SMM C/P   1988 DOY318   255 +/-   0 degrees

height = h + velocity*time   # data points =   4

Top of Fuzzy Front *Loop*

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

23:50 DOY318   0:00 DOY319   0:10 DOY319   0:20 DOY319   0:30 DOY319   0:40 DOY319   0:50 DOY319
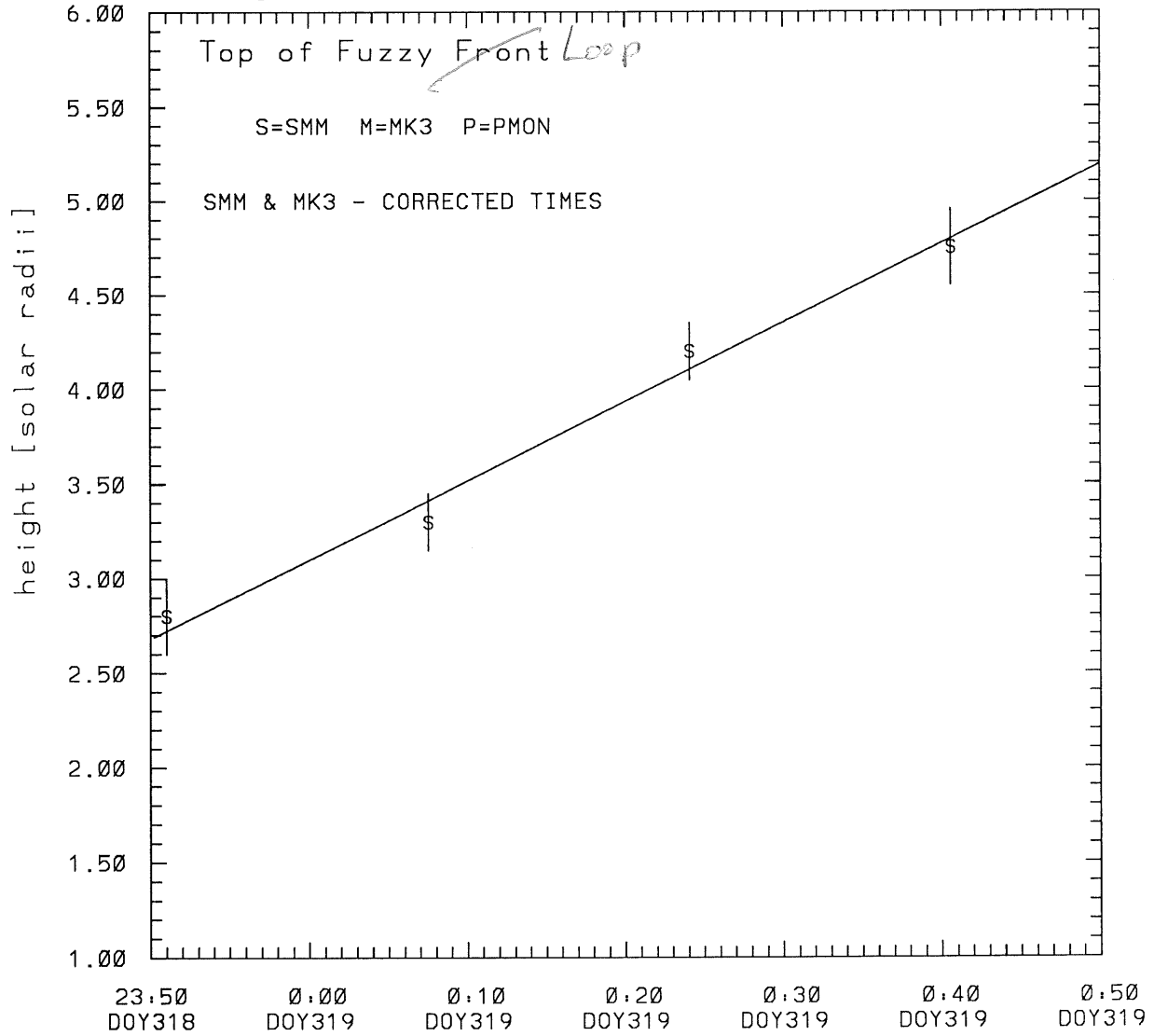
