

| ANÁLISIS DE CAUDALES MÁXIMOS |               |           |                  |            |           |                 |      |          |                 |           |        |          |            |        |             |           |        |             |           |
|------------------------------|---------------|-----------|------------------|------------|-----------|-----------------|------|----------|-----------------|-----------|--------|----------|------------|--------|-------------|-----------|--------|-------------|-----------|
| DATOS (X)                    |               | VR AJUST  |                  | KT         |           | VR AJUST        |      | VR AJUST |                 | VARIABLE  |        | VR AJUST |            |        |             |           |        |             |           |
| I (Orden)                    | MAJOR A MENOR | YI-Log Xi | weibull P (X/Xm) | YI-Weibull | YI PUNTOS | VR AJUST GUMBEL | W    | Z        | VR AJUST NORMAL | (X-Xm)/Ym | KT(PI) | PEARSON  | YI-Weibull | KT(PI) | LOG PEARSON | YI-Log Xi | KT(PI) | LOG PEARSON | YI-Log Xi |
| 1                            | 109.539348    | 4.70      | 0.04             | 5.93       | 3.15      | 118.07          | 2.52 | 1.73     | 101.10          | 1.98      | 0.34   | 1.72     | 4.71       | 110.81 | 2.03        | 109.28    | 3.18   | 108.64      | 3.43      |
| 2                            | 107.5161048   | 4.68      | 0.09             | 5.66       | 2.44      | 102.02          | 2.23 | 1.38     | 92.63           | 1.46      | 0.49   | 1.38     | 4.57       | 98.22  | 1.45        | 94.94     | 2.48   | 95.42       | 2.59      |
| 3                            | 84.8371769    | 4.55      | 0.13             | 5.21       | 2.03      | 82.41           | 1.93 | 1.01     | 81.58           | 1.11      | 0.65   | 1.01     | 4.47       | 87.55  | 1.11        | 80.05     | 2.08   | 80.17       | 1.96      |
| 4                            | 89.63970457   | 4.50      | 0.17             | 4.86       | 1.75      | 82.41           | 1.93 | 0.81     | 82.54           | 0.94      | 0.81   | 0.81     | 4.43       | 81.35  | 0.96        | 80.05     | 1.79   | 81.28       | 1.69      |
| 5                            | 83.6868288    | 4.43      | 0.21             | 0.86       | 1.45      | 79.85           | 1.77 | 0.81     | 78.77           | 1.08      | 0.81   | 0.81     | 4.33       | 78.27  | 0.87        | 75.29     | 1.57   | 78.01       | 1.41      |
| 6                            | 72.6201727    | 4.28      | 0.25             | 0.52       | 1.25      | 73.17           | 1.67 | 0.67     | 75.43           | 0.99      | 0.68   | 0.68     | 4.28       | 72.09  | 0.90        | 73.30     | 1.30   | 74.01       | 1.03      |
| 7                            | 64.6244468    | 4.17      | 0.29             | 0.29       | 1.06      | 71.30           | 1.57 | 0.55     | 72.37           | 0.94      | 0.45   | 0.45     | 4.23       | 68.47  | 0.96        | 67.84     | 1.23   | 70.44       | 0.48      |
| 8                            | 62.61242797   | 4.14      | 0.33             | 0.14       | 0.90      | 67.47           | 1.48 | 0.43     | 69.51           | 0.90      | 0.44   | 0.44     | 4.18       | 65.24  | 0.93        | 64.75     | 1.10   | 67.16       | 0.28      |
| 9                            | 62.04009714   | 4.13      | 0.38             | 0.05       | 0.76      | 64.15           | 1.40 | 0.32     | 66.79           | 0.80      | 0.40   | 0.40     | 4.13       | 62.30  | 0.92        | 61.86     | 0.98   | 64.12       | 0.07      |
| 10                           | 60.6000905    | 4.11      | 0.42             | 0.03       | 0.62      | 61.08           | 1.32 | 0.21     | 64.16           | 0.70      | 0.39   | 0.39     | 4.09       | 59.59  | 0.91        | 59.36     | 0.88   | 61.25       | 0.03      |
| 11                           | 58.1174073    | 4.08      | 0.46             | 0.02       | 0.50      | 58.09           | 1.25 | 0.15     | 60.91           | 0.60      | 0.37   | 0.37     | 4.08       | 57.49  | 0.90        | 57.26     | 0.78   | 59.51       | 0.00      |
| 12                           | 57.17296703   | 4.05      | 0.50             | 0.03       | 0.37      | 55.43           | 1.18 | 0.00     | 59.06           | 0.49      | 0.36   | 0.36     | 4.00       | 54.69  | 0.88        | 54.63     | 0.69   | 56.87       | 0.00      |
| 13                           | 51.96212174   | 3.95      | 0.54             | 0.08       | 0.25      | 52.78           | 1.25 | -0.10    | 56.53           | 0.38      | 0.33   | 0.33     | 3.98       | 52.35  | 0.87        | 52.43     | 0.61   | 53.29       | 0.00      |
| 14                           | 49.81390794   | 3.90      | 0.58             | 0.16       | 0.13      | 50.16           | 1.32 | -0.17    | 53.97           | 0.30      | 0.30   | 0.30     | 3.91       | 50.11  | 0.86        | 50.28     | 0.54   | 50.77       | 0.00      |
| 15                           | 46.69108344   | 3.84      | 0.63             | 0.26       | 0.02      | 47.64           | 1.40 | -0.32    | 51.34           | 0.20      | 0.31   | 0.31     | 3.87       | 47.92  | 0.85        | 48.18     | 0.47   | 48.26       | 0.00      |
| 16                           | 45.27892368   | 3.81      | 0.67             | 0.39       | -0.09     | 45.10           | 1.48 | -0.43    | 48.62           | 0.10      | 0.31   | 0.31     | 3.82       | 45.74  | 0.83        | 46.09     | 0.41   | 45.76       | 0.00      |
| 17                           | 44.79039814   | 3.80      | 0.71             | 0.54       | -0.21     | 42.82           | 1.57 | -0.55    | 45.76           | 0.02      | 0.34   | 0.34     | 3.77       | 43.56  | 0.82        | 44.00     | 0.34   | 43.23       | 0.00      |
| 18                           | 38.46124811   | 3.65      | 0.75             | 0.73       | -0.33     | 39.87           | 1.67 | -0.67    | 42.70           | 0.00      | 0.36   | 0.36     | 3.72       | 41.34  | 0.71        | 41.86     | 0.29   | 40.65       | 0.00      |
| 19                           | 37.79704954   | 3.63      | 0.79             | 0.86       | -0.45     | 37.10           | 1.77 | -0.81    | 39.36           | 0.00      | 0.36   | 0.36     | 3.68       | 39.03  | 0.60        | 39.64     | 0.23   | 37.58       | 0.00      |
| 20                           | 37.2890062    | 3.62      | 0.83             | 1.24       | -0.58     | 34.12           | 1.89 | -0.97    | 36.59           | 0.00      | 0.37   | 0.37     | 3.60       | 36.58  | 0.50        | 37.28     | 0.18   | 35.16       | 0.00      |
| 21                           | 30.49896534   | 3.42      | 0.88             | 1.59       | -0.73     | 30.77           | 2.04 | -1.15    | 31.14           | 0.00      | 0.38   | 0.38     | 3.52       | 33.89  | 0.40        | 34.69     | 0.13   | 32.10       | 0.00      |
| 22                           | 26.49491775   | 3.28      | 0.92             | 2.07       | -0.91     | 26.77           | 2.23 | -1.38    | 25.49           | 0.00      | 0.39   | 0.39     | 3.43       | 30.74  | 0.31        | 31.64     | 0.09   | 28.64       | 0.00      |
| 23                           | 26.46930509   | 3.28      | 0.96             | 2.84       | -1.16     | 21.25           | 2.52 | -1.73    | 17.03           | 0.00      | 0.38   | 0.38     | 3.43       | 28.54  | 0.20        | 27.56     | 0.04   | 24.36       | 0.00      |
| SUMA                         | 1998.9        | 93.96     | 26.88            |            |           | 2899.72         |      | -0.9533  |                 |           |        |          |            |        |             |           |        |             |           |

