

**APPENDIX G:**

**PMF INITIALIZATION FILE FOR  
GREAT SMOKY MOUNTAINS NATIONAL PARK**

## **Appendix G: PMF Initialization File for Great Smoky Mountains National Park**

The following is an example of the initialization files used to set the fitting parameters in PMF. The initialization files for the other sites are similar except for the Fpeak parameter, the size of the data set, and where needed to redirect input and output.

```

##PMF2 .ini file for: Great Smoky Mountains National Park
## Monitor code M: if M>1, PMF2 writes output every Mth step
## For finding errors, use M<1 to output debug information
##      M      PMF2 version number
##      10      4.2
## Dimensions: Rows, Columns, Factors. Number of "Repeats"
##           979      22      9      3
## "FPEAK" (>0.0 for large values and zeroes on F side)
##      0.5
## Mode(T:robust, F:non-robust)  Outlier-distance      (T=True F=False)
##           T      6.000
## Codes C1 C2 C3 for X_std-dev, Errormodel EM=[-10 ... -14]
##      0.0000      0.0000      0.0000      -12
## G Background fit:  Components  Pullup_strength
##           0      0.0000
## Pseudorandom numbers:  Seed      Initially skipped
##           1      0
## Iteration control table for 3 levels of limit repulsion "lims"
## "lims"  Chi2_test  Ministeps_required  Max_cumul_count
## 10.00000  0.50000      5      200
## 0.30000  0.50000      5      350
## 0.00300  0.30000      5      500
## Table of FORMATS, with reference numbers from 50 to 59
## Number  Format_text(max 40 chars)
## 50 "(A)"
## 51 "((1X,5G13.5E2))"
## 52 "((1X,10F8.3))"
## 53 "((1X,20(I3,:' ')))"
## 54 "((150(G12.5E1,:' ')))"
## 55 "((200ES10.3E3))"
## 56 "(1X,A)"
## 57 "((1X,150(G13.5E2,:' ')))"
## 58 "((1X,350(F4.3,:' ')))"
## 59 "((1X,600(I2,:' ')))"
## Table of file properties, with reference numbers from 30 to 39
## Num- In Opening Max-rec File-name(max 40 chars)
## ber  T/F status length
## 30 T "OLD" " 2000 "pmf_GRSM_data.txt"
## 31 T "OLD" " 2000 "pmf_GRSM_un.txt"
## 32 T "OLD" " 2000 "PMF32.DAT"
## 33 T "OLD" " 2000 "PMF33.DAT"
## 34 F "UNKNOWN" 2000 "PMF34.DAT"
## 35 F "UNKNOWN" 2000 "MISC.TXT"
## 36 F "REPLACE" 2000 "G_FACTOR_GRSM.TXT"
## 37 F "REPLACE" 2000 "F_FACTOR_GRSM.TXT"
## 38 F "REPLACE" 2000 "TEMP.TXT"
## 39 F "UNKNOWN" 2000 "$.DAT"
## Input/output definitions for 21 matrices
## ===HEADING===== =====MATRIX===== default HEADING
## --IN---- --OUT- -----IN----- ---OUT-- for each matrix
## FIL(R)FMT FIL FMT FIL(R)(C)FMT(T) FIL FMT(T) -----max 40 chars-----...
## 30 F 50 38 56 30 F 55 F 38 57 F "X (data matr)"
## 31 F 50 38 56 31 F 55 F 38 57 F "X_std-dev /T (constant)"
## 0 F 50 0 56 0 F 0 F 0 57 F "X_std-dev /U (sqrt)"
## 0 F 50 0 56 0 F 0 F 0 57 F "X_std-dev /V (proport)"
## 0 F 50 0 56 0 T F 0 F 0 57 F "Factor G(orig.)"
## 0 F 50 0 56 0 T F 0 F 0 57 F "Factor F(orig.)"

```

```

0 F 50 0 56 0 F 0 F 0 53 F "Key (factor G)      "
0 F 50 0 56 0 F 0 F 0 59 F "Key (factor F)      "
0 F 50 0 56 0 F 0 F 0 52 F "Rotation commands   "
0 F 50 0 56 36 57 F "Computed Factor G Q="
0 F 50 0 56 37 57 F "Computed Factor F    "
0 F 50 35 56 35 57 F "Computed std-dev of G"
0 F 50 35 56 35 57 F "Computed std-dev of F"
0 F 50 0 56 0 57 F "G_explained_variation"
0 F 50 35 56 35 58 F "F_explained_variation"
0 F 50 0 56 0 57 F "Residual matrix X-GF"
0 F 50 35 56 35 57 F "Scaled resid. (X-GF)/S"
0 F 50 0 56 0 57 F "Robustized residual"
0 F 50 35 56 35 55 F "Rotation estimates. Q="
0 F 50 0 56 0 55 F "Computed X_std-dev  "
0 F 50 0 56 0 55 F "Background coefficients"
## If Repeats>1, for input matrices, select (R)=T or (C)=T or none
## (R)=T: read(generate) again (C)=T,"chain": use computed G or F
## none, i.e.(R)=F,(C)=F: use same value as in first task
## (T)=T: Matrix should be read/written in Transposed shape
##
## Normalization of factor vectors before output. Select one of:
## None MaxG=1 Sum|G|=1 Mean|G|=1 MaxF=1 Sum|F|=1 Mean|F|=1
## F F F T F F F
## Special/read layout for X (and for X_std-dev on following line)
## Values-to-read (0: no special) #-of-X11 incr-to-X12 incr-to-X21
## 0 0 0 0
## 0 0 0 0
## A priori linear constraints for factors, file name: (not yet available)
## "none "
## Optional parameter lines (insert more lines if needed)
## (FIL#4 = this file) (FIL#24 = .log file)
## After next 2 lines, you may include matrices to be read with FIL=4
## but observe maximum line length = 120 characters in this file
## and maximum line length = 255 characters in the .log file

```