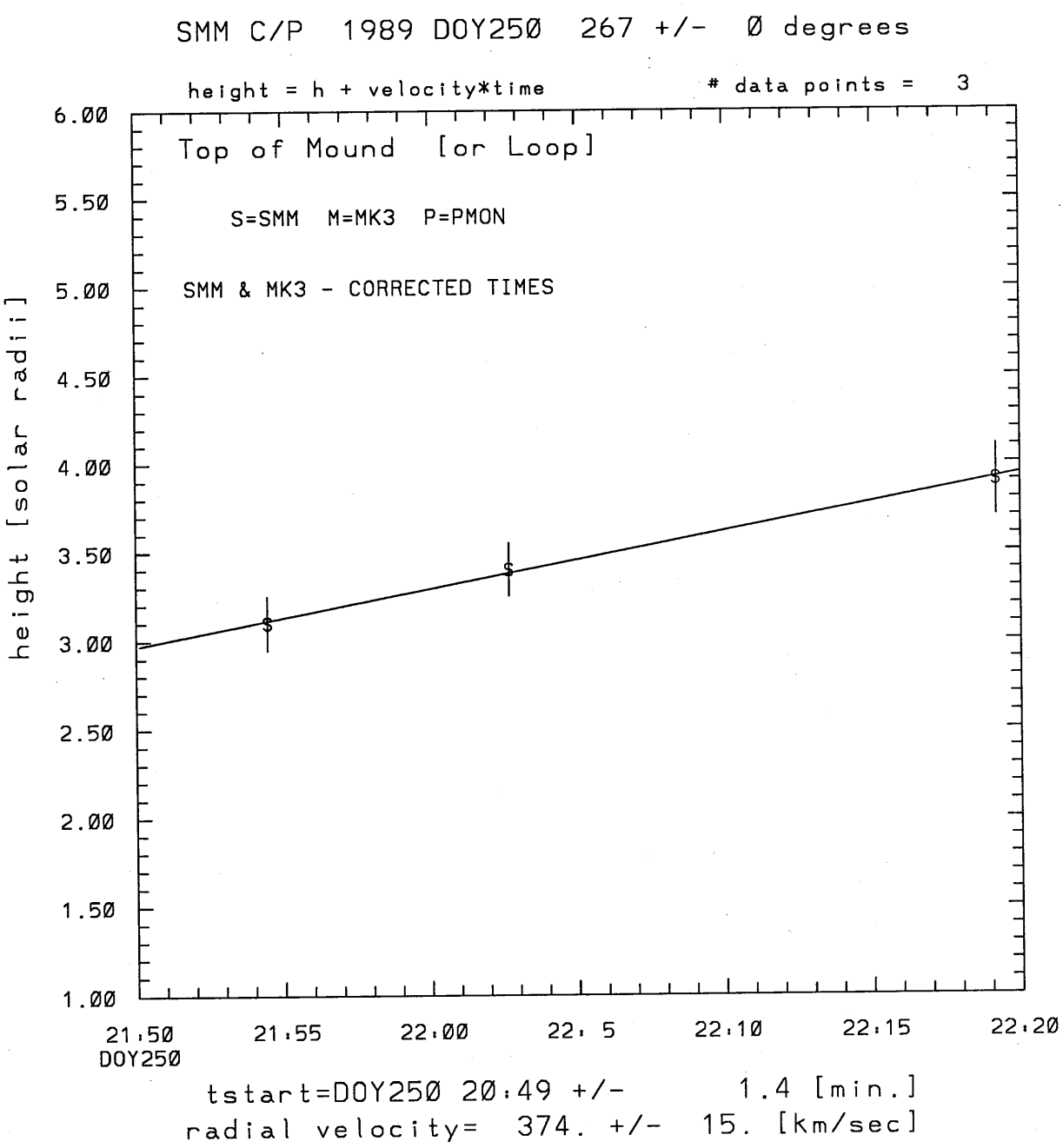
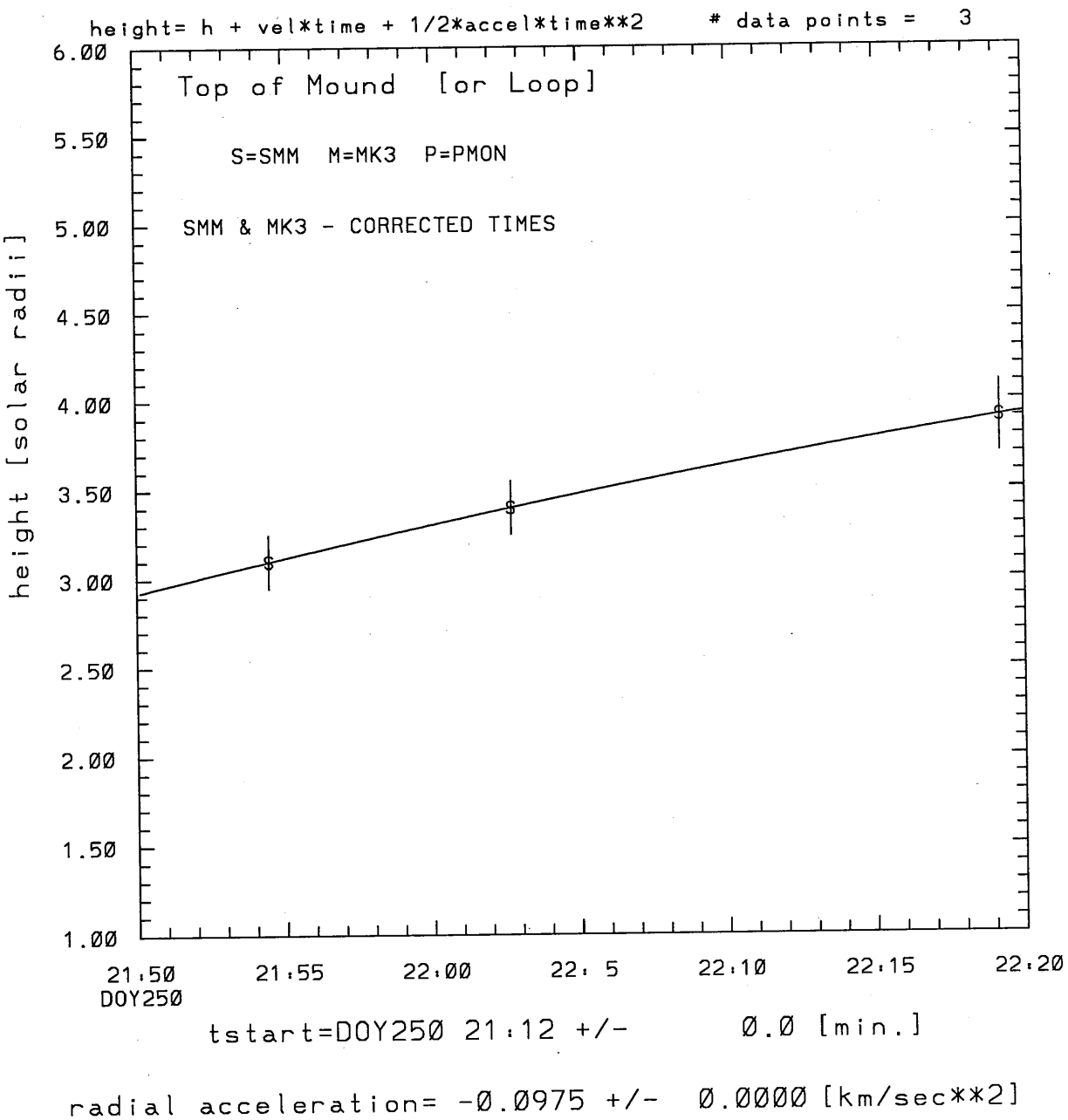
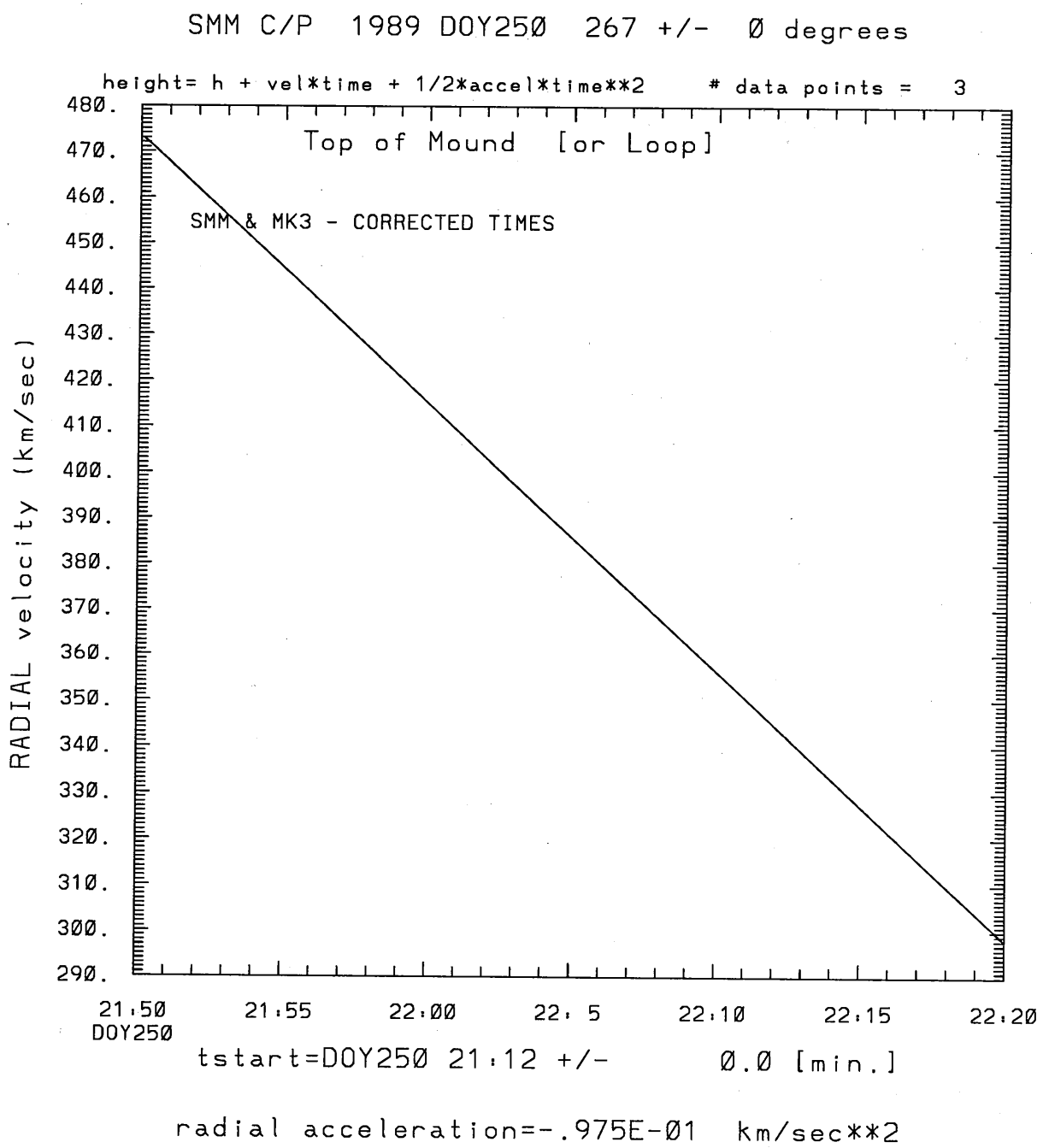
