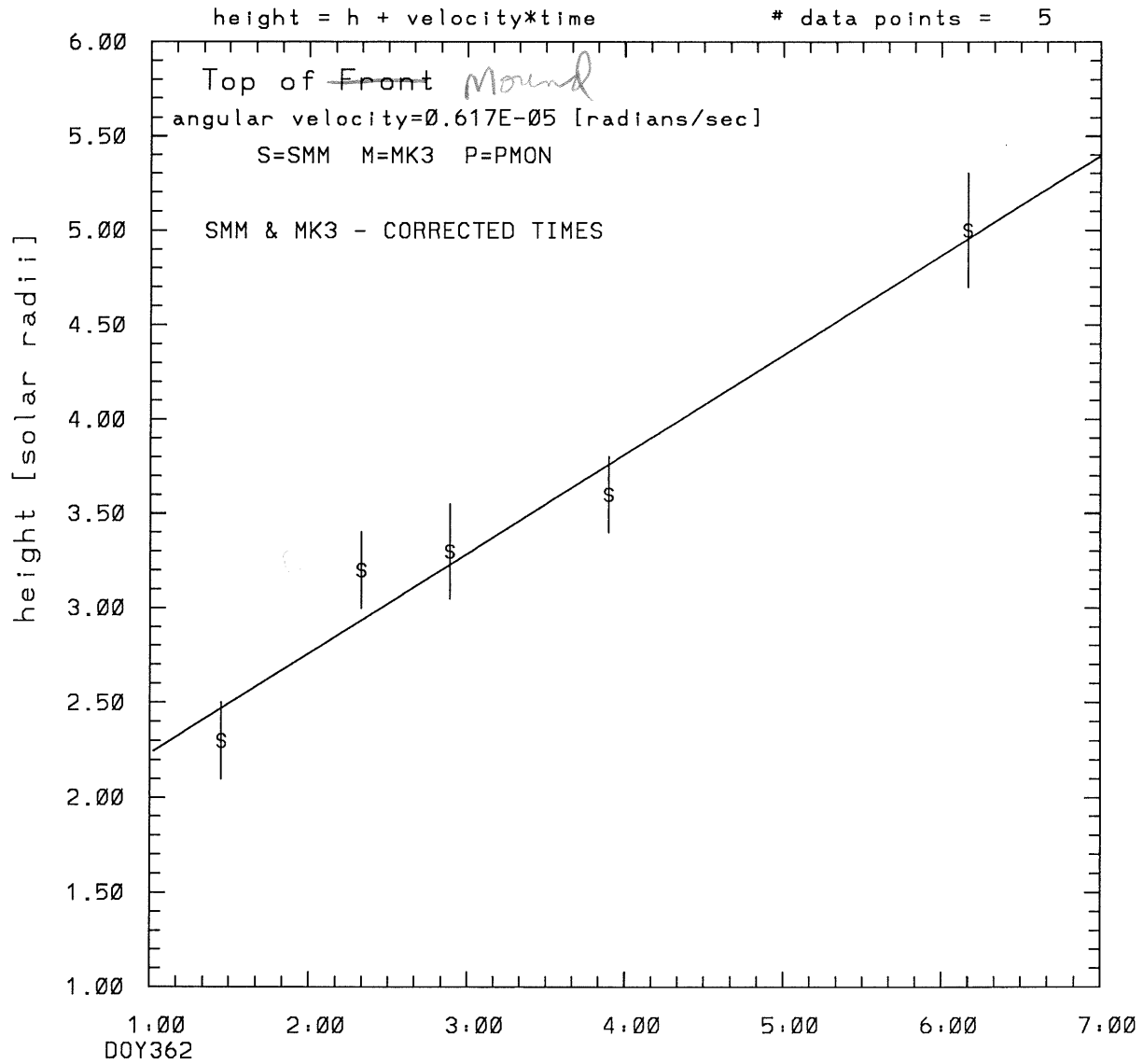
