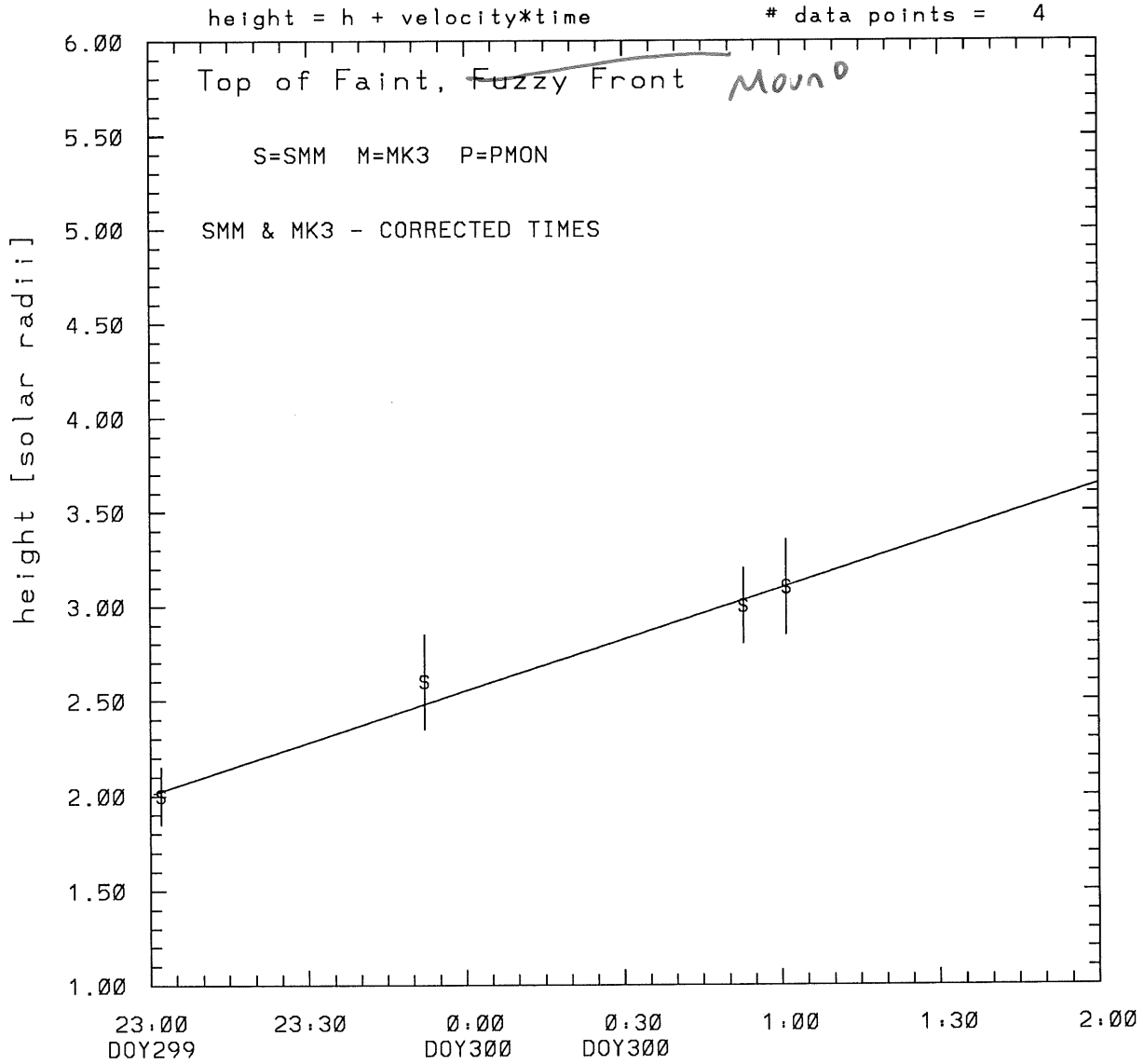
