



# TRELINA SOLAR ENERGY CENTER ELECTRIC AND MAGNETIC FIELD (EMF) CALCULATION

Revision 1

PRELIMINARY – NOT FOR CONSTRUCTION

Project No.: 13666-052

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## **ISSUE SUMMARY AND APPROVAL PAGE**

This is to certify that this Electric and Magnetic Field (EMF) Calculation has been prepared, reviewed and approved in accordance with Sargent & Lundy's Standard Operating Procedure SOP-0405, which is based on ANSI/ISO/ASSQC Q9001 Quality Management Systems.

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## EXECUTIVE SUMMARY

NextEra Energy Resources (NEER) (Owner) has requested Sargent & Lundy, L.L.C. (S&L) to provide engineering services for a 115kV transmission line tap line associated with the proposed Trelina Solar Energy Center. The project is located in Seneca County, New York; the line is less than 500 ft. The 115kV transmission line has one (1) cross section, as shown in the report below. The 34.5 kV collection cable maximum fields will be generated near the proposed collection substation and will have one (1) cross section.

As part of the deliverables, S&L will determine the electric and magnetic fields (EMF) for the Winter Normal ratings per the New York Independent System Operator (NYISO) Tie-line Rating Report. The calculation will be used to determine the maximum electric field (kV/m) and magnetic field (mG) within and at the edge of the right-of-way (ROW) for the transmission line and underground collection cross sections.

## **1.0 PURPOSE AND SCOPE**

### **1.1 DESCRIPTION**

The purpose of this calculation is to determine the electric and magnetic fields (EMF) for the ratings listed below and calculated per the New York Independent System Operator (NYISO) Tie-line Rating Report.

### **1.2 ELECTRIC AND MAGNETIC FIELD GUIDELINES**

New York State Public Service Commission (NYPSC) set forth in Opinion and Order Determining Health and Safety Issues, Imposing Operating Conditions, and Authorizing, in Case 26520, Operation Pursuant to those Conditions No. 78-13 and Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, NYPSC Cases 26529 and 26559, sets the guidance for electric and magnetic fields, respectively.

These opinions and cases set forth the requirement of the minimum electric and magnetic fields at the edge of the ROW. The electric fields strength by the proposed transmission line will not be greater than 1.6 kV/m at the edge of the ROW and measured, one meter (3.28 ft) above ground level, with the line at the rated voltage. The magnetic field strength by the proposed transmission line will not be greater than 200 mG at the edge of the ROW, measured at one meter (3.28 ft) above grade. The limits for the electric and magnetic field strength will adhere to the requirements set forth by the NYPSC [1]. The determination of the phase currents will be based on the Winter Normal rating from the NYISO Tie-line Rating Report. Finally, the conductor height will be calculated under normal conductor temperature (95°C).

## 2.0 DESIGN INPUTS

### 2.1 UNVERIFIED INPUTS

**Table 1 - PROPOSED LINE CONDUCTOR PROPERTIES**

| Properties                                        | Conductor | Overhead Shield Wire (OHSW) |
|---------------------------------------------------|-----------|-----------------------------|
| Type                                              | ACSR      | EHS STEEL                   |
| Size                                              | 795 kcmil | 3/8"                        |
| Stranding                                         | 26/7      | 7-Strand                    |
| Diameter (in)                                     | 1.107     | .36                         |
| Conductor Cross Sectional Area (in <sup>2</sup> ) | 0.7263    | N/A                         |
| Weight (lbs/ft)                                   | 1.093     | 0.273                       |
| Rated Tensile Strength (lbs)                      | 31,500    | 15,400                      |
| Sub-conductor Horizontal Spacing (in)             | N/A       | N/A                         |
| Resistance, DC, 20°C ( $\Omega$ /1000 ft)         | .0214     | N/A                         |
| Resistance, AC, 75°C ( $\Omega$ /1000 ft)         | .0263     | N/A                         |

\*Properties from General Cable

**Table 2 - PROPOSED LINE UNDERGROUND CABLE PROPERTIES**

| Properties                                        | Conductor  |
|---------------------------------------------------|------------|
| Type                                              | XLPE       |
| Size                                              | 1250 KCMIL |
| Stranding                                         | N/A        |
| Diameter (in)                                     | 2.458      |
| Conductor Cross Sectional Area (in <sup>2</sup> ) | 0.98186    |
| Weight (lbs/ft)                                   | ~2.7       |

\*Properties from General Cable

**Table 3 - PROPOSED LINE RATING OUTPUT SUMMARY**

| Case | Rating Condition              | Thermal Rating (Amperes) |
|------|-------------------------------|--------------------------|
| 1    | NYISO – Winter – Normal       | 1000 (estimated)         |
| 2    | NYISO – Winter – STE          | 1000 (estimated)         |
| 3    | NYISO – Summer – Normal       | 1000 (estimated)         |
| 4    | NYISO – Summer – STE          | 1000 (estimated)         |
| 5    | Underground Cable – 1250 kmil | 669.40                   |

#### Soil Conditions:

The geotechnical resistivity provided by the geotechnical report was calculated to be 73  $\Omega \cdot m$ . The calculation utilized a conservative value of 100  $\Omega \cdot m$ . The noted ground resistivity was then converted into the required ground conductivity input value as follows:

The inputs to the Bonneville Power Authority (BPA) program (version 3.1) require the ground conductivity to be entered (mmhos/m = mS/m). Therefore, the reciprocal of the ground resistivity of 100  $\Omega \cdot m$  = the ground conductivity of 10.0 mS/m

#### Electric Field Shielding

Shield from objects was not considered as part of this calculation.

#### Conductor Phasing

Conductor Phasing for the typical steel monopole tangent structure, conductors A, B, and C are assumed to be on the top arm, middle arm, and lower arm, respectively. It is assumed that phasing will produce the highest electric and magnetic fields.

#### Conductor Midspan Height

For proposed lines, the conductor midspan height was assumed to be at worst case sag with conductor at a temperature of 203°F (95°C). For existing lines, the conductor midspan height was assumed to be at a minimum NESC clearance to ground.

#### SW Midspan Height

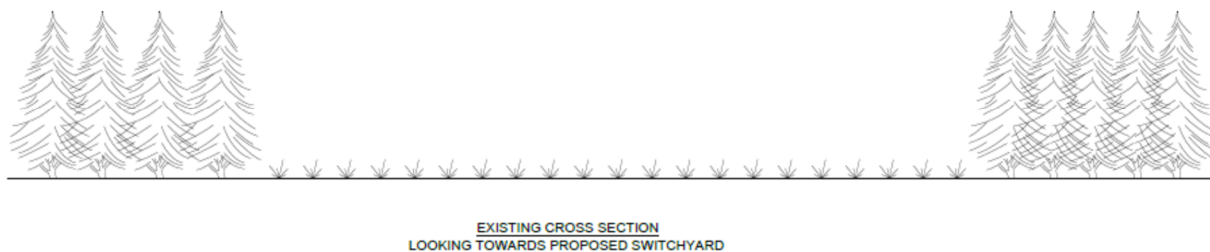
Shield wire midspan height was assumed to be at 75% of the conductor sag at average ambient temperature (49°F).

#### Ground Elevation

The ground elevation is less than 1000 ft and will be inputted as 0 ft based on the recommendation of the BPA program.

#### Existing Conductor Configuration

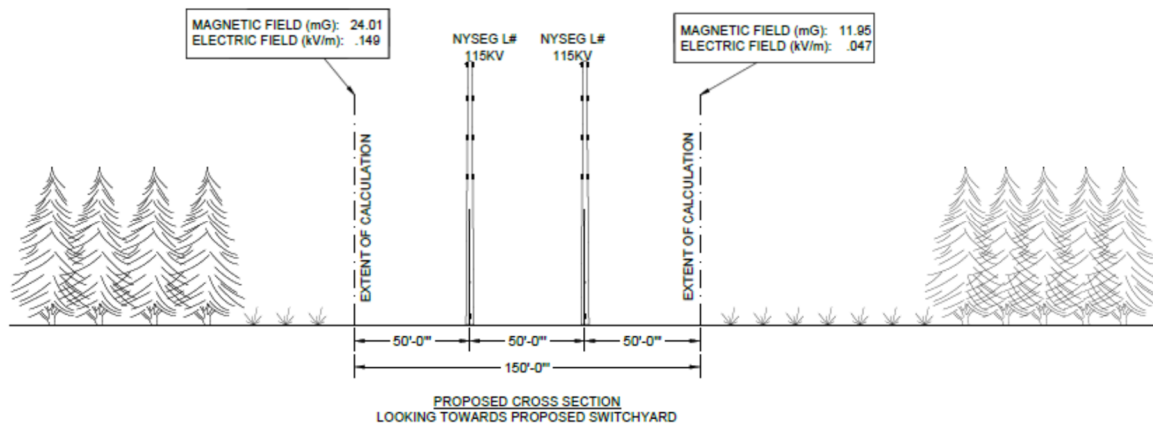
There are no existing cross sections for the existing NYSEG 115 kV transmission line. The minimum clearance to ground for the 115 kV transmission lines is 25 ft.