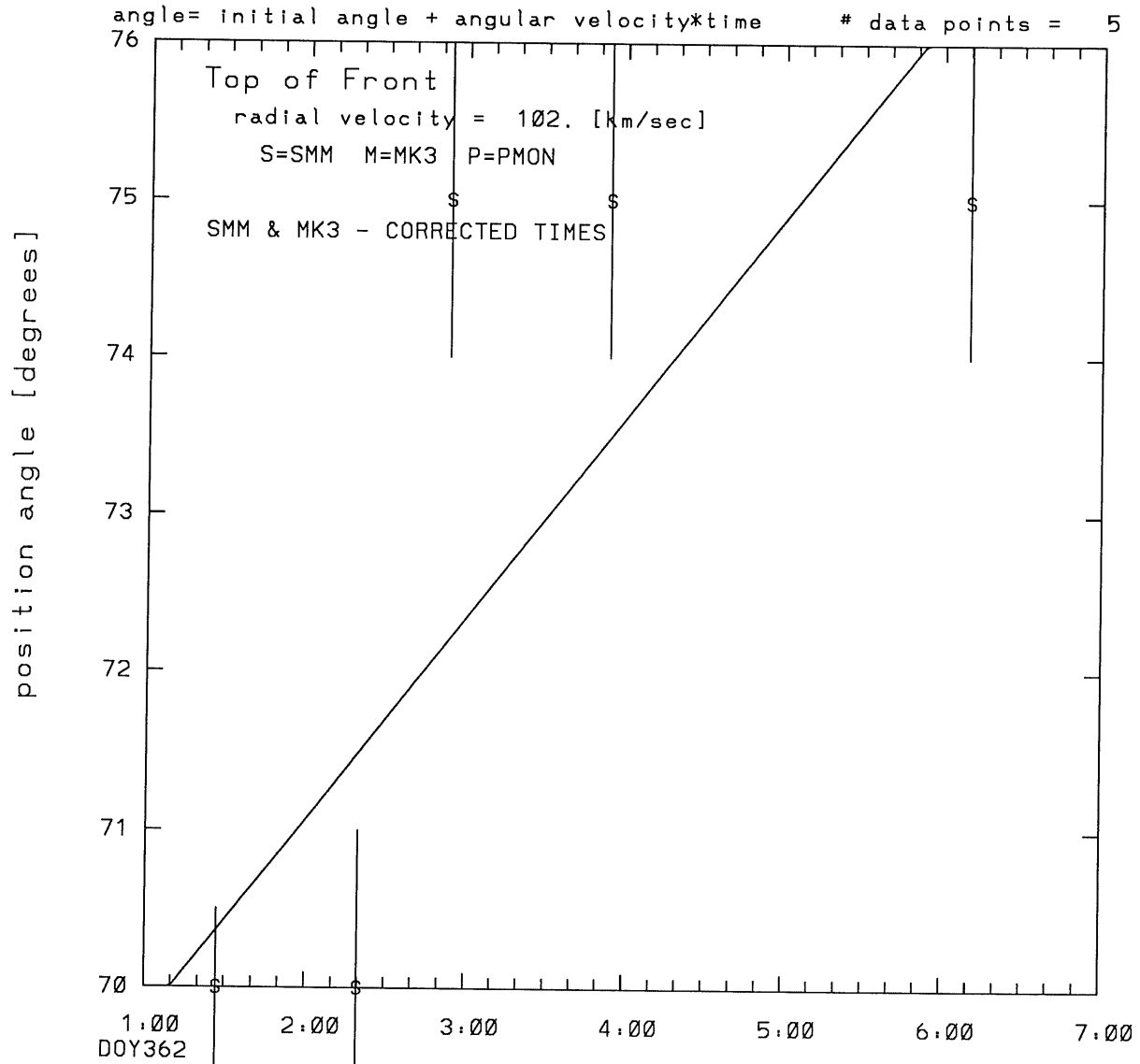


