Polhøjdestjerner for Z-tub
17. juli 1965

```
begin integer array gstj, gdr[0:2];
gstj[0]:= type in; gstj[1]:= type in; gstj[2]:= type in;
begin integer i,g,JD,JD0,JD21,aar,ibeg,islut,stjerner,gn;
array no,t,a,b,c,d,mu[0:gstj[0]],A,B,C,D,T[-1:17];
integer array antal[1:12]; real p,pp,pm;

procedure wmonth(i); value i; integer i;
writetext(
if i=1 then ⊂< jan. ⊃ else if i=2 then ⊂< feb. ⊃ else if i=3 then ⊂< mar. ⊃ else
if i=4 then ⊂< apr. ⊃ else if i=5 then ⊂< may  ⊃ else if i=6 then ⊂< june ⊃ else
if i=7 then ⊂< july ⊃ else if i=8 then ⊂< aug. ⊃ else if i=9 then ⊂< sep. ⊃ else
if i=10then ⊂< oct. ⊃ else if i=11then ⊂< nov. ⊃ else if i=12then ⊂< dec. ⊃
else ⊂< xxxx ⊃);

procedure halvmaaned(f,as); value f,as; integer f,as;
begin integer h,k;
real procedure I(A); array A;
begin real B;B:= A[k-1+g];
B:= I:=B+pp×(A[k+g]-B)-pm×(B-A[k-2+g]);
if kb on then write(⊂-ndd.dddd⊃, writecr, B, A[k-1+g])
end; writecr; writecr; writechar(11);
wmonth(if i<7 then i+6 else i-6); write(⊂-nddddd⊃, if i<7 then aar else aar+1);
for k:= 2 step 1 until as+ 1 do
begin
if JD= JD21 then begin JD:= JD-1; JD21:= 0 end;
JD:= JD+1; input(A[k], B[k], C[k], D[k]);
T[k]:= (JD-JD0)/365.24
end;
write text(⊂<
AGK⊃); for h:= 0 step 1 until as-1 do write(⊂-ndddddd⊃, h+f);
for gn:= 0,1,2 do begin
drumplace:= gdr[gn]; from drum(no); from drum(t); from drum(a); from drum(b);
from drum (c); from drum(d); from drum(mu);
for h:= 0 step 1 until gstj[gn] do
begin write cr; write(⊂nddd⊃, no[h]); g:=0; p:= t[h];
if p>0.5∧p< 0.937 then g:= 1; if p>0.5 then p:= p-1;
pp:=p/2×(p+1); pm:=p/2×(p-1);
if kb on then write (⊂-nd.dddd⊃, writecr, p, g, pp, pm);
for k:= 1 step 1 until as do  write(⊂-ndd.ddd⊃,
I(A)×a[h]+I(B)×b[h]+I(C)×c[h]+I(D)×d[h]+T[k]×mu[h])
end end;
for k:= -1,0,1 do begin A[k]:= A[k+as]; B[k]:= B[k+as];
        C[k]:= C[k+as]; D[k]:= D[k+as]; T[k]:= T[k+as] end;
end halvmaaned;

aar:= type in; JD:= type in; JD0:= type in; ibeg:= type in; islut:= type in;
JD21:= type in;
for gn:= 0,1,2 do begin
gdr[gn]:= drumplace;
for i:= 0 step 1 until gstj[gn] do
input(no[i], t[i], a[i], b[i], c[i], d[i], mu[i]);
to drum(no); to drum(t); to drum(a); to drum(b); to drum(c); to drum(d); to drum(mu);
end;
input (antal);
for i:= -1,0,1 do begin input (A[i], B[i], C[i], D[i]);
JD:= JD+1; T[i]:= (JD-JD0)/365.24   end;
for i:= ibeg step 1 until islut do
begin
halvmaaned(1,15); halvmaaned(16, antal[i])
end end
```

```
end for program;


Polhøjdestjerner for Z-tub
17. juli 1965

begin integer array gstj, gdr[0:2];
gstj[0]:= type in; gstj[1]:= type in; gstj[2]:= type in;
begin integer i,g,JD,JD0,JD21,aar,ibeg,islut,stjerner,gn;