**Figure 1 - EXISTING CONFIGURATION**

### Cross Section 1

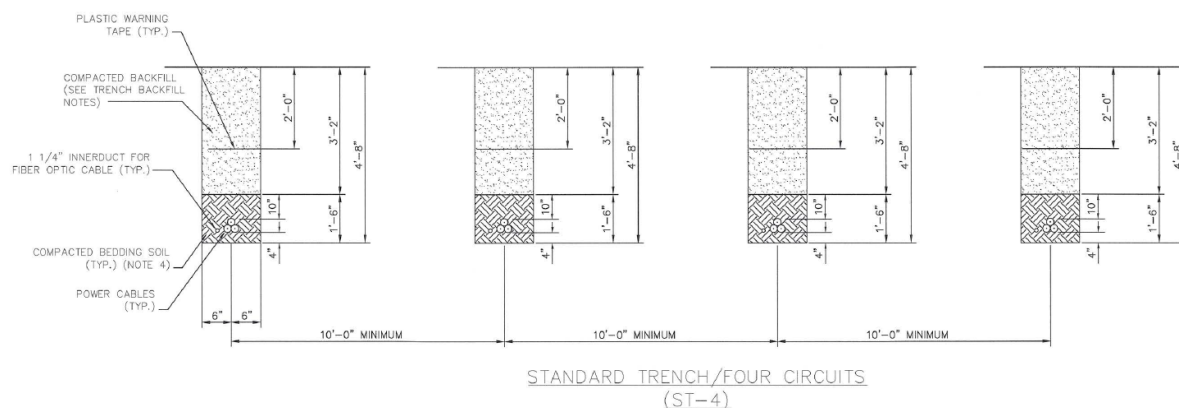
The proposed cross section consists of the 115kV transmission lines. The ROW width is 150 ft.



**Figure 2 - PROPOSED CROSS SECTION 1**

### Cross Section 2

The proposed cross section consists of four (4) 34.5 kV underground cables for the collection system. The ROW width is 50 ft.



**Figure 3 - PROPOSED CROSS SECTION 2 – UNDERGROUND CABLES**



**Figure 4 – PROPOSED SITE PLAN**

### 3.0 RESULTS

#### 4.1 EMF RESULTS TABLE

The EMF results shown are for the proposed 150' ROW by NextEra Energy Resources (NEER).

**Table 4 - EMF RESULTS**

| Case Designation                             | EMF at Edge of ROW | NYPSC Criteria at Edge of ROW |
|----------------------------------------------|--------------------|-------------------------------|
| <b>Electric Field (kV/m)</b>                 |                    |                               |
| Existing ROW Cross Section 1                 | n/a                | 1.6 kV/m                      |
| Proposed ROW Cross Section 1 – Winter Normal | .045               | 1.6 kV/m                      |
| Proposed ROW Cross Section 1 – Winter STE    | .045               | 1.6 kV/m                      |
| Proposed ROW Cross Section 1 – Summer Normal | .045               | 1.6 kV/m                      |
| Proposed ROW Cross Section 1 – Summer STE    | .045               | 1.6 kV/m                      |
| Proposed Row Cross Section 2 -Maximum Load   | N/A                | N/A                           |
| <b>Magnetic Field (mG)</b>                   |                    |                               |
| Existing ROW Cross Section 1                 | n/a                | 200 mG                        |
| Proposed ROW Cross Section 1 – Winter Normal | 69.8               | 200 mG                        |
| Proposed ROW Cross Section 1 – Winter STE    | 69.8               | 200 mG                        |
| Proposed ROW Cross Section 1 – Summer Normal | 69.8               | 200 mG                        |
| Proposed ROW Cross Section 1 – Summer STE    | 69.8               | 200 mG                        |
| Proposed ROW Cross Section 2 – Maximum Load  | 7.2                | 200 mG                        |

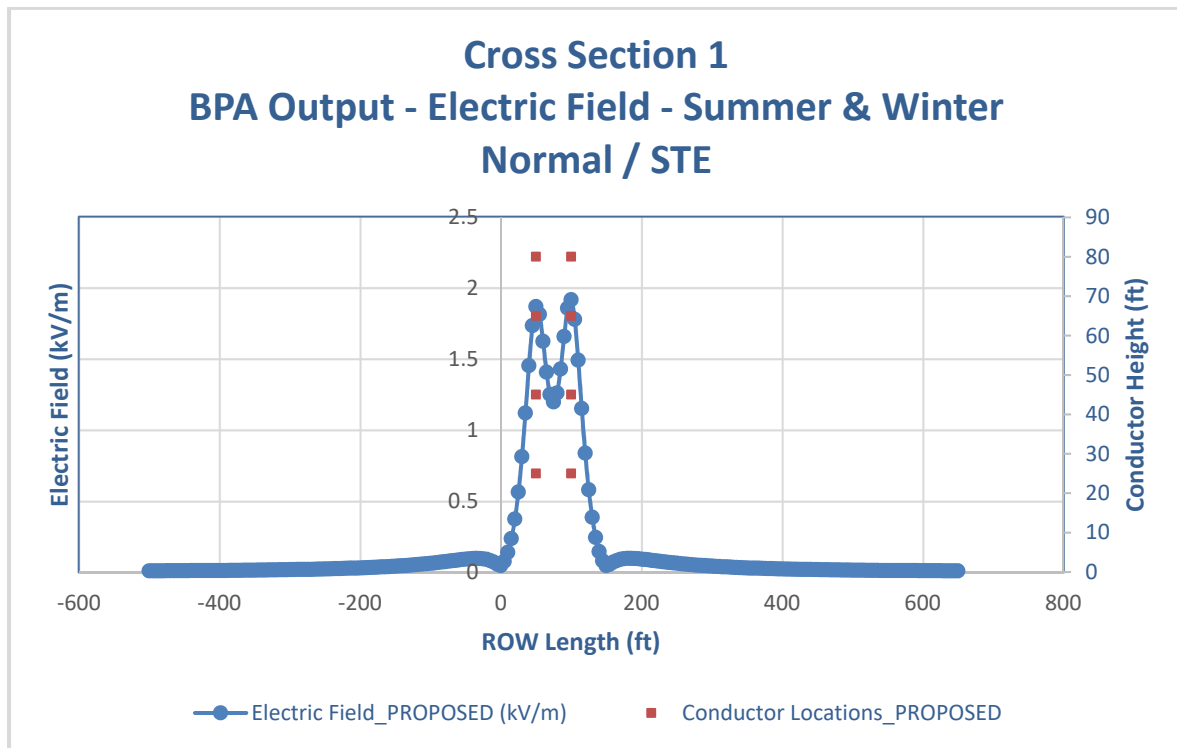
In conclusion, the results of the study show that the calculated electric and magnetic fields are acceptable when compared to the electric fields requirement of 1.6 kV/m, one meter (3.28 ft.) above ground level, and the magnetic field strength requirement is 200 mG, measured at one meter (3.28 ft.) above grade, at the existing NYSEG and proposed Trelina Solar Energy Center transmission lines edge of ROW.

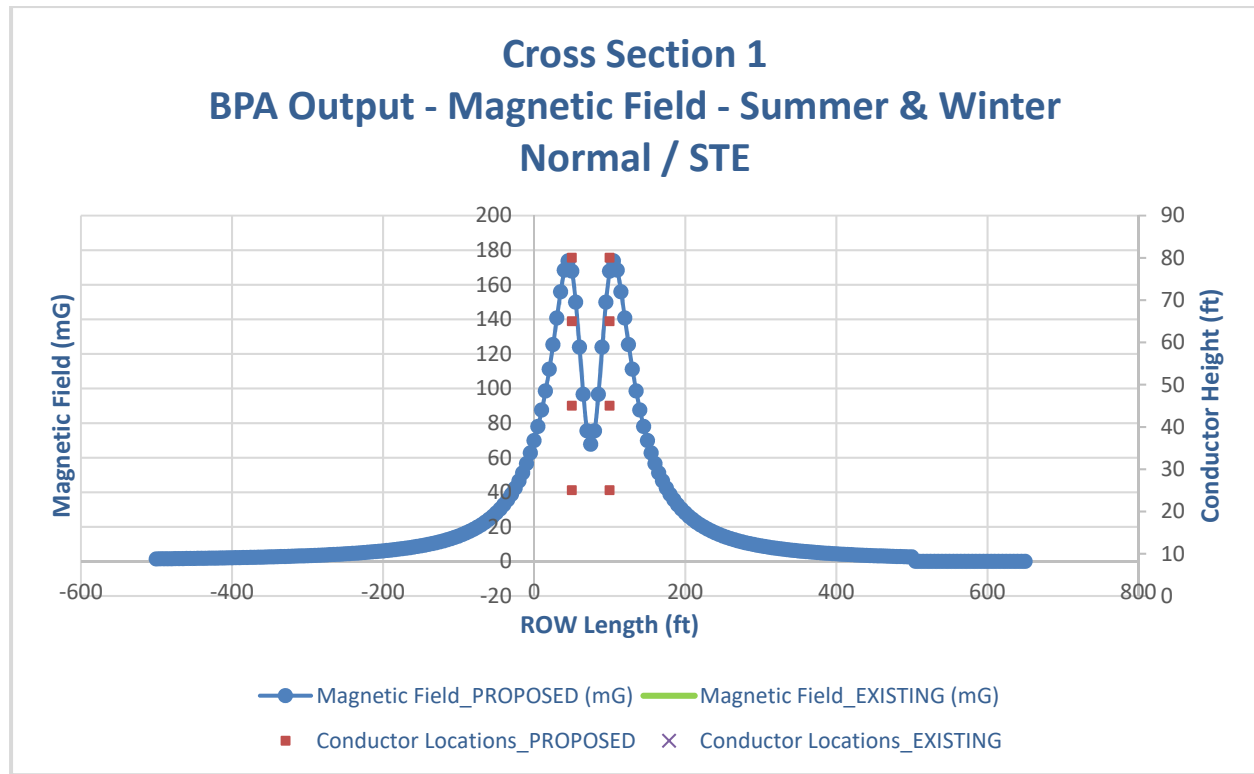
See Appendix A for the inputs and results of the (BPA) Corona and Field Effects computer programs.

