



Title	Untersuchung über Maximum und Minimum der Lichtstärke von erster Zerstreuung
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Untersuchung über Maximum und Minimum der Lichtstärke von erster Zerstreuung

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Zusammenfassung

Der Verfasser hat die in einem beliebigen Punkt in den Himmel bestrahlenden Lichtstärke von erster Zerstreuung gerechnet, und damit die Untersuchung über ihr Max. und Min. ausgeführt.

1. Erklärung. Es sei nun O und O' ein beliebiger Punkt in den Himmel und Mittelpunkt der Erde. Es sei sogar nun KM (KS) die Sonnenhöhe, IA (KP) das zu Sonne relative Azimut der aus O gesehenen Richtung, woraus die erste Zerstreuung S an O kommt, IZ (J) deren um 90 vergrößerte Höhe (d. h. Höhe+90), KH (KI) die Levelhöhe von O .

Dann wird S durch Funktion von Veränderlichen KM , IA , IZ , KH , und Wellenlänge ausgedrückt.

Der Verfasser denkt sich die Erdatmosphäre aus einer großen Anzahl 800 einander umschließender kugelförmiger Schichten mit 50 m Dicke zusammengesetzt, indem man für die obere Grenze der Atmosphäre 40 Km Höhe annimmt.

Er hat demnach die numerische Auswertung von S bei allerlei Kombination für KM , IA , IZ , KH , L , unter den nachfolgenden Werten, der Reiche nach $0^\circ, 30^\circ, 60^\circ, 90^\circ$, den mit 30 teilbaren Werten zwischen 0° und 180° , identisch mit den vorigen, den mit 5 Km teilbaren Werten zwischen 0° und 40 Km, 3572, 4364, 4910, 5445, 6088, 6763, 7456, 8567, 9850, 11396, 14960, 25356, in \AA Einheit.

Es ist jedenfalls zu ersehen, daß der Wert von S bei Durchgang von irgendeinzigem Veränderliche, dagegen alle andere ungeändert bleiben, sich verändert, dazwischen irgendwo Extremalwerte erreichen. Der Wert von Veränderliche, wo Max. beziehungsweise Minimaler Wert von S erreicht, ist natürlich in Abhängigkeit von den Werten der eben gesagten übrigen Veränderlichen. Ihr Verfahren läßt sich in Tafel synoptisch ausdrücken, indem man irgend zwei Veränderlichen aus den übrigen vier als Koordinaten-system währt. Die derartig gestalteten für Max. beziehungsweise Min. entsprechenden Tafeln betragen 5. ${}_4C_2=30$, hierbei 5 die Zahlen der Veränderlichen sind, woraus nur einzig sich wählen läßt, ${}_4C_2$ die Arten der Verfahren, zwei aus vier Veränderlichen zu wählen, ist.

Durch das großartige und ausführliche Fortran Programm kann man die oben

erwähnte Tafeln 60 folgendermassen veranschaulichen. Es wäre nur durch die Rechenmaschine möglich.

2 Fortran Programm. Es sei nun K_s, K_P, K_I, J, L der Reihe nach die Elemente von KM, IA, KH, IZ und L . Dann läßt sich S durch $S(K_S, K_P, K_I, J, L)$ ausdrücken.

Wie oben erklärt, verändert sich S bei Durchgang z. B. von K_S , mit all anderen (d. h. K_P, K_I, J, L) festgesetzt. Der Wert von Veränderliche, wo Extremalewert erreicht, ist natürlich ein Funktion von allen anderen Veränderlichen K_P, K_I, J, L .

Daher kann man diesen Wert mit $MXJ(K_S, K_P, K_I, L)$ beziehungsweise $MNJ(K_S, K_P, K_I, L)$, je nach dem zugehörigen Extremalewert entweder maximal oder minimal, ausdrücken. In ähnlicher Weise kann man leicht die Bedeutung von $MXKI(K_S, K_P, J, L)$, $MXKP(K_S, K_I, J, L)$, $MXKS(K_P, K_I, J, L)$ und $MXL(K_S, K_P, K_I, J)$ verstehen.

Im Falle des Minimalwertes, kann man die entsprechenden Ausdrücke, indem man X durch N ersetzt. In den Tafeln bedeutet Sonnenhöhe (oder SON), AZI, LEV, ALT, WVL , der Reihe nach, $KM(K_S)$, $IA(K_P)$, $KH(K_I)$, $IZ(J)$, L .

Der für beide Extremalewert gemeinsam gültige Zusammenhang zwischen den Tafeln und den jetzt erklärten Ausdrücken steht folgendermassen.

