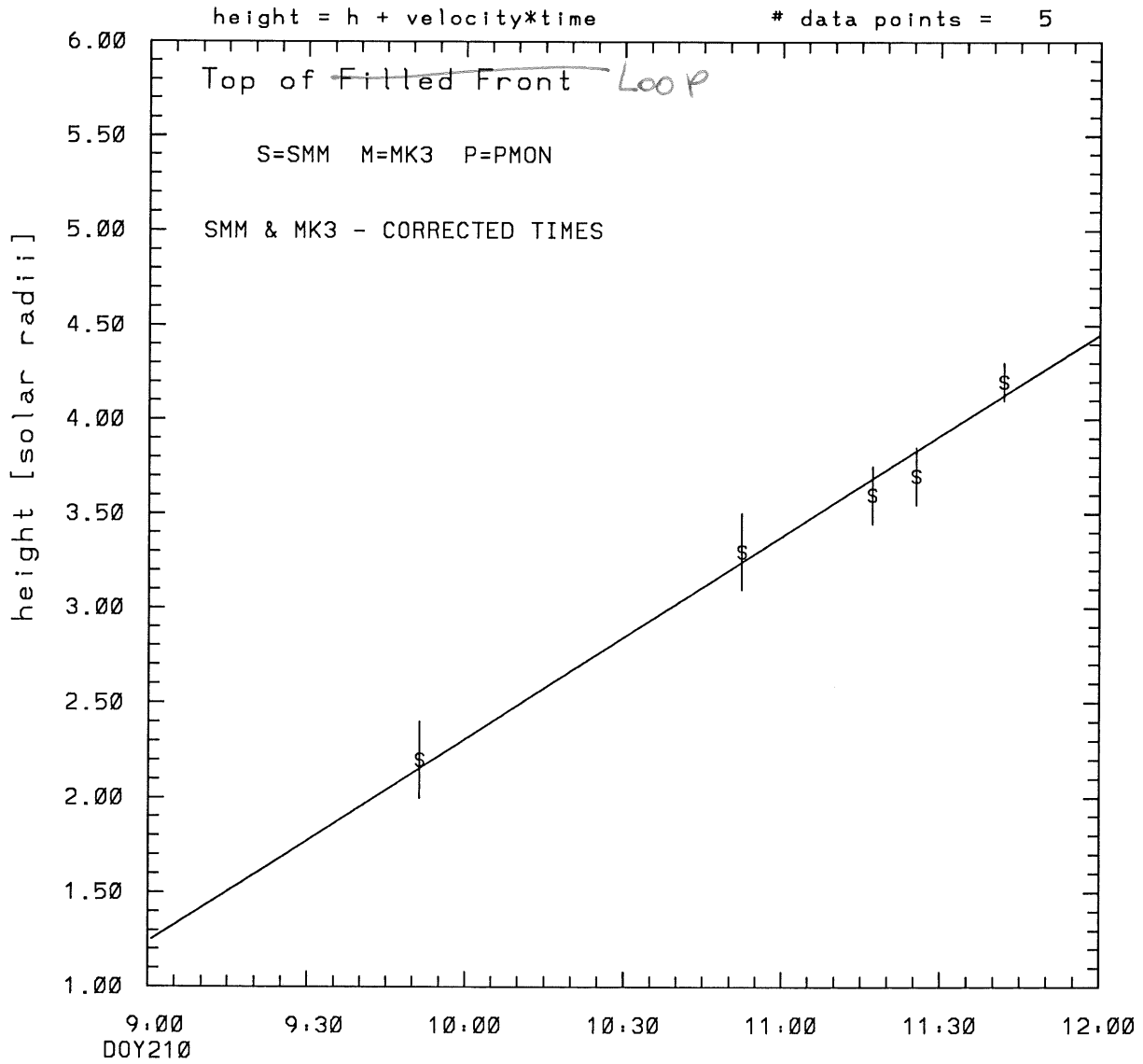
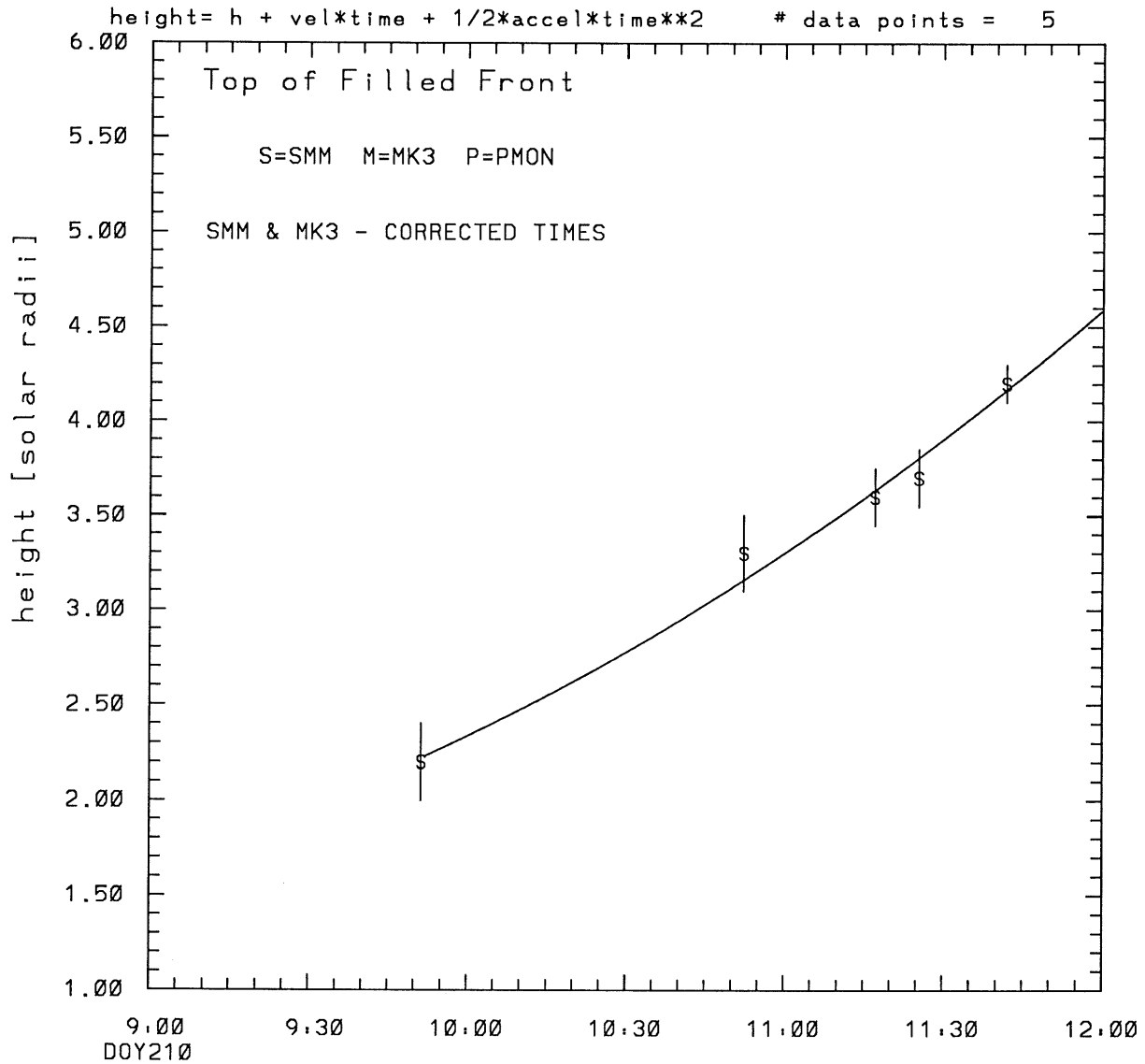