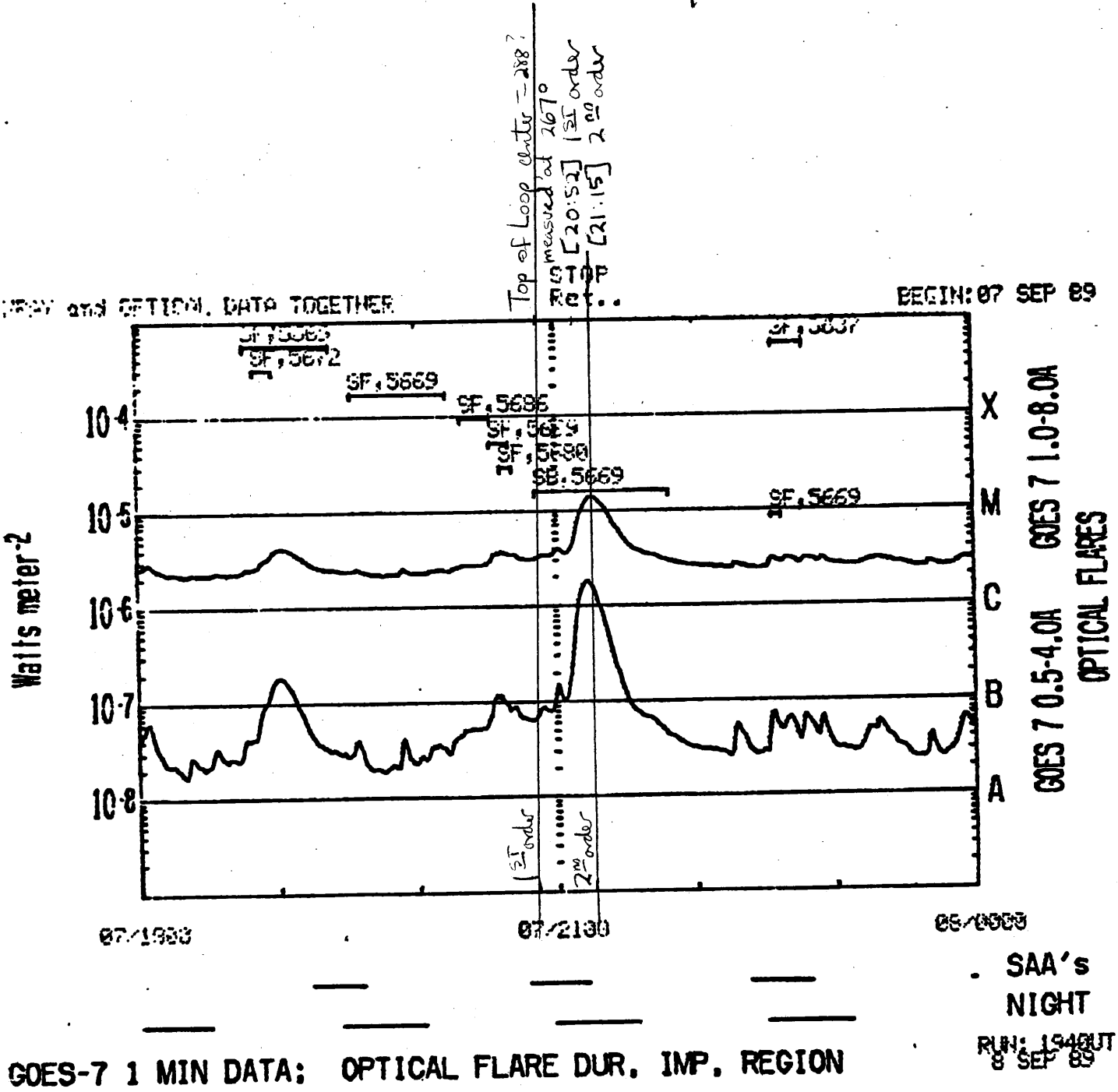

SMM C/P 1989 DOY250 267 +/- Ø degrees
height = h + velocity*time
# data points = 3
Top of Mound [or Loop]
S=SMM M=MK3 P=PMON
SMM & MK3 - CORRECTED TIMES
height [solar radii]
6.ØØ
5.5Ø
5.ØØ
4.5Ø
4.ØØ
3.5Ø
3.ØØ
2.5Ø
2.ØØ
1.5Ø
1.ØØ
21:5Ø
DOY25Ø
21:55
22:ØØ
22: 5
22:1Ø
22:15
22:2Ø
tstart=DOY25Ø 2Ø:49 +/- 1.4 [min.]