array no,t,a,b,c,d,mu[0:gstj[0]],A,B,C,D,T[-1:17];
integer array antal[1:12]; real p,pp,pm;

procedure wmonth(i); value i; integer i;
writetext(
if i=1 then ├< jan. ┤ else if i=2 then ├< feb. ┤ else if i=3 then ├< mar. ┤ else
if i=4 then ├< apr. ┤ else if i=5 then ├< may  ┤ else if i=6 then ├< june ┤ else
if i=7 then ├< july ┤ else if i=8 then ├< aug. ┤ else if i=9 then ├< sep. ┤ else
if i=10then ├< oct. ┤ else if i=11then ├< nov. ┤ else if i=12then ├< dec. ┤
else ├< xxxx ┤);

procedure halvmaaned(f,as); value f,as; integer f,as;
begin integer h,k;
real procedure I(A); array A;
begin real B;B:= A[k-1+g];
B:= I:=B+pp×(A[k+g]-B)-pm×(B-A[k-2+g]);
if kb on then write(├-ndd.dddd┤, writecr, B, A[k-1+g])
end; writecr; writecr;
wmonth(if i<7 then i+6 else i-6); write(├-nddddd┤, if i<7 then aar else aar+1);
for k:= 2 step 1 until as+ 1 do
begin
if JD= JD21 then begin JD:= JD-1; JD21:= 0 end;
JD:= JD+1; input(A[k], B[k], C[k], D[k]);
T[k]:= (JD-JD0)/365.24
end;
write text(├<
AGK┤); for h:= 0 step 1 until as-1 do write(├-ndddddd┤, h+f);
for gn:= 0,1,2 do begin
drumplace:= gdr[gn]; from drum(no); from drum(t); from drum(a); from drum(b);
from drum (c); from drum(d); from drum(mu);
for h:= 0 step 1 until gstj[gn] do
begin write cr; write(├nddd┤, no[h]); g:=0; p:= t[h];
if p>0.5∧p< 0.937 then g:= 1; if p>0.5 then p:= p-1;
pp:=p/2×(p+1); pm:=p/2×(p-1);
if kb on then write (├-nd.dddd┤, writecr, p, g, pp, pm);
for k:= 1 step 1 until as do  write(├-ndd.ddd┤,
I(A)×a[h]+I(B)×b[h]+I(C)×c[h]+I(D)×d[h]+T[k]×mu[h])
end end;
for k:= -1,0,1 do begin A[k]:= A[k+as]; B[k]:= B[k+as];
        C[k]:= C[k+as]; D[k]:= D[k+as]; T[k]:= T[k+as] end;
end halvmaaned;

aar:= type in; JD:= type in; JD0:= type in; ibeg:= type in; islut:= type in;
JD21:= type in;
for gn:= 0,1,2 do begin
gdr[gn]:= drumplace;
for i:= 0 step 1 until gstj[gn] do
input(no[i], t[i], a[i], b[i], c[i], d[i], mu[i]);
to drum(no); to drum(t); to drum(a); to drum(b); to drum(c); to drum(d); to drum(mu);
end;
input (antal);
for i:= -1,0,1 do begin input (A[i], B[i], C[i], D[i]);
JD:= JD+1; T[i]:= (JD-JD0)/365.24   end;
for i:= ibeg step 1 until islut do
begin
```

```
halvmaaned(1,15); halvmaaned(16, antal[i])
end end
end for program;


Korrektion fra middelsted til apparent sted.
algol 4, 27.6.68, J.Otzen

Stjerneantal = n; inunit = 0 for læser, 1 for skriver; stjernedata og JD0
kun ved start af programmet.
Derefter grupper bestående af JD, + Besselkonstanter.
JD er aktuelle dato; de første resultater gælder for JD + 1,
de sidste for JD. JDO er for 1. januar midt i perioden
og Besselkonstantionen starter dagen før aktuelle dato.


