SMM C/P   1988 DOY363   287 +/-   0 degrees

height = h + velocity*time          # data points =   3

Top of Irregular ~~Front~~ Mound

S=SMM   M=MK3   P=PMON

SMM & MK3 - CORRECTED TIMES

height [solar radii]

6.00 —
5.50 —
5.00 —
4.50 —
4.00 —
3.50 —
3.00 —
2.50 —
2.00 —
1.50 —
1.00 —

12:40   12:50   13:00   13:10   13:20   13:30   13:40
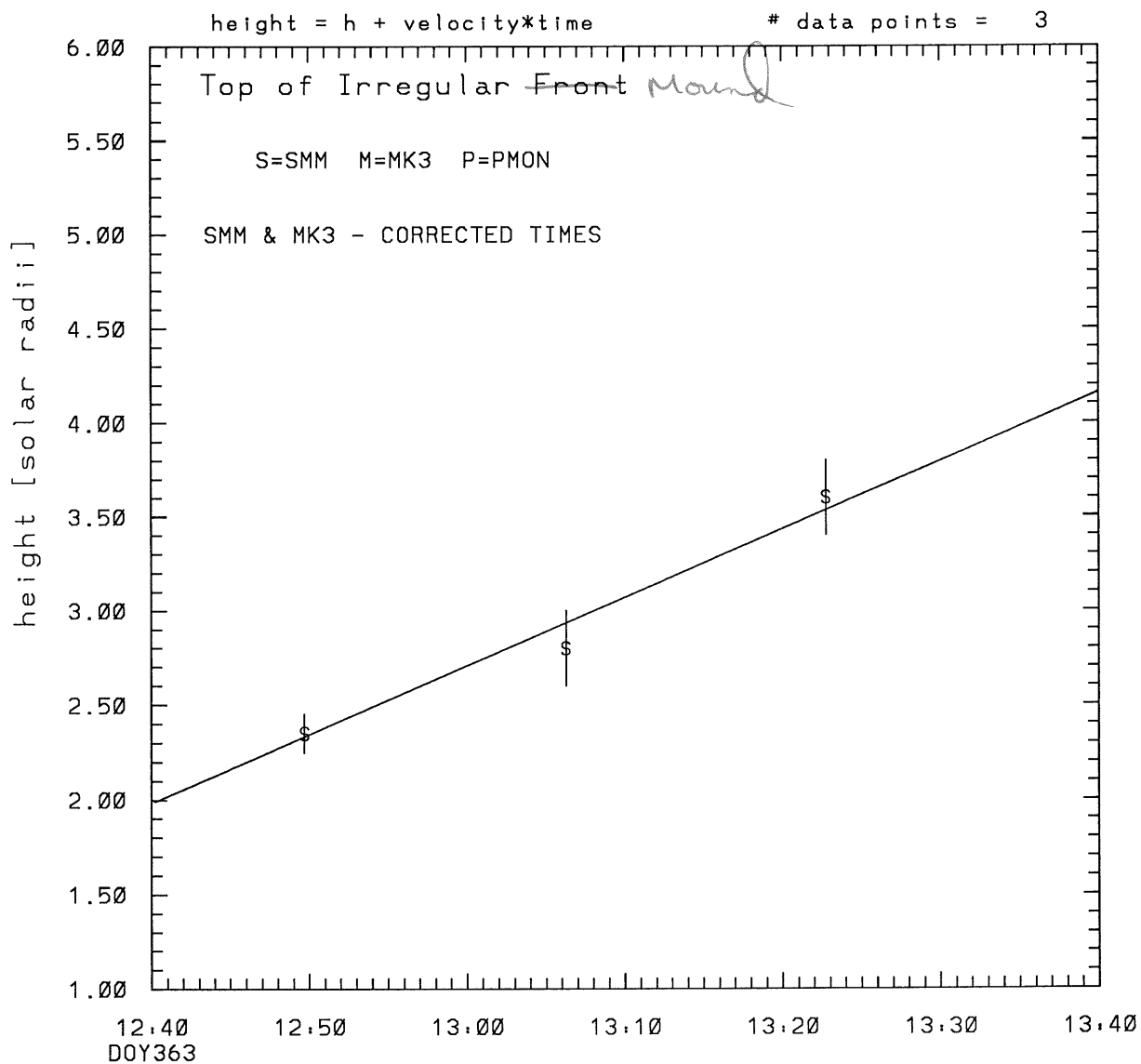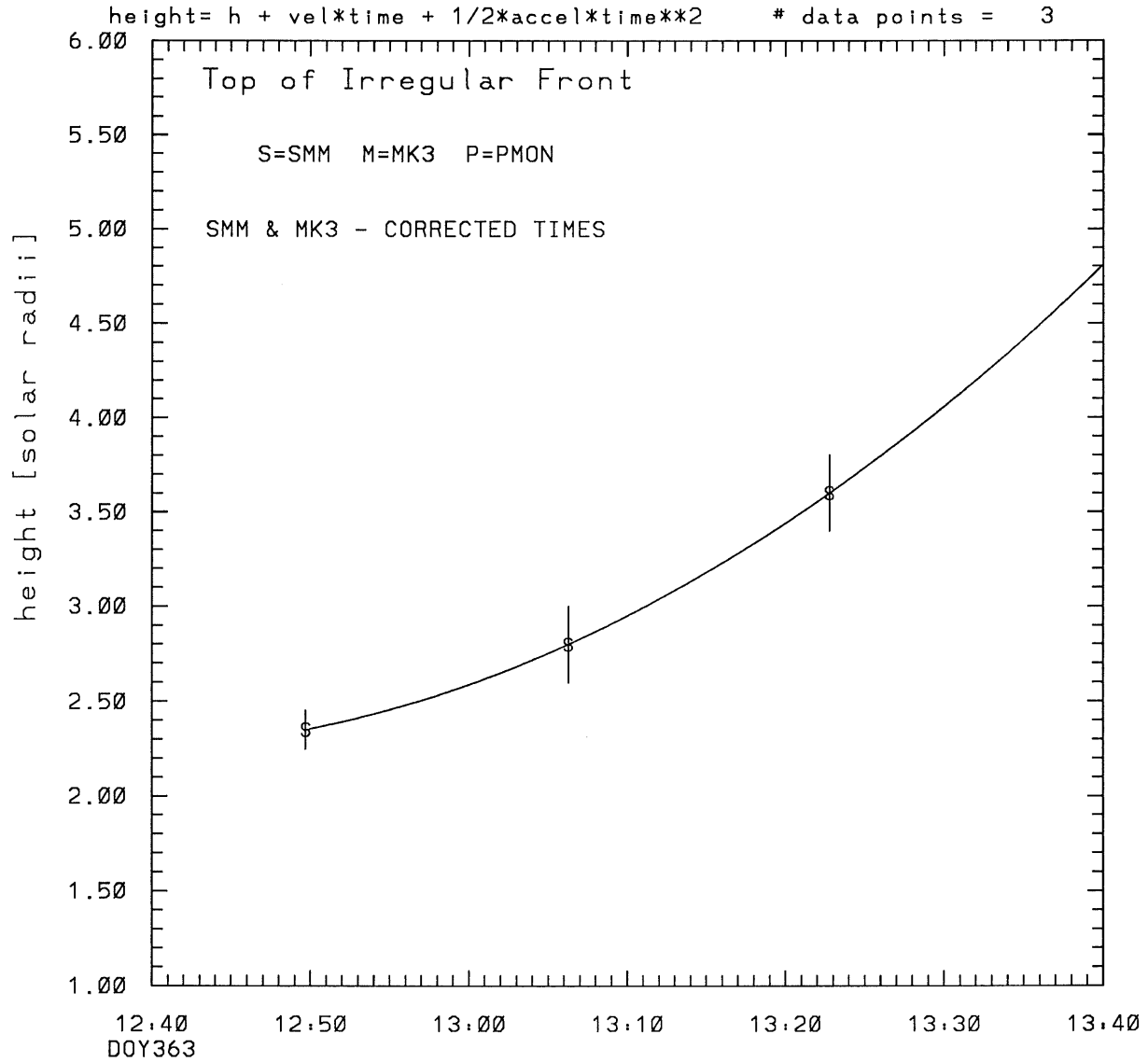DOY363

tstart=DOY363 12:13 +/-        1.6 [min.]
radial velocity=  421. +/-   41. [km/sec]

SMM C/P 1988 DOY363 287 +/- 0 degrees

height= h + vel*time + 1/2*accel*time**2     # data points =  3

Top of Irregular Front

S=SMM  M=MK3  P=PMON

SMM & MK3 - CORRECTED TIMES

height [solar radii]