Nummer von Tafel

1	..... 6	MXL
7	..... 12	MXJ
13	..... 18	$MXKI$
19	..... 24	$MXKP$
25	..... 30	$MXKS$

(Unvollendet, Fortsetzung folgt)

```

      VOLLSTANDIGES PROGRAMM VON MAX UND MIN
REAL      S(4,7,9,7,12)      ,Z(7)
      INTEGER KM(4),KH(9),IZ(7),IA(7),MAX,MIN
1         ,MXL(4,7,9,7),MXJ(4,7,9,12),MXKI(4,7,
2 7,12),MXKP(4,9,7,12),MXKS(7,9,7,12)
3         ,MNL(4,7,9,7),MNJ(4,7,9,12),MNKI(4,7,7,12),MNKP(4,9,7,
4 12),MNKS(7,9,7,12)
      DO 1 KS=1,4
      KM(KS)=30*(KS-1)
      DO 1 KP=1,7
      IA(KP)=30*(KP-1)
      DO 1 KI=1,9
      KH(KI)=5*(KI-1)
      DO 1 J=1,7
      IZ(J)=30*(J-1)
      Z(J)=IZ(J)
1      CONTINUE
      DO 1600 M=1,4
      DO 1600 KPP=1,7
      DO 1600 KI=1,9
      DO 1600 J=1,7
      IF(M.EQ.4.AND.KPP.GT.1) GO TO 1600
      IF(KI.EQ.1.AND.J.LE.3) GO TO 1600
      IF(KI.EQ.9.AND.J.GE.4) GO TO 1600
      IF(KPP.GT.1.AND.J.EQ.1) GO TO 1600
      IF(KPP.GT.1.AND.J.EQ.7) GO TO 1600
      READ(S,1603) (S(M,KPP,KI,J,L),L=1,12)
1603  FORMAT(12F5,2)
1600  CONTINUE
      DO 1601 M=1,3
      DO 1601 KPP=2,7
      DO 1601 KI=1,9
      DO 1601 J=1,7,6
      DO 1601 L=1,12
      S(M,KPP,KI,J,L)=S(M,1,KI,J,L)
1601  CONTINUE
      M=4
      DO 1602 KPP=2,7
      DO 1602 KI=1,9
      DO 1602 J=1,7
      DO 1602 L=1,12
      S(M,KPP,KI,J,L)=S(M,1,KI,J,L)
1602  CONTINUE
      DO 3 KS=1,4
      DO 3 KP=1,7
      DO 3 KI=1,9
      DO 3 J=1,7
      K=KI
      IF(K.EQ.1.AND.J.LE.3) GO TO 3
      IF(K.EQ.9.AND.J.GE.4) GO TO 3
      MAX=-100

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      DO 4 L=1,12
      IF(MAX-S(KS,KP,KI,J,L)) 5,4,4
      MAX=S(KS,KP,KI,J,L)
      LX=L
4     CONTINUE
      MXL(KS,KP,KI,J) =LX
      MIN=100
      DO 6 L=1,12
      IF(MIN-S(KS,KP,KI,J,L)) 6,6,7
7     MIN=S(KS,KP,KI,J,L)
      LN=L
6     CONTINUE
      MNL(KS,KP,KI,J) =LN
3     CONTINUE
      DO 8 KS=1,4
      DO 8 KP=1,7
      DO 8 KI=1,9
      DO 8 L=1,12
      MAX=-100
K=KI
      DO 9 J=1,7
      IF(K.EQ.1.AND,J.LE.3) GO TO 9
      IF(K.EQ.9.AND,J.GE.4) GO TO 9
10    IF(MAX-S(KS,KP,KI,J,L)) 10,9,9
      MAX=S(KS,KP,KI,J,L)
      JX=J
9     CONTINUE
      MXJ(KS,KP,KI,L)=JX
      MIN=100
      DO 11 J=1,7
      IF(K.EQ.1.AND,J.LE.3) GO TO 11
      IF(K.EQ.9.AND,J.GE.4) GO TO 11
40    IF(MIN-S(KS,KP,KI,J,L)) 11,11,40
      MIN=S(KS,KP,KI,J,L)
      JN=J
11    CONTINUE
      MNJ(KS,KP,KI,L)=JN
8     CONTINUE
      DO 12 KS=1,4
      DO 12 KP=1,7
      DO 12 J=1,7
      DO 12 L=1,12
      MAX=-100
      DO 13 KI=1,9
K=KI
      IF(K.EQ.1.AND,J.LE.3) GO TO 13
      IF(K.EQ.9.AND,J.GE.4) GO TO 13
14    IF(MAX-S(KS,KP,KI,J,L)) 14,13,13
      MAX=S(KS,KP,KI,J,L)
      KIX=KI
13    CONTINUE
      MXKI(KS,KP,J,L)=KIX
      MIN=100
      DO 15 KI=1,9
K=KI
      IF(K.EQ.1.AND,J.LE.3) GO TO 15
      IF(K.EQ.9.AND,J.GE.4) GO TO 15
16    IF(MIN-S(KS,KP,KI,J,L)) 15,15,16
      MIN=S(KS,KP,KI,J,L)
      KIN=KI
15    CONTINUE
      MNKI(KS,KP,J,L)=KIN
12    CONTINUE
      DO 17 KS=1,4
      DO 17 KI=1,9
K=KI

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```

        DO 17 J=1,7
        DO 17 L=1,12
        IF(K.EQ.1.AND,J.LE.3) GO TO 17
        IF(K.EQ.9.AND,J.GE.4) GO TO 17
        MAX=-100
        DO 18 KP=1,7
        IF(MAX-S(KS,KP,KI,J,L)) 19,18,18
19      MAX=S(KS,KP,KI,J,L)
        KPX=KP
18      CONTINUE
        MXKP(KS,KI,J,L)=KPX
        MIN=100
        DO 20 KP=1,7
        IF(MIN-S(KS,KP,KI,J,L)) 20,20,21
21      MIN=S(KS,KP,KI,J,L)
        KPN=KP
20      CONTINUE
        MNKP(KS,KI,J,L)=KPN
17      CONTINUE
        DO 22 KP=1,7
        DO 22 KI=1,9
K=KI
        DO 22 J=1,7
        DO 22 L=1,12
        IF(K.EQ.1.AND,J.LE.3) GO TO 22
        MAX=-100
        IF(K.EQ.9.AND,J.GE.4) GO TO 22
        DO 23 KS=1,4
        IF(MAX-S(KS,KP,KI,J,L)) 24,23,23
24      MAX=S(KS,KP,KI,J,L)
        KSX=KS
23      CONTINUE
        MXKS(KP,KI,J,L)=KSX
        MIN=100
        DO 25 KS=1,4
        IF(MIN-S(KS,KP,KI,J,L)) 25,25,26
26      MIN=S(KS,KP,KI,J,L)
        KSN=KS
25      CONTINUE
        MNKS(KP,KI,J,L)=KSN
22      CONTINUE
        WRITE(6,599)
        KKK=1
        WRITE(6,601) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,28) ((IZ(J),J=1,7),KS=1,4)
        DO 29 KP=1,7
WRITE(6,600)
        DO 29 KI=1,9
        IF(KI.EQ.1) GO TO 30
        IF(KI.EQ.5) GO TO 31
        IF(KI.EQ.9) GO TO 32
        WRITE(6,33) KH(KI),((MXL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 29
30      WRITE(6,34) KH(KI),((MXL(KS,KP,KI,J),J=4,7),KS=1,4)
        GO TO 29
31      WRITE(6,35) IA(KP),KH(KI),((MXL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 29
32      WRITE(6,36) KH(KI),((MXL(KS,KP,KI,J),J=1,3),KS=1,4)
29      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,37) ((IA(KP),KP=1,7),KS=1,4)
        DO 38 KI=1,9

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K=KI
  WRITE(6,600)
    DO 38 J=1,7
  IF(K.NE.9.AND.J.EQ.4) GO TO 39
  IF(K.EQ.1.AND.J.LE.3) GO TO 38
  IF(K.EQ.9.AND.J.GE.4) GO TO 38
  IF(K.EQ.9.AND.J.EQ.2) GO TO 39
  WRITE(6,33) IZ(J),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
  GO TO 38
39  WRITE(6,35) KH(KI), IZ(J),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
38  CONTINUE
    WRITE(6,599)
  KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,42) ((IA(KP),KP=1,7),KS=1,4)
    DO 43 J=1,7
    WRITE(6,600)
    DO 43 KI=1,9
    IF(KI.EQ.5) GO TO 45
K=KI
  IF(K.EQ.1.AND.J.LE.3) GO TO 43
  IF(K.EQ.9.AND.J.GE.4) GO TO 43
  WRITE(6,33) KH(KI),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
  GO TO 43
45  WRITE(6,35) IZ(J),KH(KI),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
43  CONTINUE
    WRITE(6,599)
  KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,49) (IZ(J),J=1,7)
    WRITE(6,50) ((KM(KS),KS=1,4),J=1,7)
    DO 51 KI=1,9
    WRITE(6,600)
    DO 51 KP=1,7
    IF(KI.EQ.1) GO TO 53
    IF(KI.EQ.9) GO TO 54
    IF(KP.EQ.4) GO TO 55
    WRITE(6,52) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
    GO TO 51
53  IF(KP.EQ.4) GO TO 56
    WRITE(6,57) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)
    GO TO 51
56  WRITE(6,58) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)
    GO TO 51
54  IF(KP.EQ.4) GO TO 59