SMM C/P 1988 DOY210 260 +/- 0 degrees



tstart=DOY210 8.47 +/- 0.5 [min.]
radial velocity= 207. +/- 15. [km/sec]

SMM C/P 1988 DOY210 260 +/- 0 degrees

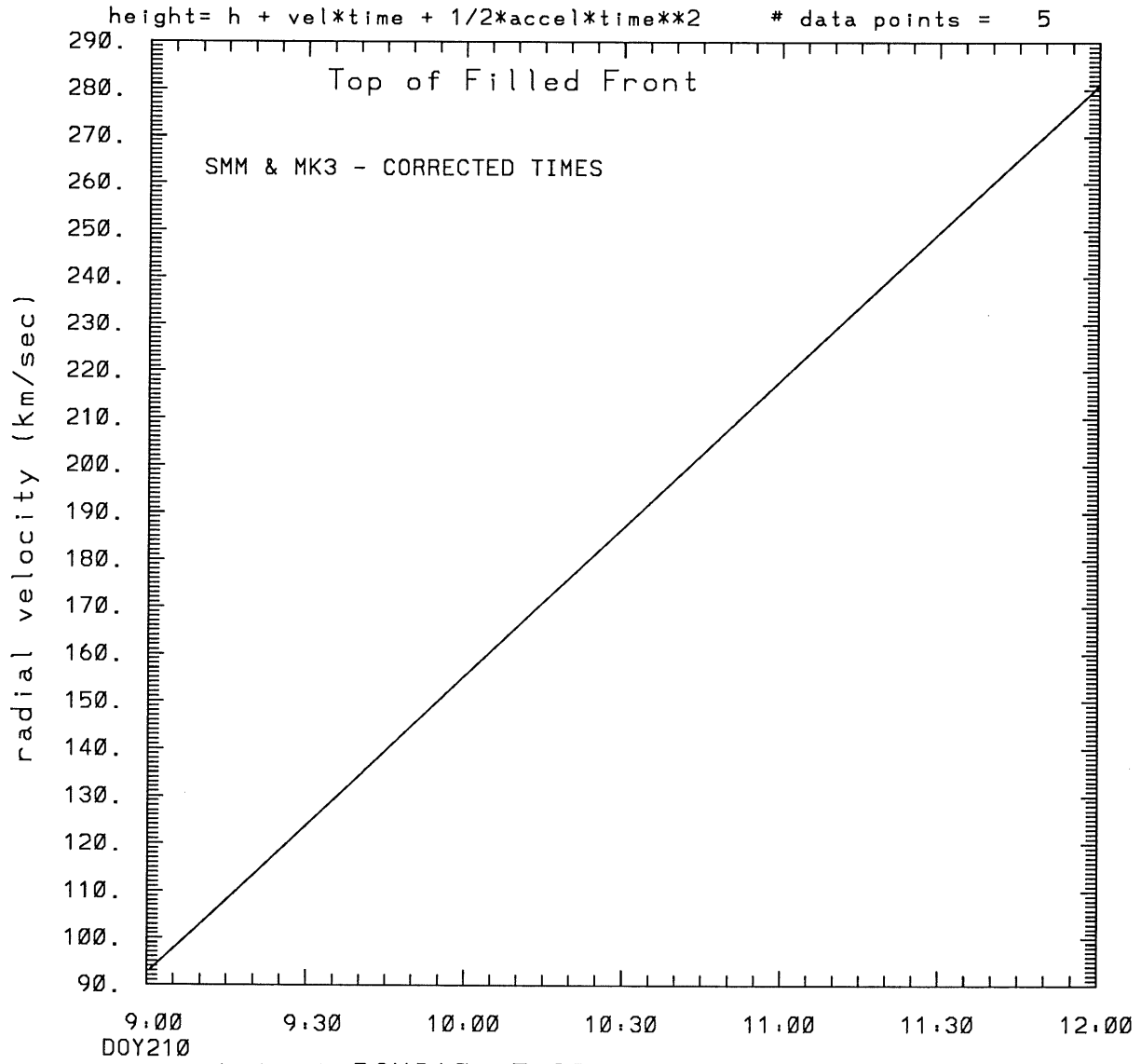


tstart=DOY210 7:32 from derivative=0

Event begins at 1.34 Solar Radii

radial acceleration = 0.0175 +/- 0.0143 [km/sec**2]

SMM C/P 1988 DOY210 260 +/- 0 degrees



tstart=DOY210 7:32 from derivative=0
Event begins at 1.34 Solar Radii
radial acceleration=0.175E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	210	9:51:22	2.20	+/- 0.20	260.0	+/- 0.5	SMM
1988	210	10:52:22	3.30	+/- 0.20	260.0	+/- 1.0	SMM
1988	210	11:17:10	3.60	+/- 0.15	260.0	+/- 1.0	SMM
1988	210	11:25:26	3.70	+/- 0.15	260.0	+/- 1.0	SMM
1988	210	11:41:55	4.20	+/- 0.10	260.0	+/- 1.0	SMM

Structure being measured:

Top of ~~Filled Front~~ Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.134E+02 +/- 0.532E+00$ [minutes]

In more convenient units:

Event began at DOY 210 8:47 +/- 0.532E+00 [minutes]

Origin defined at DOY210 9: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 207. +/- 15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.124E+01 +/- 0.183E+00$ [solar radii]

$c(2) = 0.178E-01 +/- 0.130E-02$ [radii/min]

$c(2) = 0.207E+03 +/- 0.150E+02$ [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 $c(1) = 0.16111E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.12623E-02$ [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) = 260. +/- 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 9:51 = 0. km/sec

The TOTAL velocity at 9:51 = 207. km/sec

The TANGENTIAL velocity at 10:52 = 0. km/sec

The TOTAL velocity at 10:52 = 207. km/sec

The TANGENTIAL velocity at 11:17 = 0. km/sec

The TOTAL velocity at 11:17 = 207. km/sec

The TANGENTIAL velocity at 11:25 = 0. km/sec

The TOTAL velocity at 11:25 = 207. km/sec

The TANGENTIAL velocity at 11:41 = 0. km/sec

The TOTAL velocity at 11:41 = 207. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.74

Standard Deviation in start time measurement = 0.386E+02

Error in time = 0.10582E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.929E-02

Reduced Chi Squared = 0.427E-01

Chi Squared = 0.128E+00

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.993E+00

