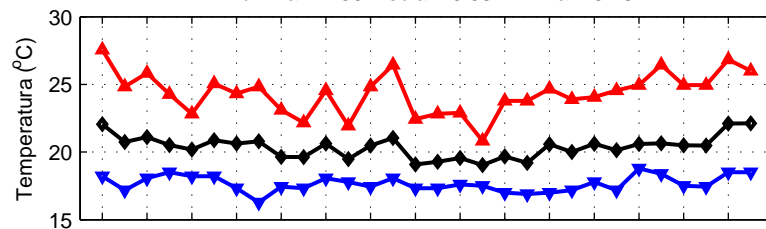


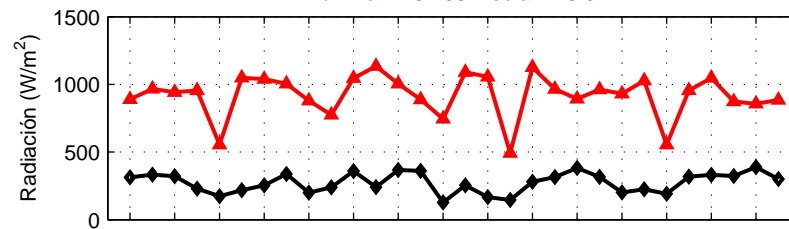
**Estación: Lago**  
**Fecha: Abril de 2011**  
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Reporte climatológico mensual  
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Aprobó: Ing Ph.D. Juan Mauricio Castaño Rojas. Director REDH.  
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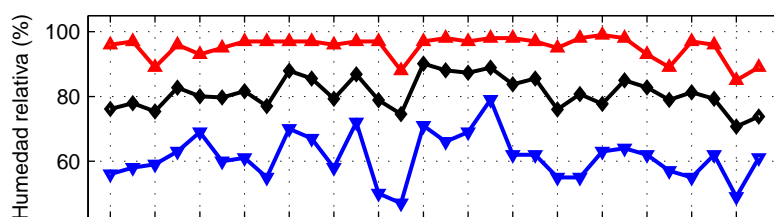
Máxima: 27.56 Media: 20.38 Mínima: 16.28



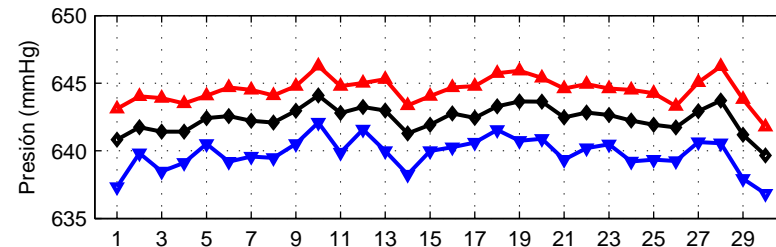
Máxima: 1134.00 Media: 273.37



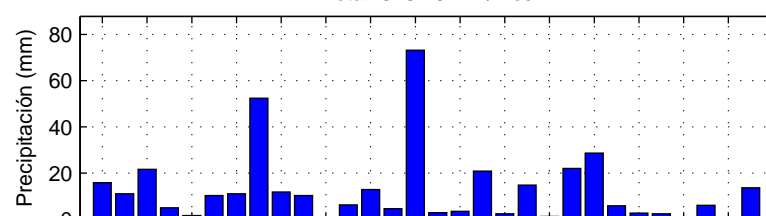
Máxima: 99.00 Media: 81.11 Mínima: 47.00



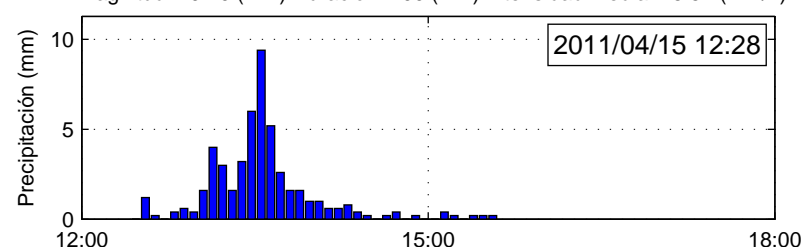
Máxima: 646.28 Media: 642.37 Mínima: 636.83



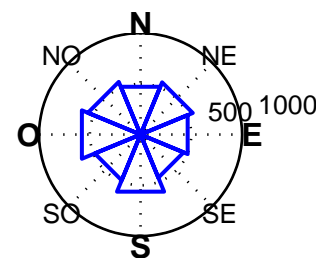
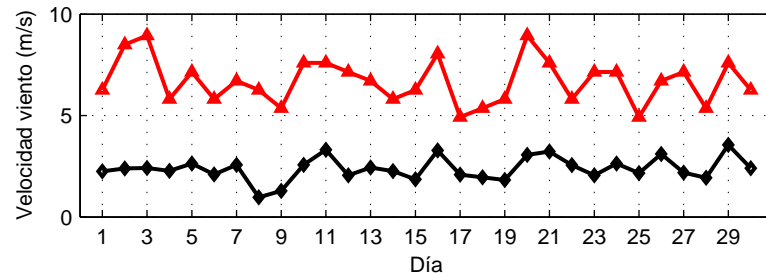
Total: 375.40 mm/mes