    WRITE(6,44) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,3)
    GO TO 51
59  WRITE(6,61) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,3)
    GO TO 51
55  WRITE(6,62) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
51  CONTINUE
    WRITE(6,599)
  KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,49) (IZ(J),J=1,7)
    WRITE(6,47) ((KM(KS),KS=1,4),J=1,7)
    DO 63 KP=1,7
    WRITE(6,600)
    DO 63 KI=1,9
    IF(KI.EQ.1) GO TO 64
    IF(KI.EQ.5) GO TO 65
    IF(KI.EQ.9) GO TO 66
    WRITE(6,52) KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
    GO TO 63
64  WRITE(6,57) KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)

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        GO TO 63
65     WRITE(6,62) IA(KP) ,KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
        GO TO 63
66     WRITE(6,60)          KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,3)
63     CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,490)(IA(KP),KP=1,7)
        WRITE(6,67) ((KM(KS),KS=1,4),KP=1,7)
        DO 68          KI=1,9
        K=KI
        WRITE(6,600)
        DO 68          J=1,7
        IF(K,EQ,1) GO TO 69
        IF(K,EQ,9) GO TO 71
        GO TO 73
69     IF(J,LE,3) GO TO 68
        IF(J,EQ,5) GO TO 70
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
70     WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
73     IF(J,EQ,4) GO TO 740
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
740    WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
71     IF(J,GE,4) GO TO 68
        IF(J,EQ,2) GO TO 72
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
72     WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
68     CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,75) ((KH(KI),KI=1,9),KS=1,4)
        DO 76          KP=1,7
        WRITE(6,600)
        DO 76          L=1,12
        IF(L,EQ,6) GO TO 77
        WRITE(6,78) L,((MXJ(KS,KP,KI,L),KI=1,9),KS=1,4)
        GO TO 76
77     WRITE(6,79) IA(KP),L,((MXJ(KS,KP,KI,L),KI=1,9),KS=1,4)
76     CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,80) ((IA(KP),KP=1,7),KS=1,4)
        DO 81          KI=1,9
        WRITE(6,600)
        DO 81          L=1,12
        IF(L,EQ,6) GO TO 82
        WRITE(6,83) L,((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
        GO TO 81
82     WRITE(6,84) KH(KI),L,((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
81     CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,41) ((IA(KP),KP=1,7),KS=1,4)
        DO 85          L=1,12

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WRITE(6,600)
  DO 85 KI=1,9
    IF(KI.EQ.5) GO TO 86
    WRITE(6,83) KH(KI), ((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
    GO TO 85
86  WRITE(6,84) L,KH(KI),((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
85  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,490) (IA(KP),KP=1,7)
    WRITE(6,850) ((KM(KS),KS=1,4),KP=1,7)
    DO 87 L=1,12
WRITE(6,600)
  DO 87 KI=1,9
    IF(KI.EQ.5) GO TO 88
    WRITE(6,52) KH(KI),((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
    GO TO 87
88  WRITE(6,62) L ,KH(KI),((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
87  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,490) (IA(KP),KP=1,7)
    WRITE(6,851) ((KM(KS),KS=1,4),KP=1,7)
    DO 89 KI=1,9
WRITE(6,600)
  DO 89 L=1,12
    IF(L.EQ.6) GO TO 90
    WRITE(6,52) L ,((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
    GO TO 89
90  WRITE(6,62) KH(KI),L,((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
89  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,46) (KH(KI),KI=1,9)
    WRITE(6,91) ((KM(KS),KS=1,4),KI=1,9)
    DO 92 L=1,12
WRITE(6,600)
  DO 92 KP=1,7
    IF(KP.EQ.4) GO TO 93
    WRITE(6,94) IA(KP),((MXJ(KS,KP,KI,L),KS=1,4),KI=1,9)
    GO TO 92
93  WRITE(6,95) L,IA(KP),((MXJ(KS,KP,KI,L),KS=1,4),KI=1,9)
92  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,97) ((IZ(J),J=1,7),KS=1,4)
    DO 98 KP=1,7
WRITE(6,600)
  DO 98 L=1,12
    IF(L.EQ.6) GO TO 99
    WRITE(6,33) L,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
    GO TO 98
99  WRITE(6,35) IA(KP), L,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
98  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,102) ((IZ(J),J=1,7),KS=1,4)
    DO 103 L=1,12
WRITE(6,600)

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      DO 103      KP=1,7
      IF(KP.EQ.4) GO TO 104
      WRITE(6,33 ) IA(KP)      ,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
      GO TO 103
104  WRITE(6,35 ) L,IA(KP)      ,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
103  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6, 27) (KM(KS),KS=1,4)
      WRITE(6,107) ((IA(KP),KP=1,7),KS=1,4)
      DO 108      J=1,7
WRITE(6,600)
      DO 108      L=1,12
      IF(L.EQ.6) GO TO 109
      WRITE(6,33 )      L,((MXKI(KS,KP,J,L),KP=1,7),KS=1,4)
      GO TO 108
109  WRITE(6,35 ) IZ(J),      L,((MXKI(KS,KP,J,L),KP=1,7),KS=1,4)
108  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,490)(IA(KP),KP=1,7)
      WRITE(6,111) ((KM(KS),KS=1,4),KP=1,7)
      DO 112      L=1,12
WRITE(6,600)
      DO 112      J=1,7
      IF(J.EQ.4) GO TO 113
      WRITE(6,52)      IZ(J),((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 112
113  WRITE(6,62) L,      IZ(J),((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
112  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,490)(IA(KP),KP=1,7)
      WRITE(6,114) ((KM(KS),KS=1,4),KP=1,7)
      DO 115      J=1,7
WRITE(6,600)
      DO 115      L=1,12
      IF(L.EQ.6) GO TO 116
      WRITE(6,52)      L      ,((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 115
116  WRITE(6,62) IZ(J),L ,      ((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
115  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,49) (IZ(J),J=1,7)
      WRITE(6,117) ((KM(KS),KS=1,4),KP=1,7)
      DO 118      L=1,12
      WRITE(6,600)
      DO 118      KP=1,7
      IF(KP.EQ.4) GO TO 119
      WRITE(6,52)      IA(KP) ,((MXKI(KS,KP,J,L),KS=1,4),J =1,7)
      GO TO 118
119  WRITE(6,62) L,      IA(KP),((MXKI(KS,KP,J,L),KS=1,4),J =1,7)