begin integer JD 0, JD, n, i, inunit;

real procedure interpolation(f,q);value q; real q; array f;
begin real dmhalv,dphalv,dtonul;  dmhalv:=f[0]-f[-1]; dphalv:=f[1]-f[0];
dtonul:=dphalv-dmhalv; interpolation:=f[0]+q×dphalv+q×(q-1)×dtonul/2;
end real procedure interpolation;

real procedure type in; type in:= read real;

select (17); writetext (ǂ<
JD0, n, inunit = ǂ); JD0:= read integer; n:= read integer; inunit:= read integer;
select (0);

begin integer array Stjnr[0:n];array p,a,b,c,d,my,Ap,Bp,Cp,Dp,deltaAM[0:n],A,B,C,D[-1
for i:=0 step 1 until n do
begin Stjnr [i]:= read real; p [i]:= read real; a [i]:= read real ; b[i]:= read real;
            c[i]:= read real; d[i]:= read real; my [i]:= read real; end;


IGEN: select (inunit+16); JD:= read real;
for i:=-1,0,1 do begin A[i]:=type in;B[i]:=type in;C[i]:=type in;D[i]:=type in;writec
end;writecr;writecr;writecr;writecr;writetext(ǂ<JD  ǂ);write(ǂddddddǂ,JD);
writetext(ǂ<
nr       deltaAM

ǂ);
for i:=0 step 1 until n do
begin Ap[i]:=interpolation(A,p[i]); Bp[i]:=interpolation(B,p[i]);
Cp[i]:=interpolation(C,p[i]);Dp[i]:=interpolation(D,p[i]);
deltaAM[i]:= a[i]×Ap[i]+b[i]×Bp[i]+c[i]×Cp[i]+d[i]×Dp[i]+my[i]×(JD-JD0)/365.25;
write(ǂddddddǂ,Stjnr[i]); write(ǂ-ddddddddddd.dddǂ,deltaAM[i]);writecr; end;
goto IGEN end;
end of program;
Op - nedgang og kulmination for et himmellegeme for et sted med angivet
geografisk længde og bredde
4. april 1963

begin
integer dato, maaned, JD;
real a,b,c,d,h,top,ctop, pi,fi, lambda, opny, nedny, skdelta,
     alf0,alf24,del0,del24,delta,op,kulm,ned;

real procedure th(MET); value MET; real MET;
  comment ths værdi bliver stjernetiden for det angivne sted
          med argument MET for det døgn, som er angivet ved JD;
begin real a;
a:= 6.57826722+(JD-6933)×0.0657098222 -( 1.00273778 - lambda);
a:= 24×(a/24 -entier(a/24));comment a:= theta 0 lokalt;
```

```
a:= a+ MET× 1.00273791;
if a>24 then a:=a-24;
th:= a
end;


real procedure lshexa(n); value n; integer n;
comment lshexa læser vinkler med enhed i n. hexadecimale ciffer,
        1. hexaciffer har fortegn for hele vinklen og skal være
        et heltal skrevet uden . og ₁₀, lshexa(3) giver rektascen-
        sioner og deklinationer skrevet paa normal maade i hhv.
        tids- og buesekunder;
begin integer  a,b,c;real d;
a:=1;
start: b:= in char;
if b=0 then go to start; if b=16 then b:= 0;
if b < 10 then go to cifre;
if b = 32 then a:= -1;
if b = 160 then a := 1;
go to start;
cifre: c:= in char;
if c = 0 ∨ c = 63 ∨ c = 127  then go to cifre;
if c = 16 then c := 0;
if c < 10 then b:= c+10×b else go to færdig;
go to cifre;
færdig: d:= b;  for c:= 2 step 1 until n do d:= d×60 + in one;
lshexa:= a×d
end;


real procedure vin one;begin vin one:= lshexa(3)/3600/180×pi end;
real procedure tin one;begin tin one:= lshexa(3)/3600 end;


START: pi:= 3.14159265;
 dato:=in one; maaned:=in one; JD:=in one; lambda := tin one; fi:= vin one;
if dato >35  then begin writetext(‡<
Datafejl‡); go to STOP end;

writetext(‡<
    Dato    opgang  kulmin. nedgang
