

**BEXT, Inc.**

**TFC2K 2 Bay Fullwave**

**TX station:**

**Site name:**

**Frequency: 98.00 MHz**

**Date: 08/08/2007**

### General data of antenna system

|   |       |
|---|-------|
| TX station  |       |
| Site name   |       |
| Site longitude (+ddd°pp'ss")                      |       |
| Site latitude (+dd°pp'ss")                        |       |
| Ground level a.s.l. (m)                           | 1     |
| Antenna system height a.g.l. (m)                  | 15.0  |
| Transmitter power (Watt)                          | 1.0   |
| Carrier wave frequency (MHz)                      | 98.00 |
| Antenna system central frequency (MHz)            | 98.00 |
| Filename of antenna base diagrams type 1          | TFC2K |
| Filename of antenna base diagrams type 2          |       |
| Antenna system polarization (H, V, C, X)          | C     |
| Transmitting cable attenuation (dB)               | 0.1   |
| Additional attenuations (dB)                      | 0.1   |
| Base diagrams sectors (A = all, F = front)        | A     |
| Velocity factor of cables to antennas (0÷1)       | 0.89  |
| Coordinate system (C = cartesian, P = polar)      | C     |
| Mast side/diameter (cm):                          | 0.0   |
| Mast cross section (Triangular, Square, Circular) | S     |
| Mast rotation w.r.t. North (°)                    | 0     |
| System picture filename (*.bmp *.gif *.jpg)       |       |

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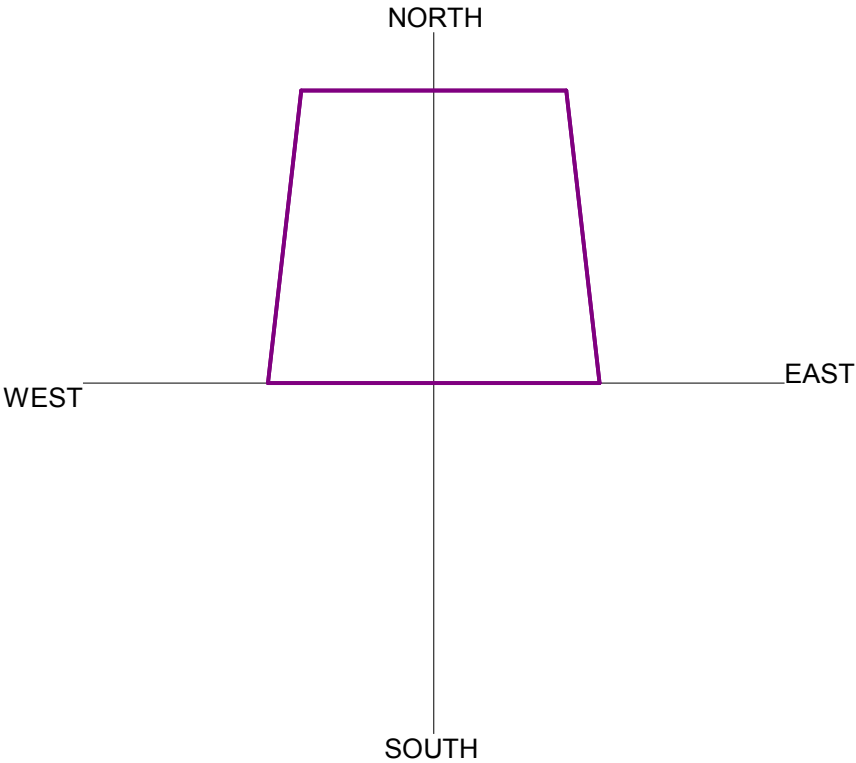
### Information about antennas used in the system

|                          |            |
|--------------------------|------------|
| Manufacturer             | BEXT, Inc. |
| Antenna model            | TFC2K      |
| Band start (MHz)         | 87         |
| Band stop (MHz)          | 108        |
| Diagrams frequency (MHz) | 98         |
| Polariz. (H, V, C, X)    | C          |
| Vertical dist. (cm)      | 320        |
| Height (cm)              | 250        |
| Width (cm)               | 170        |
| Thickness (cm)           | 150        |
| Weight (Kg)              | 80         |
| Maximum power (KW)       | 4          |
| Gain (dBd)               | -1.71      |
| North E.C. (cm)          | 70         |
| East E.C. (cm)           | 0          |
| Return loss (dB)         | 0          |
| R.C. phase (°)           | 0          |