118  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,120) ((IZ(J),J=1,7),KS=1,4)
      DO 121      L=1,12
      WRITE(6,600)
      DO 121      KI=L,0

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IF(KI, EQ, 1)      GO TO 122
IF(KI, EQ, 5)      GO TO 123
IF(KI, EQ, 9)      GO TO 124
WRITE(6, 33)       KH(KI), ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
GO TO 121
122 WRITE(6, 34)       KH(KI), ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
GO TO 121
123 WRITE(6, 35)       L, KH(KI), ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
GO TO 121
124 WRITE(6, 36)       KH(KI), ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
121 CONTINUE
WRITE(6, 599)
KKK=KKK+1
WRITE(6, 601)       KKK
WRITE(6, 27) (KM(KS), KS=1, 4)
WRITE(6, 125) ((IZ(J), J=1, 7), KS=1, 4)
DO 126 KI=1, 9
WRITE(6, 600)
DO 126 L=1, 12
IF(KI, EQ, 1)      GO TO 127
IF(KI, EQ, 9) GO TO 129
IF(L, EQ, 6) GO TO 128
WRITE(6, 33)       L, ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
GO TO 126
127 IF(L, EQ, 6) GO TO 140
WRITE(6, 34)       L, ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
GO TO 126
140 WRITE(6, 74) KH(KI), L, ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
GO TO 126
129 IF(L, EQ, 6) GO TO 141
WRITE(6, 36)       L, ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
GO TO 126
141 WRITE(6, 142) KH(KI), L, ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
GO TO 126
128 WRITE(6, 35) KH(KI), L, ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
126 CONTINUE
WRITE(6, 599)
KKK=KKK+1
WRITE(6, 27) (KM(KS), KS=1, 4)
WRITE(6, 601)       KKK
WRITE(6, 130) ((KH(KI), KI=1, 9), KS=1, 4)
DO 131 J=1, 7
WRITE(6, 600)
DO 131 L=1, 12
IF(J, LE, 3) GO TO 132
IF(J, GE, 4) GO TO 133
132 IF(L, EQ, 6) GO TO 134
WRITE(6, 135)       L, ((MXKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
GO TO 131
134 WRITE(6, 136) IZ(J), L, ((MXKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
GO TO 131
133 IF(L, EQ, 6) GO TO 137
WRITE(6, 138)       L, ((MXKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
GO TO 131
137 WRITE(6, 139) IZ(J), L, ((MXKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
GO TO 131
131 CONTINUE
WRITE(6, 599)
KKK=KKK+1
WRITE(6, 601)       KKK
WRITE(6, 144) (IZ(J), J=1, 7)
WRITE(6, 145) ((KM(KS), KS=1, 4), J=1, 7)
DO 146 KI=1, 9
WRITE(6, 600)
DO 146 L=1, 12
IF(KI, EQ, 1)      GO TO 147

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        IF(KI.EQ.9) GO TO 148
        IF(L.EQ.6) GO TO 149
        WRITE(6,150)      L,((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 146
149      WRITE(6,151) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 146
147      IF(L.EQ.6) GO TO 152
        WRITE(6,157)      L,((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 146
152      WRITE(6,154) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 146
148      IF(L.EQ.6) GO TO 155
        WRITE(6,156)      L,((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
        GO TO 146
155      WRITE(6,157) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
146      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,144) (IZ(J), J=1,7)
        WRITE(6,153) ((KM(KS),KS=1,4),J=1,7)
        DO 158 L=1,12
        WRITE(6,600)
        DO 158 KI=1,9
        IF(KI.EQ.1) GO TO 159
        IF(KI.EQ.5) GO TO 160
        IF(KI.EQ.9) GO TO 161
        WRITE(6,162) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 158
160      WRITE(6,163) L, KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 158
159      WRITE(6,164) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 158
161      WRITE(6,165) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
158      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,166) (KH(KI),KI=1,9)
        WRITE(6,167) ((KM(KS),KS=1,4),KI=1,9)
        DO 168 L=1,12
        WRITE(6,600)
        DO 168 J=1,7
        IF(J.LE.3) GO TO 169
        IF(J.EQ.4) GO TO 170
        IF(J.GT.4) GO TO 171
169      WRITE(6,172) IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=2,9)
        GO TO 168
170      WRITE(6,173) L, IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=1,8)
        GO TO 168
171      WRITE(6,174) IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=1,8)
168      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,175) (IA(KP),KP=1,7)
        WRITE(6,176) ((KI,KI=1,9),KP=1,7)
        DO 177 L=1,12
        WRITE(6,600)
        DO 177 J=1,7
        IF(J.LE.3) GO TO 178
        IF(J.EQ.4) GO TO 179
        IF(J.GT.4) GO TO 180
178      WRITE(6,182) IZ(J),((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
        GO TO 177
179      WRITE(6,183) L, IZ(J),((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)

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      GO TO 177
180  WRITE(6,189 )      IZ(J) ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
177  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,175 )      (IA(KP),KP=1,7)
      WRITE(6,184 )      ((KI,KI=1,9),KP=1,7)
      DO 185             J=1,7
        WRITE(6,600)
        DO 185 L=1,12
          IF(J.LE.3) GO TO 186
          IF(J.GE.4) GO TO 187
          WRITE(6,181)    L,((MXKS(KP,KI,J,L),KI=1,9),KP=1,7)
        GO TO 185
188  WRITE(6,190 )      IZ(J),L ,((MXKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 185
186  IF(L.EQ.6) GO TO 193
      WRITE(6,191 )      L ,((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 185
193  WRITE(6,192 )      IZ(J), L ,((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 185
187  IF(L.EQ.6) GO TO 194
      WRITE(6,189 )      L ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 185
194  WRITE(6,195 )      IZ(J), L ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
185  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,196 )      (IA(KP),KP=1,7)
      WRITE(6,197 )      ((J,J=1,7),KP=1,7)
      DO 198             KI=1,9
        WRITE(6,600)
        DO 198 L=1,12
          IF(KI.EQ.1) GO TO 199
          IF(KI.EQ.9) GO TO 200
          IF(L.EQ.6) GO TO 201
          WRITE(6,202)    L ,((MXKS(KP,KI,J,L), J=1,7),KP=1,7)
        GO TO 198
201  WRITE(6,203)      KH(KI), L ,((MXKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 198