Finally, Stipulation 35 – Section (d) – the study to evaluate potential induced voltages on Project Components located in proximity to high voltage electrical transmission facilities cannot be determined at this stage. The substation perimeter fence will be grounding in accordance to Institute of Electrical and Electronic Engineers (IEEE) standards and the design drawings. Adjacent fencing is not proposed at this time. Should fencing outside of the substation perimeter fence be required applicable codes and standards associated with the transmission line will be evaluated.

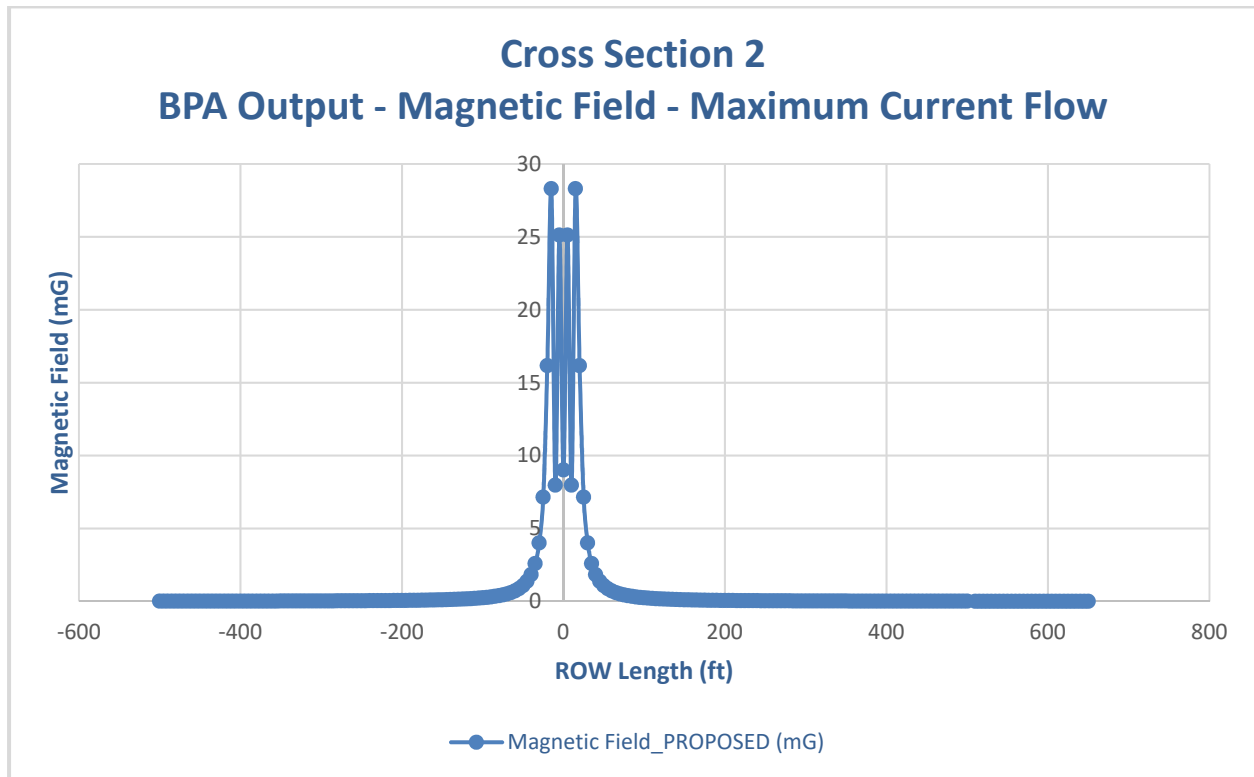
## 4.2 EMF PLOTS

### Cross Section 1





Cross Section 2



#### 4.0 REFERENCES

1. STATE OF NEW YORK PUBLIC SERVICE COMMISSION CASES 26529 and 26559 - Proceeding on Motion of the Commission as to Regulations Regarding Electric and Magnetic Field Standards for Transmission Lines – Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (Issued and Effective: September 11, 1990)
2. STATE OF NEW YORK PUBLIC SERVICE COMMISSION OPINION NO. 78-13 - Opinion and Order Determining Health and Safety Issues, Imposing Operating Conditions and Authorizing, in Case 26529, Operation Pursuant to those Conditions (Issued June 19, 1978)
3. New York Power Pool – Tie-Line Rating Task Force – Final Report on Tie-Line Rating (Approved November 1995)
4. EPRI AC Transmission Line Reference Book – 200 kV and Above, 2015 Edition (3002005659 Update November 2015)
5. NYISO 2016 Load & Capacity Data, “Gold Book” (Released April 2016)
6. National Electrical Safety Code (NESC) - 2017 Edition (C2-2017)

Appendix A: EMF Study (ROW Cross Sections 1 & 2)

emf\_underground.txt

MAGNETIC FLUX DENSITY [mG]

=====

Study : Ampacity Study  
Execution: Cable in Trench Four Circuits

Report created on: 06/23/20 8:44:17 AM

| X<br>(feet) | Y=0.0<br>(feet)<br><br>B(mG) | Y=1.0<br>(feet)<br><br>B(mG) |
|-------------|------------------------------|------------------------------|
| -500.0      | 0.0093                       | 0.0093                       |
| -495.0      | 0.0095                       | 0.0095                       |
| -490.0      | 0.0097                       | 0.0097                       |
| -485.0      | 0.0099                       | 0.0099                       |
| -480.0      | 0.0101                       | 0.0101                       |
| -475.0      | 0.0103                       | 0.0103                       |
| -470.0      | 0.0105                       | 0.0105                       |
| -465.0      | 0.0107                       | 0.0107                       |
| -460.0      | 0.011                        | 0.011                        |
| -455.0      | 0.0112                       | 0.0112                       |
| -450.0      | 0.0115                       | 0.0115                       |
| -445.0      | 0.0117                       | 0.0117                       |
| -440.0      | 0.012                        | 0.012                        |
| -435.0      | 0.0123                       | 0.0123                       |
| -430.0      | 0.0126                       | 0.0126                       |
| -425.0      | 0.0129                       | 0.0129                       |
| -420.0      | 0.0132                       | 0.0132                       |
| -415.0      | 0.0135                       | 0.0135                       |
| -410.0      | 0.0138                       | 0.0138                       |
| -405.0      | 0.0142                       | 0.0142                       |
| -400.0      | 0.0145                       | 0.0145                       |
| -395.0      | 0.0149                       | 0.0149                       |
| -390.0      | 0.0153                       | 0.0153                       |
| -385.0      | 0.0157                       | 0.0157                       |
| -380.0      | 0.0161                       | 0.0161                       |
| -375.0      | 0.0165                       | 0.0165                       |
| -370.0      | 0.017                        | 0.017                        |
| -365.0      | 0.0174                       | 0.0174                       |
| -360.0      | 0.0179                       | 0.0179                       |
| -355.0      | 0.0184                       | 0.0184                       |
| -350.0      | 0.019                        | 0.019                        |
| -345.0      | 0.0195                       | 0.0195                       |
| -340.0      | 0.0201                       | 0.0201                       |