SMM C/P 1987 DOY362 73 +/- 3 degrees



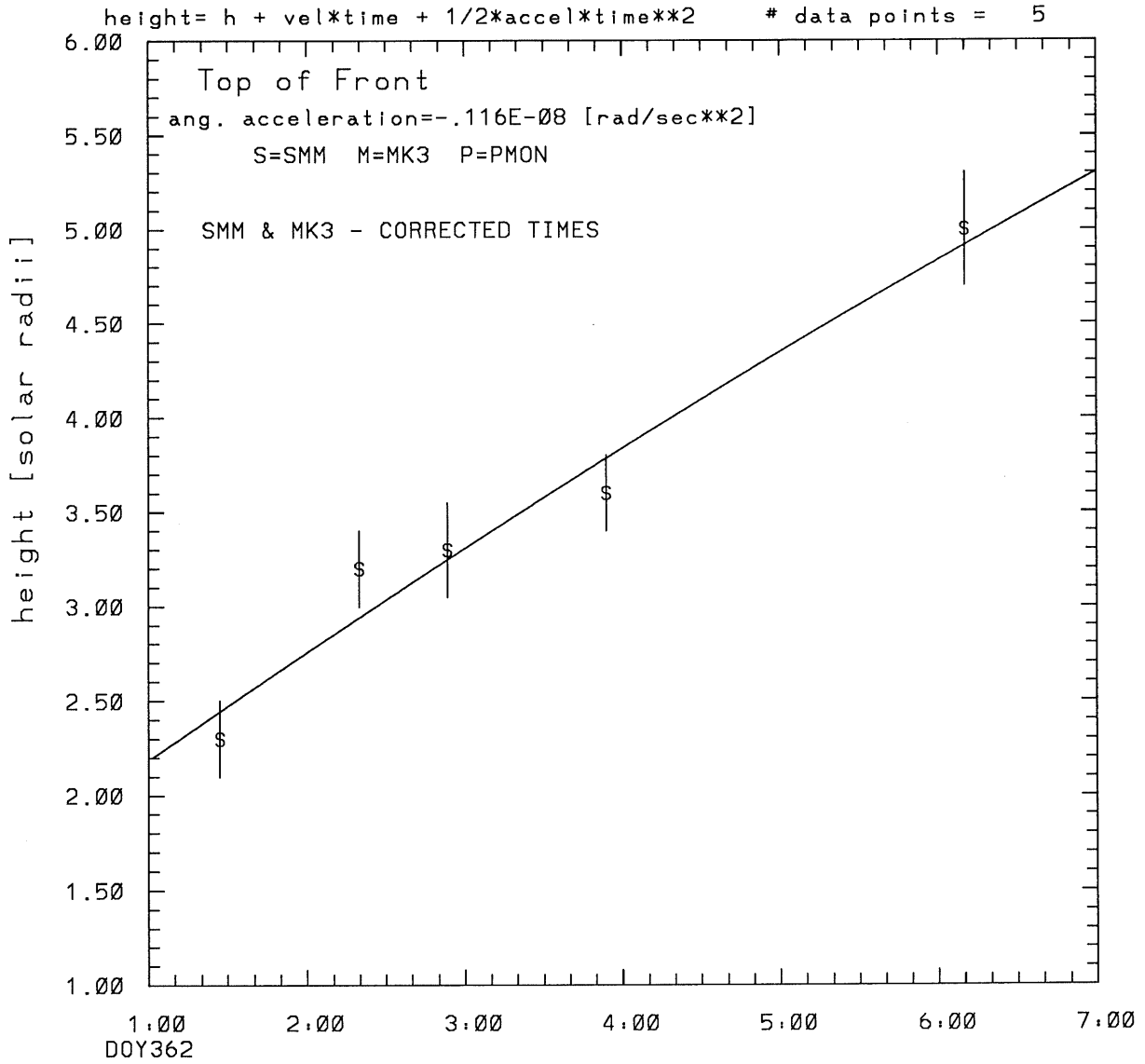
tstart=DOY361 22:40 +/- 4.7 [min.]
radial velocity= 102. +/- 12. [km/sec]

SMM C/P 1987 DOY362 73 +/- 3 degrees



tstart = DOY361 22:40 +/- 4.7 [min.]
angular velocity = 0.617E-05 +/- 0.209E-05 [rad/sec]