199  IF(L.EQ.6) GO TO 204
      WRITE(6,205)      L ,((MXKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 198
204  WRITE(6,206)      KH(KI),L ,((MXKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 198
200  IF(L.EQ.6) GO TO 207
      WRITE(6,208)      L ,((MXKS(KP,KI,J,L), J=1,3),KP=1,7)
      GO TO 198
207  WRITE(6,209)      KH(KI), L ,((MXKS(KP,KI,J,L), J=1,3),KP=1,7)
198  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,210 )      (KH(KI),KI=1,9)
      WRITE(6,211 )      ((KP,KP=1,7),KI=1,9)
      DO 212             L=1,12
        WRITE(6,600)
        DO 212             J=1,7
          IF(J.LE.3) GO TO 213
          IF(J.EQ.4) GO TO 214
          IF(J.GT.4) GO TO 215
213  WRITE(6,216)      IZ(J),((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
          GO TO 212
214  WRITE(6,217)      IZ(J),((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)

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        GO TO 212
215 WRITE(6,218) IZ(J) ,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
212 CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601) KKK
        WRITE(6,210) (KH(KI),KI=1,9)
        WRITE(6,603) ((KP,KP=1,7),KI=1,9)
        DO 219 J=1,7
        WRITE(6,600)
        DO 219 L=1,12
        IF(J.LE,3) GO TO 220
        IF(J.GE,4) GO TO 221
220 WRITE(6,223) L,((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
        GO TO 219
222 WRITE(6,224) IZ(J), L,((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
        GO TO 219
221 IF(L.EQ,6) GO TO 225
        WRITE(6,218) L,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
        GO TO 219
225 WRITE(6,217) IZ(J), L,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
219 CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601) KKK
        WRITE(6,226) (IZ(J),J=1,7)
        WRITE(6,227) ((KP,KP=1,7),J=1,7)
        DO 228 L=1,12
        WRITE(6,600)
        DO 228 KI=1,9
        IF(KI.EQ,1) GO TO 229
        IF(KI.EQ,5) GO TO 230
        IF(KI.EQ,9) GO TO 231
        WRITE(6,232) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,7)
        GO TO 228
229 WRITE(6,233) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=4,7)
        GO TO 228
230 WRITE(6,234) L, KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,7)
        GO TO 228
231 WRITE(6,235) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,3)
228 CONTINUE
        KKK=1
        WRITE(6,602) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,28) ((IZ(J),J=1,7),KS=1,4)
        DO 2900 KP=1,7
        WRITE(6,600)
        DO 2900 KI=1,9
        IF(KI.EQ,1) GO TO 3000
        IF(KI.EQ,5) GO TO 3100
        IF(KI.EQ,9) GO TO 3200
        WRITE(6,33) KH(KI),((MNL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 2900
3000 WRITE(6,34) KH(KI),((MNL(KS,KP,KI,J),J=4,7),KS=1,4)
        GO TO 2900
3100 WRITE(6,35) IA(KP),KH(KI),((MNL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 2900
3200 WRITE(6,36) KH(KI),((MNL(KS,KP,KI,J),J=1,3),KS=1,4)
2900 CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,37) ((IA(KP),KP=1,7),KS=1,4)
        DO 3800 KI=1,9

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K=KI
WRITE(6,600)
DO 3800 J=1,7
IF(K.NE.9.AND,J.EQ.4) GO TO 3900
IF(K.EQ.1.AND,J.LE.3) GO TO 3800
IF(K.EQ.9.AND,J.GE.4) GO TO 3800
IF(K.EQ.9.AND,J.EQ.2) GO TO 3900
WRITE(6,33) IZ(J),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
GO TO 3800
3900 WRITE(6,35) KH(KI), IZ(J),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
3800 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,602) KKK
WRITE(6,27) (KM(KS),KS=1,4)
WRITE(6,42) ((IA(KP),KP=1,7),KS=1,4)
DO 4300 J=1,7
WRITE(6,600)
DO 4300 KI=1,9
IF(KI.EQ.5) GO TO 4500
K=KI
IF(K.EQ.1.AND,J.LE.3) GO TO 4300
IF(K.EQ.9.AND,J.GE.4) GO TO 4300
WRITE(6,33) KH(KI),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
GO TO 4300
4500 WRITE(6,35) IZ(J),KH(KI),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
4300 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,602) KKK
WRITE(6,49) (IZ(J),J=1,7)
WRITE(6,50) ((KM(KS),KS=1,4),J=1,7)
DO 5100 KI=1,9
WRITE(6,600)
DO 5100 KP=1,7
IF(KI.EQ.1) GO TO 5300
IF(KI.EQ.9) GO TO 5400
IF(KP.EQ.4) GO TO 5500
WRITE(6,52) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
GO TO 5100
5300 IF(KP.EQ.4) GO TO 5600
WRITE(6,57) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)
GO TO 5100
5600 WRITE(6,58) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)
GO TO 5100
5400 IF(KP.EQ.4) GO TO 5900
WRITE(6,44) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,3)
GO TO 5100
5900 WRITE(6,61) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,3)
GO TO 5100
5500 WRITE(6,62) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
5100 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,602) KKK
WRITE(6,49) (IZ(J),J=1,7)
WRITE(6,47) ((KM(KS),KS=1,4),J=1,7)
DO 6300 KP=1,7
WRITE(6,600)
DO 6300 KI=1,9
IF(KI.EQ.1) GO TO 6400
IF(KI.EQ.5) GO TO 6500
IF(KI.EQ.9) GO TO 6600
WRITE(6,52) KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
GO TO 6300
6400 WRITE(6,57) KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)

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        GO TO 6300
6500  WRITE(6,62) IA(KP) ,KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
        GO TO 6300
6600  WRITE(6,60)          KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,3 )
6300  CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602)  KKK
        WRITE(6,490) (IA(KP),KP=1,7)
        WRITE(6,67) ((KM(KS),KS=1,4),KP=1,7)
          DO 6800  KI=1,9
            K=KI
            WRITE(6,600)
              DO 6800  J=1,7
                IF(K,EQ.1) GO TO 6900
                IF(K,EQ.9) GO TO 7100
                GO TO 7300
6900  IF(J.LE.3) GO TO 6800
                IF(J,EQ.5) GO TO 7000
                WRITE(6,52)  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7000  WRITE(6,62) KH(KI),  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7300  IF(J.EQ.4) GO TO 7400
                WRITE(6,52)  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7400  WRITE(6,62) KH(KI),  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7100  IF(J.GE.4) GO TO 6800
