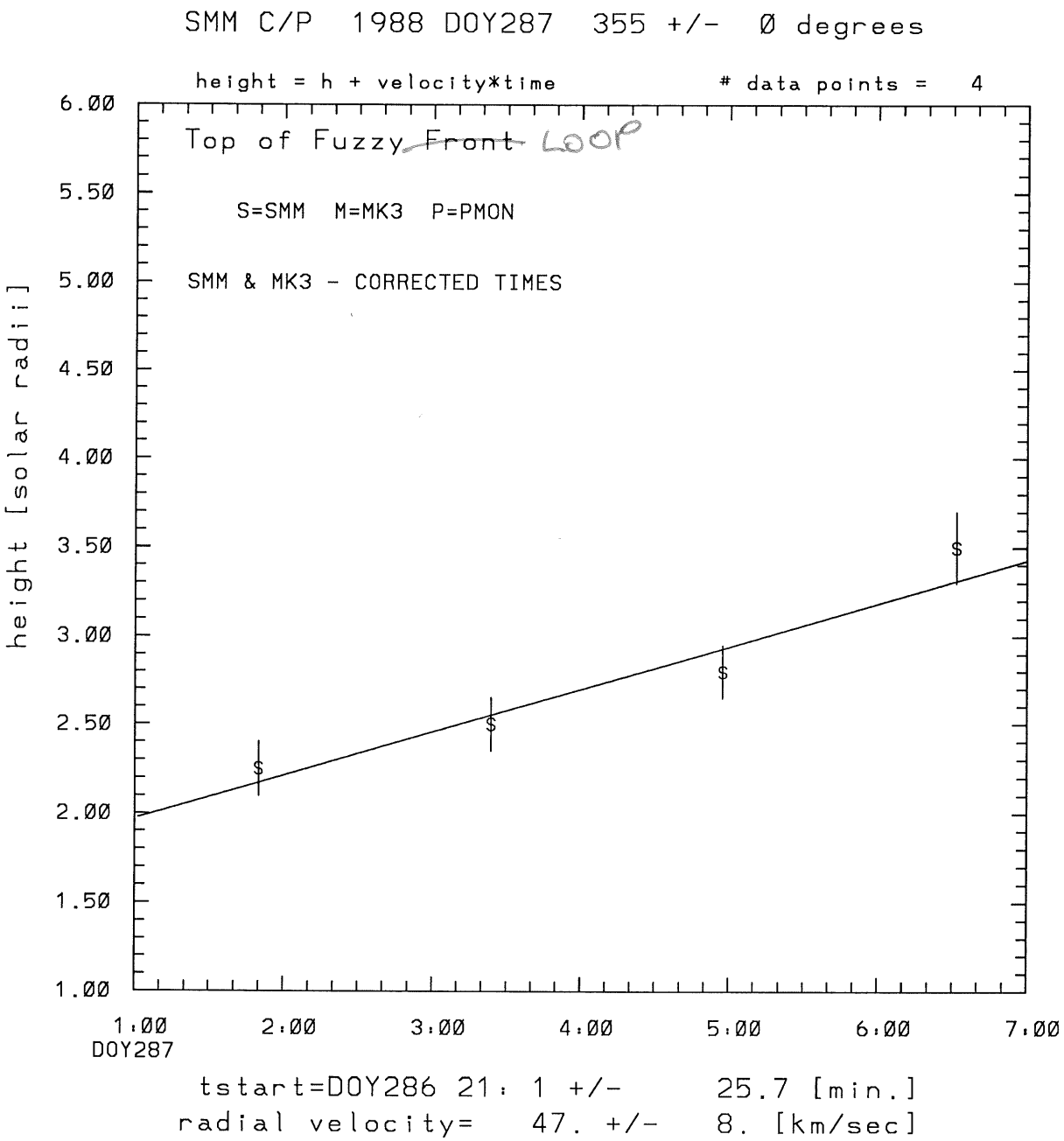