6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00

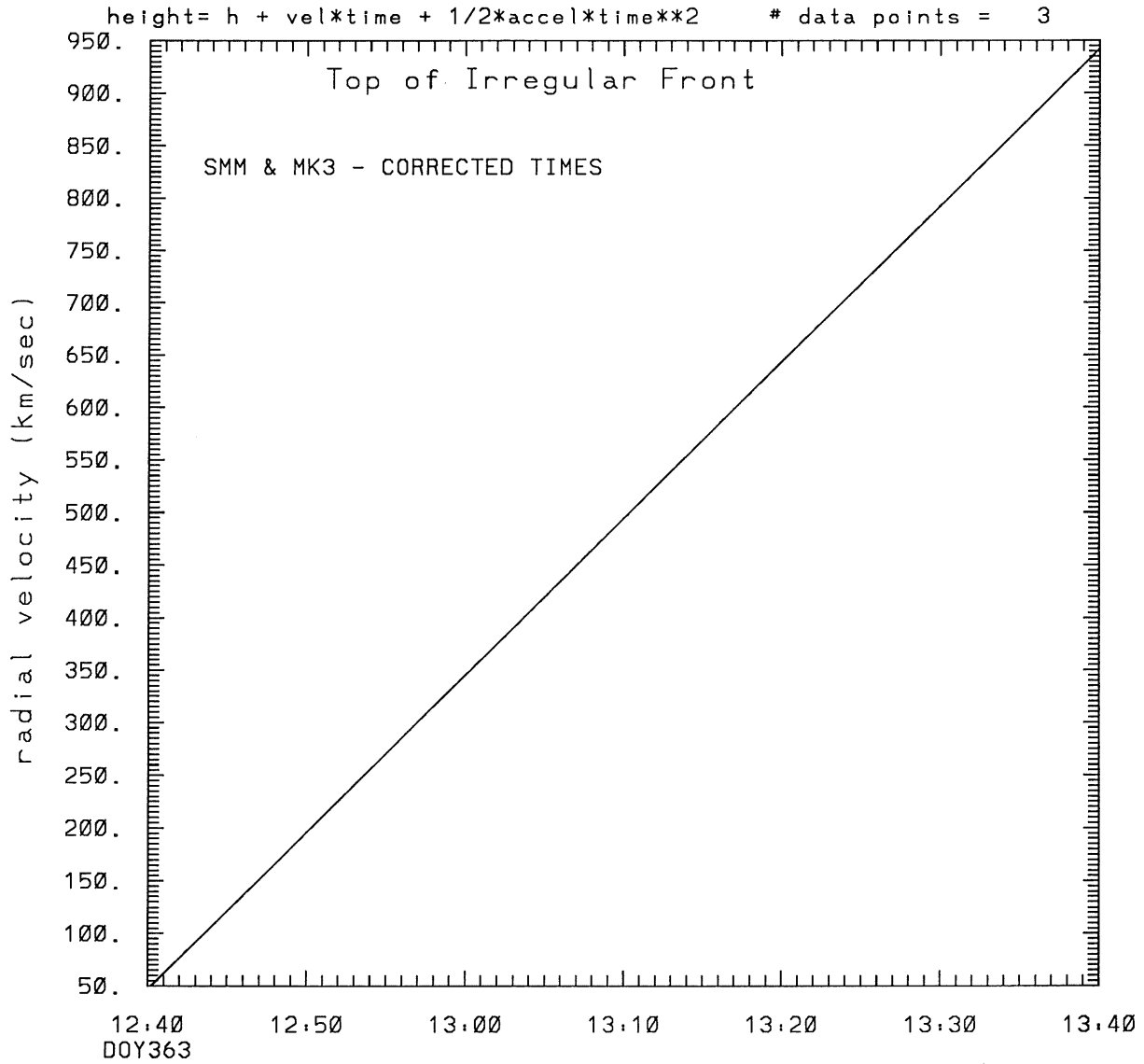12:40   12:50   13:00   13:10   13:20   13:30   13:40
DOY363

tstart=DOY363 12:37    from derivative=0
Event begins at   2.24 Solar Radii
radial acceleration= 0.2486 +/- 0.0000 [km/sec**2]

SMM C/P  1988 DOY363  287 +/-  Ø degrees

height= h + vel*time + 1/2*accel*time**2     # data points =    3

Top of Irregular Front

SMM & MK3 - CORRECTED TIMES

radial velocity (km/sec)

950.
900.
850.
800.
750.
700.
650.
600.
550.
500.
450.
400.
350.
300.
250.
200.
150.
100.
50.