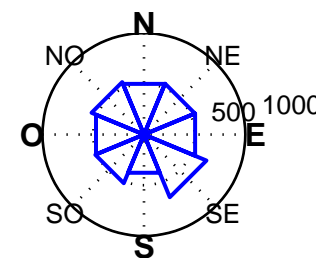
Magnitud: 49.20 (mm) Duración: 190 (min) Intensidad Media: 15.54 (mm/h)



Máxima: 8.94 Media: 2.38



Dirección del viento (Día)



Dirección del viento (Noche)



**Estación: Lago**  
**Fecha: Abril de 2011**  
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| Día   | Temperatura (°C) |       |       | Vel. Viento (m/s) |       | Presión (mmHg) | Humedad (%) | Precipitación (mm) | Evap (mm) | Radiación solar (W/m <sup>2</sup> ) |        |
|-------|------------------|-------|-------|-------------------|-------|----------------|-------------|--------------------|-----------|-------------------------------------|--------|
|       | Máx              | Media | Mín   | Máx               | Media | Media          | Media       | Total              | Total     | Máx                                 | Media  |
| 1     | 27.56            | 22.05 | 18.22 | 6.26              | 2.25  | 640.82         | 76.09       | 15.80              | 2.92      | 889.00                              | 312.44 |
| 2     | 24.83            | 20.74 | 17.17 | 8.49              | 2.39  | 641.74         | 77.88       | 11.00              | 3.07      | 967.00                              | 332.30 |
| 3     | 25.83            | 21.10 | 18.06 | 8.94              | 2.41  | 641.41         | 75.33       | 21.60              | 3.02      | 942.00                              | 321.57 |
| 4     | 24.28            | 20.50 | 18.50 | 5.81              | 2.27  | 641.41         | 82.69       | 5.00               | 2.01      | 956.00                              | 228.73 |
| 5     | 22.83            | 20.19 | 18.22 | 7.15              | 2.63  | 642.42         | 80.05       | 1.60               | 1.68      | 555.00                              | 172.58 |
| 6     | 25.06            | 20.88 | 18.22 | 5.81              | 2.10  | 642.57         | 79.66       | 10.20              | 1.98      | 1049.00                             | 217.01 |
| 7     | 24.33            | 20.63 | 17.33 | 6.71              | 2.57  | 642.23         | 81.64       | 11.00              | 2.21      | 1039.00                             | 253.37 |
| 8     | 24.83            | 20.80 | 16.28 | 6.26              | 0.97  | 642.08         | 76.99       | 52.40              | 2.62      | 1004.00                             | 337.06 |
| 9     | 23.11            | 19.65 | 17.44 | 5.36              | 1.28  | 642.95         | 87.93       | 11.80              | 1.52      | 879.00                              | 199.04 |
| 10    | 22.17            | 19.63 | 17.33 | 7.60              | 2.57  | 644.10         | 85.56       | 10.20              | 2.03      | 775.00                              | 239.74 |
| 11    | 24.56            | 20.63 | 18.06 | 7.60              | 3.32  | 642.80         | 79.29       | 1.00               | 3.28      | 1046.00                             | 359.21 |
| 12    | 21.94            | 19.47 | 17.78 | 7.15              | 2.05  | 643.23         | 86.84       | 6.20               | 1.96      | 1134.00                             | 241.29 |
| 13    | 24.83            | 20.48 | 17.44 | 6.71              | 2.43  | 642.98         | 78.90       | 12.80              | 3.23      | 1004.00                             | 366.99 |
| 14    | 26.44            | 21.04 | 18.06 | 5.81              | 2.26  | 641.29         | 74.51       | 4.60               | 3.28      | 888.00                              | 359.99 |
| 15    | 22.44            | 19.08 | 17.33 | 6.26              | 1.86  | 641.93         | 90.12       | 73.20              | 1.04      | 745.00                              | 127.64 |
| 16    | 22.83            | 19.28 | 17.33 | 8.05              | 3.28  | 642.77         | 88.08       | 2.80               | 2.06      | 1090.00                             | 254.05 |
| 17    | 22.89            | 19.57 | 17.61 | 4.92              | 2.08  | 642.43         | 87.32       | 3.40               | 1.42      | 1055.00                             | 167.41 |
| 18    | 20.83            | 19.04 | 17.50 | 5.36              | 1.95  | 643.29         | 88.91       | 20.80              | 1.22      | 492.00                              | 145.29 |
| 19    | 23.78            | 19.68 | 17.00 | 5.81              | 1.82  | 643.65         | 83.74       | 2.40               | 2.29      | 1127.00                             | 279.64 |
| 20    | 23.78            | 19.20 | 16.89 | 8.94              | 3.06  | 643.63         | 85.56       | 14.80              | 2.62      | 965.00                              | 314.26 |
| 21    | 24.67            | 20.57 | 17.00 | 7.60              | 3.23  | 642.46         | 76.00       | 1.20               | 3.43      | 893.00                              | 381.50 |
| 22    | 23.89            | 20.00 | 17.17 | 5.81              | 2.55  | 642.83         | 80.71       | 22.00              | 2.74      | 962.00                              | 315.57 |
| 23    | 24.06            | 20.62 | 17.78 | 7.15              | 2.05  | 642.65         | 77.73       | 28.60              | 1.85      | 930.00                              | 200.99 |
| 24    | 24.56            | 20.14 | 17.17 | 7.15              | 2.63  | 642.23         | 85.00       | 5.80               | 1.75      | 1027.00                             | 223.88 |
| 25    | 24.94            | 20.60 | 18.78 | 4.92              | 2.16  | 641.92         | 82.80       | 2.60               | 1.65      | 555.00                              | 191.09 |
| 26    | 26.44            | 20.64 | 18.39 | 6.71              | 3.11  | 641.73         | 78.95       | 2.40               | 2.64      | 956.00                              | 317.44 |
| 27    | 24.94            | 20.49 | 17.50 | 7.15              | 2.19  | 642.93         | 81.25       | 0.60               | 2.74      | 1048.00                             | 331.48 |
| 28    | 24.94            | 20.48 | 17.44 | 5.36              | 1.93  | 643.71         | 79.25       | 6.00               | 2.82      | 874.00                              | 322.24 |
| 29    | 26.83            | 22.11 | 18.50 | 7.60              | 3.56  | 641.18         | 70.72       | 0.00               | 4.01      | 856.00                              | 388.04 |
| 30    | 26.00            | 22.13 | 18.50 | 6.26              | 2.40  | 639.66         | 73.78       | 13.60              | 2.90      | 884.00                              | 299.30 |
| TOTAL |                  |       |       |                   |       |                |             | 375.40             | 71.99     |                                     |        |
| PROM  | 24.35            | 20.38 | 17.67 | 6.69              | 2.38  | 642.37         | 81.11       |                    |           | 919.53                              | 273.37 |

