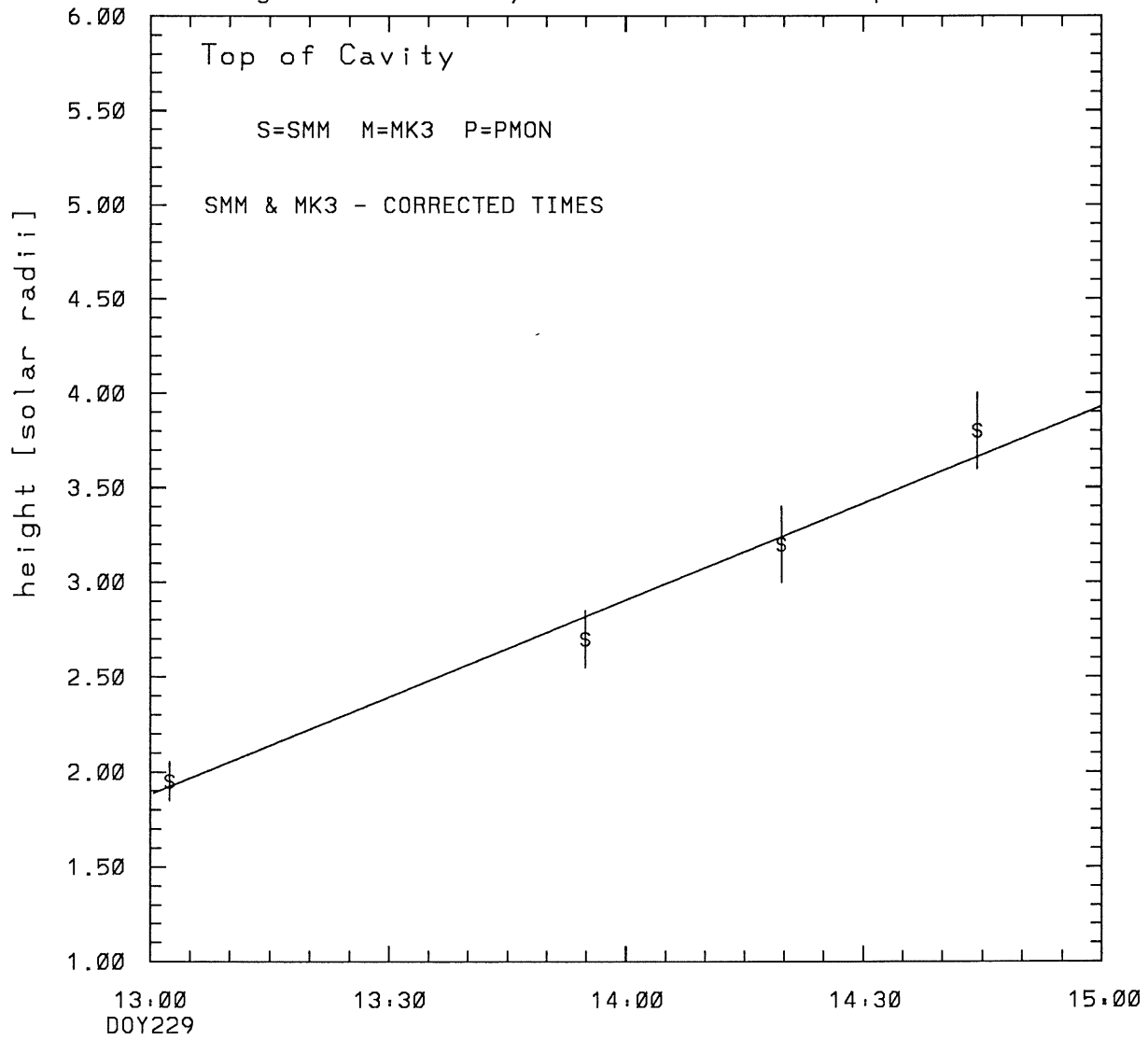


SMM C/P 1988 DOY229 112 +/- 0 degrees

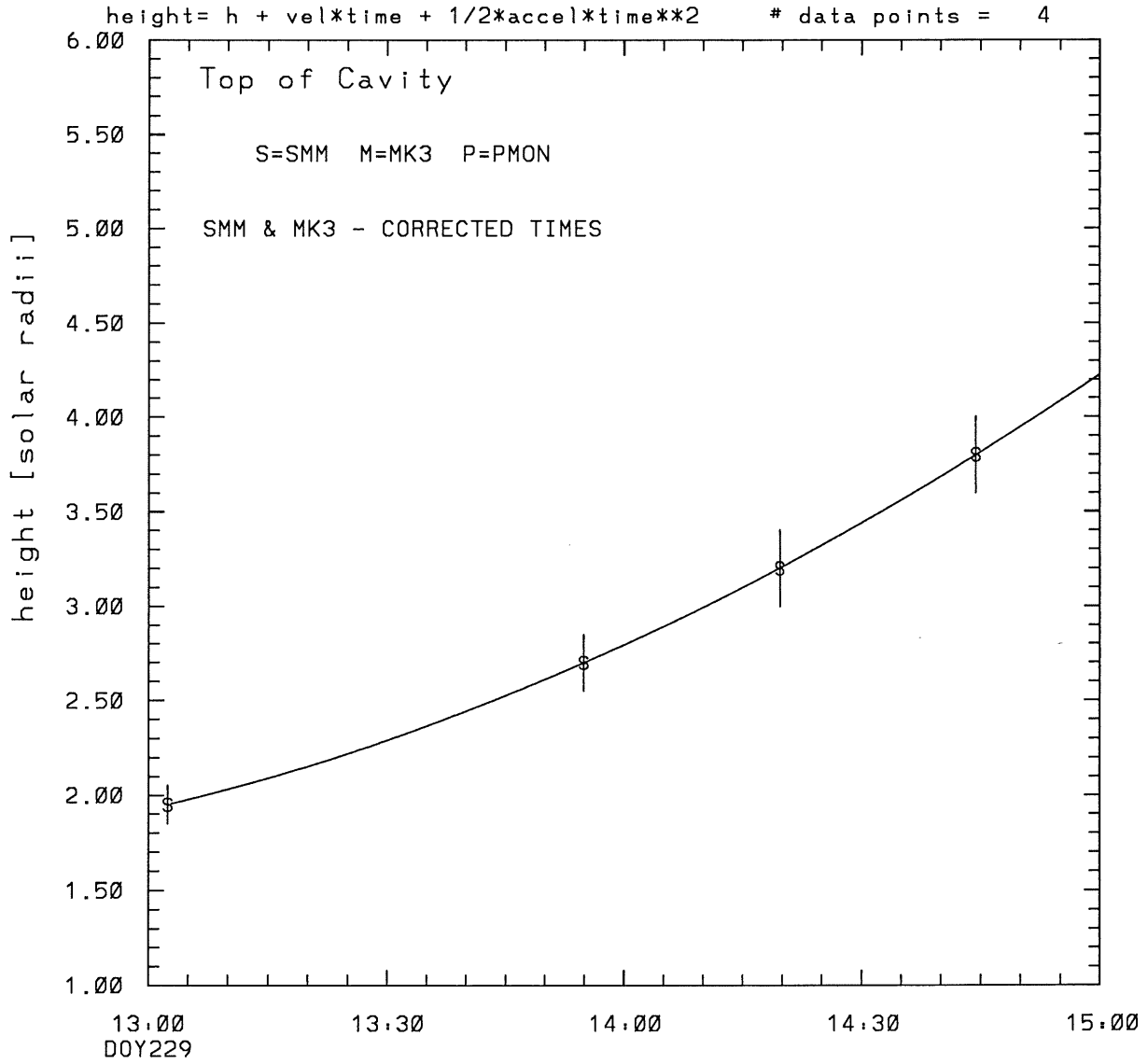
height = h + velocity*time

data points = 4



tstart=DOY229 12:10 +/- 1.4 [min.]
radial velocity= 198. +/- 14. [km/sec]