|        |        | emf_underground.txt |
|--------|--------|---------------------|
| -335.0 | 0.0207 | 0.0207              |
| -330.0 | 0.0213 | 0.0213              |
| -325.0 | 0.022  | 0.022               |
| -320.0 | 0.0227 | 0.0227              |
| -315.0 | 0.0234 | 0.0234              |
| -310.0 | 0.0242 | 0.0242              |
| -305.0 | 0.025  | 0.025               |
| -300.0 | 0.0258 | 0.0258              |
| -295.0 | 0.0267 | 0.0267              |
| -290.0 | 0.0277 | 0.0277              |
| -285.0 | 0.0287 | 0.0286              |
| -280.0 | 0.0297 | 0.0297              |
| -275.0 | 0.0308 | 0.0308              |
| -270.0 | 0.0319 | 0.0319              |
| -265.0 | 0.0332 | 0.0332              |
| -260.0 | 0.0345 | 0.0345              |
| -255.0 | 0.0358 | 0.0358              |
| -250.0 | 0.0373 | 0.0373              |
| -245.0 | 0.0388 | 0.0388              |
| -240.0 | 0.0405 | 0.0405              |
| -235.0 | 0.0422 | 0.0422              |
| -230.0 | 0.0441 | 0.0441              |
| -225.0 | 0.0461 | 0.0461              |
| -220.0 | 0.0482 | 0.0482              |
| -215.0 | 0.0505 | 0.0505              |
| -210.0 | 0.053  | 0.053               |
| -205.0 | 0.0556 | 0.0556              |
| -200.0 | 0.0584 | 0.0584              |
| -195.0 | 0.0615 | 0.0615              |
| -190.0 | 0.0648 | 0.0648              |
| -185.0 | 0.0684 | 0.0684              |
| -180.0 | 0.0723 | 0.0723              |
| -175.0 | 0.0765 | 0.0765              |
| -170.0 | 0.0812 | 0.0811              |
| -165.0 | 0.0862 | 0.0862              |
| -160.0 | 0.0918 | 0.0918              |
| -155.0 | 0.0979 | 0.0979              |
| -150.0 | 0.1046 | 0.1046              |
| -145.0 | 0.1121 | 0.1121              |
| -140.0 | 0.1204 | 0.1203              |
| -135.0 | 0.1297 | 0.1296              |
| -130.0 | 0.1401 | 0.14                |
| -125.0 | 0.1517 | 0.1516              |
| -120.0 | 0.165  | 0.1649              |
| -115.0 | 0.18   | 0.1799              |
| -110.0 | 0.1973 | 0.1971              |
| -105.0 | 0.2172 | 0.217               |
| -100.0 | 0.2402 | 0.24                |

emf\_underground.txt

|       |         |         |
|-------|---------|---------|
| -95.0 | 0.2672  | 0.2669  |
| -90.0 | 0.2991  | 0.2987  |
| -85.0 | 0.3372  | 0.3367  |
| -80.0 | 0.3832  | 0.3825  |
| -75.0 | 0.4395  | 0.4386  |
| -70.0 | 0.5095  | 0.5083  |
| -65.0 | 0.5981  | 0.5964  |
| -60.0 | 0.7129  | 0.7105  |
| -55.0 | 0.8657  | 0.8619  |
| -50.0 | 1.0759  | 1.0698  |
| -45.0 | 1.3779  | 1.3673  |
| -40.0 | 1.8377  | 1.8173  |
| -35.0 | 2.5963  | 2.5513  |
| -30.0 | 4.0049  | 3.8823  |
| -25.0 | 7.1464  | 6.683   |
| -20.0 | 16.1603 | 13.3721 |
| -15.0 | 28.2937 | 17.8604 |
| -10.0 | 7.9679  | 2.5958  |
| -5.0  | 25.1162 | 15.2187 |
| 0.0   | 9.0132  | 2.8898  |
| 5.0   | 25.1162 | 15.2187 |
| 10.0  | 7.9679  | 2.5958  |
| 15.0  | 28.2936 | 17.8603 |
| 20.0  | 16.1603 | 13.3721 |
| 25.0  | 7.1464  | 6.683   |
| 30.0  | 4.0049  | 3.8823  |
| 35.0  | 2.5963  | 2.5513  |
| 40.0  | 1.8377  | 1.8173  |
| 45.0  | 1.3779  | 1.3673  |
| 50.0  | 1.0759  | 1.0698  |
| 55.0  | 0.8657  | 0.8619  |
| 60.0  | 0.7129  | 0.7105  |
| 65.0  | 0.5981  | 0.5964  |
| 70.0  | 0.5095  | 0.5083  |
| 75.0  | 0.4395  | 0.4386  |
| 80.0  | 0.3832  | 0.3825  |
| 85.0  | 0.3372  | 0.3367  |
| 90.0  | 0.2991  | 0.2987  |
| 95.0  | 0.2672  | 0.2669  |
| 100.0 | 0.2402  | 0.24    |
| 105.0 | 0.2172  | 0.217   |
| 110.0 | 0.1973  | 0.1971  |
| 115.0 | 0.18    | 0.1799  |
| 120.0 | 0.165   | 0.1649  |
| 125.0 | 0.1517  | 0.1516  |
| 130.0 | 0.1401  | 0.14    |
| 135.0 | 0.1297  | 0.1296  |
| 140.0 | 0.1204  | 0.1203  |

|       |        | emf_underground.txt |
|-------|--------|---------------------|
| 145.0 | 0.1121 | 0.1121              |
| 150.0 | 0.1046 | 0.1046              |
| 155.0 | 0.0979 | 0.0979              |
| 160.0 | 0.0918 | 0.0918              |
| 165.0 | 0.0862 | 0.0862              |
| 170.0 | 0.0812 | 0.0811              |
| 175.0 | 0.0765 | 0.0765              |
| 180.0 | 0.0723 | 0.0723              |
| 185.0 | 0.0684 | 0.0684              |
| 190.0 | 0.0648 | 0.0648              |
| 195.0 | 0.0615 | 0.0615              |
| 200.0 | 0.0584 | 0.0584              |
| 205.0 | 0.0556 | 0.0556              |
| 210.0 | 0.053  | 0.053               |
| 215.0 | 0.0505 | 0.0505              |
| 220.0 | 0.0482 | 0.0482              |
| 225.0 | 0.0461 | 0.0461              |
| 230.0 | 0.0441 | 0.0441              |
| 235.0 | 0.0422 | 0.0422              |
| 240.0 | 0.0405 | 0.0405              |
| 245.0 | 0.0388 | 0.0388              |
| 250.0 | 0.0373 | 0.0373              |
| 255.0 | 0.0358 | 0.0358              |
| 260.0 | 0.0345 | 0.0345              |
| 265.0 | 0.0332 | 0.0332              |
| 270.0 | 0.0319 | 0.0319              |
| 275.0 | 0.0308 | 0.0308              |
| 280.0 | 0.0297 | 0.0297              |
| 285.0 | 0.0287 | 0.0286              |
| 290.0 | 0.0277 | 0.0277              |
| 295.0 | 0.0267 | 0.0267              |
| 300.0 | 0.0258 | 0.0258              |
| 305.0 | 0.025  | 0.025               |
| 310.0 | 0.0242 | 0.0242              |
| 315.0 | 0.0234 | 0.0234              |
| 320.0 | 0.0227 | 0.0227              |
| 325.0 | 0.022  | 0.022               |
| 330.0 | 0.0213 | 0.0213              |
| 335.0 | 0.0207 | 0.0207              |
| 340.0 | 0.0201 | 0.0201              |
| 345.0 | 0.0195 | 0.0195              |
| 350.0 | 0.019  | 0.019               |
| 355.0 | 0.0184 | 0.0184              |
| 360.0 | 0.0179 | 0.0179              |
| 365.0 | 0.0174 | 0.0174              |
| 370.0 | 0.017  | 0.017               |
| 375.0 | 0.0165 | 0.0165              |
| 380.0 | 0.0161 | 0.0161              |

|       |        | emf_underground.txt |
|-------|--------|---------------------|
| 385.0 | 0.0157 | 0.0157              |
| 390.0 | 0.0153 | 0.0153              |
| 395.0 | 0.0149 | 0.0149              |
| 400.0 | 0.0145 | 0.0145              |
| 405.0 | 0.0142 | 0.0142              |
| 410.0 | 0.0138 | 0.0138              |
| 415.0 | 0.0135 | 0.0135              |
| 420.0 | 0.0132 | 0.0132              |
| 425.0 | 0.0129 | 0.0129              |
| 430.0 | 0.0126 | 0.0126              |
| 435.0 | 0.0123 | 0.0123              |
| 440.0 | 0.012  | 0.012               |
| 445.0 | 0.0117 | 0.0117              |
| 450.0 | 0.0115 | 0.0115              |
| 455.0 | 0.0112 | 0.0112              |
| 460.0 | 0.011  | 0.011               |
| 465.0 | 0.0107 | 0.0107              |
| 470.0 | 0.0105 | 0.0105              |
| 475.0 | 0.0103 | 0.0103              |
| 480.0 | 0.0101 | 0.0101              |
| 485.0 | 0.0099 | 0.0099              |
| 490.0 | 0.0097 | 0.0097              |
| 495.0 | 0.0095 | 0.0095              |
| 500.0 | 0.0093 | 0.0093              |