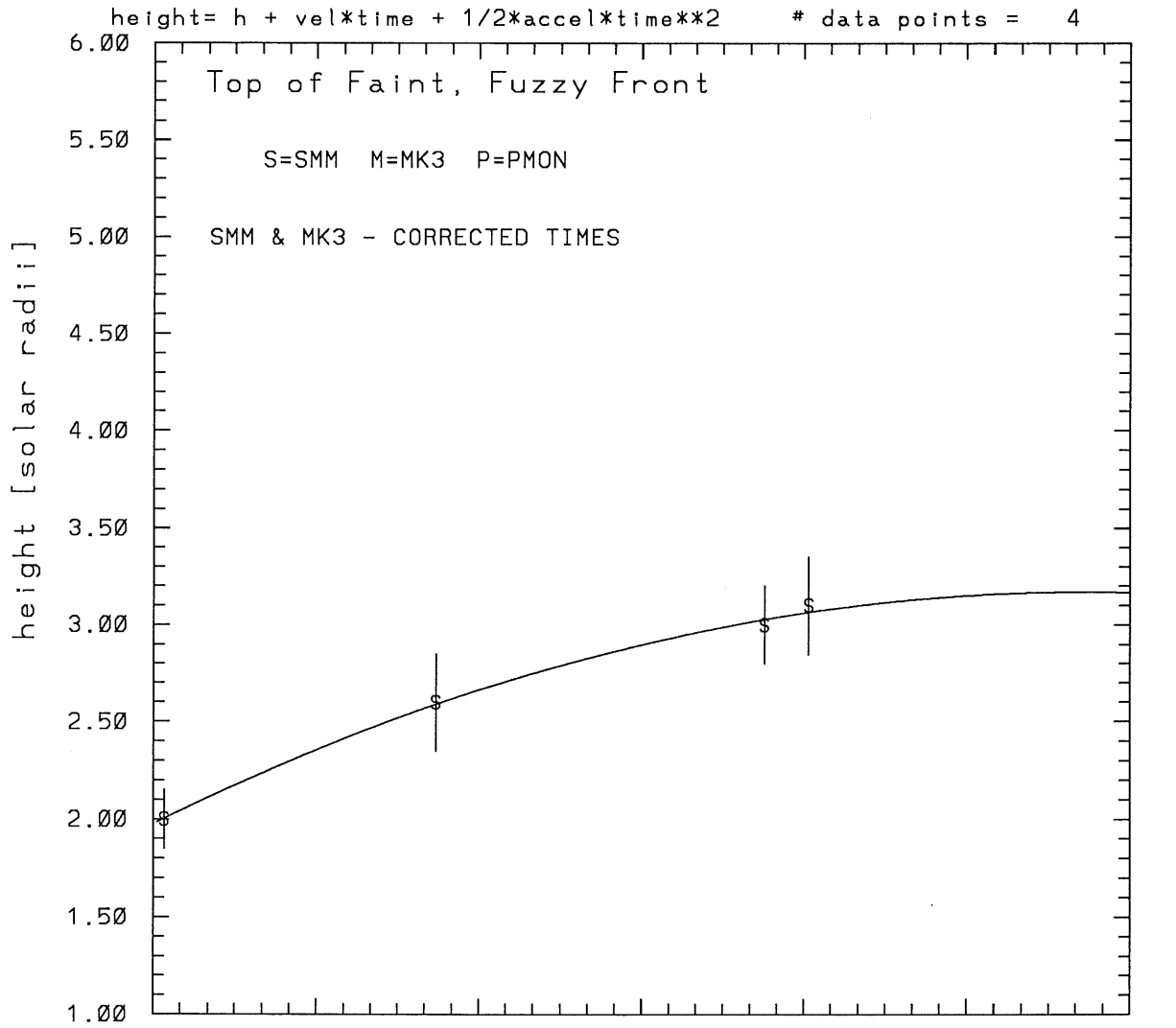