SMM C/P 1988 DOY229 112 +/- 0 degrees

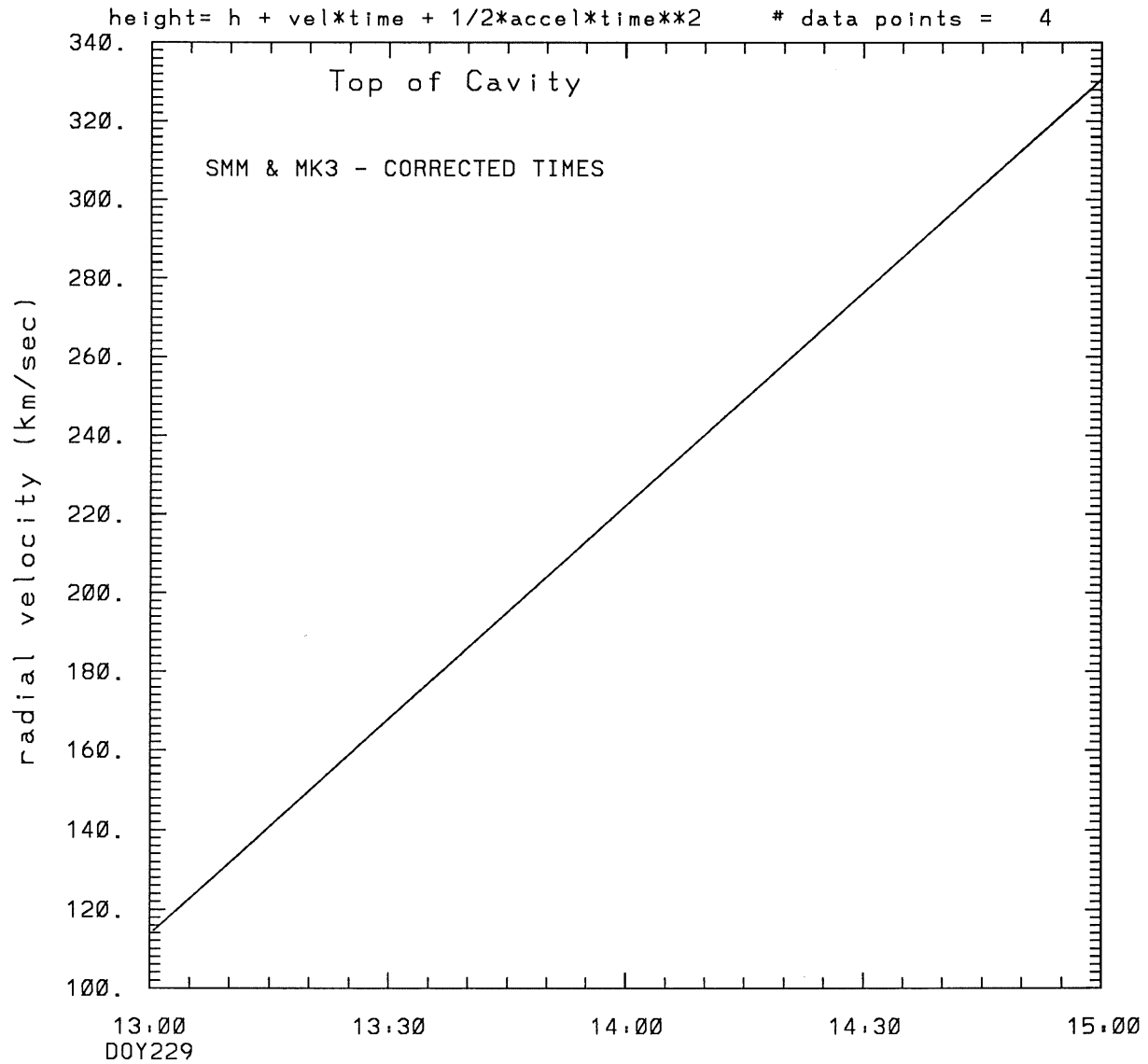


tstart=DOY229 11:58 from derivative=0

Event begins at 1.62 Solar Radii

radial acceleration = 0.0301 ± 0.0002 [km/sec**2]

SMM C/P 1988 DOY229 112 +/- 0 degrees



tstart=DOY229 11:58 from derivative=0
Event begins at 1.62 Solar Radii
radial acceleration=0.301E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1988	229	13: 2:24	1.95	+/- 0.10	112.0	+/- 0.5	SMM
1988	229	13:54:55	2.70	+/- 0.15	112.0	+/- 0.5	SMM
1988	229	14:19:41	3.20	+/- 0.20	112.0	+/- 0.5	SMM
1988	229	14:44:26	3.80	+/- 0.20	112.0	+/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.517E+02 +/- 0.138E+01$ [minutes]
In more convenient units:
Event began at DOY 229 12:10 +/- 0.138E+01 [minutes]

Origin defined at DOY229 13: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 198. +/- 14. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.188E+01 +/- 0.633E-01$ [solar radii]
 $c(2) = 0.171E-01 +/- 0.117E-02$ [radii/min]
 $c(2) = 0.198E+03 +/- 0.136E+02$ [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 $c(1) = 0.12516E+00$ [radii] see Bevington pg. 114
error in $c(2) = 0.17580E-02$ [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) = 112. +/- 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 13: 2 = 0. km/sec

The TOTAL velocity at 13: 2 = 198. km/sec

The TANGENTIAL velocity at 13:54 = 0. km/sec

The TOTAL velocity at 13:54 = 198. km/sec

The TANGENTIAL velocity at 14:19 = 0. km/sec

The TOTAL velocity at 14:19 = 198. km/sec

The TANGENTIAL velocity at 14:44 = 0. km/sec

The TOTAL velocity at 14:44 = 198. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.78

Standard Deviation in start time measurement = 0.378E+02

Error in time = 0.11012E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.829E-02

Reduced Chi Squared = 0.547E-01

Chi Squared = 0.109E+00

The probability for exceeding chi square = 0.992E+00

The correlation coefficient = 0.991E+00

The probability that no LINEAR correlation exists between the variables = 0.8709E-02

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	datatype
1988	229	13: 2:24	1.95	+/- 0.10	112.0 +/- 0.5	SMM
1988	229	13:54:55	2.70	+/- 0.15	112.0 +/- 0.5	SMM
1988	229	14:19:41	3.20	+/- 0.20	112.0 +/- 0.5	SMM
1988	229	14:44:26	3.80	+/- 0.20	112.0 +/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

tstart=DOY229 11:58 from derivative = 0
Event begins at 1.62 Solar Radii
Origin defined at DOY229 13: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.301E-01 +/- 0.203E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.193E+01 +/- 0.797E-03 [solar radii]
c(2) = 0.980E-02 +/- 0.507E-04 [radii/min]
c(2) = 0.114E+03 +/- 0.588E+00 [km/sec]
c(3) = 0.779E-04 +/- 0.525E-06 [radii/min**2]
c(3) = 0.301E-01 +/- 0.203E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.21249E-02 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.87871E-04 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.93406E-04 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.29654E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.87128E-06 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.30009E-06 [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) = 112. +/- 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 13: 2 = 0. km/sec

The TOTAL velocity at 13: 2 = 118. km/sec

The TANGENTIAL velocity at 13:54 = 0. km/sec

The TOTAL velocity at 13:54 = 213. km/sec

The TANGENTIAL velocity at 14:19 = 0. km/sec

The TOTAL velocity at 14:19 = 258. km/sec

The TANGENTIAL velocity at 14:44 = 0. km/sec

The TOTAL velocity at 14:44 = 302. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.78

Standard Deviation in start time measurement = 0.378E+02

Value of reduced Chi Squared returned from nllst2 = 0.113E-05

Reduced Chi Squared = 0.118E-04

Chi Squared = 0.118E-04

The probability for exceeding chi square = 0.999E+00

For a second order fit 3 correlation coefficients are given:

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

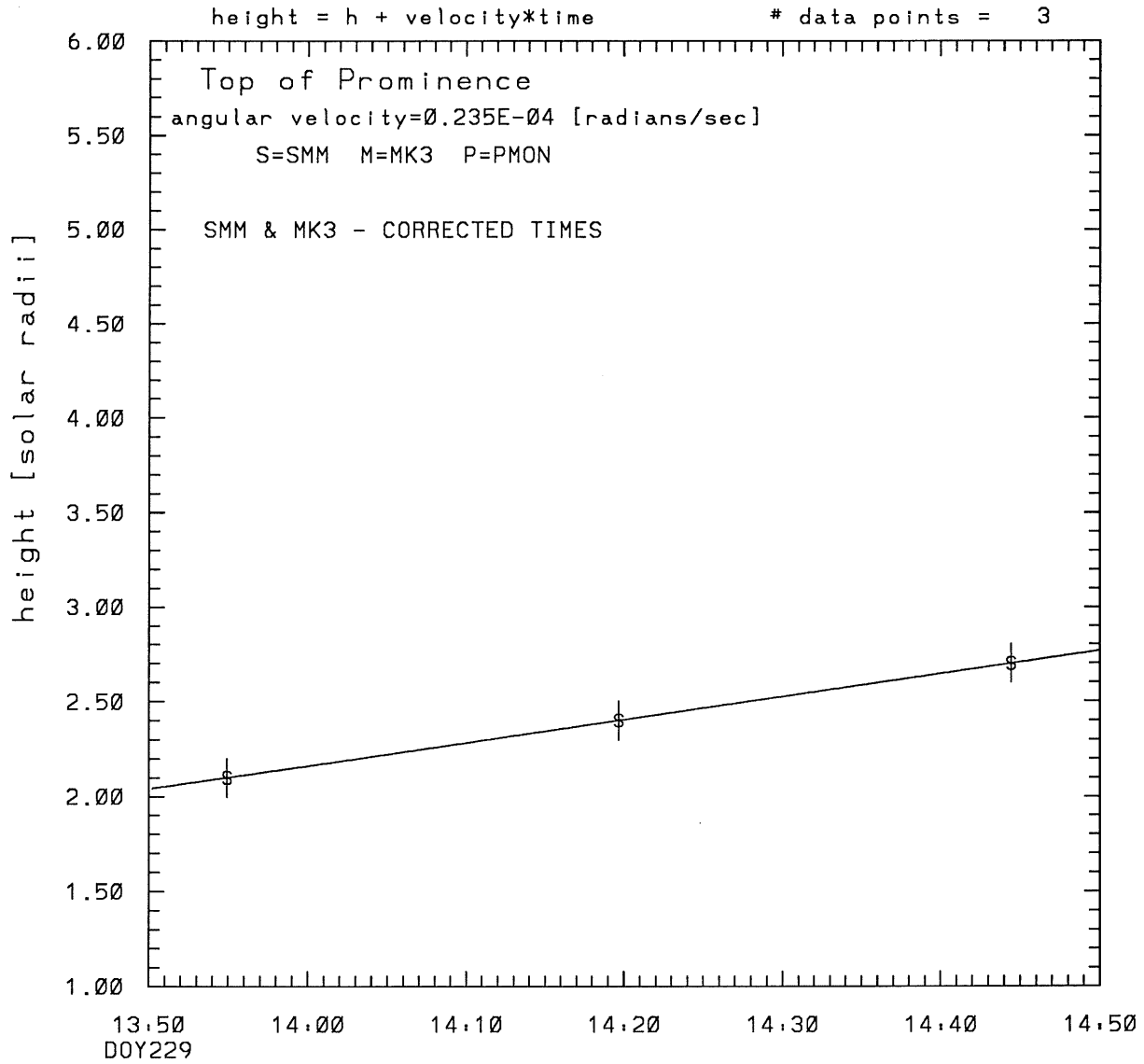
The correlation between the data and the term linear in time = 0.1187E+01

The correlation between the data and the time**2 term = 0.1060E+01

0The correlation between the data and the complete equation of motion = 0.1000E+01