Peak value found at:

| X      | Y=0.0   | Y=1.0   |
|--------|---------|---------|
| (feet) | (feet)  | (feet)  |
|        | B(mG)   | B(mG)   |
| -15.0  | 28.2937 | 17.8604 |



| winter_summer_STE.txt |      |       |      |       |       |          |       |
|-----------------------|------|-------|------|-------|-------|----------|-------|
| 0.00165               |      |       |      |       |       |          |       |
| -445.0                | -3.0 | -28.0 | -6.2 | -23.2 | -39.3 | 0.000000 | 0.008 |
| 0.00168               |      |       |      |       |       |          |       |
| -440.0                | -3.0 | -28.0 | -6.1 | -23.1 | -39.1 | 0.000000 | 0.009 |
| 0.00171               |      |       |      |       |       |          |       |
| -435.0                | -3.0 | -28.0 | -6.0 | -23.0 | -38.9 | 0.000000 | 0.009 |
| 0.00175               |      |       |      |       |       |          |       |
| -430.0                | -2.9 | -27.9 | -5.9 | -22.9 | -38.7 | 0.000000 | 0.009 |
| 0.00178               |      |       |      |       |       |          |       |
| -425.0                | -2.9 | -27.9 | -5.8 | -22.8 | -38.6 | 0.000000 | 0.009 |
| 0.00182               |      |       |      |       |       |          |       |
| -420.0                | -2.8 | -27.8 | -5.7 | -22.7 | -38.4 | 0.000000 | 0.009 |
| 0.00185               |      |       |      |       |       |          |       |
| -415.0                | -2.7 | -27.7 | -5.6 | -22.6 | -38.2 | 0.000000 | 0.009 |
| 0.00189               |      |       |      |       |       |          |       |
| -410.0                | -2.7 | -27.7 | -5.5 | -22.5 | -38.0 | 0.000000 | 0.010 |
| 0.00193               |      |       |      |       |       |          |       |
| -405.0                | -2.6 | -27.6 | -5.4 | -22.4 | -37.8 | 0.000000 | 0.010 |
| 0.00197               |      |       |      |       |       |          |       |
| -400.0                | -2.6 | -27.6 | -5.3 | -22.3 | -37.6 | 0.000000 | 0.010 |
| 0.00201               |      |       |      |       |       |          |       |
| -395.0                | -2.5 | -27.5 | -5.2 | -22.2 | -37.4 | 0.000000 | 0.010 |
| 0.00206               |      |       |      |       |       |          |       |
| -390.0                | -2.5 | -27.5 | -5.1 | -22.1 | -37.2 | 0.000000 | 0.010 |
| 0.00210               |      |       |      |       |       |          |       |
| -385.0                | -2.4 | -27.4 | -5.0 | -22.0 | -37.0 | 0.000000 | 0.011 |
| 0.00215               |      |       |      |       |       |          |       |
| -380.0                | -2.4 | -27.4 | -4.9 | -21.9 | -36.8 | 0.000000 | 0.011 |
| 0.00219               |      |       |      |       |       |          |       |
| -375.0                | -2.3 | -27.3 | -4.8 | -21.8 | -36.6 | 0.000000 | 0.011 |
| 0.00224               |      |       |      |       |       |          |       |
| -370.0                | -2.3 | -27.3 | -4.7 | -21.7 | -36.4 | 0.000000 | 0.011 |
| 0.00229               |      |       |      |       |       |          |       |
| -365.0                | -2.2 | -27.2 | -4.6 | -21.6 | -36.2 | 0.000000 | 0.012 |
| 0.00234               |      |       |      |       |       |          |       |
| -360.0                | -2.1 | -27.1 | -4.4 | -21.4 | -36.0 | 0.000000 | 0.012 |
| 0.00240               |      |       |      |       |       |          |       |
| -355.0                | -2.1 | -27.1 | -4.3 | -21.3 | -35.8 | 0.000000 | 0.012 |
| 0.00245               |      |       |      |       |       |          |       |
| -350.0                | -2.0 | -27.0 | -4.2 | -21.2 | -35.6 | 0.000000 | 0.012 |
| 0.00251               |      |       |      |       |       |          |       |
| -345.0                | -2.0 | -27.0 | -4.1 | -21.1 | -35.5 | 0.000000 | 0.013 |
| 0.00257               |      |       |      |       |       |          |       |
| -340.0                | -1.9 | -26.9 | -4.0 | -21.0 | -35.4 | 0.000000 | 0.013 |
| 0.00263               |      |       |      |       |       |          |       |
| -335.0                | -1.9 | -26.9 | -3.8 | -20.8 | -35.3 | 0.000000 | 0.013 |
| 0.00270               |      |       |      |       |       |          |       |
| -330.0                | -1.8 | -26.8 | -3.7 | -20.7 | -35.2 | 0.000000 | 0.014 |
| 0.00277               |      |       |      |       |       |          |       |
| -325.0                | -1.7 | -26.7 | -3.6 | -20.6 | -35.1 | 0.000000 | 0.014 |
| 0.00284               |      |       |      |       |       |          |       |
| -320.0                | -1.7 | -26.7 | -3.4 | -20.4 | -35.0 | 0.000000 | 0.014 |
| 0.00291               |      |       |      |       |       |          |       |
| -315.0                | -1.6 | -26.6 | -3.3 | -20.3 | -34.9 | 0.000000 | 0.015 |
| 0.00298               |      |       |      |       |       |          |       |
| -310.0                | -1.5 | -26.5 | -3.2 | -20.2 | -34.7 | 0.000000 | 0.015 |
| 0.00306               |      |       |      |       |       |          |       |
| -305.0                | -1.5 | -26.5 | -3.0 | -20.0 | -34.6 | 0.000000 | 0.015 |
| 0.00314               |      |       |      |       |       |          |       |
| -300.0                | -1.4 | -26.4 | -2.9 | -19.9 | -34.5 | 0.000000 | 0.016 |
| 0.00323               |      |       |      |       |       |          |       |
| -295.0                | -1.3 | -26.3 | -2.7 | -19.7 | -34.4 | 0.000000 | 0.016 |
| 0.00331               |      |       |      |       |       |          |       |
| -290.0                | -1.3 | -26.3 | -2.6 | -19.6 | -34.2 | 0.000000 | 0.017 |
| 0.00340               |      |       |      |       |       |          |       |
| -285.0                | -1.2 | -26.2 | -2.4 | -19.4 | -34.1 | 0.000000 | 0.017 |
| 0.00350               |      |       |      |       |       |          |       |
| -280.0                | -1.1 | -26.1 | -2.3 | -19.3 | -34.0 | 0.000000 | 0.018 |
| 0.00360               |      |       |      |       |       |          |       |
| -275.0                | -1.1 | -26.1 | -2.1 | -19.1 | -33.9 | 0.000000 | 0.018 |
| 0.00370               |      |       |      |       |       |          |       |
| -270.0                | -1.0 | -26.0 | -2.0 | -19.0 | -33.7 | 0.000000 | 0.018 |
| 0.00381               |      |       |      |       |       |          |       |
| -265.0                | -0.9 | -25.9 | -1.8 | -18.8 | -33.6 | 0.000000 | 0.019 |
| 0.00392               |      |       |      |       |       |          |       |
| -260.0                | -0.8 | -25.8 | -1.7 | -18.7 | -33.4 | 0.000000 | 0.020 |
| 0.00404               |      |       |      |       |       |          |       |
| -255.0                | -0.8 | -25.8 | -1.5 | -18.5 | -33.3 | 0.000000 | 0.020 |
| 0.00416               |      |       |      |       |       |          |       |
| -250.0                | -0.7 | -25.7 | -1.3 | -18.3 | -33.2 | 0.000000 | 0.021 |
| 0.00429               |      |       |      |       |       |          |       |
| -245.0                | -0.6 | -25.6 | -1.1 | -18.1 | -33.0 | 0.000000 | 0.021 |

