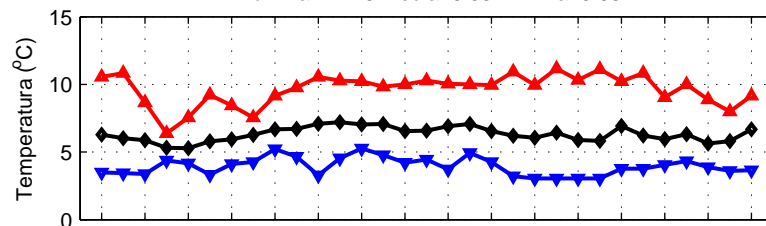


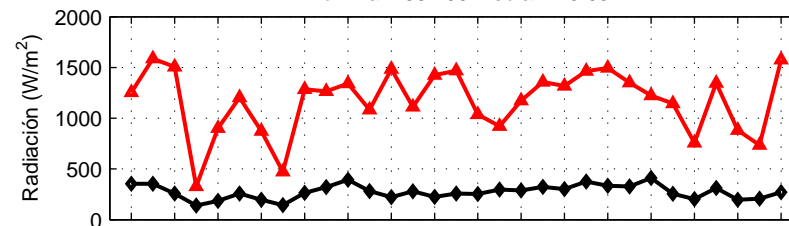
Estación: Cortaderal
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Revisó: Adm. Ambiental Victor Manuel Bermúdez Marín. Operador REDH
Aprobó: Ing Ph.D. Juan Mauricio Castaño Rojas. Director REDH.
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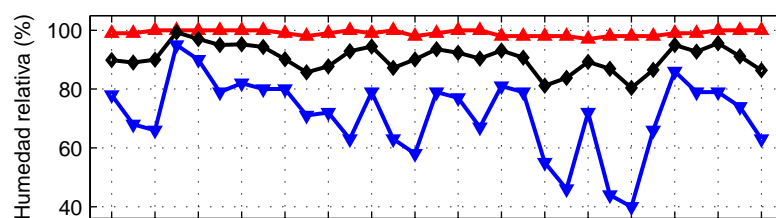
Máxima: 11.16 Media: 6.33 Mínima: 3.05



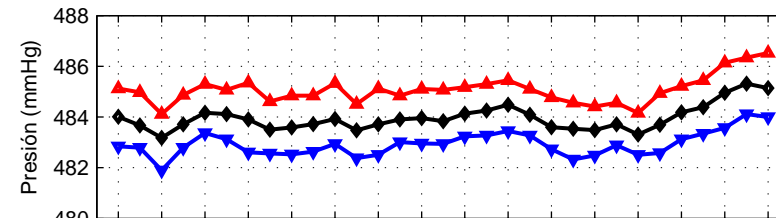
Máxima: 1587.00 Media: 273.65



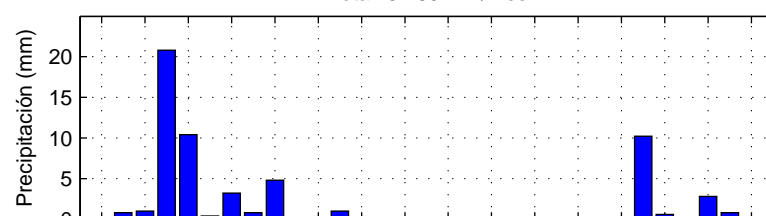
Máxima: 100.00 Media: 90.54 Mínima: 40.00



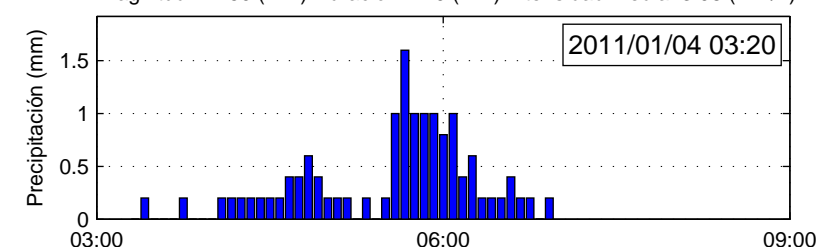
Máxima: 486.52 Media: 483.96 Mínima: 481.90