‡);
write(‡ndddd‡, dato, maaned);




alf0:= tin one; del0:= vin one;
alf24:= tin one; del24:= vin one;
a:=alf24-alf0;
if a>23 then a:= a-24;if a<-23 then a:=a+24;
d:= del24 -del0;


KULM: b:= 24.0657098;
alf0:= alf0 - a/24;comment alfa til MET= 0;
if alf0<th(0) then alf0:= alf0 + 24;
kulm:=(alf0 - th(0))/(b-a)×24;comment kulmination i MET;
h:= kulm; comment kulm gemmes i h;

op:= h-6;

OP: if op < 0
```

```
    then begin skdelta:= op+23; kulm:= h+24/(1.0027379-a/24)-24 end
    else begin skdelta:= op -1; kulm:= h end;
delta:= del0+d×skdelta/24;
ctop:= (sin(-35×pi/(60×180)) - sin(fi)×sin(delta))/(cos(fi)×cos(delta));
if abs(ctop) < 2₁₀ -8 then top:= 6 else
top:= arctan( sqrt(1-ctop×ctop)/ctop) × 12/pi;
if top<0 then top:= top+12;
top:= top/(1.0027379-a/24);
opny:= kulm - top;
if abs(op-opny) > 0.03/60 then begin op:= opny; go to OP end;
if opny < 0 then op:= opny+24 else op:= opny;

ned := h+top;

NED: if ned > 24
     then begin skdelta:= ned-25; kulm:=h -24/(1.0027379-a/24)+24 end
     else begin skdelta:= ned-1; kulm:= h end;
delta:= del0+d×skdelta/24;
ctop:= (sin(-35×pi/(60×180)) - sin(fi)×sin(delta))/(cos(fi)×cos(delta));
if abs(ctop) < 2₁₀ -8 then top:= 6 else
top:= arctan( sqrt(1-ctop×ctop)/ctop) × 12/pi;
if top<0 then top:= top+12;
top:= top/(1.0027379-a/24);
nedny:= kulm+top;
if abs(ned-nedny) > 0.03/60 then begin ned:= nedny; go to NED end;
if nedny > 24 then ned:= nedny-24 else ned:= nedny;


for  b:= op,h,ned do
begin writechar(0); writechar(0); write (‹ndd›, entier(b), (b-entier(b))×60)end;
if maaned > 12 then goto START;

begin integer i;
real MET,t,h,Az, sAz,cAz, sh,ch;

real procedure del; del:=del0+(MET-1)/24×(del24-del0);
real procedure alf;
begin real r; alf:=r :=alf 24+(MET-25)/24×a;
if r>24 then alf:= r-24; if r<0 then alf:= r+24
end;

real procedure ACT(s,c); value s,c; real s,c;
begin real a; if abs(c)<₁₀-8 then begin if s>0 then ACT:= pi/2
    else ACT:= pi×1.5; go to ud end;
ACT:= a:= arctan(s/c); if c>0 ∧ s<0 then ACT:= a+2×pi;
if  c<0 then ACT:= a+pi;
ud: end;

writetext(‹<
Hvis linie indledes med e hoppes til end,
ellers opfattes de første to tal som timer og minutter.

  MET      højde       Azimut       t
›);
L: i:= typechar; if i=53 then goto STOP else setchar(i);
MET := typein+typein/60;
t:= th(MET)- alf;if t<-12 then t:=t+24; if t>12 then t:= t-24;t:=t×pi/12;

if kbon then write(‹-ndd.dddddd›, writecr,  MET, th(MET), alf, del×180/pi, alf24, a,
    writecr, fi, lambda);

sAz:= cos(del)×sin(t); cAz:= -cos(fi)×sin(del)+sin(fi)×cos(del)×cos(t);
Az:= ACT(sAz,cAz);
sh:= sin(fi)×sin(del)+cos(fi)×cos(del)×cos(t);
```

```
if abs(sin(Az))>abs(cos(Az)) then ch:= sAz/sin(Az) else ch:= cAz/cos(Az);
h:= arctan(sh/ch);
for b:=h,Az,t do
begin if b<0 then begin i:= -1; b:=-b end else i:= 1;
b:=b/pi×180;
write(⟨-ndddd⟩, i×entier(b));
write(⟨ndd.d⟩,(b-entier(b))×60
)end; writecr; go to L;
end;
STOP: end for program;
```

Solens højde og azimut på givet sted
Otzen
17. april 1967

```
begin integer i,JD,tæl5,  ugedag,dag,maned,y,dn,opg,kulmg,nedg,askt,nyt;