                IF(J,EQ.2) GO TO 7200
                WRITE(6,52)  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7200  WRITE(6,62) KH(KI),  IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
6800  CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602)  KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,75) ((KH(KI),KI=1,9),KS=1,4)
          DO 7600  KP=1,7
            WRITE(6,600)
              DO 7600  L=1,12
                IF(L,EQ.6) GO TO 7700
                WRITE(6,78) L,((MNJ(KS,KP,KI,L),KI=1,9),KS=1,4)
                GO TO 7600
7700  WRITE(6,79) IA(KP),L,((MNJ(KS,KP,KI,L),KI=1,9),KS=1,4)
7600  CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602)  KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,80) ((IA(KP),KP=1,7),KS=1,4)
          DO 8100  KI=1,9
            WRITE(6,600)
              DO 8100  L=1,12
                IF(L,EQ.6) GO TO 8200
                WRITE(6,83) L,((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
                GO TO 8100
8200  WRITE(6,84) KH(KI),L,((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
8100  CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602)  KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,41) ((IA(KP),KP=1,7),KS=1,4)
          DO 8500  L=1,12

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WRITE(6,600)
  DO 8500 KI=1,9
  IF(KI.EQ.5) GO TO 8600
  WRITE(6,83) KH(KI), ((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
  GO TO 8500
8600 WRITE(6,84) L,KH(KI),((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
8500 CONTINUE
  WRITE(6,599)
  KKK=KKK+1
  WRITE(6,602) KKK
  WRITE(6,490) (IA(KP),KP=1,7)
  WRITE(6,850) ((KM(KS),KS=1,4),KP=1,7)
  DO 8700 L=1,12
WRITE(6,600)
  DO 8700 KI=1,9
  IF(KI.EQ.5) GO TO 8800
  WRITE(6,52) KH(KI),((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
  GO TO 8700
8800 WRITE(6,62) L ,KH(KI),((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
8700 CONTINUE
  WRITE(6,599)
  KKK=KKK+1
  WRITE(6,602) KKK
  WRITE(6,490) (IA(KP),KP=1,7)
  WRITE(6,851) ((KM(KS),KS=1,4),KP=1,7)
  DO 8900 KI=1,9
WRITE(6,600)
  DO 8900 L=1,12
  IF(L.EQ.6) GO TO 9000
  WRITE(6,52) L ,((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
  GO TO 8900
9000 WRITE(6,62) KH(KI),L,((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
8900 CONTINUE
  WRITE(6,599)
  KKK=KKK+1
  WRITE(6,602) KKK
  WRITE(6,46) (KH(KI),KI=1,9)
  WRITE(6,91) ((KM(KS),KS=1,4),KI=1,9)
  DO 9200 L=1,12
WRITE(6,600)
  DO 9200 KP=1,7
  IF(KP.EQ.4) GO TO 9300
  WRITE(6,94) IA(KP),((MNJ(KS,KP,KI,L),KS=1,4),KI=1,9)
  GO TO 9200
9300 WRITE(6,95) L,IA(KP),((MNJ(KS,KP,KI,L),KS=1,4),KI=1,9)
9200 CONTINUE
  WRITE(6,599)
  KKK=KKK+1
  WRITE(6,602) KKK
  WRITE(6,27) (KM(KS),KS=1,4)
  WRITE(6,97) ((IZ(J),J=1,7),KS=1,4)
  DO 9800 KP=1,7
WRITE(6,600)
  DO 9800 L=1,12
  IF(L.EQ.6) GO TO 9900
  WRITE(6,33) L,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
  GO TO 9800
9900 WRITE(6,35) IA(KP), L,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
9800 CONTINUE
  WRITE(6,599)
  KKK=KKK+1
  WRITE(6,602) KKK
  WRITE(6,27) (KM(KS),KS=1,4)
  WRITE(6,102) ((IZ(J),J=1,7),KS=1,4)
  DO 10300 L=1,12
WRITE(6,600)

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      DO 10300 KP=1,7
      IF(KP.EQ.4) GO TO 10400
      WRITE(6,33) IA(KP) ,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
      GO TO 10300
10400  WRITE(6,35) L,IA(KP) ,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
10300  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,107) ((IA(KP),KP=1,7),KS=1,4)
      DO 10800 J=1,7
      WRITE(6,600)
      DO 10800 L=1,12
      IF(L.EQ.6) GO TO 10900
      WRITE(6,33) L,((MNKI(KS,KP,J,L),KP=1,7),KS=1,4)
      GO TO 10800
10900  WRITE(6,35) IZ(J), L,((MNKI(KS,KP,J,L),KP=1,7),KS=1,4)
10800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,490) (IA(KP),KP=1,7)
      WRITE(6,111) ((KM(KS),KS=1,4),KP=1,7)
      DO 11200 L=1,12
      WRITE(6,600)
      DO 11200 J=1,7
      IF(J.EQ.4) GO TO 11300
      WRITE(6,52) IZ(J),((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 11200
11300  WRITE(6,62) L, IZ(J),((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
11200  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,490) (IA(KP),KP=1,7)
      WRITE(6,114) ((KM(KS),KS=1,4),KP=1,7)
      DO 11500 J=1,7
      WRITE(6,600)
      DO 11500 L=1,12
      IF(L.EQ.6) GO TO 11600
      WRITE(6,52) L , ((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 11500
11600  WRITE(6,62) IZ(J),L , ((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
11500  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,49) (IZ(J),J=1,7)
      WRITE(6,117) ((KM(KS),KS=1,4),KP=1,7)
      DO 11800 L=1,12
      WRITE(6,600)
      DO 11800 KP=1,7
      IF(KP.EQ.4) GO TO 11900
      WRITE(6,52) IA(KP) ,((MNKI(KS,KP,J,L),KS=1,4),J =1,7)
      GO TO 11800
11900  WRITE(6,62) L, IA(KP),((MNKI(KS,KP,J,L),KS=1,4),J =1,7)
11800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,120) ((IZ(J),J=1,7),KS=1,4)
      DO 12100 L=1,12
      WRITE(6,600)
      DO 12100 KI=1,9

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      IF(KI, EQ, 1)      GO TO 12200
      IF(KI, EQ, 5)      GO TO 12300
      IF(KI, EQ, 9)      GO TO 12400
      WRITE(6, 33)      KH(KI), ((MNKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 12100
12200  WRITE(6, 34)      KH(KI), ((MNKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 12100
12300  WRITE(6, 35)      L, KH(KI), ((MNKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 12100
12400  WRITE(6, 36)      KH(KI), ((MNKP(KS, KI, J, L), J=1, 3), KS=1, 4)
12100  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 602)      KKK
      WRITE(6, 27)      (KM(KS), KS=1, 4)
      WRITE(6, 125)     ((IZ(J), J=1, 7), KS=1, 4)
      DO 12600          KI=1, 9
      WRITE(6, 600)
      DO 12600          L=1, 12
      IF(KI, EQ, 1)      GO TO 12700
      IF(KI, EQ, 9)      GO TO 12900
      IF(L, EQ, 6)      GO TO 12800
      WRITE(6, 33)      L, ((MNKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 12600
12700  IF(L, EQ, 6)      GO TO 14000