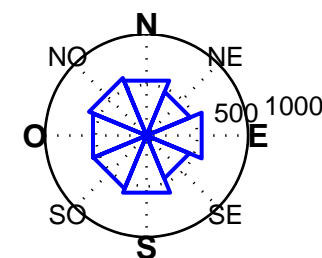
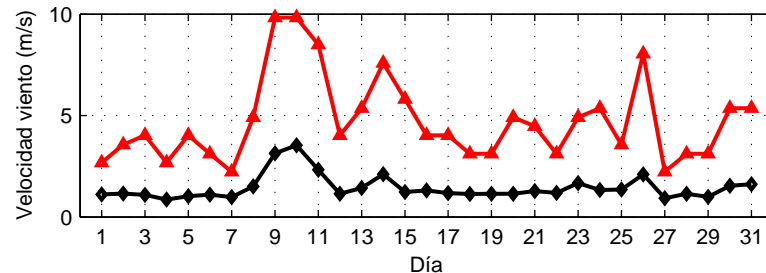
Total: 57.80 mm/mes



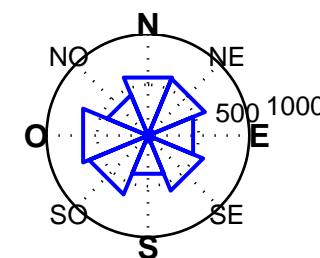
Magnitud: 14.60 (mm) Duración: 220 (min) Intensidad Media: 3.98 (mm/h)



Máxima: 9.83 Media: 1.45



Dirección del viento (Día)



Dirección del viento (Noche)