| winter_summer_STE.txt |      |       |      |       |       |          |       |
|-----------------------|------|-------|------|-------|-------|----------|-------|
| 0.00443               |      |       |      |       |       |          |       |
| -240.0                | -0.5 | -25.5 | -1.0 | -18.0 | -32.9 | 0.000000 | 0.022 |
| 0.00457               |      |       |      |       |       |          |       |
| -235.0                | -0.4 | -25.4 | -0.8 | -17.8 | -32.7 | 0.000000 | 0.023 |
| 0.00471               |      |       |      |       |       |          |       |
| -230.0                | -0.4 | -25.4 | -0.6 | -17.6 | -32.6 | 0.000000 | 0.023 |
| 0.00487               |      |       |      |       |       |          |       |
| -225.0                | -0.3 | -25.3 | -0.4 | -17.4 | -32.4 | 0.000000 | 0.024 |
| 0.00503               |      |       |      |       |       |          |       |
| -220.0                | -0.2 | -25.2 | -0.2 | -17.2 | -32.3 | 0.000000 | 0.025 |
| 0.00520               |      |       |      |       |       |          |       |
| -215.0                | -0.1 | -25.1 | -0.0 | -17.0 | -32.1 | 0.000000 | 0.026 |
| 0.00538               |      |       |      |       |       |          |       |
| -210.0                | -0.0 | -25.0 | 0.2  | -16.8 | -31.9 | 0.000000 | 0.026 |
| 0.00557               |      |       |      |       |       |          |       |
| -205.0                | 0.1  | -24.9 | 0.4  | -16.6 | -31.8 | 0.000000 | 0.027 |
| 0.00577               |      |       |      |       |       |          |       |
| -200.0                | 0.2  | -24.8 | 0.6  | -16.4 | -31.6 | 0.000000 | 0.028 |
| 0.00598               |      |       |      |       |       |          |       |
| -195.0                | 0.3  | -24.7 | 0.8  | -16.2 | -31.4 | 0.000000 | 0.029 |
| 0.00621               |      |       |      |       |       |          |       |
| -190.0                | 0.4  | -24.6 | 1.1  | -15.9 | -31.3 | 0.000000 | 0.030 |
| 0.00644               |      |       |      |       |       |          |       |
| -185.0                | 0.5  | -24.5 | 1.3  | -15.7 | -31.1 | 0.000000 | 0.031 |
| 0.00669               |      |       |      |       |       |          |       |
| -180.0                | 0.6  | -24.4 | 1.5  | -15.5 | -30.9 | 0.000000 | 0.032 |
| 0.00695               |      |       |      |       |       |          |       |
| -175.0                | 0.7  | -24.3 | 1.8  | -15.2 | -30.7 | 0.000000 | 0.033 |
| 0.00723               |      |       |      |       |       |          |       |
| -170.0                | 0.8  | -24.2 | 2.0  | -15.0 | -30.5 | 0.000000 | 0.035 |
| 0.00753               |      |       |      |       |       |          |       |
| -165.0                | 0.9  | -24.1 | 2.3  | -14.7 | -30.3 | 0.000000 | 0.036 |
| 0.00784               |      |       |      |       |       |          |       |
| -160.0                | 1.0  | -24.0 | 2.6  | -14.4 | -30.1 | 0.000000 | 0.037 |
| 0.00817               |      |       |      |       |       |          |       |
| -155.0                | 1.1  | -23.9 | 2.8  | -14.2 | -29.9 | 0.000000 | 0.039 |
| 0.00853               |      |       |      |       |       |          |       |
| -150.0                | 1.2  | -23.8 | 3.1  | -13.9 | -29.7 | 0.000000 | 0.040 |
| 0.00891               |      |       |      |       |       |          |       |
| -145.0                | 1.3  | -23.7 | 3.4  | -13.6 | -29.5 | 0.000000 | 0.042 |
| 0.00931               |      |       |      |       |       |          |       |
| -140.0                | 1.4  | -23.6 | 3.7  | -13.3 | -29.3 | 0.000000 | 0.043 |
| 0.00975               |      |       |      |       |       |          |       |
| -135.0                | 1.5  | -23.5 | 4.0  | -13.0 | -29.1 | 0.000000 | 0.045 |
| 0.01021               |      |       |      |       |       |          |       |
| -130.0                | 1.7  | -23.3 | 4.3  | -12.7 | -28.8 | 0.000000 | 0.047 |
| 0.01071               |      |       |      |       |       |          |       |
| -125.0                | 1.8  | -23.2 | 4.7  | -12.3 | -28.6 | 0.000000 | 0.049 |
| 0.01124               |      |       |      |       |       |          |       |
| -120.0                | 1.9  | -23.1 | 5.0  | -12.0 | -28.4 | 0.000000 | 0.051 |
| 0.01182               |      |       |      |       |       |          |       |
| -115.0                | 2.0  | -23.0 | 5.4  | -11.6 | -28.1 | 0.000000 | 0.053 |
| 0.01244               |      |       |      |       |       |          |       |
| -110.0                | 2.2  | -22.8 | 5.8  | -11.2 | -27.9 | 0.000000 | 0.056 |
| 0.01311               |      |       |      |       |       |          |       |
| -105.0                | 2.3  | -22.7 | 6.1  | -10.9 | -27.6 | 0.000000 | 0.058 |
| 0.01383               |      |       |      |       |       |          |       |
| -100.0                | 2.5  | -22.5 | 6.5  | -10.5 | -27.3 | 0.000000 | 0.060 |
| 0.01462               |      |       |      |       |       |          |       |
| -95.0                 | 2.6  | -22.4 | 7.0  | -10.0 | -27.0 | 0.000000 | 0.063 |
| 0.01547               |      |       |      |       |       |          |       |
| -90.0                 | 2.8  | -22.2 | 7.4  | -9.6  | -26.8 | 0.000000 | 0.066 |
| 0.01640               |      |       |      |       |       |          |       |
| -85.0                 | 2.9  | -22.1 | 7.8  | -9.2  | -26.5 | 0.000000 | 0.069 |
| 0.01741               |      |       |      |       |       |          |       |
| -80.0                 | 3.1  | -21.9 | 8.3  | -8.7  | -26.2 | 0.000000 | 0.072 |
| 0.01852               |      |       |      |       |       |          |       |
| -75.0                 | 3.3  | -21.7 | 8.8  | -8.2  | -25.8 | 0.000000 | 0.075 |
| 0.01974               |      |       |      |       |       |          |       |
| -70.0                 | 3.4  | -21.6 | 9.3  | -7.7  | -25.5 | 0.000000 | 0.078 |
| 0.02108               |      |       |      |       |       |          |       |
| -65.0                 | 3.6  | -21.4 | 9.9  | -7.1  | -25.2 | 0.000000 | 0.081 |
| 0.02255               |      |       |      |       |       |          |       |
| -60.0                 | 3.8  | -21.2 | 10.4 | -6.6  | -24.8 | 0.000000 | 0.084 |
| 0.02418               |      |       |      |       |       |          |       |
| -55.0                 | 4.0  | -21.0 | 11.0 | -6.0  | -24.5 | 0.000000 | 0.087 |
| 0.02599               |      |       |      |       |       |          |       |
| -50.0                 | 4.2  | -20.8 | 11.7 | -5.3  | -24.1 | 0.000000 | 0.090 |
| 0.02800               |      |       |      |       |       |          |       |
| -45.0                 | 4.4  | -20.6 | 12.3 | -4.7  | -23.7 | 0.000000 | 0.092 |
| 0.03024               |      |       |      |       |       |          |       |
| -40.0                 | 4.6  | -20.4 | 13.0 | -4.0  | -23.3 | 0.000000 | 0.094 |