|                              |             |             |
|------------------------------|-------------|-------------|
| Comodidad                    | 0.06        | 4.00        |
| Desar. Externas              | 2.97        | 4.00        |
| Coef Asimetrica              | 0.734       | -0.038      |
| Coef Curtosis                | 2.74        |             |
| Yn Dato                      | 23          |             |
| Valor Máximo                 | 109.539348  |             |
| Valor Mínimo                 | 26.46930509 |             |
| CONSTANTES                   |             |             |
| DISTRIB. GUMBEL              |             |             |
| Sn                           | 0.0812      |             |
| Yn (media)                   | 0.5252      |             |
| a (Gumbel)                   | 0.1446      |             |
| Yi (aj)                      | 47.3        |             |
| DISTRIBUCION                 | PEARSON     | LOG-PEARSON |
| Coef Asimetrica              | 0.734       | -0.038      |
| Coef Curtosis                | 2           |             |
| Cv (Variacion)               | 0.50        |             |
| Cv (Sdv)                     | 0.41        | 0.10        |
| GENERAL VALORES EXTREMOS EV3 |             |             |
| Coef Asimetrica              | 0.734       |             |
| LiA*                         | 0.53        |             |
| Li* (valor max)              | 1.98        |             |
| Li (valor min)               | 2.61        |             |
| Li (alpha)                   | 0.23        |             |
| Li*                          | 14.63       |             |
| Li*                          | 15.11       |             |

\* Se debe variar el valor de la casilla B63, hasta que el valor de la casilla B61, sea igual al valor de la casilla B65, es decir, igual el coeficiente de asimetría.

Esto se puede hacer, ubicándose en la casilla B61, ir a Herramientas Búsqueda Objetivo... con el valor 7, darle el valor que aparece en B65... para cambiar la celda: picar el icono de la derecha y ubicarse sobre la casilla B63... Enter, enter, enter.

| FRECUENCIA DE CAUDALES MAXIMOS - |                  |                                |                                     |      |       |               |                   |                   |                  |                                                    |                   |                       |                   |      |
|----------------------------------|------------------|--------------------------------|-------------------------------------|------|-------|---------------|-------------------|-------------------|------------------|----------------------------------------------------|-------------------|-----------------------|-------------------|------|
| PERIODO<br>RETORNO (años)        | FRECUENCIA<br>YI | VARIABLE<br>REDUCIDA<br>GUMBEL | VARIABLE<br>REDUCIDA<br>LOG-PEARSON | W    | Z     | KT<br>PEARSON | KT<br>LOG-PEARSON | YI<br>LOG-PEARSON | KT<br>LOG-NORMAL | VALOR ESPERADO PARA CADA DISTRIBUCION PARA CADA YI | PEARSON<br>GUMBEL | LOG-PEARSON<br>GUMBEL | LOG-NORMAL<br>EV3 |      |
| 1.01                             | 0.99             | 0.01                           | -1.53                               | 3.04 | -2.33 | -1.81         | -2.36             | 3.03              | -1.54            | 3.5                                                | 3.2               | 15.3                  | 20.6              |      |
| 1.11                             | 0.90             | 0.10                           | -0.86                               | 2.15 | -1.29 | -1.18         | -1.29             | 3.47              | -1.08            | 27.8                                               | 28.4              | 30.3                  | 32.0              |      |
| 1.25                             | 0.80             | 0.22                           | -0.48                               | 1.79 | -0.84 | -0.85         | -0.84             | 3.65              | -0.62            | 38.6                                               | 38.5              | 38.6                  | 39.2              |      |
| 1.33                             | 0.75             | 0.29                           | -0.33                               | 1.67 | -0.68 | -0.73         | -0.68             | 3.72              | -0.75            | 42.8                                               | 39.8              | 41.5                  | 42.2              |      |
| 2                                | 0.50             | 0.50                           | 0.37                                | 1.33 | 0.00  | -0.15         | 0.01              | 4.00              | -0.18            | 59.1                                               | 58.4              | 59.5                  | 59.7              |      |
| 2.5                              | 0.40             | 0.52                           | 0.67                                | 1.35 | 0.25  | 0.14          | 0.26              | 4.11              | 0.05             | 65.2                                               | 62.3              | 62.4                  | 60.4              |      |
| 3                                | 0.33             | 0.50                           | 0.89                                | 1.32 | 0.45  | 0.35          | 0.50              | 4.22              | 0.35             | 71.6                                               | 69.4              | 67.6                  | 62.1              |      |
| 4                                | 0.29             | 0.50                           | 1.01                                | 1.30 | 0.64  | 0.75          | 0.84              | 4.26              | 0.70             | 76.5                                               | 70.5              | 71.2                  | 63.9              |      |
| 5                                | 0.10             | 0.20                           | 2.25                                | 2.13 | 1.38  | 1.33          | 1.28              | 4.53              | 1.30             | 90.2                                               | 97.7              | 91.4                  | 90.6              |      |
| 10                               | 0.05             | 0.10                           | 4.57                                | 2.45 | 1.85  | 1.63          | 1.63              | 4.67              | 1.80             | 113.0                                              | 102.3             | 107.0                 | 104.6             |      |
| 30                               | 0.03             | 0.40                           | 3.38                                | 2.61 | 1.83  | 2.06          | 1.82              | 4.75              | 2.21             | 103.6                                              | 123.2             | 115.5                 | 112.7             |      |
| 40                               | 0.03             | 3.69                           | 3.68                                | 2.72 | 1.96  | 2.27          | 1.94              | 4.80              | 2.45             | 106.6                                              | 129.7             | 114.9                 | 112.5             |      |
| 45                               | 0.03             | 3.61                           | 3.80                                | 2.62 | 2.01  | 2.36          | 1.99              | 4.82              | 2.55             | 107.8                                              | 132.4             | 116.1                 | 113.8             |      |
| 60                               | 0.02             | 3.51                           | 3.50                                | 2.80 | 2.05  | 2.41          | 2.03              | 4.84              | 2.63             | 108.9                                              | 134.8             | 117.7                 | 114.3             |      |
| 65                               | 0.02             | 4.01                           | 4.00                                | 2.81 | 2.09  | 2.47          | 2.07              | 4.85              | 2.71             | 109.9                                              | 137.0             | 119.1                 | 116.6             |      |
| 70                               | 0.02             | 4.09                           | 4.09                                | 2.86 | 2.13  | 2.53          | 2.13              | 4.87              | 2.78             | 110.7                                              | 138.9             | 120.0                 | 116.6             |      |
| 75                               | 0.01             | 4.17                           | 4.17                                | 2.90 | 2.16  | 2.58          | 2.16              | 4.88              | 2.84             | 111.6                                              | 140.4             | 121.2                 | 118.2             |      |
| 80                               | 0.01             | 4.25                           | 4.24                                | 2.91 | 2.19  | 2.62          | 2.17              | 4.89              | 2.91             | 112.2                                              | 142.4             | 122.7                 | 119.9             |      |
| 85                               | 0.01             | 4.32                           | 4.31                                | 2.94 | 2.22  | 2.66          | 2.19              | 4.90              | 2.97             | 112.9                                              | 144.0             | 123.7                 | 121.1             |      |
| 90                               | 0.01             | 4.38                           | 4.38                                | 2.96 | 2.24  | 2.70          | 2.22              | 4.91              | 3.00             | 113.5                                              | 145.9             | 124.7                 | 123.7             |      |
| 95                               | 0.01             | 4.44                           | 4.44                                | 2.98 | 2.27  | 2.74          | 2.24              | 4.92              | 3.07             | 114.0                                              | 146.9             | 125.6                 | 124.5             |      |
| 99                               | 0.01             | 4.50                           | 4.49                                | 3.00 | 2.29  | 2.78          | 2.26              | 4.93              | 3.12             | 114.6                                              | 148.1             | 126.4                 | 125.2             |      |
| 100                              | 0.01             | 4.55                           | 4.55                                | 3.02 | 2.31  | 2.81          | 2.28              | 4.94              | 3.17             | 115.1                                              | 149.1             | 127.2                 | 125.8             |      |
| 148                              | 0.01             | 4.80                           | 4.80                                | 3.10 | 2.38  | 2.93          | 2.34              | 4.99              | 3.27             | 116.8                                              | 152.4             | 128.7                 | 126.6             |      |
| 200                              | 0.01             | 5.30                           | 5.30                                | 3.20 | 2.58  | 3.25          | 2.54              | 5.05              | 3.78             | 121.6                                              | 166.1             | 137.8                 | 135.1             |      |
| 300                              | 0.00             | 6.21                           | 6.21                                | 3.51 | 2.88  | 3.75          | 2.83              | 5.17              | 4.58             | 128.9                                              | 186.1             | 150.2                 | 145.3             |      |
| PRUEBA CHI CUADRADO              |                  |                                |                                     |      |       |               |                   |                   |                  | 14.38                                              | 4.30              | 5.94                  | 5.28              | 4.89 |