Estación: Cortaderal
Fecha: Enero de 2011
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| Día | Temperatura (°C) | | | Vel. Viento (m/s) | | Presión (mmHg) | Humedad (%) | Precipitación (mm) | Evap (mm) | Radiación solar (W/m ²) | |
|-------|------------------|-------|------|-------------------|-------|----------------|-------------|--------------------|-----------|-------------------------------------|--------|
| | Máx | Media | Mín | Máx | Media | Media | Media | Total | Total | Máx | Media |
| 1 | 10.55 | 6.29 | 3.49 | 2.68 | 1.11 | 484.01 | 89.84 | 0.00 | 1.89 | 1255.00 | 353.14 |
| 2 | 10.83 | 6.03 | 3.44 | 3.57 | 1.15 | 483.67 | 89.01 | 0.80 | 1.83 | 1587.00 | 353.76 |
| 3 | 8.66 | 5.88 | 3.38 | 4.02 | 1.09 | 483.18 | 90.00 | 1.00 | 1.26 | 1505.00 | 256.56 |
| 4 | 6.38 | 5.32 | 4.38 | 2.68 | 0.86 | 483.71 | 99.32 | 20.80 | 0.81 | 327.00 | 139.49 |
| 5 | 7.55 | 5.28 | 4.16 | 4.02 | 1.03 | 484.16 | 97.06 | 10.40 | 1.61 | 902.00 | 184.60 |
| 6 | 9.22 | 5.79 | 3.33 | 3.12 | 1.10 | 484.11 | 94.95 | 0.40 | 1.29 | 1204.00 | 257.29 |
| 7 | 8.44 | 5.95 | 4.11 | 2.23 | 0.98 | 483.91 | 95.18 | 3.20 | 0.89 | 872.00 | 195.48 |
| 8 | 7.55 | 6.27 | 4.27 | 4.91 | 1.51 | 483.50 | 94.27 | 0.80 | 0.68 | 473.00 | 143.62 |
| 9 | 9.16 | 6.68 | 5.22 | 9.83 | 3.14 | 483.58 | 90.14 | 4.80 | 1.57 | 1285.00 | 264.65 |
| 10 | 9.77 | 6.70 | 4.66 | 9.83 | 3.53 | 483.72 | 85.66 | 0.00 | 2.14 | 1264.00 | 320.93 |
| 11 | 10.55 | 7.08 | 3.27 | 8.49 | 2.32 | 483.92 | 87.72 | 0.00 | 4.67 | 1341.00 | 393.72 |
| 12 | 10.27 | 7.21 | 4.55 | 4.02 | 1.14 | 483.47 | 92.86 | 1.00 | 3.29 | 1083.00 | 282.38 |
| 13 | 10.22 | 7.03 | 5.27 | 5.36 | 1.43 | 483.71 | 94.48 | 0.00 | 3.16 | 1485.00 | 222.58 |
| 14 | 9.83 | 7.07 | 4.77 | 7.59 | 2.11 | 483.90 | 87.22 | 0.00 | 1.65 | 1111.00 | 278.46 |
| 15 | 10.00 | 6.54 | 4.22 | 5.81 | 1.24 | 483.96 | 90.07 | 0.00 | 1.17 | 1426.00 | 224.01 |
| 16 | 10.27 | 6.57 | 4.44 | 4.02 | 1.31 | 483.84 | 93.53 | 0.00 | 1.36 | 1468.00 | 258.00 |
| 17 | 10.05 | 6.90 | 3.72 | 4.02 | 1.17 | 484.13 | 92.31 | 0.00 | 2.61 | 1037.00 | 252.32 |
| 18 | 10.00 | 7.07 | 4.94 | 3.12 | 1.14 | 484.25 | 90.39 | 0.00 | 3.13 | 921.00 | 296.61 |
| 19 | 9.94 | 6.54 | 4.27 | 3.12 | 1.15 | 484.48 | 93.10 | 0.00 | 1.52 | 1172.00 | 288.68 |
| 20 | 10.94 | 6.20 | 3.22 | 4.91 | 1.14 | 484.09 | 90.70 | 0.00 | 1.68 | 1357.00 | 322.05 |
| 21 | 9.94 | 6.05 | 3.05 | 4.47 | 1.28 | 483.60 | 81.14 | 0.00 | 1.68 | 1318.00 | 301.15 |
| 22 | 11.16 | 6.44 | 3.05 | 3.12 | 1.19 | 483.54 | 83.80 | 0.00 | 2.11 | 1464.00 | 376.70 |
| 23 | 10.33 | 5.89 | 3.05 | 4.91 | 1.67 | 483.48 | 89.27 | 0.00 | 1.91 | 1494.00 | 333.88 |
| 24 | 11.11 | 5.82 | 3.05 | 5.36 | 1.33 | 483.71 | 86.86 | 0.00 | 1.74 | 1350.00 | 327.84 |
| 25 | 10.22 | 6.92 | 3.77 | 3.57 | 1.35 | 483.31 | 80.43 | 0.00 | 2.41 | 1223.00 | 410.49 |
| 26 | 10.83 | 6.21 | 3.77 | 8.04 | 2.10 | 483.69 | 86.50 | 10.20 | 1.63 | 1144.00 | 255.74 |
| 27 | 9.05 | 5.96 | 4.05 | 2.23 | 0.93 | 484.18 | 94.97 | 0.60 | 0.97 | 756.00 | 203.24 |
| 28 | 10.00 | 6.32 | 4.33 | 3.12 | 1.14 | 484.38 | 92.70 | 0.00 | 1.71 | 1346.00 | 311.99 |
| 29 | 8.88 | 5.63 | 3.88 | 3.12 | 0.99 | 484.96 | 95.63 | 2.80 | 0.88 | 881.00 | 196.60 |
| 30 | 8.00 | 5.80 | 3.61 | 5.36 | 1.54 | 485.31 | 91.15 | 0.80 | 1.00 | 735.00 | 206.32 |
| 31 | 9.16 | 6.68 | 3.66 | 5.36 | 1.62 | 485.14 | 86.38 | 0.20 | 2.03 | 1577.00 | 270.81 |
| TOTAL | | | | | | | | 57.80 | 56.28 | | |
| PROM | 9.64 | 6.33 | 3.95 | 4.71 | 1.45 | 483.96 | 90.54 | | | 1173.00 | 273.65 |