radial velocity= 374. +/- 15. [km/sec]


SMM C/P 1989 DOY250 267 +/- Ø degrees
height= h + vel*time + 1/2*accel*time**2
# data points = 3
Top of Mound [or Loop]
S=SMM M=MK3 P=PMON
SMM & MK3 - CORRECTED TIMES
height [solar radii]
6.ØØ
5.5Ø
5.ØØ
4.5Ø
4.ØØ
3.5Ø
3.ØØ
2.5Ø
2.ØØ
1.5Ø
1.ØØ
21:5Ø
DOY25Ø
21:55
22:ØØ
22: 5
22:1Ø
22:15
22:2Ø
tstart=DOY25Ø 21:12 +/- Ø.Ø [min.]
radial acceleration= -Ø.Ø975 +/- Ø.ØØØØ [km/sec**2]


SMM C/P 1989 DOY250 267 +/- Ø degrees
height= h + vel*time + 1/2*accel*time**2
# data points = 3
Top of Mound [or Loop]
SMM & MK3 - CORRECTED TIMES
RADIAL velocity (km/sec)
480.
470.
460.
450.
440.
430.
420.
410.
400.
390.
380.
370.
360.
350.
340.
330.
320.
310.
300.
290.
21:50
DOY250
21:55
22:00
22: 5
22:10
22:15
22:20
tstart=DOY250 21:12 +/- Ø.Ø [min.]
radial acceleration=-.975E-01 km/sec**2

1989 Day 250.



GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

```
**********************
 This is a 1 order run
**********************

*******
 INPUT:
*******

                                   error in          error in
year doy    time      radii   radius      angle    angle    datatype
1989 250  21:54:27   3.10 +/- 0.15     267.0 +/-  1.0        SMM
1989 250  22: 2:40   3.40 +/- 0.15     267.0 +/-  1.0        SMM
1989 250  22:19:11   3.90 +/- 0.20     267.0 +/-  1.0        SMM

****************************************
 Structure being measured:
Top of Mound  [or Loop]
****************************************

********
 OUTPUT:
********

START TIME:

 Event began at t = 0 + -0.610E+02 +/-  0.143E+01 [minutes]
 In more convenient units:
 Event began at DOY 250 20:49 +/-  0.143E+01 [minutes]

 Origin defined at DOY250 21:50

RADIAL INFORMATION:

RADIAL VELOCITY =   374. +/-    15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

 c(1) =    0.297E+01 +/-    0.204E-01 [solar radii]
 c(2) =    0.323E-01 +/-    0.127E-02 [radii/min]
 c(2) =    0.374E+03 +/-    0.148E+02 [km/sec]
 c(3) =    0.000E+00 +/-    0.000E+00 [radii/min**2]
 c(3) =    0.000E+00 +/-    0.000E+00 [km/sec**2]

 The computed ERRORS in coefficients [BEVINGTON] are:

                    error in c(1)=  0.29075E-01 [radii] see Bevington pg. 114
                    error in c(2)=  0.15677E-02 [radii/min] see Bevington pg. 114
ANGULAR INFORMATION:

ANGULAR VELOCITY =  0.0000E+00 +/-   0.0000E+00[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

 a(1) = 267. +/-   0. [degrees]
 a(2) =    0.000E+00 +/-    0.000E+00 [degrees/min]
 a(2) =    0.000E+00 +/-    0.000E+00 [rad/sec]
 a(3) =    0.000E+00 +/-    0.000E+00 [degrees/min**2]
 a(3) =    0.000E+00 +/-    0.000E+00 [rad/sec**2]


THE TANGENTIAL, RADIAL AND TOTAL SPEEDS AT EACH DATA POINT ARE:
The TANGENTIAL velocity at 21:54 =     0. km /sec
The RADIAL velocity at 21:54 =  374. km/sec

The TOTAL velocity at 21:54 =  374. km/sec
```

```
The TANGENTIAL velocity at 22: 2 =     0. km /sec
The RADIAL velocity at 22: 2 =  374. km/sec

The TOTAL velocity at 22: 2 =  374. km/sec

The TANGENTIAL velocity at 22:19 =     0. km /sec