| PRUEBA DE CHI CUADRADO |        |            |            |        |            |            |         |            |            |             |            |            |            |            |            |       |            |            |
|------------------------|--------|------------|------------|--------|------------|------------|---------|------------|------------|-------------|------------|------------|------------|------------|------------|-------|------------|------------|
| MAXIMO                 | GUMBEL |            |            | NORMAL |            |            | PEARSON |            |            | LOG PEARSON |            |            | LOG NORMAL |            |            | EV3   |            |            |
| (Y)                    | Yc     | YI-Weibull | YI-Weibull | Yc     | YI-Weibull | YI-Weibull | Yc      | YI-Weibull | YI-Weibull | Yc          | YI-Weibull | YI-Weibull | Yc         | YI-Weibull | YI-Weibull | Yc    | YI-Weibull | YI-Weibull |
| 110                    | 118.07 | 72.72      | 0.62       | 101.10 | 71.27      | 0.70       | 106.20  | 11.14      | 0.10       | 110.81      | 1.80       | 0.03       | 108.28     | 1.59       | 106.64     | 8.43  | 0.88       |            |
| 108                    | 102.02 | 30.26      | 0.80       | 92.63  | 221.53     | 2.39       | 94.59   | 167.06     | 1.77       | 96.22       | 127.49     | 1.32       | 94.34      | 175.50     | 1.84       | 96.42 | 146.24     | 1.53       |
| 95                     | 86.41  | 5.53       | 0.88       | 80.05  | 64.69      | 0.71       | 87.25   | 59.34      | 0.65       | 87.58       | 53.12      | 0.61       | 88.02      | 57.41      | 1.96       | 89.47 | 44.44      | 0.50       |
| 84                     | 79.85  | 14.61      | 0.18       | 78.77  | 23.99      | 0.30       | 77.31   | 40.45      | 0.52       | 76.27       | 54.72      | 0.72       | 75.29      | 70.20      | 0.93       | 78.01 | 32.04      | 0.41       |
| 73                     | 75.17  | 6.51       | 0.09       | 75.43  | 7.88       | 0.10       | 73.45   | 0.88       | 0.01       | 72.08       | 0.28       | 0.00       | 71.30      | 1.74       | 0.02       | 74.01 | 1.93       | 0.03       |
| 66                     | 71.10  | 42.00      | 0.93       | 72.37  | 59.93      | 0.83       | 70.02   | 29.11      | 0.42       | 68.47       | 14.77      | 0.22       | 67.84      | 10.32      | 0.15       | 70.44 | 33.77      | 0.48       |
| 63                     | 67.47  | 21.69      | 0.32       | 69.51  | 44.80      | 0.64       | 66.90   | 16.73      | 0.25       | 65.24       | 5.88       | 0.09       | 64.75      | 3.76       | 0.06       | 67.16 | 18.94      | 0.28       |
| 62                     | 64.15  | 4.47       | 0.07       | 66.79  | 22.52      | 0.34       | 64.03   | 3.98       | 0.06       | 62.30       | 0.07       | 0.00       | 61.86      | 0.01       | 0.00       | 64.12 | 0.33       | 0.07       |
| 61                     | 61.08  | 0.18       | 0.00       | 64.16  | 12.26      | 0.19       | 61.30   | 0.41       | 0.01       | 59.59       | 0.00       | 0.00       | 59.36      | 1.70       | 0.03       | 61.25 | 0.35       | 0.01       |
| 59                     | 59.19  | 0.00       | 0.00       | 61.60  | 12.11      | 0.20       | 58.71   | 0.38       | 0.01       | 57.26       | 1.12       | 0.02       | 56.83      | 1.41       | 0.02       | 59.51 | 0.15       | 0.00       |
| 57                     | 55.43  | 3.03       | 0.05       | 59.06  | 5.67       | 0.05       | 56.22   | 0.91       | 0.02       | 54.65       | 0.35       | 0.12       | 54.63      | 0.68       | 0.12       | 56.87 | 1.71       | 0.01       |
| 52                     | 52.78  | 0.67       | 0.01       | 56.43  | 20.87      | 0.37       | 53.78   | 3.33       | 0.06       | 52.35       | 0.15       | 0.00       | 52.43      | 0.21       | 0.00       | 53.29 | 1.77       | 0.03       |
| 50                     | 50.10  | 0.46       | 0.01       | 53.97  | 19.82      | 0.37       | 51.33   | 2.51       | 0.07       | 50.15       | 0.38       | 0.01       | 50.28      | 0.59       | 0.01       | 50.77 | 1.57       | 0.03       |
| 47                     | 47.61  | 0.10       | 0.00       | 49.34  | 12.42      | 0.16       | 47.10   | 0.34       | 0.01       | 47.65       | 0.32       | 0.01       | 47.69      | 0.32       | 0.01       | 48.05 | 0.15       | 0.00       |
| 45                     | 45.10  | 0.00       | 0.00       | 46.62  | 11.17      | 0.23       | 46.59   | 1.71       | 0.04       | 45.76       | 0.22       | 0.00       | 46.00      | 0.68       | 0.01       | 45.76 | 0.22       | 0.01       |
| 45                     | 42.82  | 4.22       | 0.10       | 45.76  | 1.40       | 0.03       | 44.13   | 0.20       | 0.00       | 44.30       | 0.02       | 0.00       | 44.30      | 0.34       | 0.01       | 43.23 | 0.10       | 0.00       |
| 38                     | 39.81  | 0.00       | 0.00       | 40.50  | 0.16       | 0.00       | 37.50   | 0.10       | 0.00       | 37.50       | 0.18       | 0.00       | 37.50      | 0.02       | 0.00       | 37.50 | 0.02       | 0.00       |
| 38                     | 37.10  | 0.48       | 0.01       | 39.36  | 2.43       | 0.06       | 38.88   | 1.17       | 0.03       | 39.03       | 1.52       | 0.04       | 39.64      | 3.40       | 0.09       | 37.98 | 0.03       | 0.00       |
| 30                     | 30.77  | 0.00       | 0.00       | 31.14  | 0.00       | 0.00       | 30.78   | 0.00       | 0.00       | 30.78       | 0.00       | 0.00       | 30.78      | 0.00       | 0.00       | 30.78 | 0.00       | 0.00       |
| 30                     | 30.77  | 0.08       | 0.00       | 31.14  | 0.43       | 0.01       | 32.88   | 4.77       | 0.15       | 32.88       | 11.52      | 0.34       | 34.86      | 17.57      | 0.51       | 32.10 | 2.59       | 0.08       |
| 26                     | 26.26  | 0.00       | 0.00       | 25.49  | 0.08       | 0.04       | 26.73   | 5.06       | 0.18       | 26.74       | 18.08      | 0.59       | 31.64      | 26.53      | 0.84       | 28.64 | 4.48       | 0.16       |
| 26                     | 23.75  | 27.22      | 17.03      | 29.13  | 29.13      | 29.13      | 29.13   | 10.00      | 0.45       | 29.54       | 0.00       | 0.00       | 27.56      | 1.20       | 0.04       | 28.64 | 4.43       | 0.18       |
| SUMA                   |        |            | 4.30       |        |            | 14.38      |         |            | 5.94       |             |            | 5.28       |            | 7.12       |            |       |            | 4.89       |