SMM C/P 1987 DOY362 73 +/- 3 degrees



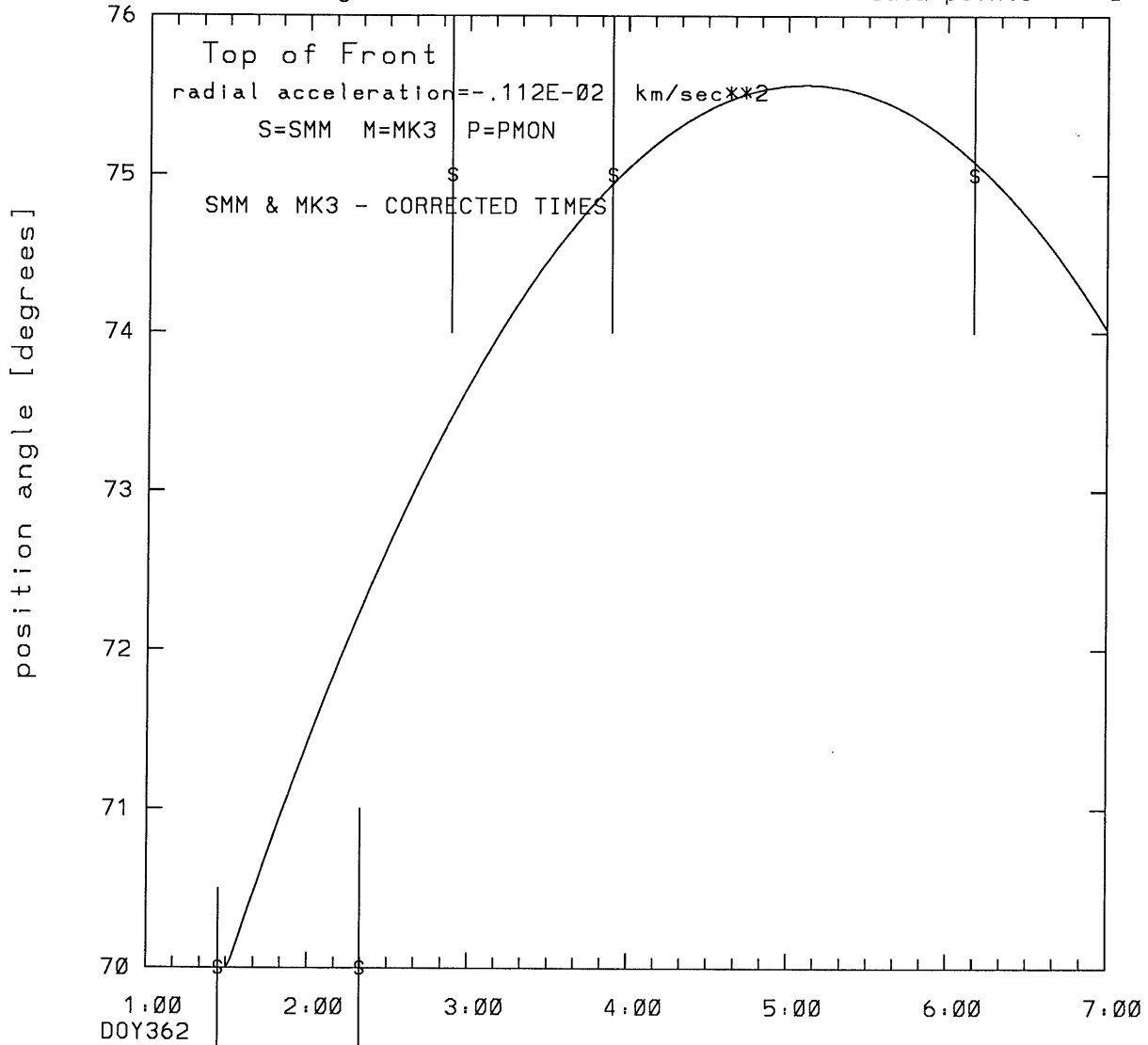
tstart = DOY361 23: 4 +/- 185.5 [min.]

radial acceleration = $-0.0011 +/- 0.0048$ [km/sec**2]