The RADIAL velocity at 22:19 =  374. km/sec

The TOTAL velocity at 22:19 =  374. km/sec


**********************************************************
 The following info is for estimating goodness of the fit
**********************************************************

 Fit is ok [ier=1]

 Standard Deviation in the height =  0.40
 Standard Deviation in start time measurement =    0.103E+02
 Error in time =        0.86515E+00 using best fit method
 See Taylor Error Analysis [Univ of Colorado] pg.78

 Value of reduced Chi Squared returned from nllst2 = 0.418E-03
 Reduced Chi Squared = 0.152E-02
 Chi Squared = 0.152E-02
 The probability for exceeding chi square = 0.984E+00

 The correlation coefficient =    0.999E+00
 The probability that no LINEAR correlation exists between the variables =    0.3063
 SEE BEVINGTON "Data Reduction and Error Analysis" [1969]
```

```
**********************
 This is a 2 order run
**********************

*******
 INPUT:
*******

                                   error in          error in
year doy    time      radii   radius      angle    angle    datatype
1989 250  21:54:27   3.10 +/- 0.15     267.0 +/-  1.0        SMM
1989 250  22: 2:40   3.40 +/- 0.15     267.0 +/-  1.0        SMM
1989 250  22:19:11   3.90 +/- 0.20     267.0 +/-  1.0        SMM

****************************************
 Structure being measured:
Top of Mound  [or Loop]
****************************************

********
 OUTPUT:
********

START TIME:

 Event began at t = 0 + -0.381E+02 +/-  0.000E+00 [minutes]
 In more convenient units:
 Event began at DOY 250 21:12 +/-  0.000E+00 [minutes]

 Origin defined at DOY250 21:50

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.975E-01 +/-  0.186E-04 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

 c(1) =    0.292E+01 +/-    0.105E-04 [solar radii]
 c(2) =    0.408E-01 +/-    0.166E-05 [radii/min]
 c(2) =    0.474E+03 +/-    0.193E-01 [km/sec]
 c(3) =   -0.252E-03 +/-    0.480E-07 [radii/min**2]
 c(3) =   -0.975E-01 +/-    0.186E-04 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION=  0.0000E+00 +/-   0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

 a(1) = 267. +/-   0. [degrees]
 a(2) =    0.000E+00 +/-    0.000E+00 [degrees/min]
 a(2) =    0.000E+00 +/-    0.000E+00 [rad/sec]
 a(3) =    0.000E+00 +/-    0.000E+00 [degrees/min**2]
 a(3) =    0.000E+00 +/-    0.000E+00 [rad/sec**2]


THE TANGENTIAL, RADIAL AND TOTAL SPEEDS AT EACH DATA POINT ARE:
The TANGENTIAL velocity at 21:54 =     0. km /sec
The RADIAL velocity at 21:54 =  448. km/sec

The TOTAL velocity at 21:54 =  448. km/sec

The TANGENTIAL velocity at 22: 2 =     0. km /sec
The RADIAL velocity at 22: 2 =  399. km/sec

The TOTAL velocity at 22: 2 =  399. km/sec
```

The TANGENTIAL velocity at 22:19 = 0. km /sec
The RADIAL velocity at 22:19 = 303. km/sec

The TOTAL velocity at 22:19 = 303. km/sec

****
The following info is for estimating goodness of the fit
****

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!