SMM C/P 1987 DOY299 245 +/- 0 degrees



tstart=DOY299 21:11 +/- 2.0 [min.]  
radial velocity= 105. +/- 7. [km/sec]

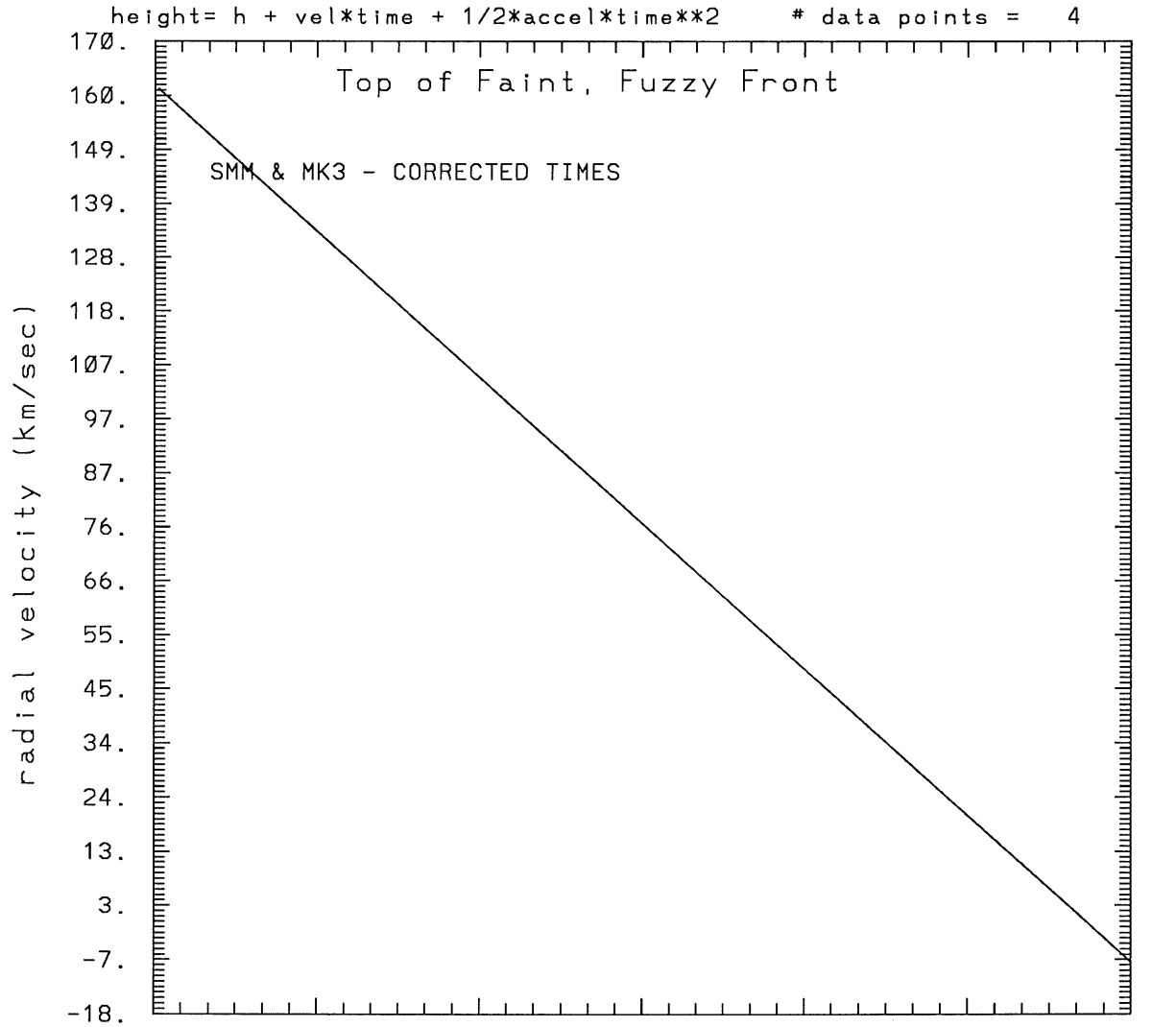
SMM C/P 1987 DOY299 245 +/- 0 degrees



tstart=DOY299 22: 2 +/- 7.1 [min.]

radial acceleration =  $-0.0157 +/- 0.0046$  [km/sec\*\*2]

SMM C/P 1987 DOY299 245 +/- 0 degrees



23:00  
DOY299

23:30

0:00  
DOY300

0:30

1:00

1:30

2:00

tstart=DOY299 22: 2 +/- 7.1 [min.]

radial acceleration=-.157E-01 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	error in radius	angle	error in angle	datatype
1987	299	23: 2: 0	2.00	+/- 0.15	245.0	+/- 0.5	SMM
1987	299	23:52: 3	2.60	+/- 0.25	245.0	+/- 0.5	SMM
1987	300	0:52:42	3.00	+/- 0.20	245.0	+/- 1.0	SMM
1987	300	1: 0:59	3.10	+/- 0.25	245.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Faint, Fuzzy Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.111\text{E}+03 \pm 0.201\text{E}+01$  [minutes]

In more convenient units:

Event began at DOY 299 21:11  $\pm 0.201\text{E}+01$  [minutes]