Cuadro 1: Resumen de análisis climatológico

**Estación: Lago**  
**Fecha: Abril de 2011**  
**Registros: 30 de 30**

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     | 1                      | 1  | 2  | 0  | 2                   | 1  | 0  | 1  | 4   | 15.80   | 1.92  | 7.99  | 45.00    | 8.80    | 10.56      | 24.00      |
| 2     | 1                      | 2  | 1  | 0  | 3                   | 1  | 0  | 0  | 4   | 11.00   | 1.42  | 5.90  | 30.00    | 6.80    | 11.66      | 43.20      |
| 3     | 1                      | 0  | 0  | 0  | 0                   | 0  | 1  | 0  | 1   | 21.60   | 0.58  | 2.43  | 40.00    | 21.60   | 28.80      | 79.20      |
| 4     | 0                      | 0  | 1  | 0  | 1                   | 0  | 0  | 0  | 1   | 5.00    | 1.25  | 5.21  | 120.00   | 5.00    | 2.40       | 7.20       |
| 5     | 0                      | 0  | 2  | 1  | 0                   | 0  | 2  | 1  | 3   | 1.60    | 0.58  | 2.43  | 35.00    | 0.80    | 1.20       | 2.40       |
| 6     | 0                      | 1  | 1  | 0  | 0                   | 0  | 1  | 1  | 2   | 10.20   | 1.42  | 5.90  | 90.00    | 9.80    | 6.19       | 21.60      |
| 7     | 0                      | 1  | 1  | 0  | 2                   | 0  | 0  | 0  | 2   | 11.00   | 1.58  | 6.60  | 115.00   | 10.80   | 5.40       | 16.80      |
| 8     | 1                      | 0  | 2  | 1  | 2                   | 0  | 0  | 2  | 4   | 52.40   | 3.33  | 13.89 | 125.00   | 47.60   | 21.97      | 84.00      |
| 9     | 0                      | 1  | 3  | 1  | 2                   | 0  | 1  | 2  | 5   | 11.80   | 3.25  | 13.54 | 200.00   | 10.80   | 3.16       | 12.00      |
| 10    | 0                      | 1  | 2  | 0  | 2                   | 1  | 0  | 0  | 3   | 10.20   | 3.67  | 15.28 | 250.00   | 6.40    | 1.51       | 4.80       |
| 11    | 0                      | 0  | 2  | 0  | 0                   | 0  | 0  | 2  | 2   | 1.00    | 0.33  | 1.39  | 30.00    | 0.80    | 1.37       | 4.80       |
| 12    | 0                      | 1  | 4  | 1  | 3                   | 0  | 2  | 1  | 6   | 6.20    | 1.92  | 7.99  | 50.00    | 2.40    | 2.62       | 7.20       |
| 13    | 0                      | 1  | 1  | 0  | 2                   | 0  | 0  | 0  | 2   | 12.80   | 2.67  | 11.11 | 135.00   | 10.40   | 4.46       | 38.40      |
| 14    | 0                      | 1  | 0  | 0  | 0                   | 0  | 1  | 0  | 1   | 4.60    | 0.58  | 2.43  | 60.00    | 4.60    | 4.25       | 24.00      |
| 15    | 2                      | 0  | 3  | 0  | 1                   | 0  | 2  | 2  | 5   | 73.20   | 4.33  | 18.06 | 190.00   | 49.20   | 15.14      | 112.80     |
| 16    | 0                      | 0  | 5  | 1  | 1                   | 3  | 2  | 0  | 6   | 2.80    | 1.17  | 4.86  | 60.00    | 1.00    | 0.92       | 2.40       |