The probability that no LINEAR correlation exists between the variables = 0.7211E-03

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

This is a 2 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1988	210	9:51:22	2.20 +/- 0.20	260.0 +/- 0.5			SMM
1988	210	10:52:22	3.30 +/- 0.20	260.0 +/- 1.0			SMM
1988	210	11:17:10	3.60 +/- 0.15	260.0 +/- 1.0			SMM
1988	210	11:25:26	3.70 +/- 0.15	260.0 +/- 1.0			SMM
1988	210	11:41:55	4.20 +/- 0.10	260.0 +/- 1.0			SMM

Structure being measured:
Top of Filled Front

OUTPUT:

START TIME:

tstart=DOY210 7:32 from derivative = 0
Event begins at 1.34 Solar Radii
Origin defined at DOY210 9: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.175E-01 +/- 0.143E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.169E+01 +/- 0.409E+00 [solar radii]
c(2) = 0.797E-02 +/- 0.816E-02 [radii/min]
c(2) = 0.925E+02 +/- 0.947E+02 [km/sec]
c(3) = 0.451E-04 +/- 0.369E-04 [radii/min**2]
c(3) = 0.175E-01 +/- 0.143E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.48893E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.11267E+00 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.10500E-01 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.28202E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.50029E-04 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.13693E-04 [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) = 260. +/- 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 9:51 = 0. km/sec

The TOTAL velocity at 9:51 = 146. km/sec

The TANGENTIAL velocity at 10:52 = 0. km/sec

The TOTAL velocity at 10:52 = 210. km/sec

The TANGENTIAL velocity at 11:17 = 0. km/sec

The TOTAL velocity at 11:17 = 236. km/sec

The TANGENTIAL velocity at 11:25 = 0. km/sec

The TOTAL velocity at 11:25 = 245. km/sec

The TANGENTIAL velocity at 11:41 = 0. km/sec

The TOTAL velocity at 11:41 = 262. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.74

Standard Deviation in start time measurement = 0.386E+02

Value of reduced Chi Squared returned from nllst2 = 0.827E-02

Reduced Chi Squared = 0.477E-01

Chi Squared = 0.954E-01

The probability for exceeding chi square = 0.992E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)