|         | winter_summer_STE.txt |       |      |      |       |          |       |
|---------|-----------------------|-------|------|------|-------|----------|-------|
| 0.03276 |                       |       |      |      |       |          |       |
| -35.0   | 4.8                   | -20.2 | 13.7 | -3.3 | -22.8 | 0.000000 | 0.095 |
| 0.03558 |                       |       |      |      |       |          |       |
| -30.0   | 5.1                   | -19.9 | 14.5 | -2.5 | -22.4 | 0.000000 | 0.094 |
| 0.03877 |                       |       |      |      |       |          |       |
| -25.0   | 5.3                   | -19.7 | 15.3 | -1.7 | -21.9 | 0.000000 | 0.092 |
| 0.04237 |                       |       |      |      |       |          |       |
| -20.0   | 5.5                   | -19.5 | 16.1 | -0.9 | -21.3 | 0.000000 | 0.088 |
| 0.04647 |                       |       |      |      |       |          |       |
| -15.0   | 5.8                   | -19.2 | 17.0 | -0.0 | -20.7 | 0.000000 | 0.080 |
| 0.05115 |                       |       |      |      |       |          |       |
| -10.0   | 6.1                   | -18.9 | 17.9 | 0.9  | -20.0 | 0.000000 | 0.069 |
| 0.05652 |                       |       |      |      |       |          |       |
| -5.0    | 6.4                   | -18.6 | 18.8 | 1.8  | -19.3 | 0.000000 | 0.055 |
| 0.06268 |                       |       |      |      |       |          |       |
| 0.0     | 6.7                   | -18.3 | 19.8 | 2.8  | -18.5 | 0.000000 | 0.045 |
| 0.06979 |                       |       |      |      |       |          |       |
| 5.0     | 7.0                   | -18.0 | 20.9 | 3.9  | -17.7 | 0.000000 | 0.075 |
| 0.07801 |                       |       |      |      |       |          |       |
| 10.0    | 7.4                   | -17.6 | 21.9 | 4.9  | -16.8 | 0.000000 | 0.138 |
| 0.08753 |                       |       |      |      |       |          |       |
| 15.0    | 7.7                   | -17.3 | 23.0 | 6.0  | -15.8 | 0.000000 | 0.235 |
| 0.09852 |                       |       |      |      |       |          |       |
| 20.0    | 8.1                   | -16.9 | 24.1 | 7.1  | -14.7 | 0.000000 | 0.373 |
| 0.11113 |                       |       |      |      |       |          |       |
| 25.0    | 8.5                   | -16.5 | 25.9 | 8.9  | -13.5 | 0.000000 | 0.563 |
| 0.12532 |                       |       |      |      |       |          |       |
| 30.0    | 8.9                   | -16.1 | 28.2 | 11.2 | -12.2 | 0.000000 | 0.813 |
| 0.14067 |                       |       |      |      |       |          |       |
| 35.0    | 9.3                   | -15.7 | 30.5 | 13.5 | -10.8 | 0.000000 | 1.121 |
| 0.15592 |                       |       |      |      |       |          |       |
| 40.0    | 9.6                   | -15.4 | 32.7 | 15.7 | -9.4  | 0.000000 | 1.454 |
| 0.16836 |                       |       |      |      |       |          |       |
| 45.0    | 9.9                   | -15.1 | 34.3 | 17.3 | -8.3  | 0.000000 | 1.736 |
| 0.17373 |                       |       |      |      |       |          |       |
| 50.0    | 10.1                  | -14.9 | 34.9 | 17.9 | -7.8  | 0.000000 | 1.871 |
| 0.16783 |                       |       |      |      |       |          |       |
| 55.0    | 10.0                  | -15.0 | 34.3 | 17.3 | -8.3  | 0.004624 | 1.816 |
| 0.14984 |                       |       |      |      |       |          |       |
| 60.0    | 9.9                   | -15.1 | 32.7 | 15.7 | -9.4  | 0.008236 | 1.626 |
| 0.12383 |                       |       |      |      |       |          |       |
| 65.0    | 9.7                   | -15.3 | 30.5 | 13.5 | -10.8 | 0.008657 | 1.408 |
| 0.09653 |                       |       |      |      |       |          |       |
| 70.0    | 9.5                   | -15.5 | 28.2 | 11.2 | -12.2 | 0.008113 | 1.251 |
| 0.07546 |                       |       |      |      |       |          |       |
| 75.0    | 9.3                   | -15.7 | 25.9 | 8.9  | -13.5 | 0.007386 | 1.198 |
| 0.06766 |                       |       |      |      |       |          |       |
| 80.0    | 9.2                   | -15.8 | 24.1 | 7.1  | -14.7 | 0.006696 | 1.262 |
| 0.07546 |                       |       |      |      |       |          |       |
| 85.0    | 9.1                   | -15.9 | 26.3 | 9.3  | -15.0 | 0.006091 | 1.431 |
| 0.09653 |                       |       |      |      |       |          |       |
| 90.0    | 9.1                   | -15.9 | 28.5 | 11.5 | -13.6 | 0.005574 | 1.660 |
| 0.12383 |                       |       |      |      |       |          |       |
| 95.0    | 9.0                   | -16.0 | 30.1 | 13.1 | -12.5 | 0.005133 | 1.860 |
| 0.14984 |                       |       |      |      |       |          |       |
| 100.0   | 8.9                   | -16.1 | 30.7 | 13.7 | -12.1 | 0.004754 | 1.919 |
| 0.16783 |                       |       |      |      |       |          |       |
| 105.0   | 8.7                   | -16.3 | 30.1 | 13.1 | -12.5 | 0.007229 | 1.781 |
| 0.17373 |                       |       |      |      |       |          |       |
| 110.0   | 8.4                   | -16.6 | 28.5 | 11.5 | -13.6 | 0.009144 | 1.493 |
| 0.16836 |                       |       |      |      |       |          |       |
| 115.0   | 8.0                   | -17.0 | 26.3 | 9.3  | -15.0 | 0.009152 | 1.152 |
| 0.15592 |                       |       |      |      |       |          |       |
| 120.0   | 7.7                   | -17.3 | 24.0 | 7.0  | -16.4 | 0.008602 | 0.837 |
| 0.14067 |                       |       |      |      |       |          |       |
| 125.0   | 7.3                   | -17.7 | 21.7 | 4.7  | -17.7 | 0.007965 | 0.579 |
| 0.12532 |                       |       |      |      |       |          |       |
| 130.0   | 7.0                   | -18.0 | 19.9 | 2.9  | -19.0 | 0.007370 | 0.385 |
| 0.11113 |                       |       |      |      |       |          |       |
| 135.0   | 6.7                   | -18.3 | 18.8 | 1.8  | -20.0 | 0.006845 | 0.243 |
| 0.09852 |                       |       |      |      |       |          |       |
| 140.0   | 6.4                   | -18.6 | 17.8 | 0.8  | -21.0 | 0.006388 | 0.144 |
| 0.08753 |                       |       |      |      |       |          |       |
| 145.0   | 6.1                   | -18.9 | 16.7 | -0.3 | -21.9 | 0.005990 | 0.078 |
| 0.07801 |                       |       |      |      |       |          |       |
| 150.0   | 5.8                   | -19.2 | 15.7 | -1.3 | -22.8 | 0.005641 | 0.045 |
| 0.06979 |                       |       |      |      |       |          |       |
| 155.0   | 5.5                   | -19.5 | 14.7 | -2.3 | -23.5 | 0.005334 | 0.054 |
| 0.06268 |                       |       |      |      |       |          |       |
| 160.0   | 5.2                   | -19.8 | 13.7 | -3.3 | -24.2 | 0.005061 | 0.069 |
| 0.05652 |                       |       |      |      |       |          |       |
| 165.0   | 5.0                   | -20.0 | 12.8 | -4.2 | -24.9 | 0.004818 | 0.080 |