real a, d, top,ctop, pi,fi, opny, nedny, op, kulm, ned, r, alfakulm, eqeq,m,
     A0, A1, A2, A3, D0, D1, D2, D3, h1, h2, p, lambda,  MET, t, h, Az, sAz, cAz, sh,
array k,X[0:2];

real procedure th(MET); value MET; real MET;
  comment ths værdi bliver stjernetiden
          med argument MET for det døgn, som er angivet ved JD;
begin real a;
a:= 6.57826722+(JD-6933)×0.0657098222 - (1.00273778-lambda);
a:= 24×(a/24 -entier(a/24));
a:= a+ MET× 1.00273791+eqeq/3600; if a>24 then a:=a-24; th:= a
end;

procedure JDATE (j,d,m,y); value j;
integer j,d,m,y;
begin j:=j-1721119;
  y:=(4×j-1):146097; j:=4×j-1-146097×y;
    d:=j:4;
  j:=(4×d+3):1461; d:=4×d+3-1461×j;
    d:=(d+4):4;
  m:=(5×d-3):153; d:=5×d-3-153×m;
    d:=(d+5):5;
  y:=100×y+j; if m<10 then m:=m+3
    else begin m:=m-9; y:=y+1   end;
 end JDATE;


real procedure lshexa(n); value n; integer n;
begin integer  a,b,c;real d;
a:=1; start: b:= in char; if b=0 then go to start; if b=16 then b:= 0;
if b < 10 then go to cifre; if b = 32 then a:= -1; if b = 160 then a := 1;
go to start;
cifre: c:= in char;
if c = 0 ∨ c = 63 ∨ c = 127  then go to cifre;
if c = 16 then c := 0; if c < 10 then b:= c+10×b else go to færdig;
go to cifre;
færdig: d:= b;  for c:= 2 step 1 until n do d:= d×60 + in one;
lshexa:= a×d
end;
real procedure vin one;begin vin one:= lshexa(3)/3600/180×pi end;
real procedure tin one;begin tin one:= lshexa(3)/3600 end;

procedure mm; begin writechar(0); writechar(0) end;
```

```
real procedure alfa(MET); value MET; real MET;
begin real a0, a1, a2, a3, a;
a0:= A0; a1:= ( if A1<A0 then (A1+24) else A1);
         a2:= (if A2<A0 then (A2+24) else A2);
         a3:= (if A3<A0 then (A3+24) else A3);
p:= 1+(tæl5+(MET-1)/24)/5;
h1:=1/ 2×(p-2)×(p-3); h2:=1/ 2×p×(p-1);
a:= -1/3×(p-1)×h1×a0+p×h1×a1-h2×(p-3)×a2+1/3×(p-2)×a3×h2;
alfa:= (if a>24 then (a-24) else a)
end alfa;

real procedure delta(MET); value MET; real MET;
begin p:= 1+(tæl5+(MET-1)/24)/5;
h1:= 1/2×(p-2)×(p-3); h2:= 1/2×p×(p-1);
delta:= -1/3×(p-1)×h1×D0+p×h1×D1-h2×(p-3)×D2+1/3×(p-2)×D3×h2;
end delta;

real procedure ACT(s,c); value s,c; real s,c;
begin real a; if abs(c)<10-8 then begin if s>0 then ACT:= pi/2
    else ACT:= pi×1.5; go to ud end;
ACT:= a:= arctan(s/c); if c>0 ∧ s<0 then ACT:= a+2×pi;
if  c<0 then ACT:= a+pi;
ud: end;

procedure tidud(t); value t; real t;
begin
nyt:= entier(t+0.5/60); if dag= 1 ∨ ugedag = 0∨ nyt ≠ askt
then write (╞nd╡, nyt) else mm; m:= (t-entier(t))×60;
if m≥59.5 then m:= 0; write (if kb on then ╞ndd.dddd╡ else ╞ndd╡,m);
end tidud;

START: pi:= 3.14159265; lambda:= tin one; fi:= vin one; ugedag:= type in; JD:= type i
tæl5:= 0;
r:= sin(-35×pi/(60×180));
A0:= tin one; D0:= vin one;
if kb on then begin writecr;tidud(A0);tidud(D0×180/pi) end;
A1:= tin one; D1:= vin one;
A2:= tin one; D2:= vin one;
A3:= tin one; D3:=vin one;

IGEN: JDATE(JD+2430001, dag, maned,y);
if dag=1∨dag=15 then begin writetext(╞<

Dato:╡); write(╞-ndd╡,dag, maned); writetext(╞<
 MET      h      Az    MET      h      Az ╡);