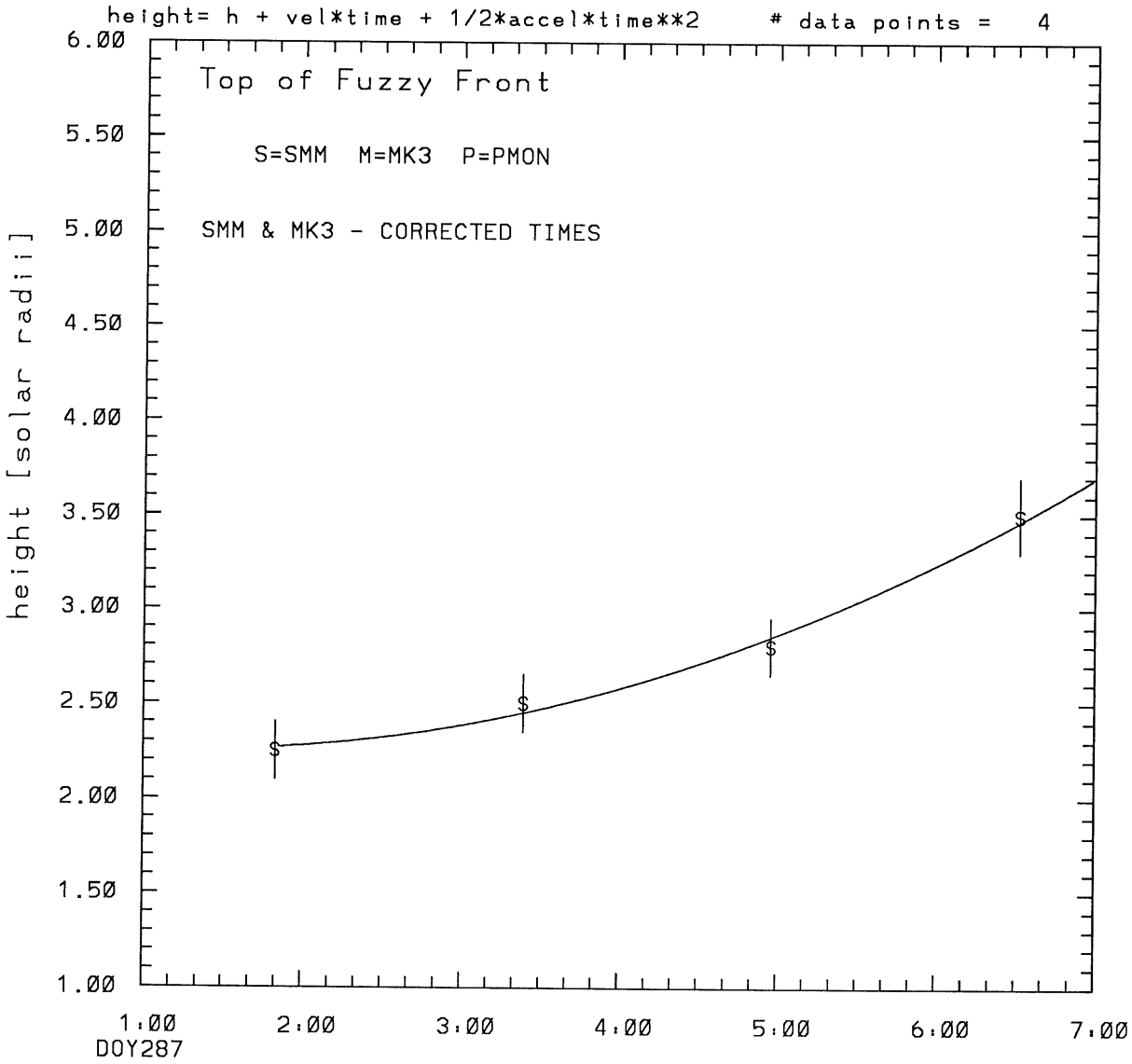