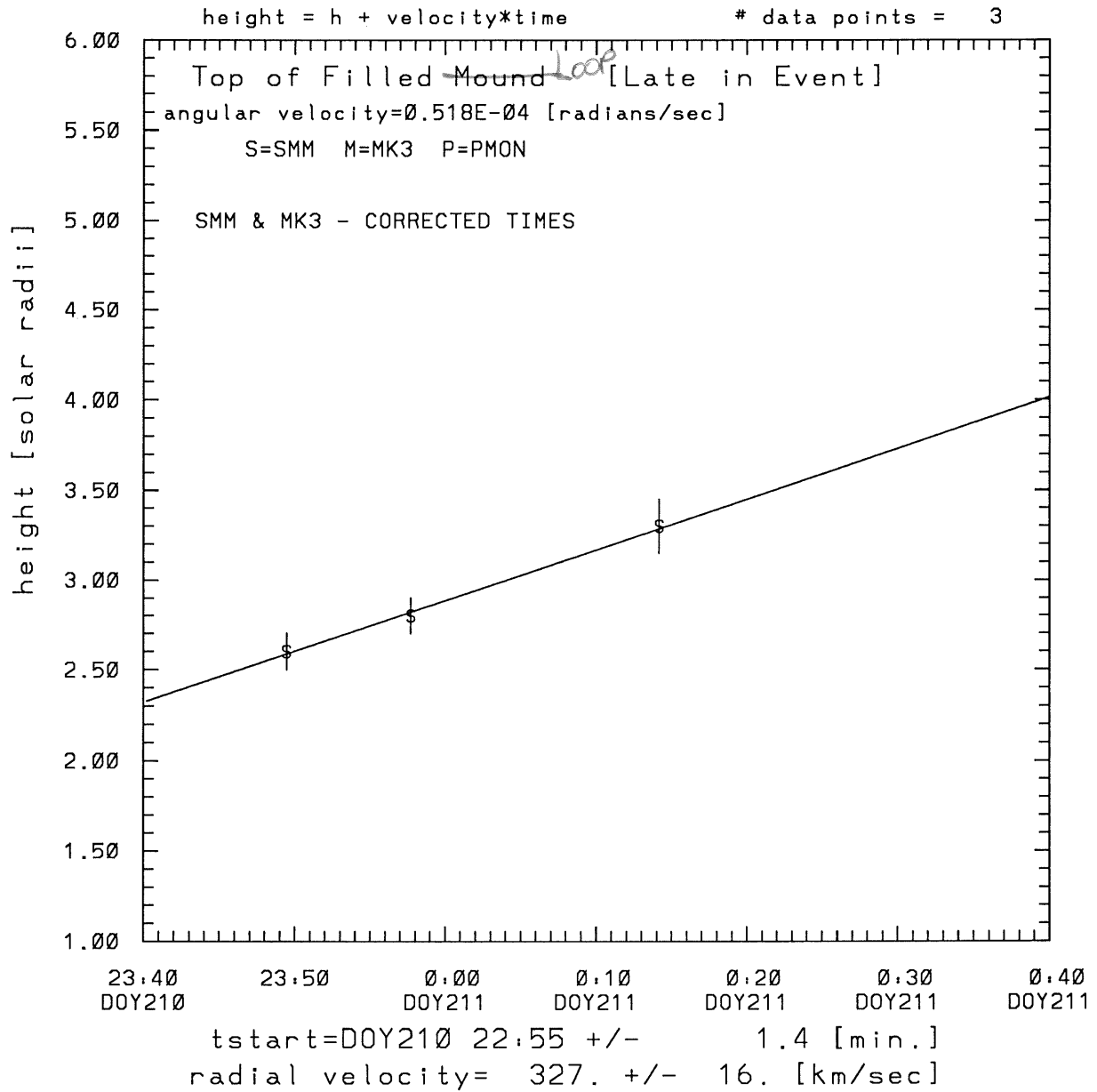
The correlation between the data and the term linear in time = 0.9452E+00