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

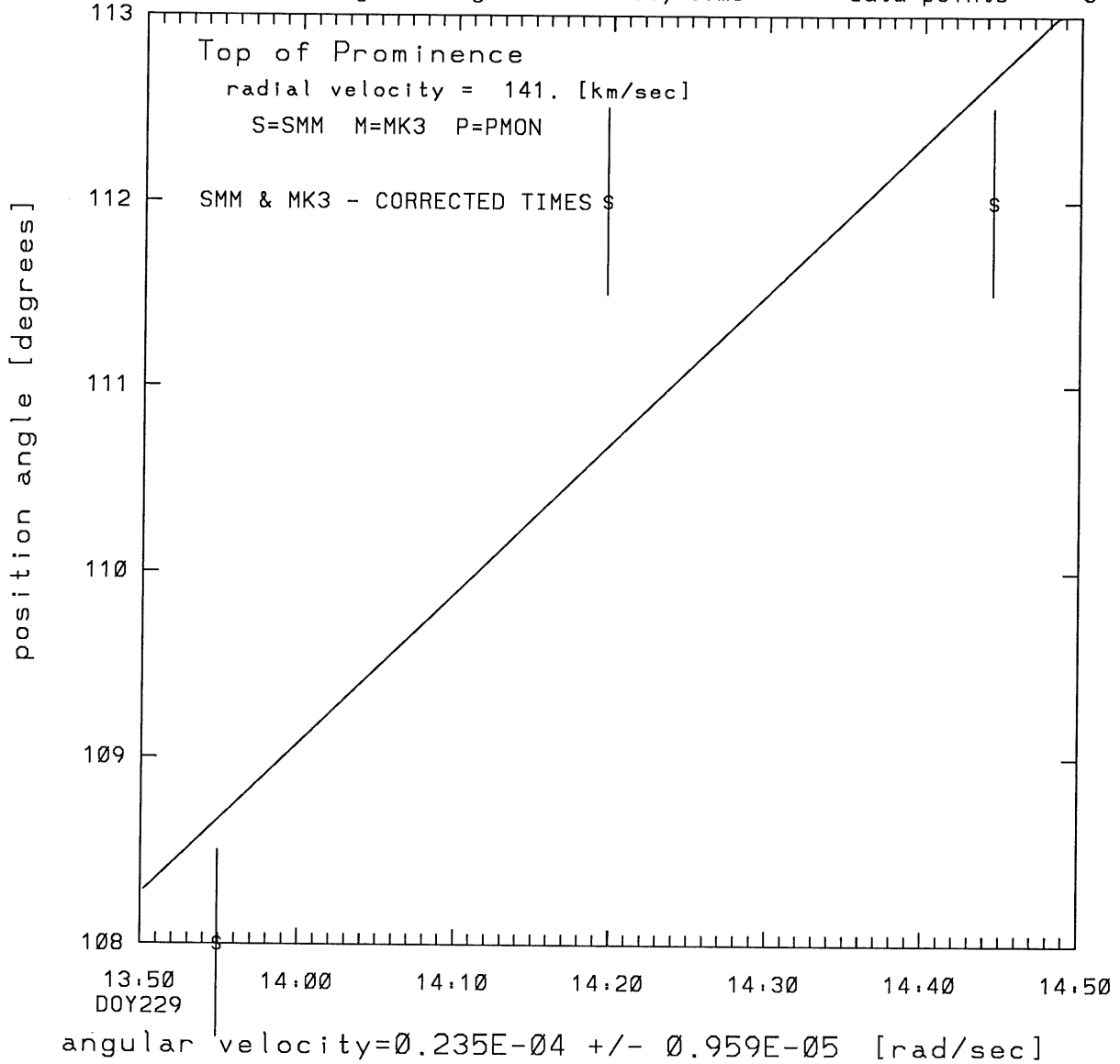
SMM C/P 1988 DOY229 110 +/- 2 degrees



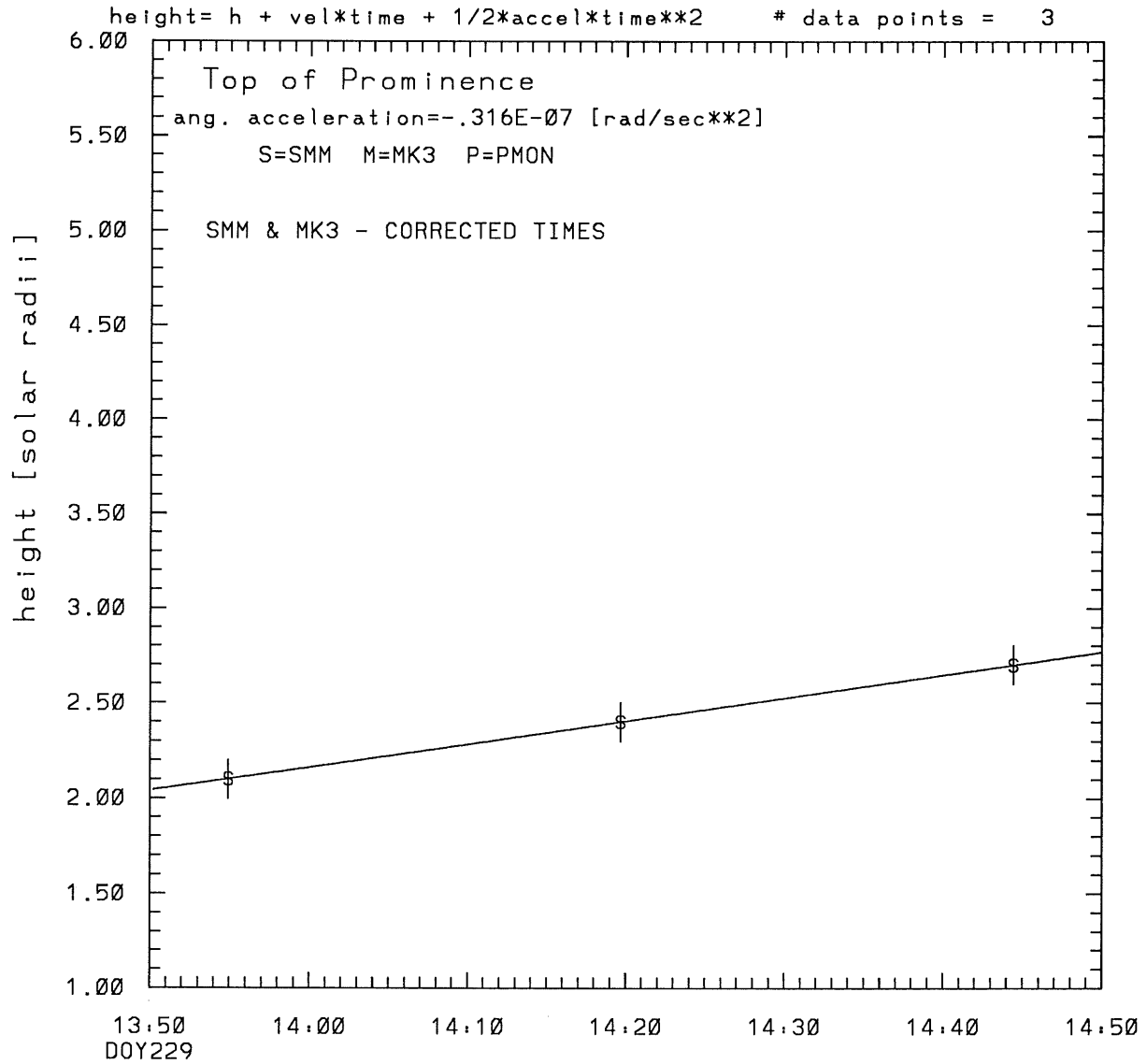
tstart=DOY229 12:26 +/- 0.0 [min.]
radial velocity= 141. +/- 0. [km/sec]