tstart=DOY318 23:10 +/-   1.4 [min.]
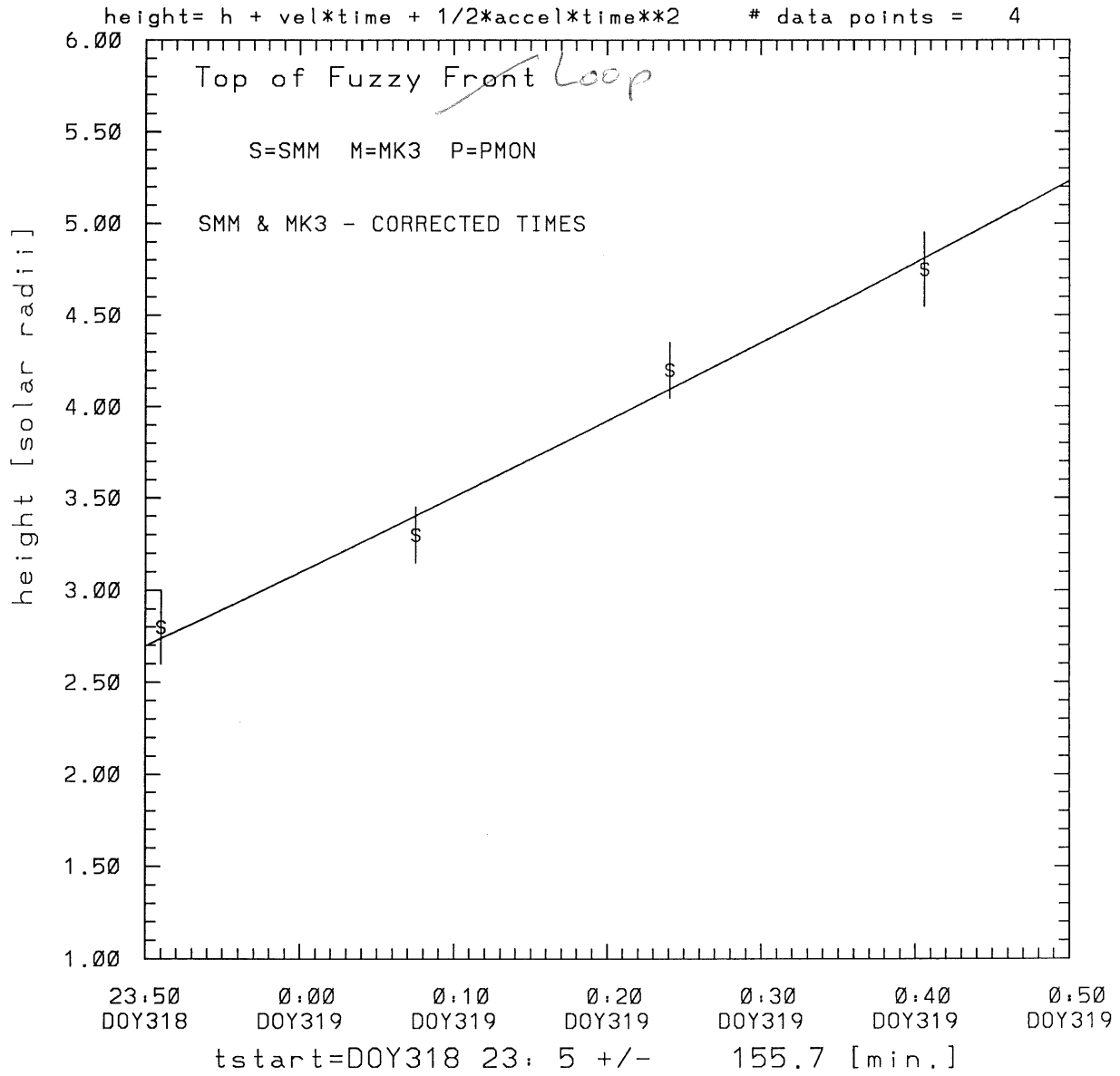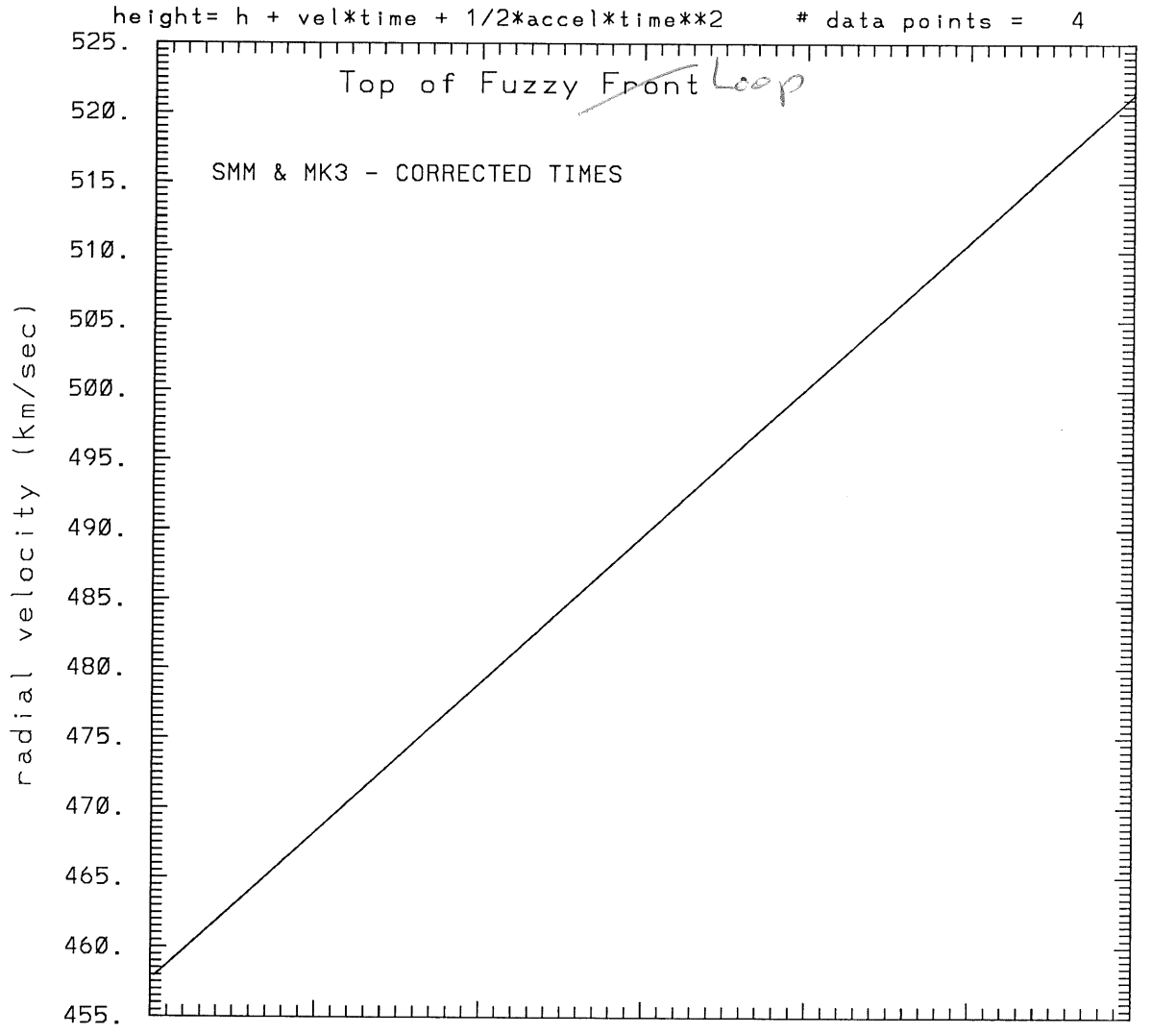radial velocity=   485. +/-   38. [km/sec]