The correlation between the data and the time**2 term = 0.1008E+01

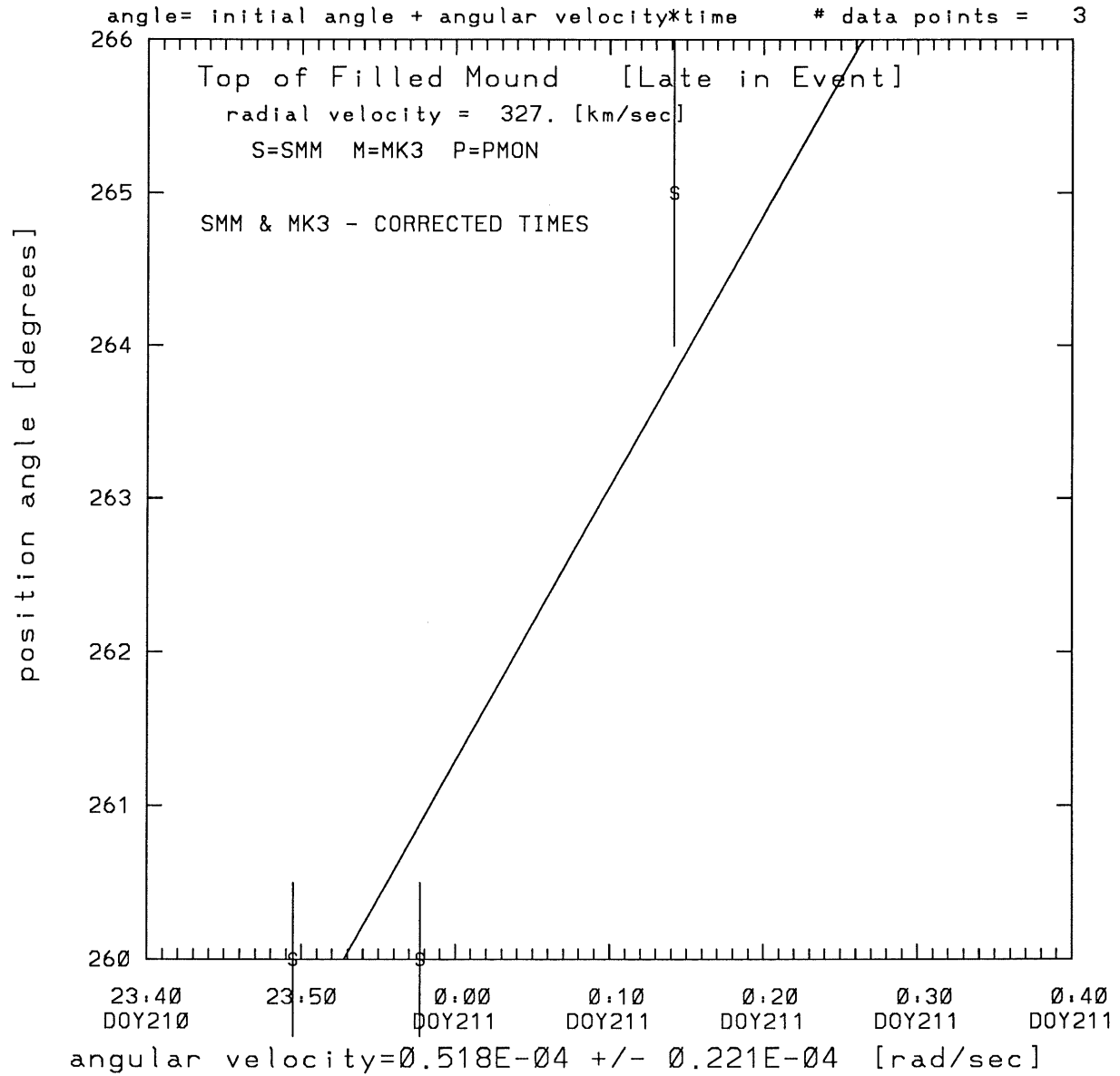
The correlation between the data and the complete equation of motion = 0.9903E+00