SMM C/P 1988 DOY229 110 +/- 2 degrees

angle = initial angle + angular velocity * time # data points = 3



SMM C/P 1988 DOY229 110 +/- 2 degrees

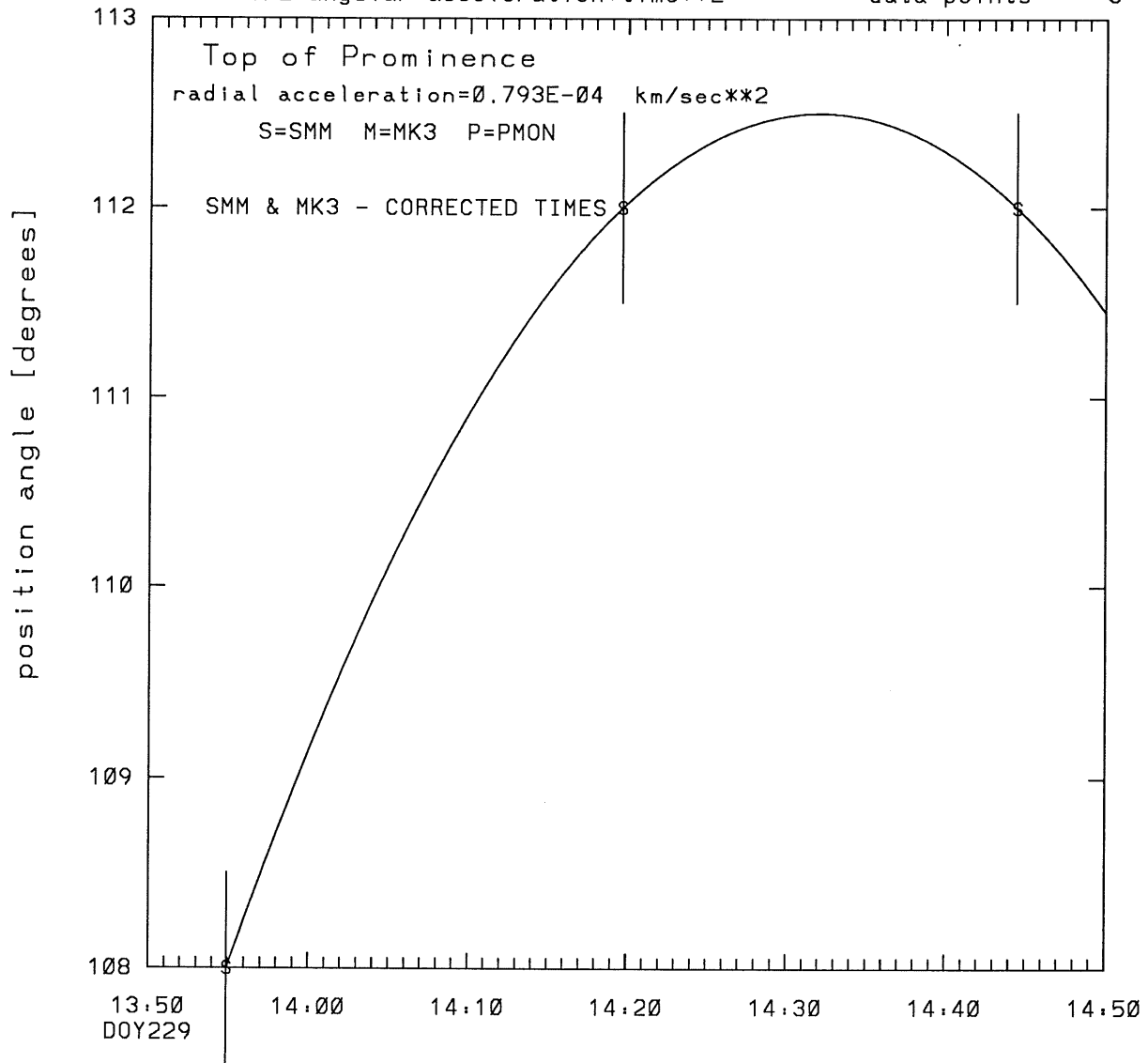


tstart = DOY229 12:24 +/- 0.0 [min.]

radial acceleration = $0.0001 +/- 0.0000$ [km/sec**2]

