



# 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

FEBRERO 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	29.2	17.1	12.1	3.1	0.5	793.2	96.0	77.8	38.0	1.0	1087.0	408.0	2.8
2	27.3	17.3	11.5	4.0	0.9	793.3	96.0	73.7	39.0	0.0	993.0	452.8	3.6
3	25.3	17.3	10.9	4.5	1.5	793.2	91.0	70.6	45.0	0.0	846.0	348.7	3.1
4	23.3	16.6	12.1	3.6	1.1	793.1	94.0	79.2	57.0	0.0	950.0	298.3	2.0
5	25.1	16.6	12.6	4.0	1.0	792.8	94.0	79.8	49.0	0.0	1063.0	325.3	2.3
6	23.8	16.2	11.9	7.1	1.3	792.9	97.0	83.9	57.0	85.1	1060.0	292.3	2.0
7	21.0	14.4	12.7	3.6	0.7	793.2	98.0	91.2	66.0	9.9	661.0	190.8	1.0
8	20.1	15.1	11.8	3.1	0.9	793.0	97.0	88.2	71.0	23.1	615.0	199.6	1.3
9	22.8	14.7	12.5	2.7	0.7	792.5	98.0	91.5	61.0	14.0	671.0	172.4	1.0
10	24.4	15.8	12.3	4.0	1.0	792.3	96.0	83.4	52.0	1.8	1194.0	442.1	2.8
11	24.2	15.4	11.8	3.1	0.9	792.7	97.0	86.1	51.0	0.5	923.0	246.5	1.5
12	27.8	17.3	11.6	4.0	1.2	793.3	96.0	77.3	41.0	0.0	1125.0	504.1	3.6
13	25.3	16.4	13.6	3.1	0.8	794.0	96.0	85.2	51.0	23.9	1115.0	461.2	2.5
14	21.8	15.6	12.5	3.6	1.0	793.8	97.0	86.4	61.0	6.6	1199.0	201.5	1.5
15	23.1	15.9	11.9	3.1	1.1	793.6	96.0	85.5	60.0	10.4	1021.0	291.1	1.8
16	20.8	14.8	12.6	4.9	0.9	793.6	97.0	90.2	69.0	16.3	735.0	242.6	1.3
17	22.7	15.0	11.7	3.1	0.7	793.6	98.0	88.5	60.0	18.0	783.0	277.5	1.8
18	21.9	14.3	11.7	4.5	1.2	793.3	95.0	88.4	60.0	38.6	1054.0	192.5	1.0
19	23.5	15.6	11.6	3.1	1.0	792.8	97.0	85.9	59.0	0.3	1136.0	315.5	2.3
20	25.2	16.8	11.4	4.0	1.1	793.3	97.0	78.7	46.0	2.5	1191.0	436.3	3.3
21	25.3	16.6	11.7	4.0	1.1	793.8	95.0	77.6	48.0	2.3	1085.0	449.3	3.6
22	25.4	16.3	10.5	4.0	1.2	794.1	95.0	78.3	44.0	2.0	1159.0	388.3	2.5
23	21.1	15.1	13.2	3.1	0.8	794.2	97.0	88.5	63.0	20.8	1095.0	177.5	1.0
24	19.2	14.1	11.9	3.1	0.8	794.3	97.0	92.1	73.0	22.6	656.0	189.2	1.0
25	23.6	15.0	11.1	3.1	1.1	794.0	96.0	85.1	59.0	7.9	1081.0	271.2	1.8
26	25.2	16.5	10.7	4.0	1.4	793.7	97.0	77.9	43.0	0.0	1255.0	419.2	3.0
27	21.1	15.7	12.7	3.1	0.8	793.9	94.0	85.8	67.0	6.3	590.0	198.7	1.3
28	22.9	15.7	11.7	3.1	1.0	793.7	96.0	83.0	55.0	32.5	1062.0	281.1	2.0
<b>Mensual</b>	<b>29.2</b>	<b>15.8</b>	<b>10.5</b>	<b>7.1</b>	<b>1.0</b>	<b>793.4</b>	<b>98.0</b>	<b>83.6</b>	<b>38.0</b>	<b>346.5</b>	<b>1255.0</b>	<b>309.8</b>	<b>58.7</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 YARUMOS

CÓDIGO: EMM-05

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

DIRECCION DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	E	ONO	NNO	O	N	ESE	ENE	OSO	SO	NE	SE	NNE	SSO	SSE	S
F. R.	20%	17%	16%	14%	8%	7%	6%	4%	2%	1%	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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CÓDIGO: EMM-05

FEBRERO DE 2011



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	6%	0%	3%	6%	59%	17%	1%	2%	0%	0%	0%	0%	0%	1%	4%	0%
2	2%	1%	0%	13%	61%	18%	4%	0%	0%	0%	0%	0%	0%	0%	0%	1%
3	0%	3%	0%	4%	76%	16%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4	1%	1%	2%	17%	68%	7%	0%	0%	0%	0%	0%	0%	0%	3%	1%	0%
5	2%	6%	1%	8%	72%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
6	1%	1%	2%	20%	58%	12%	1%	0%	0%	1%	1%	1%	1%	0%	1%	1%
7	0%	0%	4%	53%	15%	28%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8	0%	0%	12%	10%	40%	22%	0%	0%	0%	2%	1%	1%	6%	3%	3%	1%
9	0%	1%	44%	10%	40%	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	0%
10	0%	0%	1%	3%	93%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	0%	0%	2%	8%	79%	3%	0%	0%	0%	0%	0%	0%	3%	6%	0%	0%
12	0%	0%	1%	10%	81%	5%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%
13	3%	3%	1%	9%	78%	1%	0%	1%	0%	0%	0%	0%	0%	0%	3%	0%
14	6%	1%	1%	28%	50%	3%	0%	0%	0%	0%	0%	0%	1%	3%	4%	3%
15	0%	1%	1%	13%	71%	12%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%
16	1%	0%	0%	8%	63%	23%	1%	1%	0%	0%	0%	0%	0%	1%	1%	1%
17	3%	1%	10%	10%	24%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%
18	2%	0%	1%	7%	78%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19	1%	0%	3%	21%	49%	1%	0%	0%	0%	0%	0%	1%	0%	1%	23%	1%
20	2%	0%	5%	13%	67%	7%	1%	0%	0%	0%	1%	2%	1%	1%	0%	0%
21	0%	0%	1%	6%	81%	8%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
22	0%	0%	0%	8%	83%	4%	0%	0%	1%	2%	0%	0%	0%	1%	1%	0%
23	0%	0%	0%	9%	50%	41%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24	0%	0%	1%	3%	17%	63%	4%	6%	0%	4%	0%	0%	0%	0%	0%	2%
25	0%	0%	0%	9%	71%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26	0%	0%	0%	8%	81%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27	1%	3%	3%	12%	53%	10%	0%	0%	0%	0%	2%	0%	1%	8%	1%	8%
28	1%	1%	10%	16%	56%	5%	4%	1%	1%	1%	0%	3%	1%	0%	0%	0%
Mensual	1%	1%	4%	12%	61%	14%	1%	0%	0%	0%	0%	0%	1%	1%	2%	1%

DIRECCION DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	E	ESE	ENE	NE	NO	N	ONO	NNO	NNE	SE	O	SSO	SSE	OSO	SO	S
F. R.	61%	14%	12%	4%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%

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