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

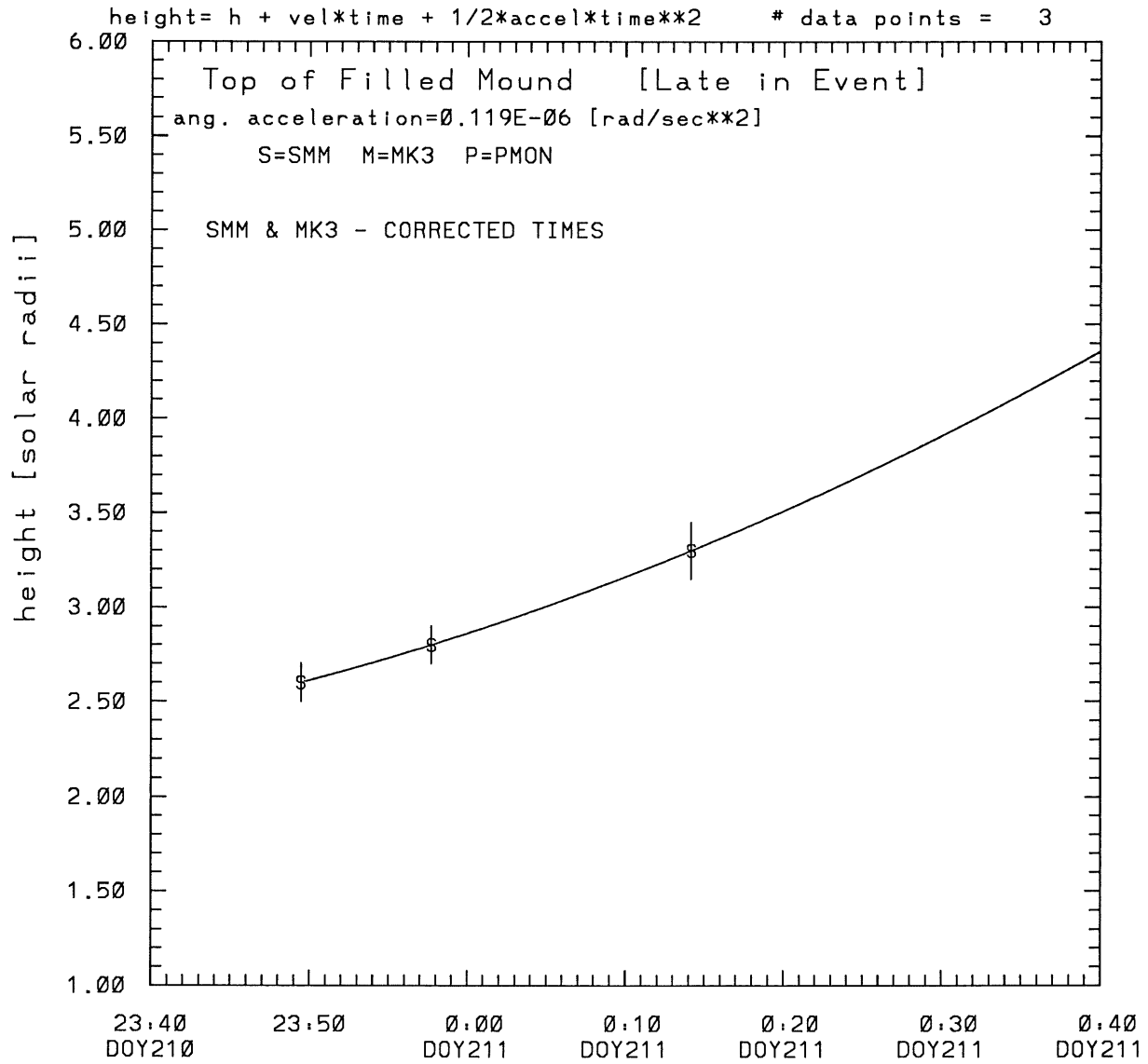
SMM C/P 1988 DOY210 261 +/- 4 degrees



SMM C/P 1988 DOY210 261 +/- 4 degrees



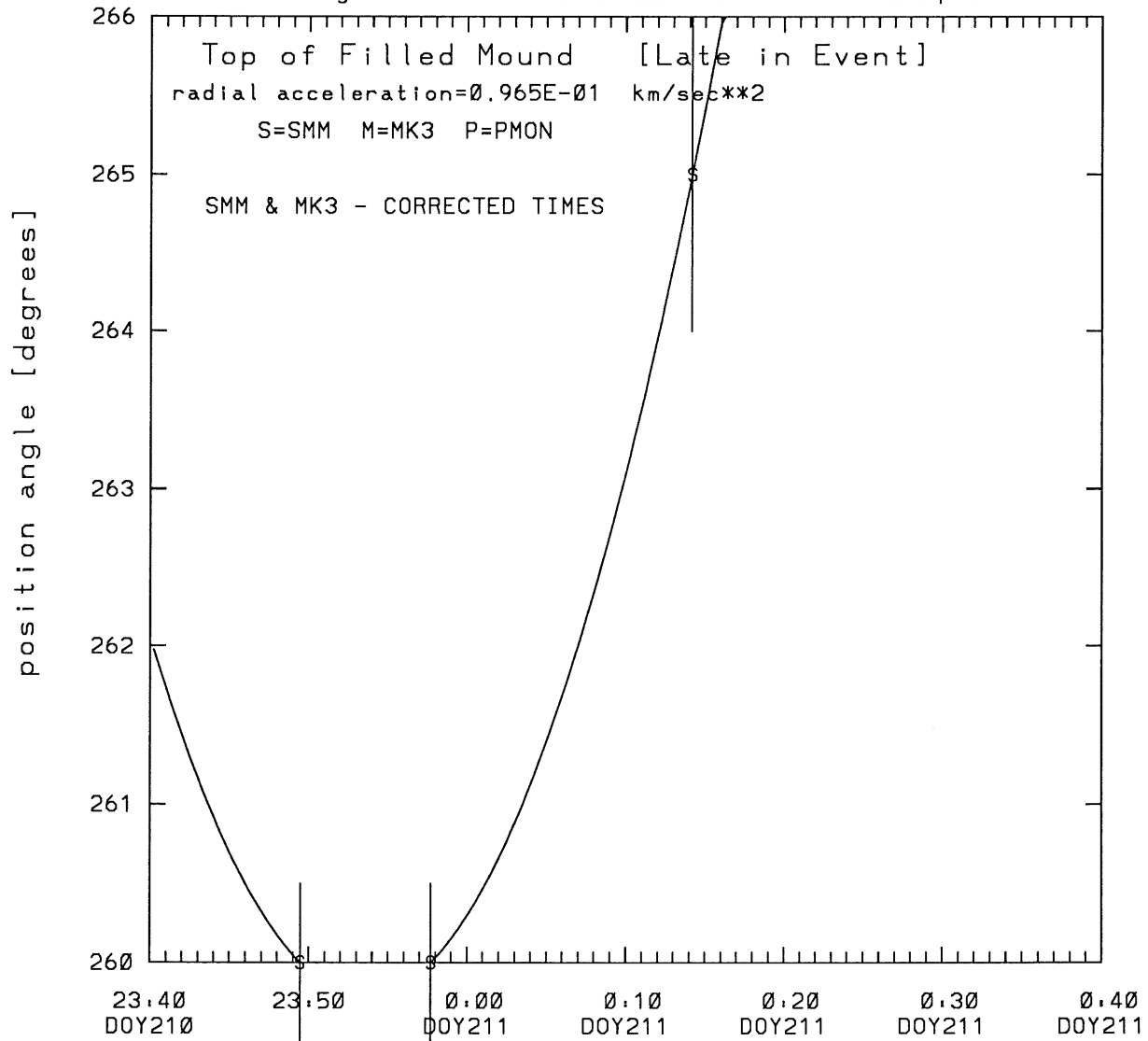
SMM C/P 1988 DOY210 261 +/- 4 degrees



tstart = DOY210 23: 6 from derivative = 0
Event begins at 2.11 Solar Radii
radial acceleration = $0.0965 +/- 0.0000$ [km/sec**2]