SMM C/P 1988 DOY287 355 +/- Ø degrees
height = h + velocity*time
# data points = 4
Top of Fuzzy ~~Front~~ Loop
S=SMM M=MK3 P=PMON
SMM & MK3 - CORRECTED TIMES
height [solar radii]
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
1:00
DOY287
2:00
3:00
4:00
5:00
6:00
7:00
tstart=DOY286 21: 1 +/- 25.7 [min.]
radial velocity= 47. +/- 8. [km/sec]

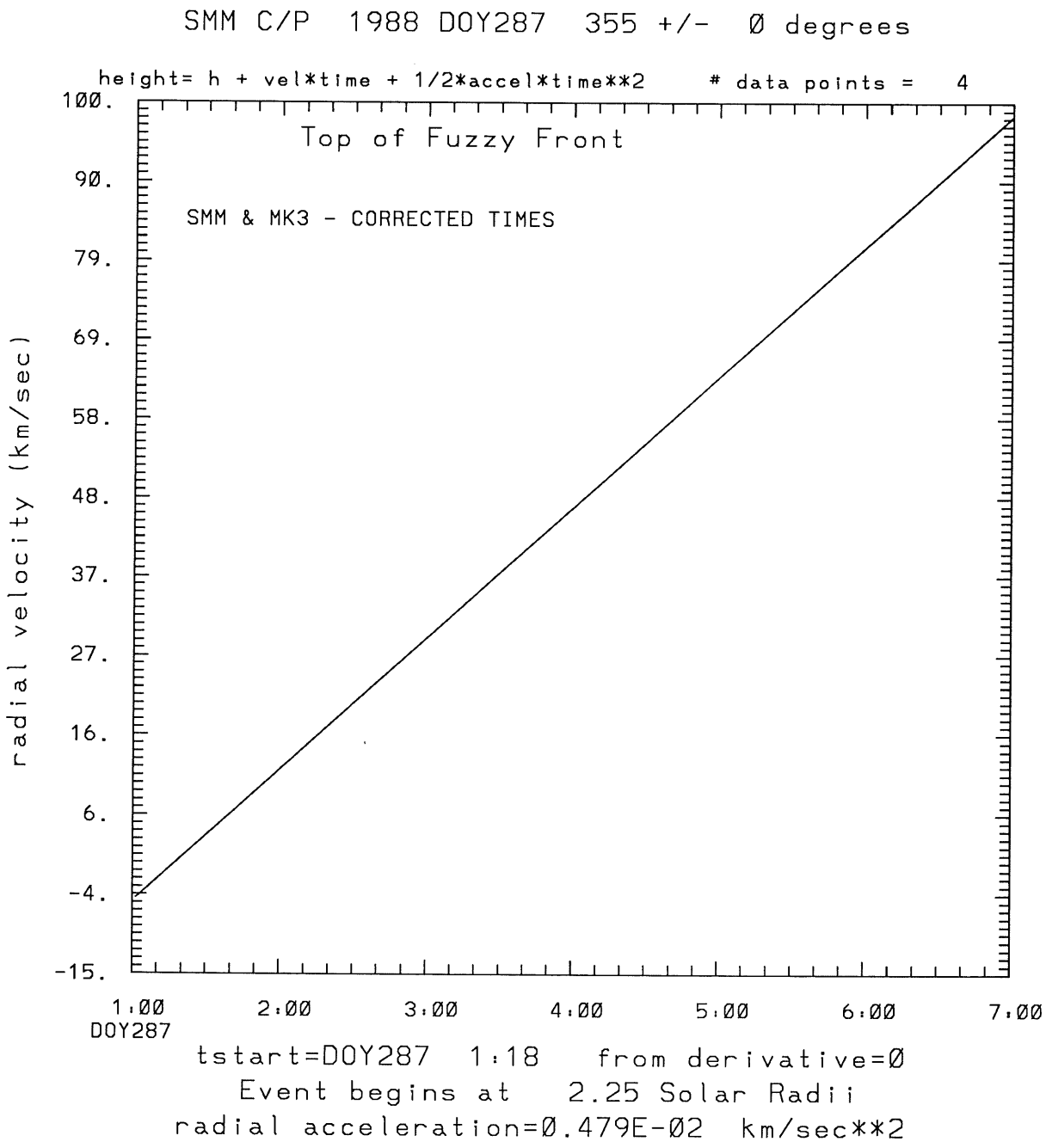
SMM C/P 1988 DOY287 355 +/- Ø degrees



tstart=DOY287 1:18 from derivative=Ø

Event begins at 2.25 Solar Radii

radial acceleration= Ø.ØØ48 +/- Ø.ØØ13 [km/sec**2]