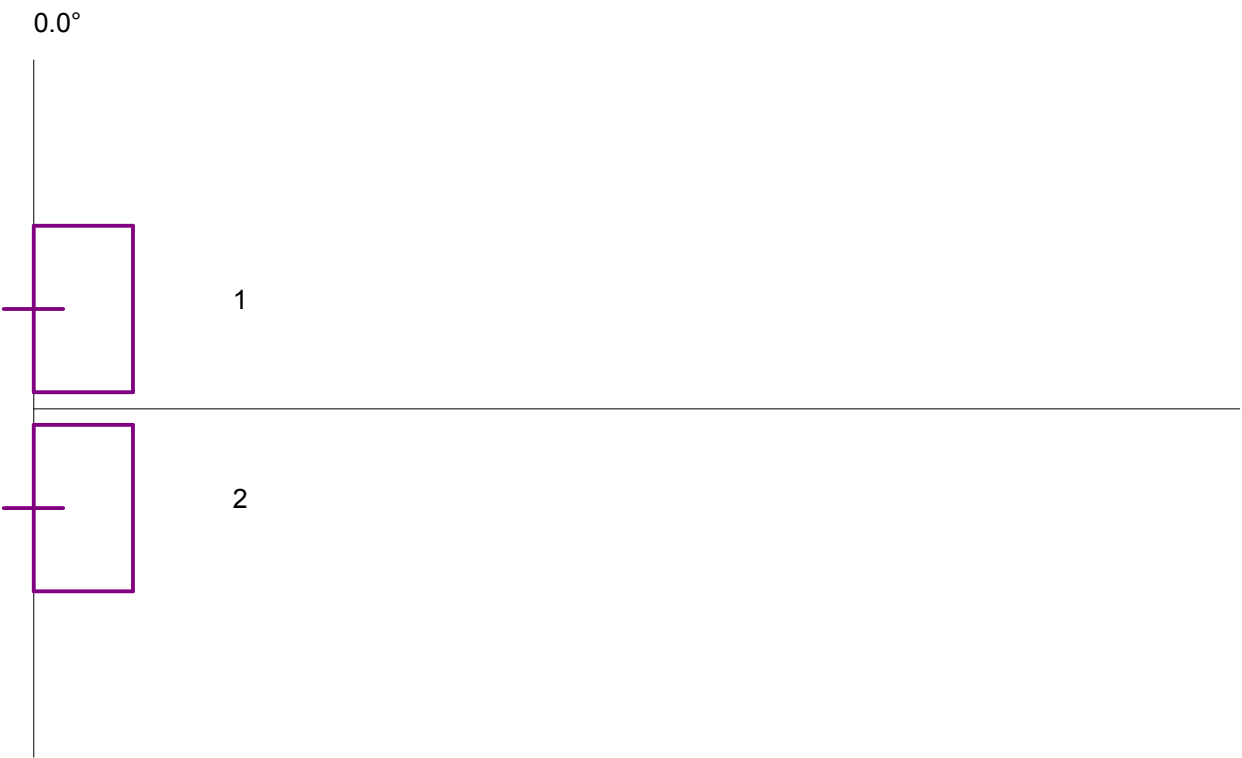
**Geometrical and electrical data of antenna system**