SMM C/P 1988 DOY210 261 +/- 4 degrees

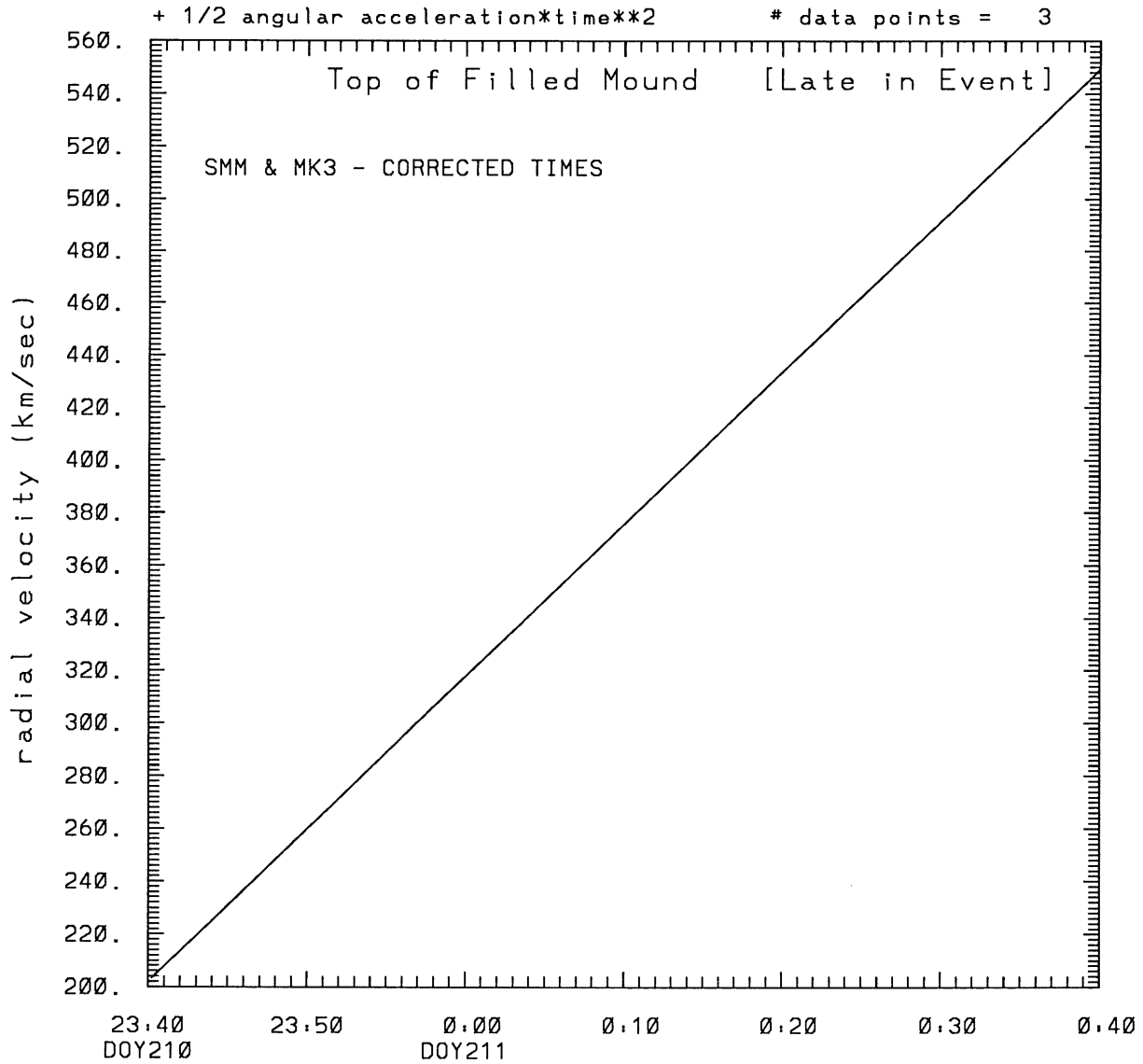
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2 # data points = 3



Event begins at 2.11 Solar Radii

angular acceleration=0.119E-06 +/- 0.289E-11 [rad/sec**2]