SMM C/P 1987 DOY362 73 +/- 3 degrees

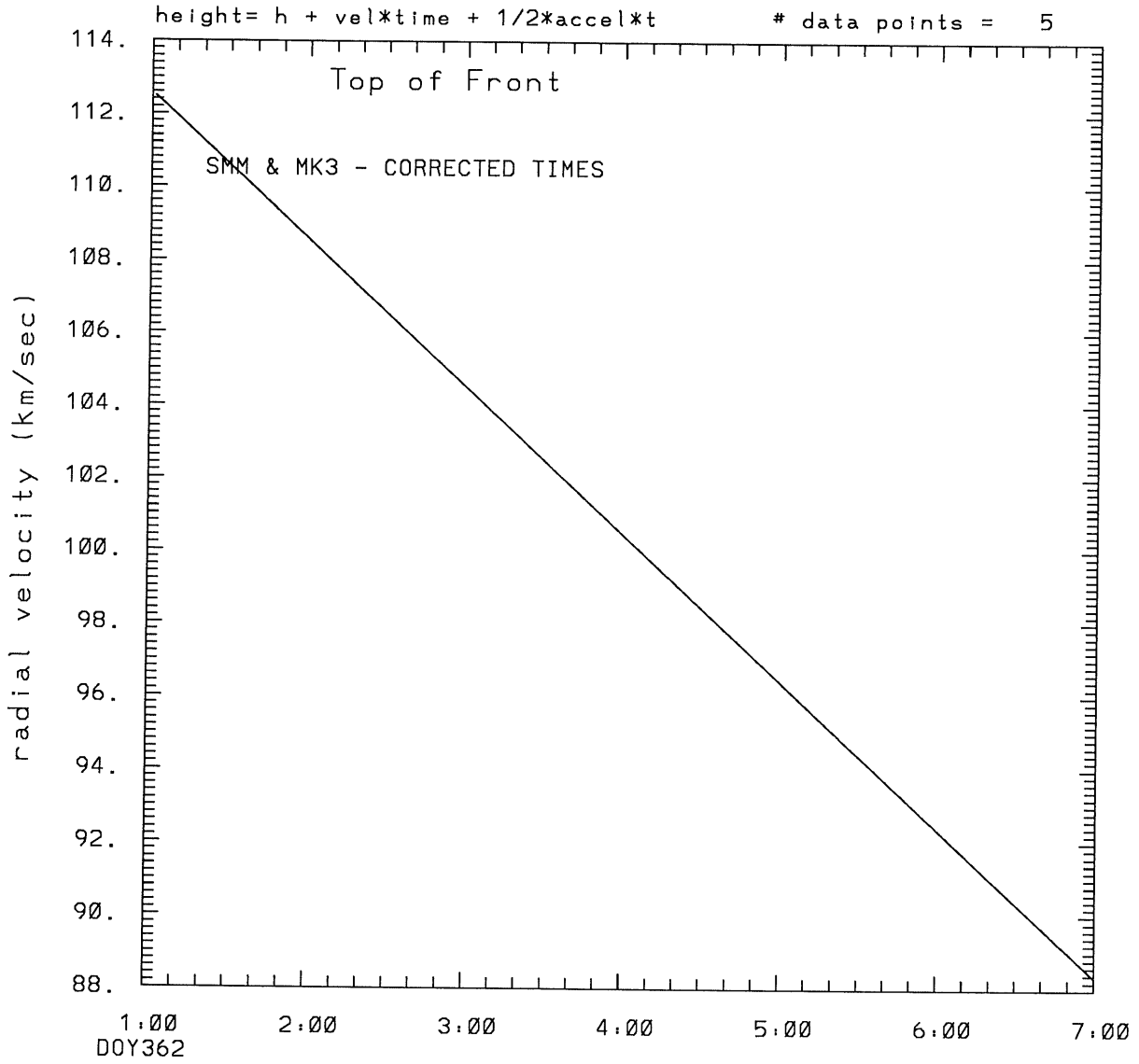
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2

data points = 5



tstart = DOY361 23: 4 +/- 185.5 [min.]
angular acceleration = $-.116E-08$ +/- $0.690E-09$ [rad/sec**2]