|   | <i>Power</i><br>(%) | <i>Tilt</i><br>(°) | <i>Az.</i><br>(°/N) | <i>Phase</i><br>(°) | <i>V dist.</i><br>(m) | <i>E.C.</i><br>(cm) | <i>N.C.</i><br>(cm) | <i>Rot.</i><br>(1÷4) | <i>Type</i><br>(1÷2) | <i>L cables</i><br>(cm) | <i>Car. phase</i><br>(°) |     |
|---|---------------------|--------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|----------------------|----------------------|-------------------------|--------------------------|-----|
| 1 | 50.0000             |                    | 0                   | 0                   | +0.0                  | 1.50                | 0.0                 | 0.0                  | 1                    | 1                       | 0.0                      | 0.0 |
| 2 | 50.0000             |                    | 0                   | 0                   | +0.0                  | -1.50               | 0.0                 | 0.0                  | 1                    | 1                       | 0.0                      | 0.0 |

**Plane of antenna system**



**Side of antenna system**



Frequency: 98.00 MHz

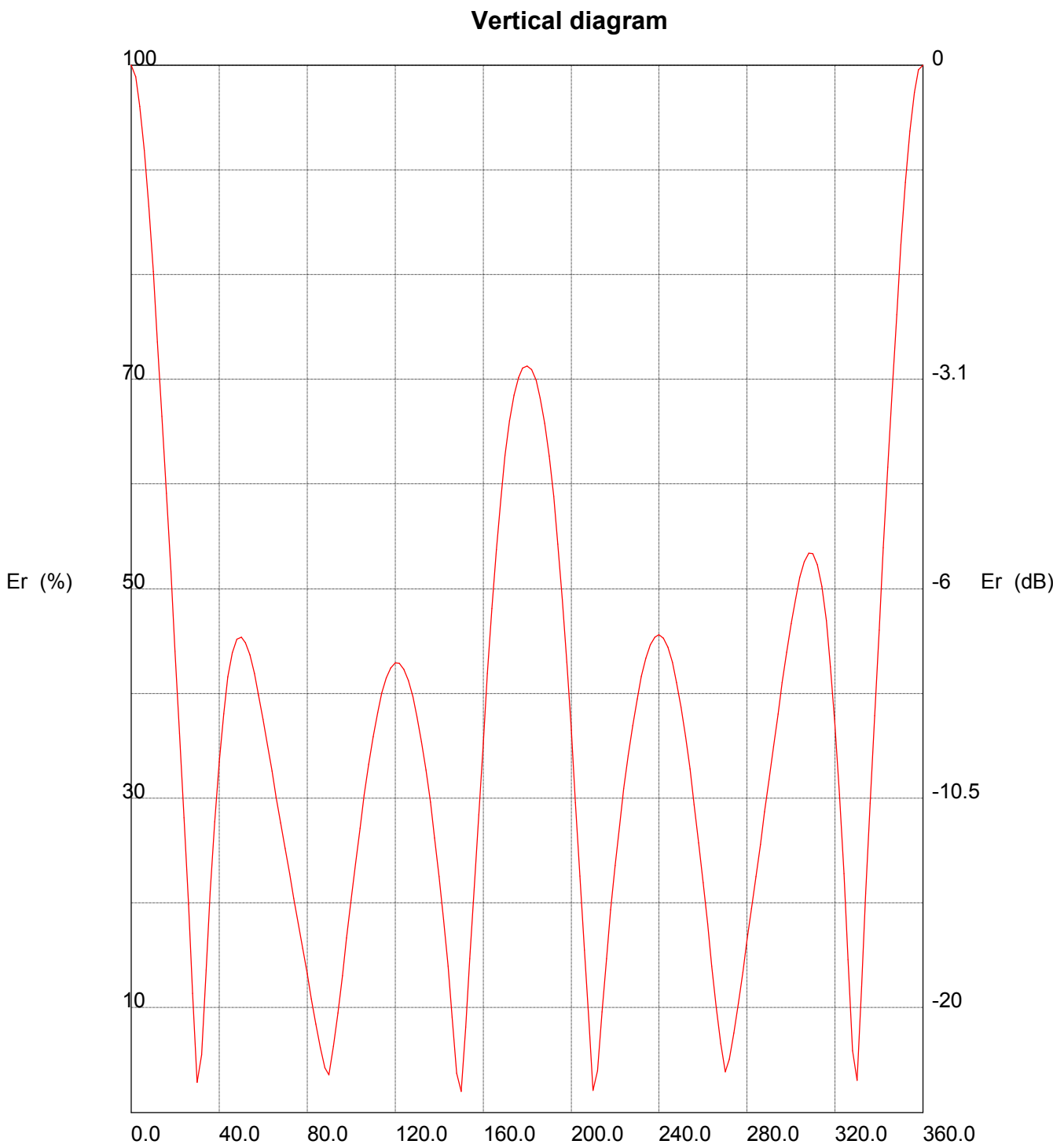
Antennas arrays data

|                                   |        |
|-----------------------------------|--------|
| A. Antennas array azimuth (°/N)   | 0      |
| B. Number of antennas             | 2      |
| C. Nominal power supply (W)       | 1.00   |
| D. Losses (addit. + cables) (dB)  | 0.2    |
| E. Effective power supply (W)     | 0.95   |
| F. Theor. maximum gain (dBd)      | 1.30   |