SMM C/P 1988 DOY229 110 +/- 2 degrees

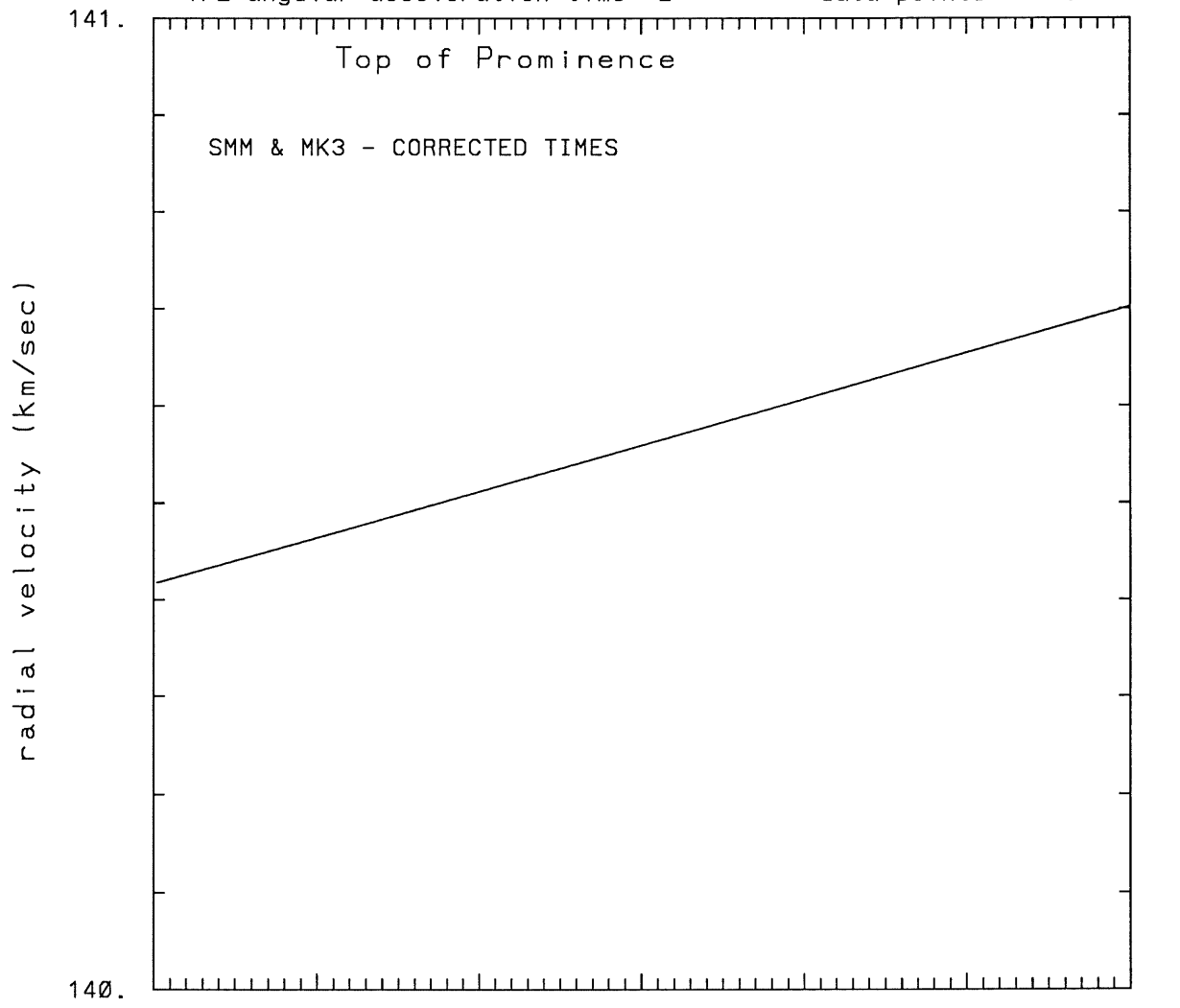
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2 # data points = 3



angular acceleration = $-.316E-07 \pm 0.148E-12$ [rad/sec**2]