for op:= 6,8,10,12,14,16,18 do begin for MET:= op, op+1 do
begin if MET≠ op then mm else writecr;
write (╞nddd╡, MET);
t:= th(MET)-alfa(MET); if t<-12 then t:= t+24;
if t>12 then t:= t-24; t:= t×pi/12;
sAz:= cos(delta(MET))×sin(t); cAz:= -cos(fi)×sin(delta(MET))+sin(fi)×cos(delta(MET))×
Az:=ACT(sAz, cAz); if Az>pi then Az:= Az-2×pi;
sh:= sin(fi)×sin(delta(MET))+cos(fi)×cos(delta(MET))×cos(t);
if abs(sin(Az))>abs(cos(Az)) then ch:= sAz/sin(Az) else ch:= cAz/cos(Az);
h:= arctan(sh/ch)×180/pi;
write (╞-ndddd.d╡, h, Az×180/pi);
end end en dag; end 1 eller 15;

if kb on then begin
kulm:= 12;
writecr; KULM: a:= alfa(kulm)-th(kulm);
if kb on then begin writecr; tidud(kulm); write(╞-ndd.ddd╡,a×3600) end;
kulm:= kulm+a; if a>1_10-7 then goto KULM;
```

```
if ugedag = 0 then begin writecr; writecr;writecr end;


op:= kulm - 6; alfakulm:= alfa(kulm);
OP: d:= delta(op); ctop:= ( r - sin(fi)×sin(d))/(cos(fi)×cos(d));
if abs(ctop) < 2₁₀ -8 then top:= 6 else top:= arctan( sqrt(1-ctop×ctop)/ctop) × 12/pi;
if top<0 then top:= top+12; a:= alfakulm - alfa(op); if a<0 then a:= a+24;
top:= (top+a)/1.0027379;
opny:= kulm - top;
if abs(op-opny) > 0.03/60 then begin op:= opny; go to OP end;
op:= opny;

ned:= kulm + top;
NED: d:= delta(ned); ctop:= ( r - sin(fi)×sin(d))/(cos(fi)×cos(d));
if abs(ctop) < 2₁₀ -8 then top:= 6 else
top:= arctan( sqrt(1-ctop×ctop)/ctop) × 12/pi;
if top<0 then top:= top+12;
a:= alfa(ned) - alfakulm; if a<0 then a:= a+24;
top:= (top+a)/1.0027379; nedny:= kulm + top;
if abs(ned-nedny) > 0.03/60 then begin ned:= nedny; go to NED end;
ned:= nedny;


JDATE(JD+2430001, dag, maned, y); end;
if dag  =1∧maned =1 then begin writecr; writecr;dn:=1;
write (╞ndddddddddd╡, y); writecr; writecr;
if y=1964 then eqeq:=-1;
if y=1965 then eqeq:=-1;
if y=1966 then eqeq:=-0.82;
if y=1967 then eqeq:=-0.55;
if y=1968 then eqeq:=-0.25;
if y=1969 then eqeq:=0.10;
if y=1970 then eqeq:=0.45;
   end;
dn:= dn+1; if kb on then begin writetext(if ugedag = 0 then ╞<S. ╡ else
                     if ugedag = 1 then ╞<M. ╡ else
                     if ugedag = 2 then ╞<Ti.╡ else
                     if ugedag = 3 then ╞<O. ╡ else
                     if ugedag = 4 then ╞<To.╡ else
                     if ugedag = 5 then ╞<F. ╡ else
                                        ╞<L. ╡);
      write(╞-nd╡,dag);
writechar(60); writechar(14); writechar(30); writechar(14); writechar(58);
askt:= opg; tidud(op); opg:= nyt; mm; askt:= kulmg; tidud(kulm); kulmg:= nyt;
writechar(0); a:= delta(kulm)×180/pi; if a<0 then begin a:= -a;
writechar (32) end else begin writechar(60); writechar(32); writechar(58) end;
askt:= 400; tidud(a); mm;
askt:= nedg; tidud(ned); nedg:= nyt; end;

tæl5:=tæl5+1; JD:= JD +1; ugedag:= ugedag+1;
if ugedag = 7 then ugedag:= 0;
if tæl5<5 then go to IGEN;
A0:= A1; A1:= A2; A2:= A3;
D0:=D1; D1:= D2; D2:= D3;
A3:= tin one; D3:= vin one;
if kb on then begin writecr; tidud (A3); tidud(D3×180/pi) end;
if A3>24 ∨ abs(D3) > pi/2 then begin writetext(╞<
Datafejl╡); go to STOP end;
tæl5:= 0; go to IGEN;
STOP: end for program;
```