| G. Distribution losses (dB)       | 0.00   |
| H. Nominal max gain [F - G] (dBd) | 1.30   |
| I. Compensation losses (dB)       | 0.01   |
| J. Effec. max gain [H - I] (dBd)  | 1.29   |
| K. Effec. max gain (times)        | 1.35   |
| L. Effec. max power [E * K] (KW)  | 0.0013 |
| M. Max power depr. angle (°)      | -0.4   |
| N. Max power az. angle (°)        | 66     |

Diagram in dBK calculated at horizon

| Az. (°/N) dBK |       | Az. (°/N) dBK |       | Az. (°/N) dBK |       | Az. (°/N) dBK |       |
|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
| 0             | -30.5 | 90            | -29.5 | 180           | -33.4 | 270           | -29.5 |
| 10            | -30.4 | 100           | -30.2 | 190           | -33.4 | 280           | -29.1 |
| 20            | -30.1 | 110           | -31.1 | 200           | -33.4 | 290           | -29.0 |
| 30            | -29.8 | 120           | -32.0 | 210           | -33.3 | 300           | -29.0 |
| 40            | -29.5 | 130           | -32.7 | 220           | -33.1 | 310           | -29.2 |
| 50            | -29.2 | 140           | -33.2 | 230           | -32.6 | 320           | -29.5 |
| 60            | -29.0 | 150           | -33.4 | 240           | -31.9 | 330           | -29.9 |
| 70            | -28.9 | 160           | -33.5 | 250           | -31.1 | 340           | -30.2 |
| 80            | -29.1 | 170           | -33.4 | 260           | -30.2 | 350           | -30.4 |

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**Vertical diagram at an azimuth of 0°**