SMM C/P 1988 DOY229 110 +/- 2 degrees

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



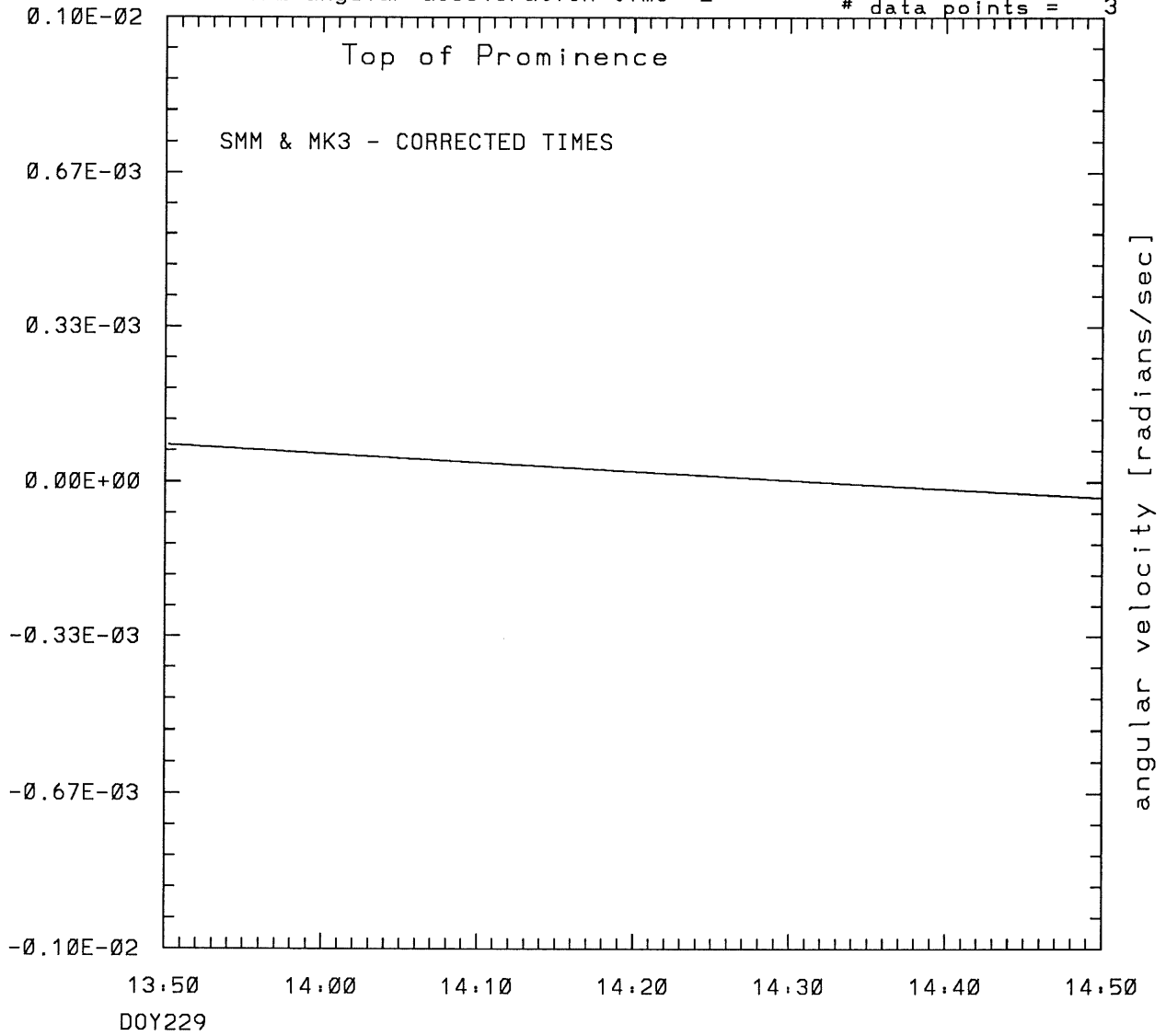
tstart=DOY229 12:24 +/- 0.0 [min.]

radial acceleration=0.793E-04 km/sec**2

SMM C/P 1988 DOY229 110 +/- 2 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 = $-.316E-07 \pm 0.148E-12$ [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	229	13:54:55	2.10 +/-	0.10	108.0 +/-	0.5	SMM
1988	229	14:19:41	2.40 +/-	0.10	112.0 +/-	0.5	SMM
1988	229	14:44:26	2.70 +/-	0.10	112.0 +/-	0.5	SMM

Structure being measured:
Top of Prominence

OUTPUT:

START TIME:

Event began at t = 0 + -0.859E+02 +/- 0.703E-02 [minutes]
In more convenient units:
Event began at DOY 229 12:26 +/- 0.703E-02 [minutes]

Origin defined at DOY229 13:50

RADIAL INFORMATION:

RADIAL VELOCITY = 141. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.204E+01 +/- 0.597E-04 [solar radii]
c(2) = 0.121E-01 +/- 0.166E-05 [radii/min]
c(2) = 0.141E+03 +/- 0.193E-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)= 0.84457E-04 [radii] see Bevington pg. 114
error in c(2)= 0.23520E-05 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.2350E-04 +/- 0.9590E-05 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 108. +/- 1. [degrees]
a(2) = 0.808E-01 +/- 0.330E-01 [degrees/min]
a(2) = 0.235E-04 +/- 0.959E-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 13:54 = 141. km/sec

The RADIAL velocity at 14:19 = 141. km/sec

The RADIAL velocity at 14:44 = 141. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.30
Standard Deviation in start time measurement = 0.202E+02
Error in time = 0.67978E-02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.339E-08
Reduced Chi Squared = 0.135E-07
Chi Squared = 0.135E-07
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.100E+01
The probability that no LINEAR correlation exists between the variables = 0.25251
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
1988	229	13:54:55	2.10 +/-	0.10	108.0 +/-	0.5	SMM
1988	229	14:19:41	2.40 +/-	0.10	112.0 +/-	0.5	SMM
1988	229	14:44:26	2.70 +/-	0.10	112.0 +/-	0.5	SMM

Structure being measured:
Top of Prominence

OUTPUT:

START TIME:

Event began at t = 0 + -0.861E+02 +/- 0.000E+00 [minutes]
In more convenient units:
Event began at DOY 229 12:24 +/- 0.000E+00 [minutes]

Origin defined at DOY229 13:50

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.793E-04 +/- 0.158E-04 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.204E+01 +/- 0.285E-04 [solar radii]
c(2) = 0.121E-01 +/- 0.249E-05 [radii/min]
c(2) = 0.140E+03 +/- 0.289E-01 [km/sec]
c(3) = 0.205E-06 +/- 0.408E-07 [radii/min**2]
c(3) = 0.793E-04 +/- 0.158E-04 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= -0.3163E-07 +/- 0.1478E-12[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 107. +/- 0. [degrees]
a(2) = 0.274E+00 +/- 0.931E-06 [degrees/min]
a(2) = 0.798E-04 +/- 0.271E-09 [rad/sec]
a(3) = -0.326E-02 +/- 0.152E-07 [degrees/min**2]
a(3) = -0.316E-07 +/- 0.148E-12 [rad/sec**2]

The RADIAL velocity at 13:54 = 140. km/sec

The RADIAL velocity at 14:19 = 141. km/sec

The RADIAL velocity at 14:44 = 141. 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!