Cuadro 1: Resumen de análisis climatológico

Estación: Cortaderal
Fecha: Enero de 2011
Registros: 31 de 31

Reporte climatológico mensual
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| Día | Lluvias por intensidad | | | | Lluvias por jornada | | | | CLL | PT (mm) | DP | | DM (min) | MM (mm) | IMM (mm/h) | IM5 (mm/h) |
|-------|------------------------|---|----|----|---------------------|----|----|---|-----|---------|-------|-------|----------|---------|------------|------------|
| | F | M | L | LL | Md | Mñ | T | N | | | (h) | (%) | | | | |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.80 | 0.17 | 0.69 | 15.00 | 0.80 | 2.40 | 7.20 |
| 3 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 2 | 1.00 | 0.42 | 1.74 | 45.00 | 0.80 | 0.96 | 2.40 |
| 4 | 0 | 1 | 6 | 3 | 2 | 1 | 3 | 4 | 10 | 20.80 | 5.25 | 21.88 | 220.00 | 14.60 | 3.89 | 19.20 |
| 5 | 0 | 1 | 7 | 1 | 6 | 0 | 3 | 0 | 9 | 10.40 | 2.75 | 11.46 | 170.00 | 8.00 | 2.74 | 12.00 |
| 6 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 2 | 0.40 | 0.17 | 0.69 | 10.00 | 0.20 | 0.80 | 2.40 |
| 7 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3.20 | 0.75 | 3.13 | 55.00 | 3.20 | 3.20 | 9.60 |
| 8 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 1 | 4 | 0.80 | 0.33 | 1.39 | 10.00 | 0.20 | 0.80 | 2.40 |
| 9 | 0 | 1 | 5 | 0 | 5 | 0 | 1 | 0 | 6 | 4.80 | 1.50 | 6.25 | 55.00 | 2.80 | 2.80 | 7.20 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 3 | 1.00 | 0.33 | 1.39 | 15.00 | 0.60 | 1.80 | 4.80 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 10.20 | 1.92 | 7.99 | 155.00 | 9.80 | 3.67 | 16.80 |
| 27 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 2 | 0.60 | 0.25 | 1.04 | 20.00 | 0.40 | 0.96 | 2.40 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 0 | 1 | 2 | 1 | 0 | 0 | 3 | 1 | 4 | 2.80 | 0.67 | 2.78 | 15.00 | 1.60 | 4.80 | 12.00 |
| 30 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0.80 | 0.33 | 1.39 | 30.00 | 0.60 | 1.03 | 2.40 |
| 31 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0.20 | 0.08 | 0.35 | 10.00 | 0.20 | 0.80 | 2.40 |
| MAX | 0 | 1 | 7 | 3 | 6 | 1 | 3 | 4 | 10 | 20.80 | 5.25 | 21.88 | 220.00 | 14.60 | 4.80 | 19.20 |
| TOTAL | 0 | 7 | 38 | 5 | 15 | 1 | 25 | 9 | 50 | 57.80 | 14.92 | 2.00 | | | | |

Cuadro 1: Análisis mensual de lluvias

| | | |
|----|----------|--|
| F | Fuerte | $7.6 \text{ (mm/h)} \leq \text{intensidad}$ |
| M | Moderada | $2.5 \text{ (mm/h)} < \text{intensidad} \leq 7.6 \text{ (mm/h)}$ |
| L | Ligera | $1.0 \text{ (mm/h)} < \text{intensidad} \leq 2.5 \text{ (mm/h)}$ |
| LL | Llovizna | $1.0 \text{ (mm/h)} \geq \text{intensidad}$ |

| | | |
|----|-----------|---------------|
| Md | Madrugada | 00:00 - 05:59 |
| Mñ | Mañana | 06:00 - 11:59 |
| T | Tarde | 12:00 - 17:59 |
| N | Noche | 18:00 - 23:59 |

| | |
|-----|--------------------------------------|
| CLL | Cantidad de Lluvias |
| PT | Precipitación total (mm) |
| DP | Duración precipitación diaria |
| DM | Duración máxima lluvia aislada (min) |
| MM | Magnitud máx. lluvia aislada (mm) |
| IMM | Intensidad media máxima (mm/h) |
| IM5 | Intensidad máx. en 5 minutos (mm/h) |

Cuadro 2: Convenciones y Unidades