**PAPEL NORMAL**

| CONSTANTES |              |              |          |              |             |              |
|------------|--------------|--------------|----------|--------------|-------------|--------------|
| 10         | 120          | 20           | 110      |              |             |              |
|            | PROBABILIDAD | ABSCISA      | ORDENADA | P excedencia | W           | Z            |
|            |              | X            | Y        |              |             |              |
| 0,001      | .001         | -3,090522226 | 10       | 0,999        | 3,716922189 | -3,090522226 |
| 0,001      |              | -3,090522226 | 120      | 0,999        | 3,716922189 | -3,090522226 |
|            |              |              |          |              |             |              |
| 0,002      |              | -2,878506108 | 110      | 0,998        | 3,525509353 | -2,878506108 |
| 0,002      |              | -2,878506108 | 20       | 0,998        | 3,525509353 | -2,878506108 |
|            |              |              |          |              |             |              |
| 0,003      |              | -2,748155353 | 20       | 0,997        | 3,40856069  | -2,748155353 |
| 0,003      |              | -2,748155353 | 110      | 0,997        | 3,40856069  | -2,748155353 |
|            |              |              |          |              |             |              |
| 0,004      |              | -2,652463028 | 110      | 0,996        | 3,323089201 | -2,652463028 |
| 0,004      |              | -2,652463028 | 20       | 0,996        | 3,323089201 | -2,652463028 |
|            |              |              |          |              |             |              |
| 0,005      |              | -2,576236081 | 20       | 0,995        | 3,255247261 | -2,576236081 |
| 0,005      |              | -2,576236081 | 110      | 0,995        | 3,255247261 | -2,576236081 |
|            |              |              |          |              |             |              |
| 0,006      |              | -2,512561064 | 110      | 0,994        | 3,198748446 | -2,512561064 |
| 0,006      |              | -2,512561064 | 20       | 0,994        | 3,198748446 | -2,512561064 |
|            |              |              |          |              |             |              |
| 0,007      |              | -2,45768761  | 20       | 0,993        | 3,150188924 | -2,45768761  |
| 0,007      |              | -2,45768761  | 110      | 0,993        | 3,150188924 | -2,45768761  |
|            |              |              |          |              |             |              |
| 0,008      |              | -2,409345447 | 110      | 0,992        | 3,10751146  | -2,409345447 |
| 0,008      |              | -2,409345447 | 20       | 0,992        | 3,10751146  | -2,409345447 |
|            |              |              |          |              |             |              |
| 0,009      |              | -2,366052342 | 20       | 0,991        | 3,069374758 | -2,366052342 |
| 0,009      |              | -2,366052342 | 110      | 0,991        | 3,069374758 | -2,366052342 |

|      |      |              |     |      |             |              |
|------|------|--------------|-----|------|-------------|--------------|
|      |      |              |     |      |             |              |
| 0,01 | .010 | -2,326785333 | 120 | 0,99 | 3,034854259 | -2,326785333 |
| 0,01 |      | -2,326785333 | 10  | 0,99 | 3,034854259 | -2,326785333 |
|      |      |              |     |      |             |              |
| 0,02 |      | -2,054188589 | 20  | 0,98 | 2,797149623 | -2,054188589 |
| 0,02 |      | -2,054188589 | 110 | 0,98 | 2,797149623 | -2,054188589 |
|      |      |              |     |      |             |              |
| 0,03 |      | -1,881212794 | 110 | 0,97 | 2,648228803 | -1,881212794 |
| 0,03 |      | -1,881212794 | 20  | 0,97 | 2,648228803 | -1,881212794 |
|      |      |              |     |      |             |              |
| 0,04 |      | -1,751076531 | 20  | 0,96 | 2,537272482 | -1,751076531 |
| 0,04 |      | -1,751076531 | 110 | 0,96 | 2,537272482 | -1,751076531 |
|      |      |              |     |      |             |              |
| 0,05 |      | -1,64521144  | 110 | 0,95 | 2,447746831 | -1,64521144  |
| 0,05 |      | -1,64521144  | 20  | 0,95 | 2,447746831 | -1,64521144  |
|      |      |              |     |      |             |              |
| 0,06 |      | -1,555096672 | 20  | 0,94 | 2,372092206 | -1,555096672 |
| 0,06 |      | -1,555096672 | 110 | 0,94 | 2,372092206 | -1,555096672 |
|      |      |              |     |      |             |              |
| 0,07 |      | -1,476078221 | 110 | 0,93 | 2,306191682 | -1,476078221 |
| 0,07 |      | -1,476078221 | 20  | 0,93 | 2,306191682 | -1,476078221 |
|      |      |              |     |      |             |              |
| 0,08 |      | -1,405322264 | 20  | 0,92 | 2,247544724 | -1,405322264 |
| 0,08 |      | -1,405322264 | 110 | 0,92 | 2,247544724 | -1,405322264 |
|      |      |              |     |      |             |              |
| 0,09 |      | -1,340968991 | 110 | 0,91 | 2,194513891 | -1,340968991 |
| 0,09 |      | -1,340968991 | 20  | 0,91 | 2,194513891 | -1,340968991 |
|      |      |              |     |      |             |              |
| 0,1  | .10  | -1,281728757 | 10  | 0,9  | 2,145966026 | -1,281728757 |
| 0,1  |      | -1,281728757 | 120 | 0,9  | 2,145966026 | -1,281728757 |
|      |      |              |     |      |             |              |
| 0,12 |      | -1,175091053 | 110 | 0,88 | 2,059254009 | -1,175091053 |
| 0,12 |      | -1,175091053 | 20  | 0,88 | 2,059254009 | -1,175091053 |
|      |      |              |     |      |             |              |

|      |     |              |     |      |             |              |
|------|-----|--------------|-----|------|-------------|--------------|
| 0,14 |     | -1,080352268 | 20  | 0,86 | 1,982984042 | -1,080352268 |
| 0,14 |     | -1,080352268 | 110 | 0,86 | 1,982984042 | -1,080352268 |
|      |     |              |     |      |             |              |
| 0,16 |     | -0,994421814 | 110 | 0,84 | 1,914461524 | -0,994421814 |
| 0,16 |     | -0,994421814 | 20  | 0,84 | 1,914461524 | -0,994421814 |
|      |     |              |     |      |             |              |
| 0,18 |     | -0,915263    | 20  | 0,82 | 1,851917076 | -0,915263    |
| 0,18 |     | -0,915263    | 110 | 0,82 | 1,851917076 | -0,915263    |
|      |     |              |     |      |             |              |
| 0,2  | .20 | -0,841456717 | 120 | 0,8  | 1,794122578 | -0,841456717 |
| 0,2  |     | -0,841456717 | 10  | 0,8  | 1,794122578 | -0,841456717 |
|      |     |              |     |      |             |              |
| 0,22 |     | -0,771970493 | 20  | 0,78 | 1,740188342 | -0,771970493 |
| 0,22 |     | -0,771970493 | 110 | 0,78 | 1,740188342 | -0,771970493 |
|      |     |              |     |      |             |              |
| 0,24 |     | -0,706026537 | 110 | 0,76 | 1,689447457 | -0,706026537 |
| 0,24 |     | -0,706026537 | 20  | 0,76 | 1,689447457 | -0,706026537 |
|      |     |              |     |      |             |              |
| 0,26 |     | -0,643021721 | 20  | 0,74 | 1,641385785 | -0,643021721 |
| 0,26 |     | -0,643021721 | 110 | 0,74 | 1,641385785 | -0,643021721 |
|      |     |              |     |      |             |              |
| 0,28 |     | -0,58247664  | 110 | 0,72 | 1,59559749  | -0,58247664  |
| 0,28 |     | -0,58247664  | 20  | 0,72 | 1,59559749  | -0,58247664  |
|      |     |              |     |      |             |              |
| 0,3  | .30 | -0,52400187  | 10  | 0,7  | 1,551755654 | -0,52400187  |
| 0,3  |     | -0,52400187  | 120 | 0,7  | 1,551755654 | -0,52400187  |
|      |     |              |     |      |             |              |
| 0,32 |     | -0,467274845 | 110 | 0,68 | 1,509592185 | -0,467274845 |
| 0,32 |     | -0,467274845 | 20  | 0,68 | 1,509592185 | -0,467274845 |
|      |     |              |     |      |             |              |
| 0,34 |     | -0,412023528 | 20  | 0,66 | 1,4688837   | -0,412023528 |
| 0,34 |     | -0,412023528 | 110 | 0,66 | 1,4688837   | -0,412023528 |
|      |     |              |     |      |             |              |
| 0,36 |     | -0,358014577 | 110 | 0,64 | 1,429441323 | -0,358014577 |