SMM C/P 1987 DOY362 73 +/- 3 degrees



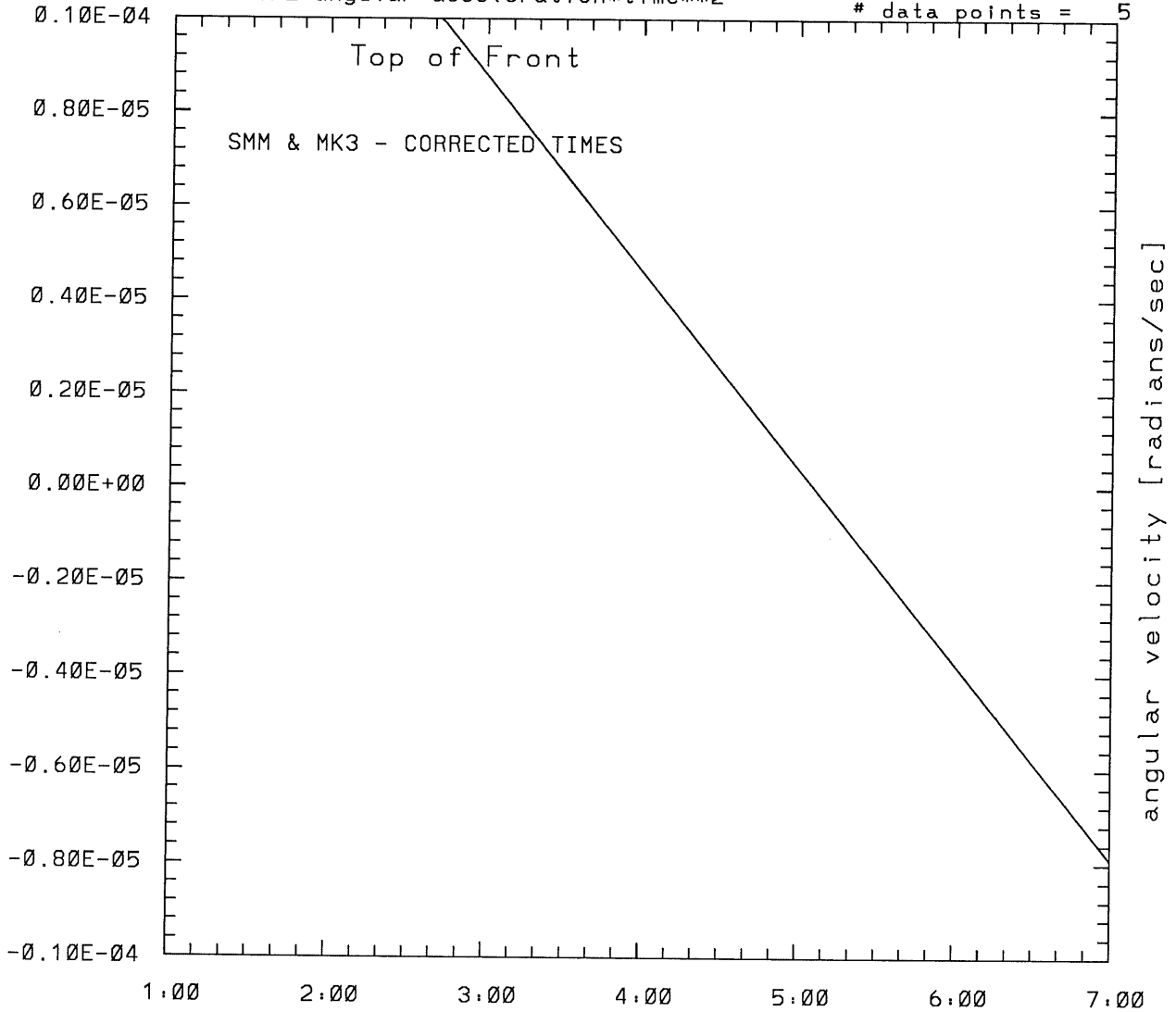
tstart=DOY361 23: 4 +/- 185.5 [min.]

radial acceleration=-.112E-02 km/sec**2

SMM C/P 1987 DOY362 73 +/- 3 degrees

$$\text{angle} = \text{initial angle} + \text{angular velocity} * \text{time} + \frac{1}{2} \text{angular acceleration} * \text{time}^2$$

data points = 5



DOY362

tstart=DOY361 23: 4 +/- 185.5 [min.]

angular acceleration=-.116E-08 +/-

0.690E-09 [rad/sec**2]