tstart=DOY287 1:18 from derivative=Ø

Event begins at 2.25 Solar Radii

radial acceleration=Ø.479E-Ø2 km/sec**2

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

****
INPUT:
****

year doy	time	radii	error in radius	angle	error in angle	datatype
1988 287	1:49:54	2.25	+/- 0.15	355.0	+/- 0.5	SMM
1988 287	3:23:46	2.50	+/- 0.15	355.0	+/- 0.5	SMM
1988 287	4:57:38	2.80	+/- 0.15	355.0	+/- 0.5	SMM
1988 287	6:31:30	3.50	+/- 0.20	355.0	+/- 1.0	SMM

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

****
OUTPUT:
****

START TIME:

Event began at t = 0 + -0.239E+03 +/- 0.257E+02 [minutes]
In more convenient units:
Event began at DOY 286 21: 1 +/- 0.257E+02 [minutes]

Origin defined at DOY287 1: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 47. +/- 8. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.197E+01 +/- 0.133E+00 [solar radii]
c(2) = 0.405E-02 +/- 0.669E-03 [radii/min]
c(2) = 0.470E+02 +/- 0.776E+01 [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)= 0.18179E+00 [radii] see Bevington pg. 114
error in c(2)= 0.83515E-03 [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) = 355. +/- 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 1:49 = 0. km/sec
The TOTAL velocity at 1:49 = 47. km/sec

The TANGENTIAL velocity at 3:23 = 0. km/sec
The TOTAL velocity at 3:23 = 47. km/sec

The TANGENTIAL velocity at 4:57 = 0. km/sec
The TOTAL velocity at 4:57 = 47. km/sec

The TANGENTIAL velocity at 6:31 = 0. km/sec
The TOTAL velocity at 6:31 = 47. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.54
Standard Deviation in start time measurement = 0.105E+03
Error in time = 0.61170E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.173E-01
Reduced Chi Squared = 0.102E+00
Chi Squared = 0.204E+00
The probability for exceeding chi square = 0.983E+00

The correlation coefficient = 0.967E+00
The probability that no LINEAR correlation exists between the variables = 0.3290E-01
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
1988	287	1:49:54	2.25	+/- 0.15	355.0	+/- 0.5	SMM
1988	287	3:23:46	2.50	+/- 0.15	355.0	+/- 0.5	SMM
1988	287	4:57:38	2.80	+/- 0.15	355.0	+/- 0.5	SMM
1988	287	6:31:30	3.50	+/- 0.20	355.0	+/- 1.0	SMM

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

****
OUTPUT:
****

START TIME:

tstart=DOY287 1:18 from derivative = 0
Event begins at 2.25 Solar Radii
Origin defined at DOY287 1: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.479E-02 +/- 0.130E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.226E+01 +/- 0.978E-01 [solar radii]
c(2) = -0.455E-03 +/- 0.126E-02 [radii/min]
c(2) = -0.528E+01 +/- 0.146E+02 [km/sec]
c(3) = 0.124E-04 +/- 0.336E-05 [radii/min**2]
c(3) = 0.479E-02 +/- 0.130E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.14063E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.44385E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.17573E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.83906E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.44999E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.22485E-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) = 355. +/- 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 1:49 = 0. km/sec
The TOTAL velocity at 1:49 = 9. km/sec

The TANGENTIAL velocity at 3:23 = 0. km/sec
The TOTAL velocity at 3:23 = 36. km/sec

The TANGENTIAL velocity at 4:57 = 0. km/sec
The TOTAL velocity at 4:57 = 63. km/sec

The TANGENTIAL velocity at 6:31 = 0. km/sec
The TOTAL velocity at 6:31 = 90. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.54
Standard Deviation in start time measurement = 0.105E+03
Value of reduced Chi Squared returned from nllst2 = 0.331E-02
Reduced Chi Squared = 0.166E-01
Chi Squared = 0.166E-01
The probability for exceeding chi square = 0.954E+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 = 0.9136E+00
The correlation between the data and the time**2 term = 0.9104E+00
0The correlation between the data and the complete equation of motion = 0.9891E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]