SMM C/P 1988 DOY318 255 +/- Ø degrees

height= h + vel*time + 1/2*accel*time**2   # data points =   4

Top of Fuzzy Front Loop

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

23:50   Ø:00   Ø:10   Ø:20   Ø:30   Ø:40   Ø:50
DOY318   DOY319   DOY319   DOY319   DOY319   DOY319   DOY319

tstart=DOY318 23: 5 +/-   155.7 [min.]

radial acceleration= Ø.Ø177 +/- Ø.Ø95Ø [km/sec**2]

SMM C/P   1988 DOY318   255 +/-   0 degrees

height= h + vel*time + 1/2*accel*time**2   # data points =   4

Top of Fuzzy Front Loop

SMM & MK3 - CORRECTED TIMES

radial velocity (km/sec)

525.
520.
515.
510.
505.
500.
495.
490.
485.
480.
475.
470.
465.
460.
455.

23:50   0:00   0:10   0:20   0:30   0:40   0:50
DOY318   DOY319

tstart=DOY318 23: 5 +/-   155.7 [min.]

radial acceleration=0.177E-01 km/sec**2

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


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

			error in	error in		
year	doy	time	radii	radius	angle	angle	datatype
1988	318	23:51: 1	2.80 +/- 0.20	255.0 +/- 0.5	SMM
1988	319	0: 7:32	3.30 +/- 0.15	255.0 +/- 1.0	SMM
1988	319	0:24: 5	4.20 +/- 0.15	255.0 +/- 1.0	SMM
1988	319	0:40:36	4.75 +/- 0.20	255.0 +/- 1.0	SMM

```
*****************************************
 Structure being measured:
Top of Fuzzy Front  Loop
*****************************************


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


START TIME:

Event began at t = 0 + -0.402E+02 +/-  0.140E+01 [minutes]
In more convenient units:
Event began at DOY 318 23:10 +/-  0.140E+01 [minutes]

 Origin defined at DOY318 23:50

RADIAL INFORMATION:

RADIAL VELOCITY =   485. +/-   38. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

 c(1) =    0.268E+01 +/-   0.994E-01 [solar radii]
 c(2) =    0.418E-01 +/-   0.326E-02 [radii/min]
 c(2) =    0.485E+03 +/-   0.378E+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)= 0.10502E+00 [radii] see Bevington pg. 114
            error in c(2)= 0.33083E-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) = 255. +/-   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 23:51 =   0. km/sec
The TOTAL velocity at 23:51 = 485. km/sec

The TANGENTIAL velocity at 0: 7 =   0. km/sec
The TOTAL velocity at 0: 7 = 485. km/sec

The TANGENTIAL velocity at 0:24 =   0. km/sec
The TOTAL velocity at 0:24 = 485. km/sec

The TANGENTIAL velocity at 0:40 =   0. km/sec
The TOTAL velocity at 0:40 = 485. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.88
Standard Deviation in start time measurement =   0.185E+02
Error in time =   0.41356E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.112E-01
Reduced Chi Squared = 0.335E-01
Chi Squared = 0.670E-01
The probability for exceeding chi square = 0.989E+00

The correlation coefficient =   0.994E+00
The probability that no LINEAR correlation exists between the variables =   0.6206E-02
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	318	23:51: 1	2.80 +/-	0.20	255.0 +/-	0.5	SMM
1988	319	0: 7:32	3.30 +/-	0.15	255.0 +/-	1.0	SMM
1988	319	0:24: 5	4.20 +/-	0.15	255.0 +/-	1.0	SMM
1988	319	0:40:36	4.75 +/-	0.20	255.0 +/-	1.0	SMM

```
*****************************************
  Structure being measured:
Top of Fuzzy Front  Loop
*****************************************


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

START TIME:

Event began at t = 0 + -0.454E+02 +/- 0.156E+03 [minutes]
In more convenient units:
Event began at DOY 318 23: 5 +/- 0.156E+03 [minutes]

Origin defined at DOY318 23:50

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.177E-01 +/- 0.950E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

```
c(1) =   0.270E+01 +/-   0.156E+00 [solar radii]
c(2) =   0.395E-01 +/-   0.133E-01 [radii/min]
c(2) =   0.458E+03 +/-   0.154E+03 [km/sec]
c(3) =   0.458E-04 +/-   0.246E-03 [radii/min**2]
c(3) =   0.177E-01 +/-   0.950E-01 [km/sec**2]
```

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.17855E+00 [radii] Bevington pg 154 (8-30)
    Exact error in c(1) = 0.65659E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.16808E-01 [radii/min] Bevington pg 154 (8-30)
    Exact error in c(2) = 0.82617E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.31305E-03 [radii/min**] Bevington pg 154 (8-30)
    Exact error in c(3) = 0.15653E-03 [radii/min**] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 255. +/- 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 23:51 =   0. km/sec
The TOTAL velocity at 23:51 = 459. km/sec

The TANGENTIAL velocity at 0: 7 =   0. km/sec
The TOTAL velocity at 0: 7 = 476. km/sec

The TANGENTIAL velocity at 0:24 =   0. km/sec
The TOTAL velocity at 0:24 = 494. km/sec

The TANGENTIAL velocity at 0:40 =   0. km/sec
The TOTAL velocity at 0:40 = 511. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.88
Standard Deviation in start time measurement =   0.185E+02
Value of reduced Chi Squared returned from nllst2 = 0.166E-01
Reduced Chi Squared = 0.731E-01
Chi Squared = 0.731E-01
The probability for exceeding chi square = 0.898E+00

For a second order fit 3 correlation coefficients are given:
 (Using equation of motion: r = a + bt + at**2)
The correlation between the data and the term linear in time = 0.8731E+00
The correlation between the data and the time**2 term = 0.8444E+00
0The correlation between the data and the complete equation of motion = 0.9824E+00
 SEE BEVINGTON "Data Reduction and Error Analysis" [1969]