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1987	362	1:26:59	2.30 +/- 0.20	70.0 +/- 0.5		SMM	
1987	362	2:19:52	3.20 +/- 0.20	70.0 +/- 1.0		SMM	
1987	362	2:53:27	3.30 +/- 0.25	75.0 +/- 1.0		SMM	
1987	362	3:54: 2	3.60 +/- 0.20	75.0 +/- 1.0		SMM	
1987	362	6:10: 1	5.00 +/- 0.30	75.0 +/- 1.0		SMM	

Structure being measured:
Top of Mound

OUTPUT:

START TIME:

Event began at t = 0 + -0.140E+03 +/- 0.473E+01 [minutes]
In more convenient units:
Event began at DOY 361 22:40 +/- 0.473E+01 [minutes]

Origin defined at DOY362 1: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 102. +/- 12. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.223E+01 +/- 0.155E+00 [solar radii]
c(2) = 0.878E-02 +/- 0.105E-02 [radii/min]
c(2) = 0.102E+03 +/- 0.122E+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)= 0.16559E+00 [radii] see Bevington pg. 114
error in c(2)= 0.96780E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.6166E-05 +/- 0.2090E-05 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 70. +/- 1. [degrees]
a(2) = 0.212E-01 +/- 0.719E-02 [degrees/min]
a(2) = 0.617E-05 +/- 0.209E-05 [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 RADIAL velocity at 1:26 = 102. km/sec

The RADIAL velocity at 2:19 = 102. km/sec

The RADIAL velocity at 2:53 = 102. km/sec

The RADIAL velocity at 3:54 = 102. km/sec

The RADIAL velocity at 6:10 = 102. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.98

Standard Deviation in start time measurement = 0.971E+02

Error in time = 0.41467E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.396E-01

Reduced Chi Squared = 0.997E-01

Chi Squared = 0.299E+00

The probability for exceeding chi square = 0.989E+00

The correlation coefficient = 0.983E+00

The probability that no LINEAR correlation exists between the variables = 0.27371

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

This is a 2 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1987	362	1:26:59	2.30 +/- 0.20	70.0 +/- 0.5		SMM	
1987	362	2:19:52	3.20 +/- 0.20	70.0 +/- 1.0		SMM	
1987	362	2:53:27	3.30 +/- 0.25	75.0 +/- 1.0		SMM	
1987	362	3:54: 2	3.60 +/- 0.20	75.0 +/- 1.0		SMM	
1987	362	6:10: 1	5.00 +/- 0.30	75.0 +/- 1.0		SMM	

Structure being measured:
Top of Mound

OUTPUT:

START TIME:

Event began at t = 0 + -0.118E+03 +/- 0.186E+03 [minutes]
In more convenient units:
Event began at DOY 361 23: 4 +/- 0.186E+03 [minutes]

Origin defined at DOY362 1: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.112E-02 +/- 0.484E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.218E+01 +/- 0.275E+00 [solar radii]
c(2) = 0.971E-02 +/- 0.418E-02 [radii/min]
c(2) = 0.113E+03 +/- 0.485E+02 [km/sec]
c(3) = -0.290E-05 +/- 0.125E-04 [radii/min**2]
c(3) = -0.112E-02 +/- 0.484E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.34056E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.14028E+00 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.49553E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.17957E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.13804E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.45318E-05 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= -0.1158E-08 +/- 0.6901E-09[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 68. +/- 1. [degrees]
a(2) = 0.589E-01 +/- 0.232E-01 [degrees/min]
a(2) = 0.171E-04 +/- 0.675E-05 [rad/sec]
a(3) = -0.119E-03 +/- 0.712E-04 [degrees/min**2]
a(3) = -0.116E-08 +/- 0.690E-09 [rad/sec**2]

The RADIAL velocity at 1:26 = 111. km/sec
The RADIAL velocity at 2:19 = 107. km/sec
The RADIAL velocity at 2:53 = 105. km/sec
The RADIAL velocity at 3:54 = 101. km/sec
The RADIAL velocity at 6:10 = 92. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.98
Standard Deviation in start time measurement = 0.971E+02
Value of reduced Chi Squared returned from nllst2 = 0.519E-01
Reduced Chi Squared = 0.169E+00
Chi Squared = 0.337E+00
The probability for exceeding chi square = 0.949E+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 = 0.8736E+00
The correlation between the data and the time**2 term = 0.7782E+00
The correlation between the data and the complete equation of motion=0.9457E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]