|      |     |              |     |      |             |              |
|------|-----|--------------|-----|------|-------------|--------------|
| 0,36 |     | -0,358014577 | 20  | 0,64 | 1,429441323 | -0,358014577 |
|      |     |              |     |      |             |              |
| 0,38 |     | -0,305044559 | 20  | 0,62 | 1,391103178 | -0,305044559 |
| 0,38 |     | -0,305044559 | 110 | 0,62 | 1,391103178 | -0,305044559 |
|      |     |              |     |      |             |              |
| 0,4  | .40 | -0,252933268 | 120 | 0,6  | 1,353728726 | -0,252933268 |
| 0,4  |     | -0,252933268 | 10  | 0,6  | 1,353728726 | -0,252933268 |
|      |     |              |     |      |             |              |
| 0,42 |     | -0,201518523 | 20  | 0,58 | 1,317194418 | -0,201518523 |
| 0,42 |     | -0,201518523 | 110 | 0,58 | 1,317194418 | -0,201518523 |
|      |     |              |     |      |             |              |
| 0,44 |     | -0,150652033 | 110 | 0,56 | 1,281390301 | -0,150652033 |
| 0,44 |     | -0,150652033 | 20  | 0,56 | 1,281390301 | -0,150652033 |
|      |     |              |     |      |             |              |
| 0,46 |     | -0,100196002 | 20  | 0,54 | 1,246217308 | -0,100196002 |
| 0,46 |     | -0,100196002 | 110 | 0,54 | 1,246217308 | -0,100196002 |
|      |     |              |     |      |             |              |
| 0,48 |     | -0,050020285 | 110 | 0,52 | 1,211585057 | -0,050020285 |
| 0,48 |     | -0,050020285 | 20  | 0,52 | 1,211585057 | -0,050020285 |
|      |     |              |     |      |             |              |
| 0,5  | .50 | -1,01007E-07 | 10  | 0,5  | 1,177410023 | -1,01007E-07 |
| 0,5  |     | -1,01007E-07 | 120 | 0,5  | 1,177410023 | -1,01007E-07 |
|      |     |              |     |      |             |              |
| 0,52 |     | 0,050020285  | 110 | 0,48 | 1,211585057 | 0,050020285  |
| 0,52 |     | 0,050020285  | 20  | 0,48 | 1,211585057 | 0,050020285  |
|      |     |              |     |      |             |              |
| 0,54 |     | 0,100196002  | 20  | 0,46 | 1,246217308 | 0,100196002  |
| 0,54 |     | 0,100196002  | 110 | 0,46 | 1,246217308 | 0,100196002  |
|      |     |              |     |      |             |              |
| 0,56 |     | 0,150652033  | 110 | 0,44 | 1,281390301 | 0,150652033  |
| 0,56 |     | 0,150652033  | 20  | 0,44 | 1,281390301 | 0,150652033  |
|      |     |              |     |      |             |              |
| 0,58 |     | 0,201518523  | 20  | 0,42 | 1,317194418 | 0,201518523  |
| 0,58 |     | 0,201518523  | 110 | 0,42 | 1,317194418 | 0,201518523  |

|      |     |             |     |      |             |             |
|------|-----|-------------|-----|------|-------------|-------------|
|      |     |             |     |      |             |             |
| 0,6  | .60 | 0,252933268 | 120 | 0,4  | 1,353728726 | 0,252933268 |
| 0,6  |     | 0,252933268 | 10  | 0,4  | 1,353728726 | 0,252933268 |
|      |     |             |     |      |             |             |
| 0,62 |     | 0,305044559 | 20  | 0,38 | 1,391103178 | 0,305044559 |
| 0,62 |     | 0,305044559 | 110 | 0,38 | 1,391103178 | 0,305044559 |
|      |     |             |     |      |             |             |
| 0,64 |     | 0,358014577 | 110 | 0,36 | 1,429441323 | 0,358014577 |
| 0,64 |     | 0,358014577 | 20  | 0,36 | 1,429441323 | 0,358014577 |
|      |     |             |     |      |             |             |
| 0,66 |     | 0,412023528 | 20  | 0,34 | 1,4688837   | 0,412023528 |
| 0,66 |     | 0,412023528 | 110 | 0,34 | 1,4688837   | 0,412023528 |
|      |     |             |     |      |             |             |
| 0,68 |     | 0,467274845 | 110 | 0,32 | 1,509592185 | 0,467274845 |
| 0,68 |     | 0,467274845 | 20  | 0,32 | 1,509592185 | 0,467274845 |
|      |     |             |     |      |             |             |
| 0,7  | .70 | 0,52400187  | 10  | 0,3  | 1,551755654 | 0,52400187  |
| 0,7  |     | 0,52400187  | 120 | 0,3  | 1,551755654 | 0,52400187  |
|      |     |             |     |      |             |             |
| 0,71 |     | 0,553001976 | 110 | 0,29 | 1,573451211 | 0,553001976 |
| 0,71 |     | 0,553001976 | 20  | 0,29 | 1,573451211 | 0,553001976 |
|      |     |             |     |      |             |             |
| 0,72 |     | 0,58247664  | 20  | 0,28 | 1,59559749  | 0,58247664  |
| 0,72 |     | 0,58247664  | 110 | 0,28 | 1,59559749  | 0,58247664  |
|      |     |             |     |      |             |             |
| 0,73 |     | 0,61246785  | 110 | 0,27 | 1,618229477 | 0,61246785  |
| 0,73 |     | 0,61246785  | 20  | 0,27 | 1,618229477 | 0,61246785  |
|      |     |             |     |      |             |             |
| 0,74 |     | 0,643021721 | 20  | 0,26 | 1,641385785 | 0,643021721 |
| 0,74 |     | 0,643021721 | 110 | 0,26 | 1,641385785 | 0,643021721 |
|      |     |             |     |      |             |             |
| 0,75 |     | 0,67418914  | 110 | 0,25 | 1,665109222 | 0,67418914  |
| 0,75 |     | 0,67418914  | 20  | 0,25 | 1,665109222 | 0,67418914  |
|      |     |             |     |      |             |             |

|      |     |             |     |      |             |             |
|------|-----|-------------|-----|------|-------------|-------------|
| 0,76 |     | 0,706026537 | 20  | 0,24 | 1,689447457 | 0,706026537 |
| 0,76 |     | 0,706026537 | 110 | 0,24 | 1,689447457 | 0,706026537 |
|      |     |             |     |      |             |             |
| 0,77 |     | 0,738596818 | 110 | 0,23 | 1,714453831 | 0,738596818 |
| 0,77 |     | 0,738596818 | 20  | 0,23 | 1,714453831 | 0,738596818 |
|      |     |             |     |      |             |             |
| 0,78 |     | 0,771970493 | 20  | 0,22 | 1,740188342 | 0,771970493 |
| 0,78 |     | 0,771970493 | 110 | 0,22 | 1,740188342 | 0,771970493 |
|      |     |             |     |      |             |             |
| 0,79 |     | 0,806227059 | 110 | 0,21 | 1,76671885  | 0,806227059 |
| 0,79 |     | 0,806227059 | 20  | 0,21 | 1,76671885  | 0,806227059 |
|      |     |             |     |      |             |             |
| 0,8  | .80 | 0,841456717 | 10  | 0,2  | 1,794122578 | 0,841456717 |
| 0,8  |     | 0,841456717 | 120 | 0,2  | 1,794122578 | 0,841456717 |
|      |     |             |     |      |             |             |
| 0,81 |     | 0,877762505 | 110 | 0,19 | 1,822487974 | 0,877762505 |
| 0,81 |     | 0,877762505 | 20  | 0,19 | 1,822487974 | 0,877762505 |
|      |     |             |     |      |             |             |
| 0,82 |     | 0,915263    | 20  | 0,18 | 1,851917076 | 0,915263    |
| 0,82 |     | 0,915263    | 110 | 0,18 | 1,851917076 | 0,915263    |
|      |     |             |     |      |             |             |
| 0,83 |     | 0,954095764 | 110 | 0,17 | 1,882528535 | 0,954095764 |
| 0,83 |     | 0,954095764 | 20  | 0,17 | 1,882528535 | 0,954095764 |
|      |     |             |     |      |             |             |
| 0,84 |     | 0,994421814 | 20  | 0,16 | 1,914461524 | 0,994421814 |
| 0,84 |     | 0,994421814 | 110 | 0,16 | 1,914461524 | 0,994421814 |
|      |     |             |     |      |             |             |
| 0,85 |     | 1,036431485 | 110 | 0,15 | 1,947880892 | 1,036431485 |
| 0,85 |     | 1,036431485 | 20  | 0,15 | 1,947880892 | 1,036431485 |
|      |     |             |     |      |             |             |
| 0,86 |     | 1,080352268 | 20  | 0,14 | 1,982984042 | 1,080352268 |
| 0,86 |     | 1,080352268 | 110 | 0,14 | 1,982984042 | 1,080352268 |
|      |     |             |     |      |             |             |
| 0,87 |     | 1,126459473 | 110 | 0,13 | 2,020010311 | 1,126459473 |