      WRITE(6, 34)      L, ((MNKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 12600
14000  WRITE(6, 74)      KH(KI), L, ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 12600
12900  IF(L, EQ, 6)      GO TO 14100
      WRITE(6, 36)      L, ((MNKP(KS, KI, J, L), J=1, 3), KS=1, 4)
      GO TO 12600
14100  WRITE(6, 142)     KH(KI), L, ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
      GO TO 12600
12800  WRITE(6, 35)      KH(KI), L, ((MNKP(KS, KI, J, L), J=1, 7), KS=1, 4)
12600  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 602)      KKK
      WRITE(6, 27)      (KM(KS), KS=1, 4)
      WRITE(6, 600)
      WRITE(6, 130)     (KH(KI), KI=1, 9), KS=1, 4)
      DO 13100          J=1, 7
      WRITE(6, 600)
      DO 13100          L=1, 12
      IF(J, LE, 3)      GO TO 13200
      IF(J, GE, 4)      GO TO 13300
      IF(L, EQ, 6)      GO TO 13400
      WRITE(6, 135)     L, ((MNKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
      GO TO 13100
13400  WRITE(6, 136)     IZ(J), L, ((MNKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
      GO TO 13100
13300  IF(L, EQ, 6)      GO TO 13700
      WRITE(6, 138)     L, ((MNKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
      GO TO 13100
13700  WRITE(6, 139)     IZ(J), L, ((MNKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
13100  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 602)      KKK
      WRITE(6, 144)     (IZ(J), J=1, 7)
      WRITE(6, 145)     ((KM(KS), KS=1, 4), J=1, 7)
      DO 14600          KI=1, 9
      WRITE(6, 600)
      DO 14600          L=1, 12
      IF(KI, EQ, 1)      GO TO 14700

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        IF(KI.EQ.9) GO TO 14800
        IF(L.EQ.6) GO TO 14900
        WRITE(6,150)      L,((MKNP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 14600
14900    WRITE(6,151)    KH(KI), L,((MKNP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 14600
14700    IF(L.EQ.6) GO TO 15200
        WRITE(6,152)      L,((MKNP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 14600
15200    WRITE(6,154)    KH(KI), L,((MKNP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 14600
14800    IF(L.EQ.6) GO TO 15500
        WRITE(6,156)      L,((MKNP(KS,KI,J,L),KS=1,4),J=1,3)
        GO TO 14600
15500    WRITE(6,157)    KH(KI), L,((MKNP(KS,KI,J,L),KS=1,4),J=1,3)
14600    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602)    KKK
        WRITE(6,144)    (IZ(J), J=1,7)
        WRITE(6,153)    ((KM(KS),KS=1,4),J=1,7)
        DO 15800 L=1,12
        WRITE(6,600)
            DO 15800 KI=1,9
                IF(KI.EQ.1) GO TO 15900
                IF(KI.EQ.5) GO TO 16000
                IF(KI.EQ.9) GO TO 16100
                WRITE(6,162)    KH(KI), ((MKNP(KS,KI,J,L),KS=1,4),J=1,7)
                GO TO 15800
16000    WRITE(6,163)    L, KH(KI), ((MKNP(KS,KI,J,L),KS=1,4),J=1,7)
                GO TO 15800
15900    WRITE(6,164)    KH(KI), ((MKNP(KS,KI,J,L),KS=1,4),J=4,7)
                GO TO 15800
16100    WRITE(6,165)    KH(KI), ((MKNP(KS,KI,J,L),KS=1,4),J=1,3)
15800    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602)    KKK
        WRITE(6,166)    (KH(KI),KI=1,9)
        WRITE(6,167)    ((KM(KS),KS=1,4),KI=1,9)
        DO 16800 L=1,12
        WRITE(6,600)
            DO 16800 J=1,7
                IF(J.LE.3) GO TO 16900
                IF(J.EQ.4) GO TO 17000
                IF(J.GT.4) GO TO 17100
16900    WRITE(6,172)    IZ(J),((MKNP(KS,KI,J,L),KS=1,4),KI=2,9)
                GO TO 16800
17000    WRITE(6,173)    L, IZ(J),((MKNP(KS,KI,J,L),KS=1,4),KI=1,8)
                GO TO 16800
17100    WRITE(6,174)    IZ(J),((MKNP(KS,KI,J,L),KS=1,4),KI=1,8)
16800    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602)    KKK
        WRITE(6,175)    (IA(KP),KP=1,7)
        WRITE(6,176)    ((KI,KI=1,9),KP=1,7)
        DO 17700 L=1,12
        WRITE(6,600)
            DO 17700 J=1,7
                IF(J.LE.3) GO TO 17800
                IF(J.EQ.4) GO TO 17900
                IF(J.GT.4) GO TO 18000
17800    WRITE(6,181)    IZ(J),((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
                WRITE(6,182)    IZ(J),((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
                GO TO 17700

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17900 WRITE(6,183 ) L, IZ(J),((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 17700
18000 WRITE(6,189 ) IZ(J) ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
17700 CONTINUE
      WRITE(6,599)
      KKK=1 +KKK
      WRITE(6,602) KKK
      WRITE(6,175 ) (IA(KP),KP=1,..
      WRITE(6,184 ) ((KI,KI=1,9),KP=1,7)
      DO 18500 J=1,7
      WRITE(6,600)
      DO 18500 L=1,12
      IF(J.LE.3) GO TO 18600
      IF(J.GE.4) GO TO 18700
      WRITE(6,181) L,((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 18500
18800 WRITE(6,190 ) IZ(J),L ,((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 18500
18600 IF(L.EQ.6) GO TO 19300
      WRITE(6,191 ) L ,((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 18500
19300 WRITE(6,192 ) IZ(J), L ,((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 18500
18700 IF(L.EQ.6) GO TO 19400
      WRITE(6,189 ) L ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 18500
19400 WRITE(6,195 ) IZ(J), L ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
18500 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,196 ) (IA(KP),KP=1,7)
      WRITE(6,197) ((J,J=1,7),KP=1,7)
      DO 19800 KI=1,9
      WRITE(6,600)
      DO 19800 L=1,12
      IF(KI.EQ.1) GO TO 19900
      IF(KI.EQ.9) GO TO 20001
      IF(L.EQ.6) GO TO 20100
      WRITE(6,202) L ,((MNKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 19800
20100 WRITE(6,203) KH(KI), L ,((MNKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 19800
19900 IF(L.EQ.6) GO TO 20400
      WRITE(6,205) L ,((MNKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 19800
20400 WRITE(6,206) KH(KI),L ,((MNKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 19800
20001 IF(L.EQ.6) GO TO 20700
      WRITE(6,208) L ,((MNKS(KP,KI,J,L), J=1,3),KP=1,7)
      GO TO 19800
20700 WRITE(6,209) KH(KI), L, ((MNKS(KP,KI,J,L), J=1,3),KP=1,7)