| Dep (°) | Er (%) | ERP (W) | Dep (°) | Er (%) | ERP (W) | Dep (°) | Er (%) | ERP (W) |
|---------|--------|---------|---------|--------|---------|---------|--------|---------|
| 0.0     | 100.0  | 0.9     | 120.0   | 42.9   | 0.2     | 240.0   | 45.6   | 0.2     |
| 2.0     | 98.9   | 0.9     | 122.0   | 42.9   | 0.2     | 242.0   | 45.3   | 0.2     |
| 4.0     | 96.0   | 0.8     | 124.0   | 42.3   | 0.2     | 244.0   | 44.4   | 0.2     |
| 6.0     | 91.9   | 0.8     | 126.0   | 41.2   | 0.2     | 246.0   | 43.0   | 0.2     |
| 8.0     | 86.5   | 0.7     | 128.0   | 39.7   | 0.1     | 248.0   | 41.0   | 0.2     |
| 10.0    | 80.3   | 0.6     | 130.0   | 37.8   | 0.1     | 250.0   | 38.7   | 0.1     |
| 12.0    | 73.6   | 0.5     | 132.0   | 35.4   | 0.1     | 252.0   | 35.9   | 0.1     |
| 14.0    | 66.4   | 0.4     | 134.0   | 32.7   | 0.1     | 254.0   | 32.8   | 0.1     |
| 16.0    | 59.1   | 0.3     | 136.0   | 29.6   | 0.1     | 256.0   | 29.4   | 0.1     |
| 18.0    | 51.7   | 0.2     | 138.0   | 26.2   | 0.1     | 258.0   | 25.7   | 0.1     |
| 20.0    | 44.0   | 0.2     | 140.0   | 22.5   | 0.0     | 260.0   | 21.9   | 0.0     |
| 22.0    | 36.2   | 0.1     | 142.0   | 18.4   | 0.0     | 262.0   | 18.0   | 0.0     |
| 24.0    | 28.1   | 0.1     | 144.0   | 13.9   | 0.0     | 264.0   | 14.0   | 0.0     |
| 26.0    | 19.8   | 0.0     | 146.0   | 9.1    | 0.0     | 266.0   | 10.0   | 0.0     |
| 28.0    | 11.4   | 0.0     | 148.0   | 3.8    | 0.0     | 268.0   | 6.6    | 0.0     |
| 30.0    | 2.9    | 0.0     | 150.0   | 2.0    | 0.0     | 270.0   | 3.9    | 0.0     |
| 32.0    | 5.5    | 0.0     | 152.0   | 8.2    | 0.0     | 272.0   | 5.1    | 0.0     |
| 34.0    | 13.6   | 0.0     | 154.0   | 14.7   | 0.0     | 274.0   | 7.6    | 0.0     |
| 36.0    | 21.1   | 0.0     | 156.0   | 21.5   | 0.0     | 276.0   | 10.4   | 0.0     |
| 38.0    | 27.8   | 0.1     | 158.0   | 28.4   | 0.1     | 278.0   | 13.4   | 0.0     |
| 40.0    | 33.5   | 0.1     | 160.0   | 35.3   | 0.1     | 280.0   | 16.4   | 0.0     |
| 42.0    | 38.1   | 0.1     | 162.0   | 41.9   | 0.2     | 282.0   | 19.4   | 0.0     |
| 44.0    | 41.6   | 0.2     | 164.0   | 48.1   | 0.2     | 284.0   | 22.5   | 0.0     |
| 46.0    | 43.9   | 0.2     | 166.0   | 53.7   | 0.3     | 286.0   | 25.6   | 0.1     |
| 48.0    | 45.2   | 0.2     | 168.0   | 58.6   | 0.3     | 288.0   | 28.7   | 0.1     |
| 50.0    | 45.4   | 0.2     | 170.0   | 62.7   | 0.4     | 290.0   | 31.8   | 0.1     |
| 52.0    | 44.9   | 0.2     | 172.0   | 66.0   | 0.4     | 292.0   | 34.9   | 0.1     |
| 54.0    | 43.7   | 0.2     | 174.0   | 68.5   | 0.4     | 294.0   | 38.0   | 0.1     |
| 56.0    | 41.9   | 0.2     | 176.0   | 70.1   | 0.4     | 296.0   | 41.1   | 0.2     |