|       |     |             |     |       |             |             |
|-------|-----|-------------|-----|-------|-------------|-------------|
| 0,87  |     | 1,126459473 | 20  | 0,13  | 2,020010311 | 1,126459473 |
|       |     |             |     |       |             |             |
| 0,88  |     | 1,175091053 | 20  | 0,12  | 2,059254009 | 1,175091053 |
| 0,88  |     | 1,175091053 | 110 | 0,12  | 2,059254009 | 1,175091053 |
|       |     |             |     |       |             |             |
| 0,89  |     | 1,2266687   | 110 | 0,11  | 2,101083013 | 1,2266687   |
| 0,89  |     | 1,2266687   | 20  | 0,11  | 2,101083013 | 1,2266687   |
|       |     |             |     |       |             |             |
| 0,9   | .90 | 1,281728757 | 10  | 0,1   | 2,145966026 | 1,281728757 |
| 0,9   |     | 1,281728757 | 120 | 0,1   | 2,145966026 | 1,281728757 |
|       |     |             |     |       |             |             |
| 0,905 |     | 1,310774676 | 110 | 0,095 | 2,169736568 | 1,310774676 |
| 0,905 |     | 1,310774676 | 20  | 0,095 | 2,169736568 | 1,310774676 |
|       |     |             |     |       |             |             |
| 0,91  |     | 1,340968991 | 20  | 0,09  | 2,194513891 | 1,340968991 |
| 0,91  |     | 1,340968991 | 110 | 0,09  | 2,194513891 | 1,340968991 |
|       |     |             |     |       |             |             |
| 0,915 |     | 1,372436155 | 110 | 0,085 | 2,22040718  | 1,372436155 |
| 0,915 |     | 1,372436155 | 20  | 0,085 | 2,22040718  | 1,372436155 |
|       |     |             |     |       |             |             |
| 0,92  |     | 1,405322264 | 20  | 0,08  | 2,247544724 | 1,405322264 |
| 0,92  |     | 1,405322264 | 110 | 0,08  | 2,247544724 | 1,405322264 |
|       |     |             |     |       |             |             |
| 0,925 |     | 1,43980047  | 110 | 0,075 | 2,276078718 | 1,43980047  |
| 0,925 |     | 1,43980047  | 20  | 0,075 | 2,276078718 | 1,43980047  |
|       |     |             |     |       |             |             |
| 0,93  |     | 1,476078221 | 20  | 0,07  | 2,306191682 | 1,476078221 |
| 0,93  |     | 1,476078221 | 110 | 0,07  | 2,306191682 | 1,476078221 |
|       |     |             |     |       |             |             |
| 0,935 |     | 1,514407126 | 110 | 0,065 | 2,33810522  | 1,514407126 |
| 0,935 |     | 1,514407126 | 20  | 0,065 | 2,33810522  | 1,514407126 |
|       |     |             |     |       |             |             |
| 0,94  |     | 1,555096672 | 20  | 0,06  | 2,372092206 | 1,555096672 |
| 0,94  |     | 1,555096672 | 110 | 0,06  | 2,372092206 | 1,555096672 |



|       |     |             |     |       |             |             |
|-------|-----|-------------|-----|-------|-------------|-------------|
|       |     |             |     |       |             |             |
| 0,945 |     | 1,598533775 | 110 | 0,055 | 2,408494174 | 1,598533775 |
| 0,945 |     | 1,598533775 | 20  | 0,055 | 2,408494174 | 1,598533775 |
|       |     |             |     |       |             |             |
| 0,95  | .95 | 1,64521144  | 10  | 0,05  | 2,447746831 | 1,64521144  |
| 0,95  |     | 1,64521144  | 120 | 0,05  | 2,447746831 | 1,64521144  |
|       |     |             |     |       |             |             |
| 0,955 |     | 1,695772192 | 110 | 0,045 | 2,490418756 | 1,695772192 |
| 0,955 |     | 1,695772192 | 20  | 0,045 | 2,490418756 | 1,695772192 |
|       |     |             |     |       |             |             |
| 0,96  |     | 1,751076531 | 20  | 0,04  | 2,537272482 | 1,751076531 |
| 0,96  |     | 1,751076531 | 110 | 0,04  | 2,537272482 | 1,751076531 |
|       |     |             |     |       |             |             |
| 0,965 |     | 1,812316163 | 110 | 0,035 | 2,589365643 | 1,812316163 |
| 0,965 |     | 1,812316163 | 20  | 0,035 | 2,589365643 | 1,812316163 |
|       |     |             |     |       |             |             |
| 0,97  | .97 | 1,881212794 | 10  | 0,03  | 2,648228803 | 1,881212794 |
| 0,97  |     | 1,881212794 | 120 | 0,03  | 2,648228803 | 1,881212794 |
|       |     |             |     |       |             |             |
| 0,972 |     | 1,911459811 | 110 | 0,028 | 2,674154359 | 1,911459811 |
| 0,972 |     | 1,911459811 | 20  | 0,028 | 2,674154359 | 1,911459811 |
|       |     |             |     |       |             |             |
| 0,974 |     | 1,943562531 | 20  | 0,026 | 2,701724909 | 1,943562531 |
| 0,974 |     | 1,943562531 | 110 | 0,026 | 2,701724909 | 1,943562531 |
|       |     |             |     |       |             |             |
| 0,976 |     | 1,977801395 | 110 | 0,024 | 2,731190747 | 1,977801395 |
| 0,976 |     | 1,977801395 | 20  | 0,024 | 2,731190747 | 1,977801395 |
|       |     |             |     |       |             |             |
| 0,978 |     | 2,014527449 | 20  | 0,022 | 2,762865478 | 2,014527449 |
| 0,978 |     | 2,014527449 | 110 | 0,022 | 2,762865478 | 2,014527449 |
|       |     |             |     |       |             |             |
| 0,98  | .98 | 2,054188589 | 120 | 0,02  | 2,797149623 | 2,054188589 |
| 0,98  |     | 2,054188589 | 10  | 0,02  | 2,797149623 | 2,054188589 |
|       |     |             |     |       |             |             |

|        |     |             |     |        |             |             |
|--------|-----|-------------|-----|--------|-------------|-------------|
| 0,981  |     | 2,075295652 | 20  | 0,019  | 2,815427605 | 2,075295652 |
| 0,981  |     | 2,075295652 | 110 | 0,019  | 2,815427605 | 2,075295652 |
|        |     |             |     |        |             |             |
| 0,982  |     | 2,097369369 | 110 | 0,018  | 2,834566465 | 2,097369369 |
| 0,982  |     | 2,097369369 | 20  | 0,018  | 2,834566465 | 2,097369369 |
|        |     |             |     |        |             |             |
| 0,983  |     | 2,120514407 | 20  | 0,017  | 2,854660027 | 2,120514407 |
| 0,983  |     | 2,120514407 | 110 | 0,017  | 2,854660027 | 2,120514407 |
|        |     |             |     |        |             |             |
| 0,984  |     | 2,144853838 | 110 | 0,016  | 2,875818686 | 2,144853838 |
| 0,984  |     | 2,144853838 | 20  | 0,016  | 2,875818686 | 2,144853838 |
|        |     |             |     |        |             |             |
| 0,985  |     | 2,170533778 | 20  | 0,015  | 2,89817359  | 2,170533778 |
| 0,985  |     | 2,170533778 | 110 | 0,015  | 2,89817359  | 2,170533778 |
|        |     |             |     |        |             |             |
| 0,986  |     | 2,197729598 | 110 | 0,014  | 2,921882253 | 2,197729598 |
| 0,986  |     | 2,197729598 | 20  | 0,014  | 2,921882253 | 2,197729598 |
|        |     |             |     |        |             |             |
| 0,987  |     | 2,226654389 | 20  | 0,013  | 2,94713621  | 2,226654389 |
| 0,987  |     | 2,226654389 | 110 | 0,013  | 2,94713621  | 2,226654389 |
|        |     |             |     |        |             |             |
| 0,988  |     | 2,257570768 | 110 | 0,012  | 2,974171693 | 2,257570768 |
| 0,988  |     | 2,257570768 | 20  | 0,012  | 2,974171693 | 2,257570768 |
|        |     |             |     |        |             |             |
| 0,989  |     | 2,290807721 | 20  | 0,011  | 3,00328487  | 2,290807721 |
| 0,989  |     | 2,290807721 | 110 | 0,011  | 3,00328487  | 2,290807721 |
|        |     |             |     |        |             |             |
| 0,99   | .99 | 2,326785333 | 120 | 0,01   | 3,034854259 | 2,326785333 |
| 0,99   |     | 2,326785333 | 10  | 0,01   | 3,034854259 | 2,326785333 |
|        |     |             |     |        |             |             |
| 0,9905 |     | 2,345966927 | 20  | 0,0095 | 3,051708859 | 2,345966927 |
| 0,9905 |     | 2,345966927 | 110 | 0,0095 | 3,051708859 | 2,345966927 |
|        |     |             |     |        |             |             |
| 0,991  |     | 2,366052342 | 110 | 0,009  | 3,069374758 | 2,366052342 |