| winter_summer_STE.txt |      |       |      |       |       |          |       |
|-----------------------|------|-------|------|-------|-------|----------|-------|
| 0.05115               |      |       |      |       |       |          |       |
| 170.0                 | 4.8  | -20.2 | 11.9 | -5.1  | -25.5 | 0.004598 | 0.088 |
| 0.04647               |      |       |      |       |       |          |       |
| 175.0                 | 4.5  | -20.5 | 11.1 | -5.9  | -25.8 | 0.004400 | 0.093 |
| 0.04237               |      |       |      |       |       |          |       |
| 180.0                 | 4.3  | -20.7 | 10.3 | -6.7  | -26.2 | 0.004220 | 0.095 |
| 0.03877               |      |       |      |       |       |          |       |
| 185.0                 | 4.1  | -20.9 | 9.5  | -7.5  | -26.5 | 0.004055 | 0.095 |
| 0.03558               |      |       |      |       |       |          |       |
| 190.0                 | 3.9  | -21.1 | 8.8  | -8.2  | -26.8 | 0.003904 | 0.094 |
| 0.03276               |      |       |      |       |       |          |       |
| 195.0                 | 3.7  | -21.3 | 8.1  | -8.9  | -27.0 | 0.003765 | 0.093 |
| 0.03024               |      |       |      |       |       |          |       |
| 200.0                 | 3.5  | -21.5 | 7.5  | -9.5  | -27.3 | 0.003636 | 0.090 |
| 0.02800               |      |       |      |       |       |          |       |
| 205.0                 | 3.4  | -21.6 | 6.8  | -10.2 | -27.6 | 0.003517 | 0.087 |
| 0.02599               |      |       |      |       |       |          |       |
| 210.0                 | 3.2  | -21.8 | 6.3  | -10.7 | -27.9 | 0.003406 | 0.085 |
| 0.02418               |      |       |      |       |       |          |       |
| 215.0                 | 3.0  | -22.0 | 5.7  | -11.3 | -28.1 | 0.003302 | 0.081 |
| 0.02255               |      |       |      |       |       |          |       |
| 220.0                 | 2.9  | -22.1 | 5.1  | -11.9 | -28.4 | 0.003205 | 0.078 |
| 0.02108               |      |       |      |       |       |          |       |
| 225.0                 | 2.7  | -22.3 | 4.7  | -12.3 | -28.6 | 0.003114 | 0.075 |
| 0.01974               |      |       |      |       |       |          |       |
| 230.0                 | 2.6  | -22.4 | 4.3  | -12.7 | -28.8 | 0.003029 | 0.072 |
| 0.01852               |      |       |      |       |       |          |       |
| 235.0                 | 2.4  | -22.6 | 4.0  | -13.0 | -29.1 | 0.002949 | 0.069 |
| 0.01741               |      |       |      |       |       |          |       |
| 240.0                 | 2.3  | -22.7 | 3.7  | -13.3 | -29.3 | 0.002873 | 0.066 |
| 0.01640               |      |       |      |       |       |          |       |
| 245.0                 | 2.1  | -22.9 | 3.4  | -13.6 | -29.5 | 0.002801 | 0.064 |
| 0.01547               |      |       |      |       |       |          |       |
| 250.0                 | 2.0  | -23.0 | 3.1  | -13.9 | -29.7 | 0.002733 | 0.061 |
| 0.01462               |      |       |      |       |       |          |       |
| 255.0                 | 1.9  | -23.1 | 2.8  | -14.2 | -29.9 | 0.002669 | 0.058 |
| 0.01383               |      |       |      |       |       |          |       |
| 260.0                 | 1.7  | -23.3 | 2.6  | -14.4 | -30.1 | 0.002607 | 0.056 |
| 0.01311               |      |       |      |       |       |          |       |
| 265.0                 | 1.6  | -23.4 | 2.3  | -14.7 | -30.3 | 0.002549 | 0.054 |
| 0.01244               |      |       |      |       |       |          |       |
| 270.0                 | 1.5  | -23.5 | 2.0  | -15.0 | -30.5 | 0.002494 | 0.051 |
| 0.01182               |      |       |      |       |       |          |       |
| 275.0                 | 1.4  | -23.6 | 1.8  | -15.2 | -30.7 | 0.002441 | 0.049 |
| 0.01124               |      |       |      |       |       |          |       |
| 280.0                 | 1.3  | -23.7 | 1.5  | -15.5 | -30.9 | 0.002390 | 0.047 |
| 0.01071               |      |       |      |       |       |          |       |
| 285.0                 | 1.1  | -23.9 | 1.3  | -15.7 | -31.1 | 0.002342 | 0.046 |
| 0.01021               |      |       |      |       |       |          |       |
| 290.0                 | 1.0  | -24.0 | 1.1  | -15.9 | -31.3 | 0.002296 | 0.044 |
| 0.00975               |      |       |      |       |       |          |       |
| 295.0                 | 0.9  | -24.1 | 0.8  | -16.2 | -31.4 | 0.002252 | 0.042 |
| 0.00931               |      |       |      |       |       |          |       |
| 300.0                 | 0.8  | -24.2 | 0.6  | -16.4 | -31.6 | 0.002209 | 0.041 |
| 0.00891               |      |       |      |       |       |          |       |
| 305.0                 | 0.7  | -24.3 | 0.4  | -16.6 | -31.8 | 0.002169 | 0.039 |
| 0.00853               |      |       |      |       |       |          |       |
| 310.0                 | 0.6  | -24.4 | 0.2  | -16.8 | -31.9 | 0.002130 | 0.038 |
| 0.00817               |      |       |      |       |       |          |       |
| 315.0                 | 0.5  | -24.5 | -0.0 | -17.0 | -32.1 | 0.002092 | 0.036 |
| 0.00784               |      |       |      |       |       |          |       |
| 320.0                 | 0.4  | -24.6 | -0.2 | -17.2 | -32.3 | 0.002056 | 0.035 |
| 0.00753               |      |       |      |       |       |          |       |
| 325.0                 | 0.3  | -24.7 | -0.4 | -17.4 | -32.4 | 0.002021 | 0.034 |
| 0.00723               |      |       |      |       |       |          |       |
| 330.0                 | 0.2  | -24.8 | -0.6 | -17.6 | -32.6 | 0.001987 | 0.032 |
| 0.00695               |      |       |      |       |       |          |       |
| 335.0                 | 0.1  | -24.9 | -0.8 | -17.8 | -32.7 | 0.001955 | 0.031 |
| 0.00669               |      |       |      |       |       |          |       |
| 340.0                 | 0.0  | -25.0 | -1.0 | -18.0 | -32.9 | 0.001924 | 0.030 |
| 0.00644               |      |       |      |       |       |          |       |
| 345.0                 | -0.1 | -25.1 | -1.1 | -18.1 | -33.0 | 0.001893 | 0.029 |
| 0.00621               |      |       |      |       |       |          |       |
| 350.0                 | -0.1 | -25.1 | -1.3 | -18.3 | -33.2 | 0.001864 | 0.028 |
| 0.00598               |      |       |      |       |       |          |       |
| 355.0                 | -0.2 | -25.2 | -1.5 | -18.5 | -33.3 | 0.001836 | 0.027 |
| 0.00577               |      |       |      |       |       |          |       |
| 360.0                 | -0.3 | -25.3 | -1.7 | -18.7 | -33.4 | 0.001809 | 0.027 |
| 0.00557               |      |       |      |       |       |          |       |
| 365.0                 | -0.4 | -25.4 | -1.8 | -18.8 | -33.6 | 0.001782 | 0.026 |
| 0.00538               |      |       |      |       |       |          |       |
| 370.0                 | -0.5 | -25.5 | -2.0 | -19.0 | -33.7 | 0.001756 | 0.025 |

| winter_summer_STE.txt |      |       |      |       |       |          |       |
|-----------------------|------|-------|------|-------|-------|----------|-------|
| 0.00520               |      |       |      |       |       |          |       |
| 375.0                 | -0.6 | -25.6 | -2.1 | -19.1 | -33.9 | 0.001732 | 0.024 |
| 0.00503               |      |       |      |       |       |          |       |
| 380.0                 | -0.6 | -25.6 | -2.3 | -19.3 | -34.0 | 0.001708 | 0.023 |
| 0.00487               |      |       |      |       |       |          |       |
| 385.0                 | -0.7 | -25.7 | -2.4 | -19.4 | -34.1 | 0.001684 | 0.023 |
| 0.00471               |      |       |      |       |       |          |       |
| 390.0                 | -0.8 | -25.8 | -2.6 | -19.6 | -34.2 | 0.001661 | 0.022 |
| 0.00457               |      |       |      |       |       |          |       |
| 395.0                 | -0.9 | -25.9 | -2.7 | -19.7 | -34.4 | 0.001639 | 0.021 |
| 0.00443               |      |       |      |       |       |          |       |
| 400.0                 | -0.9 | -25.9 | -2.9 | -19.9 | -34.5 | 0.001618 | 0.021 |
| 0.00429               |      |       |      |       |       |          |       |
| 405.0                 | -1.0 | -26.0 | -3.0 | -20.0 | -34.6 | 0.001597 | 0.020 |
| 0.00416               |      |       |      |       |       |          |       |
| 410.0                 | -1.1 | -26.1 | -3.2 | -20.2 | -34.7 | 0.001577 | 0.020 |
| 0.00404               |      |       |      |       |       |          |       |
| 415.0                 | -1.2 | -26.2 | -3.3 | -20.3 | -34.9 | 0.001557 | 0.019 |
| 0.00392               |      |       |      |       |       |          |       |
| 420.0                 | -1.2 | -26.2 | -3.4 | -20.4 | -35.0 | 0.001538 | 0.019 |
| 0.00381               |      |       |      |       |       |          |       |
| 425.0                 | -1.3 | -26.3 | -3.6 | -20.6 | -35.1 | 0.001519 | 0.018 |
| 0.00370               |      |       |      |       |       |          |       |
| 430.0                 | -1.4 | -26.4 | -3.7 | -20.7 | -35.2 | 0.001501 | 0.018 |
| 0.00360               |      |       |      |       |       |          |       |
| 435.0                 | -1.4 | -26.4 | -3.8 | -20.8 | -35.3 | 0.001484 | 0.017 |
| 0.00350               |      |       |      |       |       |          |       |
| 440.0                 | -1.5 | -26.5 | -4.0 | -21.0 | -35.4 | 0.001466 | 0.017 |
| 0.00340               |      |       |      |       |       |          |       |
| 445.0                 | -1.6 | -26.6 | -4.1 | -21.1 | -35.5 | 0.001449 | 0.016 |
| 0.00331               |      |       |      |       |       |          |       |
| 450.0                 | -1.6 | -26.6 | -4.2 | -21.2 | -35.6 | 0.001433 | 0.016 |
| 0.00323               |      |       |      |       |       |          |       |
| 455.0                 | -1.7 | -26.7 | -4.3 | -21.3 | -35.8 | 0.001417 | 0.015 |
| 0.00314               |      |       |      |       |       |          |       |
| 460.0                 | -1.8 | -26.8 | -4.4 | -21.4 | -36.0 | 0.001401 | 0.015 |
| 0.00306               |      |       |      |       |       |          |       |
| 465.0                 | -1.8 | -26.8 | -4.6 | -21.6 | -36.2 | 0.001386 | 0.015 |
| 0.00298               |      |       |      |       |       |          |       |
| 470.0                 | -1.9 | -26.9 | -4.7 | -21.7 | -36.4 | 0.001371 | 0.014 |
| 0.00291               |      |       |      |       |       |          |       |
| 475.0                 | -1.9 | -26.9 | -4.8 | -21.8 | -36.6 | 0.001357 | 0.014 |
| 0.00284               |      |       |      |       |       |          |       |
| 480.0                 | -2.0 | -27.0 | -4.9 | -21.9 | -36.8 | 0.001342 | 0.014 |
| 0.00277               |      |       |      |       |       |          |       |
| 485.0                 | -2.1 | -27.1 | -5.0 | -22.0 | -37.0 | 0.001328 | 0.013 |
| 0.00270               |      |       |      |       |       |          |       |
| 490.0                 | -2.1 | -27.1 | -5.1 | -22.1 | -37.2 | 0.001315 | 0.013 |
| 0.00263               |      |       |      |       |       |          |       |
| 495.0                 | -2.2 | -27.2 | -5.2 | -22.2 | -37.4 | 0.001301 | 0.013 |
| 0.00257               |      |       |      |       |       |          |       |
| 500.0                 | -2.2 | -27.2 | -5.3 | -22.3 | -37.6 | 0.001288 | 0.012 |
| 0.00251               |      |       |      |       |       |          |       |
| 1                     |      |       |      |       |       |          |       |