SMM C/P 1988 DOY210 261 +/- 4 degrees



DOY210 23.40 23.50 0.00 0.10 0.20 0.30 0.40

DOY211

tstart=DOY210 23: 6 from derivative=0

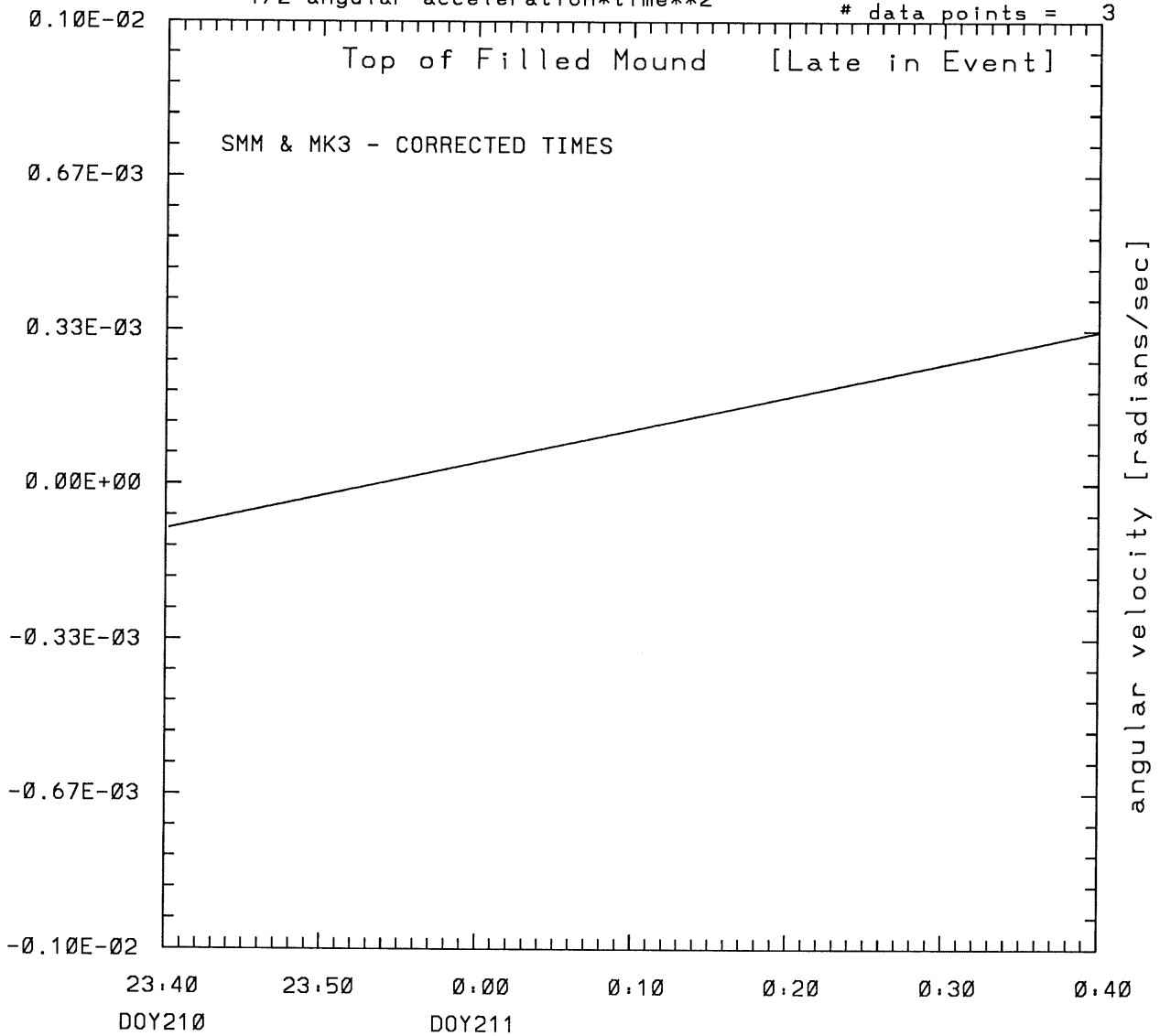
Event begins at 2.11 Solar Radii

radial acceleration=0.965E-01 km/sec**2

SMM C/P 1988 DOY210 261 +/- 4 degrees

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

data points = 3



angular acceleration = $0.119E-06$ +/- $0.289E-11$ [rad/sec**2]

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1988	210	23:49:27	2.60 +/- 0.10	260.0 +/- 0.5			SMM
1988	210	23:57:43	2.80 +/- 0.10	260.0 +/- 0.5			SMM
1988	211	0:14:11	3.30 +/- 0.15	265.0 +/- 1.0			SMM

Structure being measured:
Top of ~~Filled Mound [Late in event]~~ LOOP

OUTPUT:

START TIME:

Event began at t = 0 + -0.468E+02 +/- 0.139E+01 [minutes]
In more convenient units:
Event began at DOY 210 22:55 +/- 0.139E+01 [minutes]

Origin defined at DOY210 23:40

RADIAL INFORMATION:

RADIAL VELOCITY = 327. +/- 16. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.232E+01 +/- 0.261E-01 [solar radii]
c(2) = 0.282E-01 +/- 0.134E-02 [radii/min]
c(2) = 0.327E+03 +/- 0.156E+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)= 0.36512E-01 [radii] see Bevington pg. 114
error in c(2)= 0.15952E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.5183E-04 +/- 0.2206E-04 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 258. +/- 1. [degrees]
a(2) = 0.178E+00 +/- 0.758E-01 [degrees/min]
a(2) = 0.518E-04 +/- 0.221E-04 [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 23:49 = 327. km/sec

The RADIAL velocity at 23:57 = 327. km/sec

The RADIAL velocity at 0:14 = 327. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.36
Standard Deviation in start time measurement = 0.103E+02
Error in time = 0.10061E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.418E-03
Reduced Chi Squared = 0.166E-02
Chi Squared = 0.166E-02
The probability for exceeding chi square = 0.984E+00

The correlation coefficient = 0.999E+00
The probability that no LINEAR correlation exists between the variables = 0.34031
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	210	23:49:27	2.60 +/-	0.10	260.0 +/-	0.5	SMM
1988	210	23:57:43	2.80 +/-	0.10	260.0 +/-	0.5	SMM
1988	211	0:14:11	3.30 +/-	0.15	265.0 +/-	1.0	SMM

Structure being measured:
Top of Filled Mound [Late in event]

OUTPUT:

START TIME:

tstart=DOY210 23: 6 from derivative = 0
Event begins at 2.11 Solar Radii
Origin defined at DOY210 23:40

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.965E-01 +/- 0.252E-05 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.241E+01 +/- 0.262E-05 [solar radii]
c(2) = 0.174E-01 +/- 0.286E-06 [radii/min]
c(2) = 0.202E+03 +/- 0.332E-02 [km/sec]
c(3) = 0.249E-03 +/- 0.651E-08 [radii/min**2]
c(3) = 0.965E-01 +/- 0.252E-05 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.1190E-06 +/- 0.2894E-11[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 262. +/- 0. [degrees]
a(2) = -0.334E+00 +/- 0.127E-04 [degrees/min]
a(2) = -0.970E-04 +/- 0.370E-08 [rad/sec]
a(3) = 0.123E-01 +/- 0.298E-06 [degrees/min**2]
a(3) = 0.119E-06 +/- 0.289E-11 [rad/sec**2]

The RADIAL velocity at 23:49 = 257. km/sec

The RADIAL velocity at 23:57 = 305. km/sec

The RADIAL velocity at 0:14 = 400. 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!