12:40     12:50     13:00     13:10     13:20     13:30     13:40
DOY363

tstart=DOY363 12:37     from derivative=Ø
Event begins at   2.24 Solar Radii
radial acceleration=Ø.249E+ØØ   km/sec**2

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


*******
 INPUT:
*******
```

|            |     |          | error in |       | error in |          |
| year | doy | time | radii | radius | angle | angle | datatype |
|------|-----|------|-------|--------|-------|-------|----------|
| 1988 | 363 | 12:49:42 | 2.35 +/- | 0.10 | 287.0 +/- | 0.5 | SMM |
| 1988 | 363 | 13: 6:16 | 2.80 +/- | 0.20 | 287.0 +/- | 0.5 | SMM |
| 1988 | 363 | 13:22:47 | 3.60 +/- | 0.20 | 287.0 +/- | 1.0 | SMM |

```
*****************************************
 Structure being measured:
 Top of Irregular Front
*****************************************


********
 OUTPUT:
********
```

## START TIME:

Event began at t = 0 + -0.271E+02 +/- 0.157E+01 [minutes]
In more convenient units:
Event began at DOY 363 12:13 +/- 0.157E+01 [minutes]

Origin defined at DOY363 12:40

## RADIAL INFORMATION:

RADIAL VELOCITY =   421. +/-   41. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

```
c(1) =   0.198E+01 +/-   0.771E-01 [solar radii]
c(2) =   0.363E-01 +/-   0.351E-02 [radii/min]
c(2) =   0.421E+03 +/-   0.407E+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)= 0.19028E+00 [radii] see Bevington pg. 114
error in c(2)= 0.64457E-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) = 287. +/-  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 AND TOTAL VELOCITIES AT EACH DATA POINT ARE:
The TANGENTIAL velocity at 12:49 =    0. km/sec
The TOTAL velocity at 12:49 =  421. km/sec

The TANGENTIAL velocity at 13: 6 =    0. km/sec
The TOTAL velocity at 13: 6 =  421. km/sec

The TANGENTIAL velocity at 13:22 =    0. km/sec
The TOTAL velocity at 13:22 =  421. km/sec


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


Fit is ok [ier=1]

Standard Deviation in the height = 0.63
Standard Deviation in start time measurement =   0.135E+02
Error in time =        0.41584E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.589E-02
Reduced Chi Squared = 0.497E-01
Chi Squared = 0.497E-01
The probability for exceeding chi square = 0.939E+00

The correlation coefficient =   0.987E+00
The probability that no LINEAR correlation exists between the variables =   0.1026E+00
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
1988 363 12:49:42  2.35 +/- 0.10   287.0 +/- 0.5      SMM
1988 363 13: 6:16  2.80 +/- 0.20   287.0 +/- 0.5      SMM
1988 363 13:22:47  3.60 +/- 0.20   287.0 +/- 1.0      SMM


****************************************
 Structure being measured:
 Top of Irregular Front
****************************************


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


START TIME:

 tstart=DOY363 12:37 from derivative = 0
 Event begins at   2.24 Solar Radii
 Origin defined at DOY363 12:40


RADIAL INFORMATION:

RADIAL ACCELERATION =  0.249E+00 +/-  0.204E-05 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

  c(1) =    0.225E+01 +/-    0.238E-05 [solar radii]
  c(2) =    0.404E-02 +/-    0.268E-06 [radii/min]
  c(2) =    0.468E+02 +/-    0.311E-02 [km/sec]
  c(3) =    0.643E-03 +/-    0.528E-08 [radii/min**2]
  c(3) =    0.249E+00 +/-    0.204E-05 [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) = 287. +/-   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 AND TOTAL VELOCITIES AT EACH DATA POINT ARE:
The TANGENTIAL velocity at 12:49 =    0. km/sec
The TOTAL velocity at 12:49 =  192. km/sec

The TANGENTIAL velocity at 13: 6 =    0. km/sec
The TOTAL velocity at 13: 6 =  439. km/sec

The TANGENTIAL velocity at 13:22 =    0. km/sec
The TOTAL velocity at 13:22 =  685. 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!