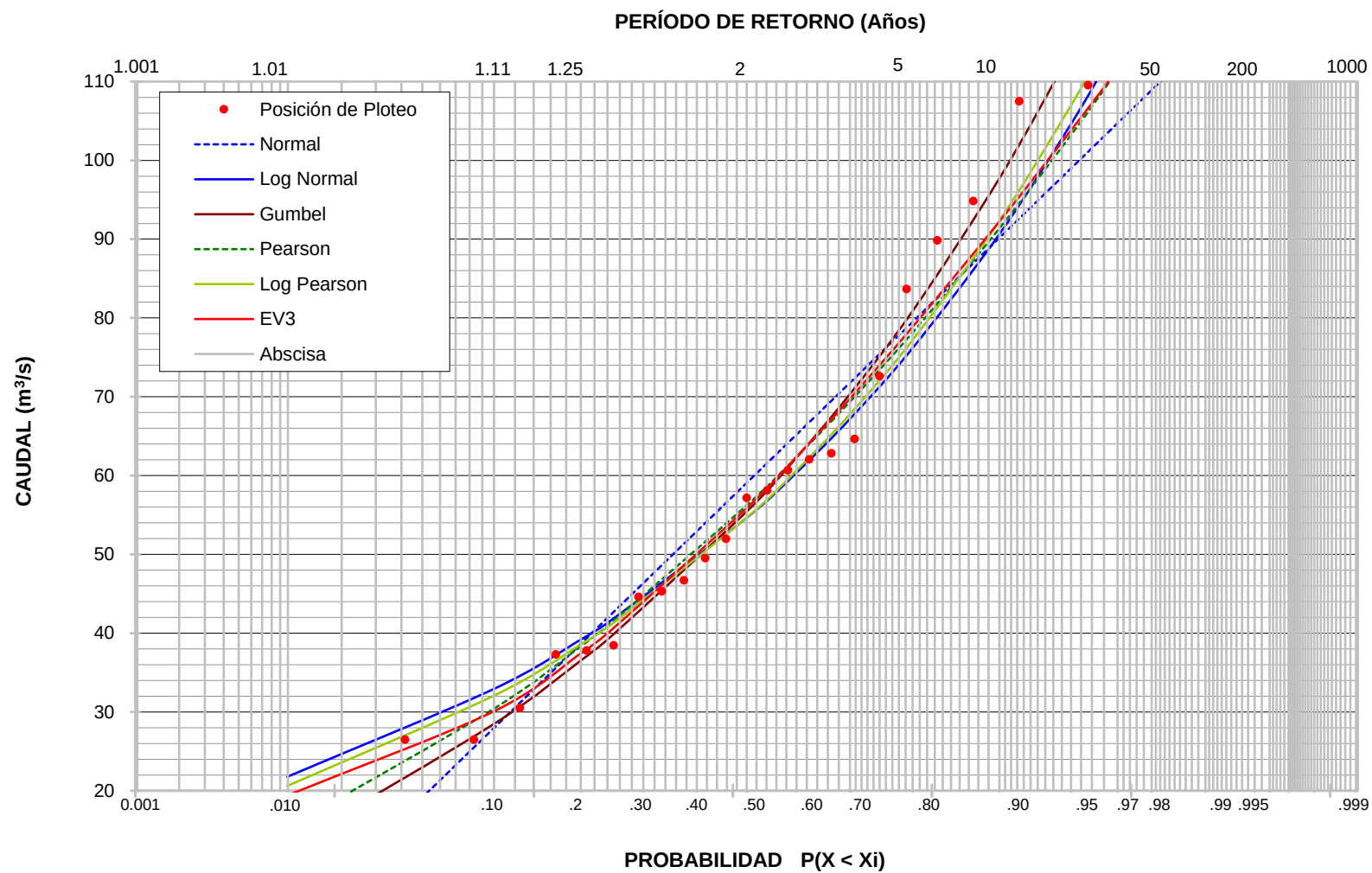
|        |      |             |     |        |             |             |
|--------|------|-------------|-----|--------|-------------|-------------|
| 0,991  |      | 2,366052342 | 20  | 0,009  | 3,069374758 | 2,366052342 |
|        |      |             |     |        |             |             |
| 0,9915 |      | 2,387139942 | 20  | 0,0085 | 3,087940775 | 2,387139942 |
| 0,9915 |      | 2,387139942 | 110 | 0,0085 | 3,087940775 | 2,387139942 |
|        |      |             |     |        |             |             |
| 0,992  |      | 2,409345447 | 110 | 0,008  | 3,10751146  | 2,409345447 |
| 0,992  |      | 2,409345447 | 20  | 0,008  | 3,10751146  | 2,409345447 |
|        |      |             |     |        |             |             |
| 0,9925 |      | 2,432806313 | 20  | 0,0075 | 3,128211073 | 2,432806313 |
| 0,9925 |      | 2,432806313 | 110 | 0,0075 | 3,128211073 | 2,432806313 |
|        |      |             |     |        |             |             |
| 0,993  |      | 2,45768761  | 110 | 0,007  | 3,150188924 | 2,45768761  |
| 0,993  |      | 2,45768761  | 20  | 0,007  | 3,150188924 | 2,45768761  |
|        |      |             |     |        |             |             |
| 0,9935 |      | 2,484190031 | 20  | 0,0065 | 3,173626664 | 2,484190031 |
| 0,9935 |      | 2,484190031 | 110 | 0,0065 | 3,173626664 | 2,484190031 |
|        |      |             |     |        |             |             |
| 0,994  |      | 2,512561064 | 110 | 0,006  | 3,198748446 | 2,512561064 |
| 0,994  |      | 2,512561064 | 20  | 0,006  | 3,198748446 | 2,512561064 |
|        |      |             |     |        |             |             |
| 0,9945 |      | 2,543110942 | 20  | 0,0055 | 3,225835454 | 2,543110942 |
| 0,9945 |      | 2,543110942 | 110 | 0,0055 | 3,225835454 | 2,543110942 |
|        |      |             |     |        |             |             |
| 0,995  | .995 | 2,576236081 | 120 | 0,005  | 3,255247261 | 2,576236081 |
| 0,995  |      | 2,576236081 | 10  | 0,005  | 3,255247261 | 2,576236081 |
|        |      |             |     |        |             |             |
| 0,9955 |      | 2,612454688 | 20  | 0,0045 | 3,287454298 | 2,612454688 |
| 0,9955 |      | 2,612454688 | 110 | 0,0045 | 3,287454298 | 2,612454688 |
|        |      |             |     |        |             |             |
| 0,996  | .996 | 2,652463028 | 120 | 0,004  | 3,323089201 | 2,652463028 |
| 0,996  |      | 2,652463028 | 10  | 0,004  | 3,323089201 | 2,652463028 |
|        |      |             |     |        |             |             |
| 0,9962 |      | 2,669732012 | 20  | 0,0038 | 3,338488943 | 2,669732012 |
| 0,9962 |      | 2,669732012 | 110 | 0,0038 | 3,338488943 | 2,669732012 |