| 17    | 0                      | 0  | 1  | 0  | 0                   | 0  | 1  | 0  | 1   | 3.40    | 1.33  | 5.56  | 130.00   | 3.40    | 1.51       | 4.80       |
| 18    | 1                      | 0  | 6  | 0  | 0                   | 1  | 2  | 4  | 7   | 20.80   | 3.67  | 15.28 | 95.00    | 14.80   | 8.88       | 40.80      |
| 19    | 0                      | 0  | 1  | 0  | 0                   | 0  | 0  | 1  | 1   | 2.40    | 1.00  | 4.17  | 85.00    | 2.40    | 1.60       | 2.40       |
| 20    | 0                      | 2  | 5  | 0  | 3                   | 0  | 1  | 3  | 7   | 14.80   | 3.00  | 12.50 | 155.00   | 11.00   | 4.13       | 21.60      |
| 21    | 0                      | 1  | 0  | 0  | 0                   | 0  | 0  | 1  | 1   | 1.20    | 0.17  | 0.69  | 15.00    | 1.20    | 3.60       | 7.20       |
| 22    | 0                      | 1  | 0  | 0  | 1                   | 0  | 0  | 0  | 1   | 22.00   | 3.75  | 15.63 | 275.00   | 22.00   | 4.71       | 16.80      |
| 23    | 1                      | 0  | 0  | 0  | 0                   | 0  | 0  | 1  | 1   | 28.60   | 1.92  | 7.99  | 120.00   | 28.60   | 13.73      | 50.40      |
| 24    | 1                      | 0  | 2  | 0  | 1                   | 0  | 2  | 0  | 3   | 5.80    | 0.58  | 2.43  | 20.00    | 4.80    | 11.52      | 31.20      |
| 25    | 0                      | 0  | 4  | 0  | 0                   | 2  | 1  | 1  | 4   | 2.60    | 1.08  | 4.51  | 60.00    | 1.20    | 1.11       | 2.40       |
| 26    | 0                      | 0  | 1  | 2  | 0                   | 0  | 3  | 0  | 3   | 2.40    | 1.00  | 4.17  | 70.00    | 1.40    | 1.12       | 2.40       |
| 27    | 0                      | 0  | 3  | 0  | 1                   | 1  | 0  | 1  | 3   | 0.60    | 0.25  | 1.04  | 10.00    | 0.20    | 0.80       | 2.40       |
| 28    | 0                      | 1  | 1  | 0  | 2                   | 0  | 0  | 0  | 2   | 6.00    | 1.75  | 7.29  | 115.00   | 5.80    | 2.90       | 7.20       |
| 29    | 0                      | 0  | 0  | 0  | 0                   | 0  | 0  | 0  | 0   | 0.00    | 0.00  | 0.00  | 0.00     | 0.00    | 0.00       | 0.00       |
| 30    | 1                      | 1  | 0  | 0  | 2                   | 0  | 0  | 0  | 2   | 13.60   | 1.25  | 5.21  | 45.00    | 9.60    | 11.52      | 24.00      |
| MAX   | 2                      | 2  | 6  | 2  | 3                   | 3  | 3  | 4  | 7   | 73.20   | 4.33  | 18.06 | 275.00   | 49.20   | 28.80      | 112.80     |
| TOTAL | 10                     | 16 | 54 | 7  | 31                  | 10 | 22 | 24 | 87  | 375.40  | 50.75 | 7.05  |          |         |            |            |

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