19800 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,210 ) (KH(KI),KI=1,9)
      WRITE(6,211 ) ((KP,KP=1,7),KI=1,9)
      DO 21200 L=1,12
      WRITE(6,600)
      DO 21200 J=1,7
      IF(J.LE.3) GO TO 21300
      IF(J.EQ.4) GO TO 21400
      IF(J.GT.4) GO TO 21500
21300 WRITE(6,216) IZ(J),((MNKS(KP,KI,J,L),KP=1,7),KI=2,9)

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21400 WRITE(6,217) L, IZ(J), ((MNKS(KP,KI,J,L),KP=1,7),KI=1,8)
      GO TO 21200
21500 WRITE(6,218) IZ(J) , ((MNKS(KP,KI,J,L),KP=1,7),KI=1,8)
21200 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,210) (KH(KI),KI=1,9)
      WRITE(6,603) ((KP,KP=1,7),KI=1,9)
      DO 21900 J=1,7
        WRITE(6,600)
        DO 21900 L=1,12
          IF(J.LE.3) GO TO 22000
          IF(J.GE.4) GO TO 22100
22000 IF(L.EQ.6) GO TO 22200
          WRITE(6,223) L, ((MNKS(KP,KI,J,L),KP=1,7),KI=2,9)
          GO TO 21900
22200 WRITE(6,224) IZ(J), L, ((MNKS(KP,KI,J,L),KP=1,7),KI=2,9)
          GO TO 21900
22100 IF(L.EQ.6) GO TO 22500
          WRITE(6,218) L, ((MNKS(KP,KI,J,L),KP=1,7),KI=1,8)
          GO TO 21900
22500 WRITE(6,217) IZ(J), L, ((MNKS(KP,KI,J,L),KP=1,7),KI=1,8)
21900 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,226) (IZ(J),J=1,7)
      WRITE(6,227) ((KP,KP=1,7),J=1,7)
      DO 22800 L=1,12
        WRITE(6,600)
        DO 22800 KI=1,9
          IF(KI.EQ.1) GO TO 22900
          IF(KI.EQ.5) GO TO 23000
          IF(KI.EQ.9) GO TO 23100
          WRITE(6,232) KH(KI), ((MNKS(KP,KI,J,L),KP=1,7),J=1,7)
          GO TO 22800
22900 WRITE(6,233) KH(KI), ((MNKS(KP,KI,J,L),KP=1,7),J=4,7)
          GO TO 22800
23000 WRITE(6,234) L, KH(KI), ((MNKS(KP,KI,J,L),KP=1,7),J=1,7)
          GO TO 22800
23100 WRITE(6,235) KH(KI), ((MNKS(KP,KI,J,L),KP=1,7),J=1,3)
22800 CONTINUE
27 FORMAT(1H0,10HSONNENHOHE,17X,I2,3(27X,I2),/)
28 FORMAT(1H0,4H AZI,4H LEV,4H ALT,4(1X,7I4))
33 FORMAT(1H ,4X,I4,4X,4(1X,7I4))
34 FORMAT(1H ,4X,I4,4X,4(1X,12X,4I4))
35 FORMAT(1H ,I4,I4,4X,4(1X,7I4))
36 FORMAT(1H ,4X,I4,4X,4(1X,3I4,16X))
37 FORMAT(1H0,4H LEV,4H ALT,4H AZI,4(1X,7I4))
41 FORMAT(1H0,4H WVL,4H LEV,4H AZI,4(1X,7I4))
42 FORMAT(1H0,4H ALT,4H LEV,4H AZI,4(1X,7I4))
44 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
45 FORMAT(1H0,4H LEV,8X,9(1X,5X,I2,5X),/)
47 FORMAT(1H0,4H AZI,4H LEV,4H SON,7(1X,4I4))
49 FORMAT(1H0,4H ALT,8X,7(1X,6X,I4,6X),/)
50 FORMAT(1H0,4H LEV,4H AZI,4H SON,7(1X,4I4))
52 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
57 FORMAT(1H ,4X,I4,4X,51X,4(1X,4I4))
58 FORMAT(1H ,I4,I4,4X,51X,4(1X,4I4))
60 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
61 FORMAT(1H ,I4,I4,4X,3(1X,4I4))
62 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
67 FORMAT(1H0,4H LEV,4H ALT,4H SON,7(1X,4I4))
74 FORMAT(1H ,I4,I4,4X,4(1X,12X,4I4))
75 FORMAT(1H0,4H AZI,4H WVL,4H LEV,4(2X,9I3))

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78  FORMAT(1H ,4X,I4,4X,4(2X,9I3))
79  FORMAT(1H ,I4,I4,4X,4(2X,9I3))
80  FORMAT(1H0,4H LEV,4H WV,4H AZI,4(1X,7I4))
83  FORMAT(1H ,4X,I4,4X,4(1X,7I4))
84  FORMAT(1H ,I4,I4,4X,4(1X,7I4))
91  FORMAT(1H0,4H WV,4H AZI,4H SON,9(1X,4I3))
94  FORMAT(1H ,4X,I4,4X,9(1X,4I3))
95  FORMAT(1H ,I4,I4,4X,9(1X,4I3))
97  FORMAT(1H0,4H AZI,4H LEV,4H ALT,4(1X,7I4))
102 FORMAT(1H0,4H WV,4H AZI,4H ALT,4(1X,7I4))
107 FORMAT(1H0,4H ALT,4H WV,4H AZI,4(1X,7I4))
111 FORMAT(1H0,4H WV,4H ALT,4H SON,7(1X,4I4))
114 FORMAT(1H0,4H ALT,4H WV,4H SON,7(1X,4I4))
117 FORMAT(1H0,4H WV,4H AZI,4H SON,7(1X,4I4))
120 FORMAT(1H0,4H WV,4H LEV,4H ALT,4(1X,7I4))
125 FORMAT(1H0,4H LEV,4H WV,4H ALT,4(1X,7I4))
130 FORMAT(1H0,4H ALT,4H WV,4H LEV,4(2X,9I3))
135 FORMAT(1H ,4X,I4,4X,4(2X,3X,8I3))
136 FORMAT(1H ,I4,I4,4X,4(2X,3X,8I3))
138 FORMAT(1H ,4X,I4,4X,4(2X,8I3,3X))
139 FORMAT(1H ,I4,I4,4X,4(2X,8I3,3X))
142 FORMAT(1H ,I4,I4,4X,4(1X,3I4,16X))
144 FORMAT(1H0,12X,7(1X,6X,14,6X))
145 FORMAT(1H0,4H LEV,4H WV,4H SON,7(1X,4I4))
150 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
151 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
153 FORMAT(1H0,4H WV,4H LEV,4H SON,7(1X,4I4))
154 FORMAT(1H ,I4,I4,4X,5I4,4(1X,4I4))
156 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
157 FORMAT(1H ,I4,I4,4X,3(1X,4I4))
162 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
163 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
164 FORMAT(1H ,4X,I4,4X,5I4,4(1X,4I4))
165 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
166 FORMAT(1H0,12X,9(1X,5X,12,5X))
167 FORMAT(1H0,4H LEV,4H ALT,4H SON,9(1X,4I3))
172 FORMAT(1H ,4X,I4,4X,13X,8(1X,4I3))
173 FORMAT(1H ,I4,I4,4X,8(1X,4I3))
174 FORMAT(1H ,4X,I4,4X,8(1X,4I3))
175 FORMAT(1H0,12X,7(3X,3X,13,3X))
176 FORMAT(1H0,4H WV,4H ALT,4H LEV,7(3X,9I1))
181 FORMAT(1H ,4X,I4,4X,7(3X,9I1))
182 FORMAT(1H ,4X,I4,4X,7(3X,1X,8I1))
183 FORMAT(1H ,I4,I4,4X,7(3X,8I1,1X))
184 FORMAT(1H0,4H ALT,4H WV,4H LEV,7(3X,9I1))
189 FORMAT(1H ,4X,I4,4X,7(3X,8I1,1X))
190 FORMAT(1H ,I4,I4,4X,7(3X,9I1))
191 FORMAT(1H ,4X,I4,4X,7(3X,1X,8I1))
192 FORMAT(1H ,I4,I4,4X,7(3X,1X,8I1))
195 FORMAT(1H ,I4,I4,4X,7(3X,8I1,1X))
196 FORMAT(1H0,12X,7(3X,2X,13,2X))
197 FORMAT(1H0,4H ALT,4H WV,4H LEV,7(3X,7I1))
202 FORMAT(1H ,4X,I4,4X,7(3X,7I1))
203 FORMAT(1H ,I4,I4,4X,7(3X,7I1))
205 FORMAT(1H ,4X,I4,4X,7(3X,3X,4I1))
206 FORMAT(1H ,I4,I4,4X,7(3X,3X,4I1))
208 FORMAT(1H ,4X,I4,4X,7(3X,3I1,4X))
209 FORMAT(1H ,I4,I4,4X,7(3X,3I1,4X))
210 FORMAT(1H0,12X,9(3X,2X,13,2X))
211 FORMAT(1H0,4H WV,4H ALT,4H AZI,9(3X,7I1))
216 FORMAT(1H ,4X,I4,4X,10X,8(3X,7I1))
217 FORMAT(1H ,I4,I4,4X,8(3X,7I1))
218 FORMAT(1H ,4X,I4,4X,8(3X,7I1))
223 FORMAT(1H ,4X,I4,4X,10X,8(3X,7I1))
224 FORMAT(1H ,I4,I4,4X,10X,8(3X,7I1))
226 FORMAT(1H0,12X,7(3X,2X,13,2X))

```

```
227   FORMAT(1H0,4H WV,4H ALT,4H AZI,7(3X,7I1))
232   FORMAT(1H ,4X,I4,4X,7(3X,7I1))
233   FORMAT(1H ,4X,I4,4X,30X,4(3X,7I1))
234   FORMAT(1H ,I4,I4,4X,7(3X,7I1))
235   FORMAT(1H ,4X,I4,4X,3(3X,7I1))
490   FORMAT(1H0,4H AZI,8X,7(1X,6X,I4,6X ),//)
599   FORMAT(1H1)
600   FORMAT(1H0)
601   FORMAT(1H0,10HMAX TABLE,I3)
602   FORMAT(1H0,10HMIN TABLE,I3)
 603   FORMAT(1H0,4H ALT,4H WV,4H AZI,9(3X,7I1))
850   FORMAT(1H0,4H WV,4H LEV,4H SGN,7(1X,4I4))
851   FORMAT(1H0,4H LEV,4H WV,4H SGN,7(1X,4I4))
      STOP
END
```