|        |      |             |     |        |             |             |
|--------|------|-------------|-----|--------|-------------|-------------|
|        |      |             |     |        |             |             |
| 0,9964 |      | 2,687835823 | 110 | 0,0036 | 3,354644969 | 2,687835823 |
| 0,9964 |      | 2,687835823 | 20  | 0,0036 | 3,354644969 | 2,687835823 |
|        |      |             |     |        |             |             |
| 0,9966 |      | 2,70686587  | 20  | 0,0034 | 3,371640505 | 2,70686587  |
| 0,9966 |      | 2,70686587  | 110 | 0,0034 | 3,371640505 | 2,70686587  |
|        |      |             |     |        |             |             |
| 0,9968 |      | 2,726929752 | 110 | 0,0032 | 3,389573563 | 2,726929752 |
| 0,9968 |      | 2,726929752 | 20  | 0,0032 | 3,389573563 | 2,726929752 |
|        |      |             |     |        |             |             |
| 0,997  | .997 | 2,748155353 | 10  | 0,003  | 3,40856069  | 2,748155353 |
| 0,997  |      | 2,748155353 | 120 | 0,003  | 3,40856069  | 2,748155353 |
|        |      |             |     |        |             |             |
| 0,9971 |      | 2,759250625 | 110 | 0,0029 | 3,418492224 | 2,759250625 |
| 0,9971 |      | 2,759250625 | 20  | 0,0029 | 3,418492224 | 2,759250625 |
|        |      |             |     |        |             |             |
| 0,9972 |      | 2,770696341 | 20  | 0,0028 | 3,428742003 | 2,770696341 |
| 0,9972 |      | 2,770696341 | 110 | 0,0028 | 3,428742003 | 2,770696341 |
|        |      |             |     |        |             |             |
| 0,9973 |      | 2,782516968 | 110 | 0,0027 | 3,43933235  | 2,782516968 |
| 0,9973 |      | 2,782516968 | 20  | 0,0027 | 3,43933235  | 2,782516968 |
|        |      |             |     |        |             |             |
| 0,9974 |      | 2,794739668 | 20  | 0,0026 | 3,450288056 | 2,794739668 |
| 0,9974 |      | 2,794739668 | 110 | 0,0026 | 3,450288056 | 2,794739668 |
|        |      |             |     |        |             |             |
| 0,9975 |      | 2,807394723 | 110 | 0,0025 | 3,461636765 | 2,807394723 |
| 0,9975 |      | 2,807394723 | 20  | 0,0025 | 3,461636765 | 2,807394723 |
|        |      |             |     |        |             |             |
| 0,9976 |      | 2,820516029 | 20  | 0,0024 | 3,473409432 | 2,820516029 |
| 0,9976 |      | 2,820516029 | 110 | 0,0024 | 3,473409432 | 2,820516029 |
|        |      |             |     |        |             |             |
| 0,9977 |      | 2,834141703 | 110 | 0,0023 | 3,485640875 | 2,834141703 |
| 0,9977 |      | 2,834141703 | 20  | 0,0023 | 3,485640875 | 2,834141703 |
|        |      |             |     |        |             |             |

|        |      |             |     |        |             |             |
|--------|------|-------------|-----|--------|-------------|-------------|
| 0,9978 |      | 2,848314819 | 20  | 0,0022 | 3,498370455 | 2,848314819 |
| 0,9978 |      | 2,848314819 | 110 | 0,0022 | 3,498370455 | 2,848314819 |
|        |      |             |     |        |             |             |
| 0,9979 |      | 2,863084312 | 110 | 0,0021 | 3,511642902 | 2,863084312 |
| 0,9979 |      | 2,863084312 | 20  | 0,0021 | 3,511642902 | 2,863084312 |
|        |      |             |     |        |             |             |
| 0,998  | .998 | 2,878506108 | 10  | 0,002  | 3,525509353 | 2,878506108 |
| 0,998  |      | 2,878506108 | 120 | 0,002  | 3,525509353 | 2,878506108 |
|        |      |             |     |        |             |             |
| 0,9981 |      | 2,894644524 | 110 | 0,0019 | 3,540028642 | 2,894644524 |
| 0,9981 |      | 2,894644524 | 20  | 0,0019 | 3,540028642 | 2,894644524 |
|        |      |             |     |        |             |             |
| 0,9982 |      | 2,911574059 | 20  | 0,0018 | 3,555268939 | 2,911574059 |
| 0,9982 |      | 2,911574059 | 110 | 0,0018 | 3,555268939 | 2,911574059 |
|        |      |             |     |        |             |             |
| 0,9983 |      | 2,929381676 | 110 | 0,0017 | 3,571309852 | 2,929381676 |
| 0,9983 |      | 2,929381676 | 20  | 0,0017 | 3,571309852 | 2,929381676 |
|        |      |             |     |        |             |             |
| 0,9984 |      | 2,948169775 | 20  | 0,0016 | 3,588245156 | 2,948169775 |
| 0,9984 |      | 2,948169775 | 110 | 0,0016 | 3,588245156 | 2,948169775 |
|        |      |             |     |        |             |             |
| 0,9985 |      | 2,968060106 | 110 | 0,0015 | 3,606186399 | 2,968060106 |
| 0,9985 |      | 2,968060106 | 20  | 0,0015 | 3,606186399 | 2,968060106 |
|        |      |             |     |        |             |             |
| 0,9986 |      | 2,989199025 | 20  | 0,0014 | 3,625267726 | 2,989199025 |
| 0,9986 |      | 2,989199025 | 110 | 0,0014 | 3,625267726 | 2,989199025 |
|        |      |             |     |        |             |             |
| 0,9987 |      | 3,011764655 | 110 | 0,0013 | 3,645652483 | 3,011764655 |
| 0,9987 |      | 3,011764655 | 20  | 0,0013 | 3,645652483 | 3,011764655 |
|        |      |             |     |        |             |             |
| 0,9988 |      | 3,035976898 | 20  | 0,0012 | 3,667542426 | 3,035976898 |
| 0,9988 |      | 3,035976898 | 110 | 0,0012 | 3,667542426 | 3,035976898 |
|        |      |             |     |        |             |             |
| 0,9989 |      | 3,062111727 | 110 | 0,0011 | 3,691190892 | 3,062111727 |

|        |      |             |     |        |             |             |
|--------|------|-------------|-----|--------|-------------|-------------|
| 0,9989 |      | 3,062111727 | 20  | 0,0011 | 3,691190892 | 3,062111727 |
|        |      |             |     |        |             |             |
| 0,999  | .999 | 3,090522226 | 10  | 0,001  | 3,716922189 | 3,090522226 |
| 0,999  |      | 3,090522226 | 120 | 0,001  | 3,716922189 | 3,090522226 |

# **RIO BOGOTÁ - METRO BOGOTÁ** **FRECUENCIAS DE CAUDALES MAXIMOS**



# FRECUENCIA DE CAUDALES MÁXIMOS

| Tr<br>años | NORMAL<br>m³/s | GUMBEL<br>m³/s | PEARSON<br>m³/s | LOG- PEAR<br>m³/s | LOG-NOR<br>m³/s | EV3<br>m³/s |
|------------|----------------|----------------|-----------------|-------------------|-----------------|-------------|
| 2          | 59,1           | 55,4           | 56,2            | 54,7              | 54,6            | 55,9        |
| 2,5        | 65,2           | 62,3           | 62,4            | 60,7              | 60,4            | 62,4        |
| 3,33       | 71,8           | 70,3           | 69,4            | 67,8              | 67,2            | 69,7        |
| 5          | 79,5           | 80,9           | 78,1            | 77,2              | 76,2            | 78,9        |
| 10         | 90,2           | 97,7           | 91,4            | 92,3              | 90,6            | 92,2        |
| 20         | 99,0           | 113,9          | 103,2           | 107,0             | 104,6           | 103,8       |
| 50         | 108,9          | 134,8          | 117,7           | 126,2             | 123,0           | 117,3       |
| 100        | 115,5          | 150,5          | 127,9           | 140,7             | 137,0           | 126,6       |
| 200        | 121,6          | 166,1          | 137,8           | 155,5             | 151,1           | 135,2       |
| 500        | 128,9          | 186,7          | 150,4           | 175,4             | 170,3           | 145,8       |
| chi 2      | 14,4           | 4,3            | 5,9             | 5,3               | 7,1             | 4,9         |