| 58.0    | 39.8   | 0.1     | 178.0   | 71.0   | 0.5     | 298.0   | 43.9   | 0.2     |
| 60.0    | 37.5   | 0.1     | 180.0   | 71.2   | 0.5     | 300.0   | 46.7   | 0.2     |
| 62.0    | 35.1   | 0.1     | 182.0   | 70.9   | 0.5     | 302.0   | 49.1   | 0.2     |
| 64.0    | 32.6   | 0.1     | 184.0   | 69.9   | 0.4     | 304.0   | 51.1   | 0.2     |
| 66.0    | 30.1   | 0.1     | 186.0   | 68.2   | 0.4     | 306.0   | 52.6   | 0.2     |
| 68.0    | 27.6   | 0.1     | 188.0   | 65.8   | 0.4     | 308.0   | 53.4   | 0.3     |
| 70.0    | 25.2   | 0.1     | 190.0   | 62.7   | 0.4     | 310.0   | 53.3   | 0.3     |
| 72.0    | 22.8   | 0.0     | 192.0   | 58.8   | 0.3     | 312.0   | 52.3   | 0.2     |
| 74.0    | 20.4   | 0.0     | 194.0   | 54.2   | 0.3     | 314.0   | 50.2   | 0.2     |
| 76.0    | 18.0   | 0.0     | 196.0   | 49.0   | 0.2     | 316.0   | 47.0   | 0.2     |
| 78.0    | 15.7   | 0.0     | 198.0   | 43.0   | 0.2     | 318.0   | 42.5   | 0.2     |
| 80.0    | 13.3   | 0.0     | 200.0   | 36.5   | 0.1     | 320.0   | 37.0   | 0.1     |
| 82.0    | 10.8   | 0.0     | 202.0   | 29.6   | 0.1     | 322.0   | 30.3   | 0.1     |
| 84.0    | 8.4    | 0.0     | 204.0   | 22.5   | 0.0     | 324.0   | 22.8   | 0.0     |
| 86.0    | 6.2    | 0.0     | 206.0   | 15.5   | 0.0     | 326.0   | 14.6   | 0.0     |
| 88.0    | 4.3    | 0.0     | 208.0   | 8.6    | 0.0     | 328.0   | 5.9    | 0.0     |
| 90.0    | 3.6    | 0.0     | 210.0   | 2.1    | 0.0     | 330.0   | 3.0    | 0.0     |
| 92.0    | 6.3    | 0.0     | 212.0   | 4.0    | 0.0     | 332.0   | 12.0   | 0.0     |
| 94.0    | 9.5    | 0.0     | 214.0   | 9.6    | 0.0     | 334.0   | 20.9   | 0.0     |
| 96.0    | 13.0   | 0.0     | 216.0   | 14.7   | 0.0     | 336.0   | 29.5   | 0.1     |
| 98.0    | 16.6   | 0.0     | 218.0   | 19.4   | 0.0     | 338.0   | 37.9   | 0.1     |
| 100.0   | 20.2   | 0.0     | 220.0   | 23.6   | 0.0     | 340.0   | 46.0   | 0.2     |
| 102.0   | 23.7   | 0.1     | 222.0   | 27.4   | 0.1     | 342.0   | 53.9   | 0.3     |
| 104.0   | 27.1   | 0.1     | 224.0   | 30.9   | 0.1     | 344.0   | 61.6   | 0.3     |
| 106.0   | 30.3   | 0.1     | 226.0   | 34.1   | 0.1     | 346.0   | 69.1   | 0.4     |
| 108.0   | 33.2   | 0.1     | 228.0   | 36.9   | 0.1     | 348.0   | 76.2   | 0.5     |
| 110.0   | 35.8   | 0.1     | 230.0   | 39.5   | 0.1     | 350.0   | 82.8   | 0.6     |
| 112.0   | 38.2   | 0.1     | 232.0   | 41.6   | 0.2     | 352.0   | 88.8   | 0.7     |
| 114.0   | 40.0   | 0.1     | 234.0   | 43.4   | 0.2     | 354.0   | 93.7   | 0.8     |
| 116.0   | 41.5   | 0.2     | 236.0   | 44.6   | 0.2     | 356.0   | 97.4   | 0.9     |
| 118.0   | 42.4   | 0.2     | 238.0   | 45.4   | 0.2     | 358.0   | 99.5   | 0.9     |