Origin defined at DOY299 23: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 105.  $\pm$  7. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.201\text{E}+01 \pm 0.447\text{E}-01$  [solar radii]  
 $c(2) = 0.909\text{E}-02 \pm 0.583\text{E}-03$  [radii/min]  
 $c(2) = 0.105\text{E}+03 \pm 0.676\text{E}+01$  [km/sec]  
 $c(3) = 0.000\text{E}+00 \pm 0.000\text{E}+00$  [radii/min\*\*2]  
 $c(3) = 0.000\text{E}+00 \pm 0.000\text{E}+00$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in  $c(1) = 0.80552\text{E}-01$  [radii] see Bevington pg. 114

error in  $c(2) = 0.92934\text{E}-03$  [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00  $\pm$  0.0000E+00[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 245. +/- 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: 2 = 0.000E+00 km/sec

The TOTAL velocity at 23: 2 = 105. km/sec

The TANGENTIAL velocity at 23:52 = 0.000E+00 km/sec

The TOTAL velocity at 23:52 = 105. km/sec

The TANGENTIAL velocity at 0:52 = 0.000E+00 km/sec

The TOTAL velocity at 0:52 = 105. km/sec

The TANGENTIAL velocity at 1: 0 = 0.000E+00 km/sec

The TOTAL velocity at 1: 0 = 105. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.50

Standard Deviation in start time measurement = 0.484E+02

Error in time = 0.13977E+02 using best fit method

See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.373E-02

Reduced Chi Squared = 0.164E-01

Chi Squared = 0.328E-01

The probability for exceeding chi square = 0.996E+00

The correlation coefficient = 0.990E+00

The probability that no LINEAR correlation exists between the variables = 0.9884E-02

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

\*\*\*\*\*

This is a 2 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	error in radius	angle	error in angle	datatype
1987	299	23: 2: 0	2.00	+/- 0.15	245.0	+/- 0.5	SMM
1987	299	23:52: 3	2.60	+/- 0.25	245.0	+/- 0.5	SMM
1987	300	0:52:42	3.00	+/- 0.20	245.0	+/- 1.0	SMM
1987	300	1: 0:59	3.10	+/- 0.25	245.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Faint, Fuzzy Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.596E+02 +/- 0.711E+01$  [minutes]

In more convenient units:

Event began at DOY 299 22: 2 +/- 0.711E+01 [minutes]

Origin defined at DOY299 23: 0

RADIAL INFORMATION:

RADIAL ACCELERATION =  $-0.157E-01 +/- 0.459E-02$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.197E+01 +/- 0.230E-01$  [solar radii]  
 $c(2) = 0.139E-01 +/- 0.144E-02$  [radii/min]  
 $c(2) = 0.162E+03 +/- 0.167E+02$  [km/sec]  
 $c(3) = -0.406E-04 +/- 0.119E-04$  [radii/min\*\*2]  
 $c(3) = -0.157E-01 +/- 0.459E-02$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in  $c(1) = 0.49130E-01$  [radii] Bevington pg 154 (8-30)

Exact error in  $c(1) = 0.16499E-02$  [radii] Bevington pg 154 (8-28)

Approximate error in  $c(2) = 0.21466E-02$  [radii/min] Bevington pg 154 (8-30)

Exact error in  $c(2) = 0.45342E-03$  [radii/min] Bevington pg 154 (8-28)

Approximate error in  $c(3) = 0.16562E-04$  [radii/min\*\*] Bevington pg 154 (8-30)

Exact error in  $c(3) = 0.46551E-05$  [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) = 245. +/- 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: 2 = 0.000E+00 km/sec

The TOTAL velocity at 23: 2 = 160. km/sec

The TANGENTIAL velocity at 23:52 = 0.000E+00 km/sec

The TOTAL velocity at 23:52 = 113. km/sec

The TANGENTIAL velocity at 0:52 = 0.000E+00 km/sec

The TOTAL velocity at 0:52 = 55. km/sec

The TANGENTIAL velocity at 1: 0 = 0.000E+00 km/sec

The TOTAL velocity at 1: 0 = 48. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.50

Standard Deviation in start time measurement = 0.484E+02

Value of reduced Chi Squared returned from nllst2 = 0.818E-03

Reduced Chi Squared = 0.760E-02

Chi Squared = 0.760E-02

The probability for exceeding chi square = 0.977E+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 = 0.1125E+01

The correlation between the data and the time\*\*2 term = 0.1002E+01

The correlation between the data and the complete equation of motion = 0.9956E+00

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]