%	0%	0%	15%	74%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27	4%	1%	3%	18%	58%	6%	0%	0%	1%	1%	0%	1%	0%	3%	2%	3%
28	1%	5%	2%	13%	34%	8%	1%	0%	0%	0%	0%	0%	0%	9%	24%	3%
29	0%	4%	0%	17%	66%	6%	1%	1%	2%	1%	0%	0%	0%	2%	1%	0%
30	1%	0%	1%	26%	63%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
31	1%	1%	0%	24%	69%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mensual	3%	1%	1%	21%	57%	9%	1%	0%	0%	0%	0%	0%	0%	2%	3%	1%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ENE	ESE	N	NO	ONO	NE	NNO	NNE	SE	SSE	S	O	SSO	OSO	SO
F. R.	57%	21%	9%	3%	3%	2%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%

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