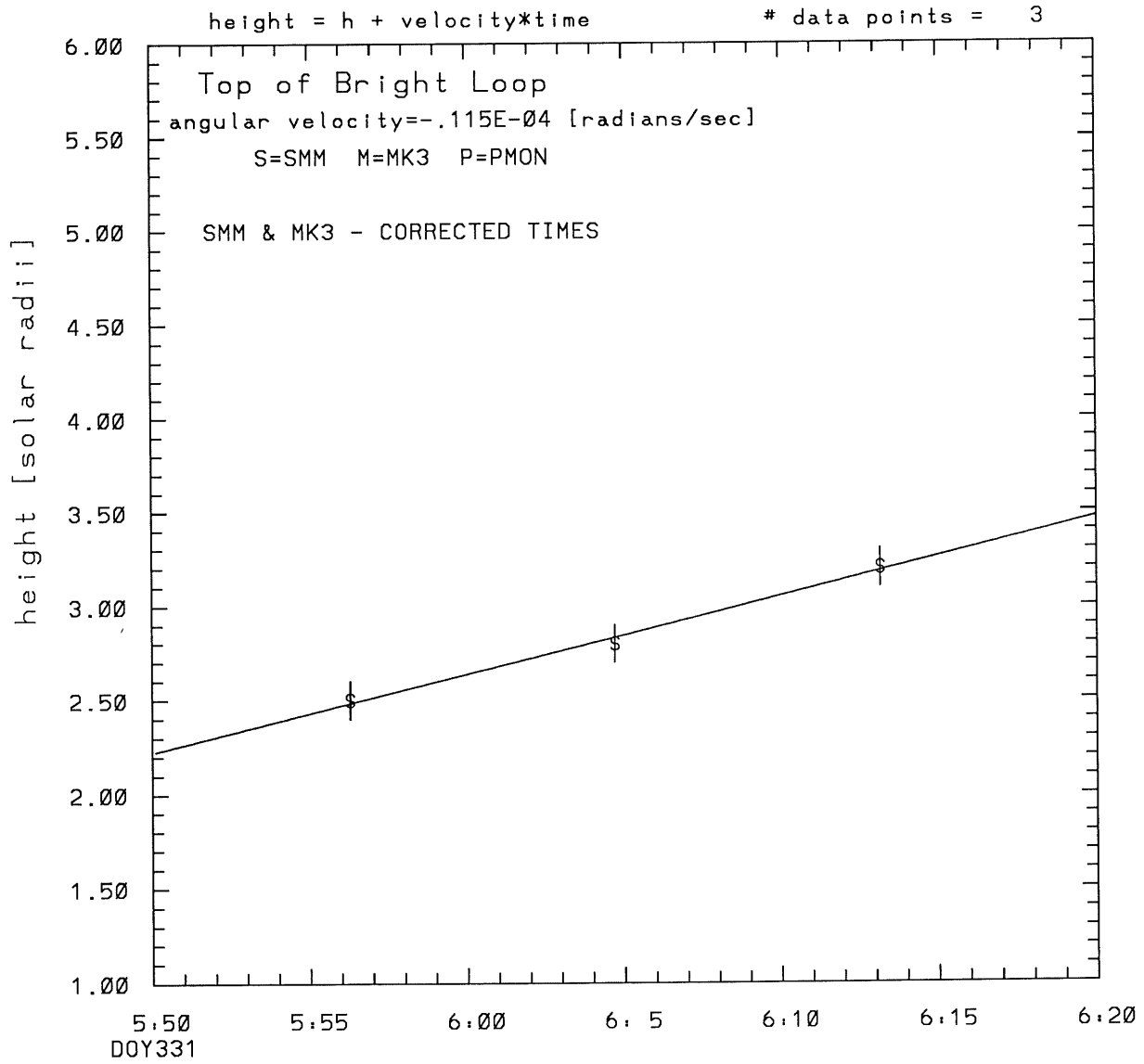


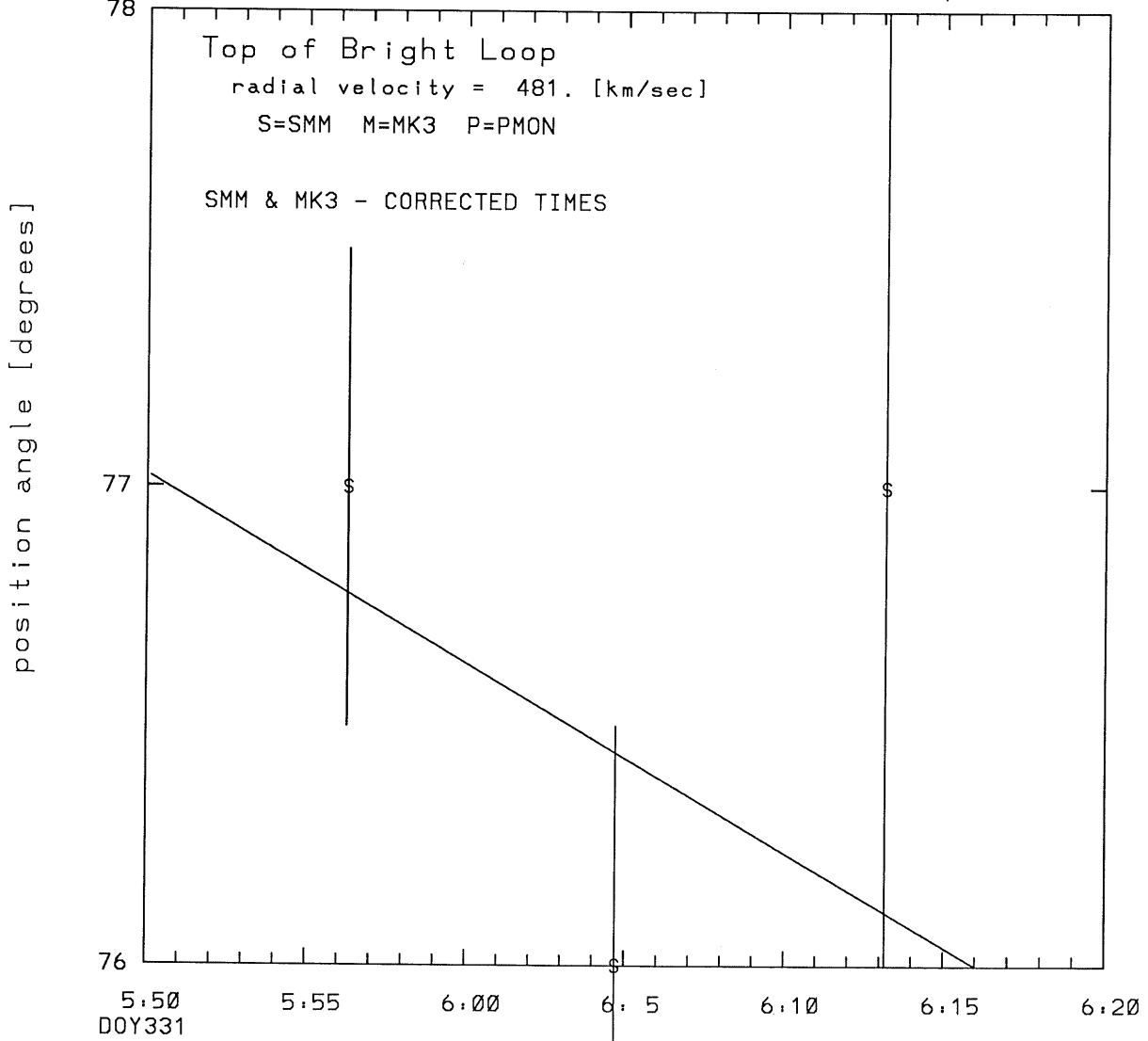
SMM C/P 1988 DOY331 76 +/- 1 degrees



tstart=DOY331 5:21 +/- 1.0 [min.]  
radial velocity= 481. +/- 28. [km/sec]

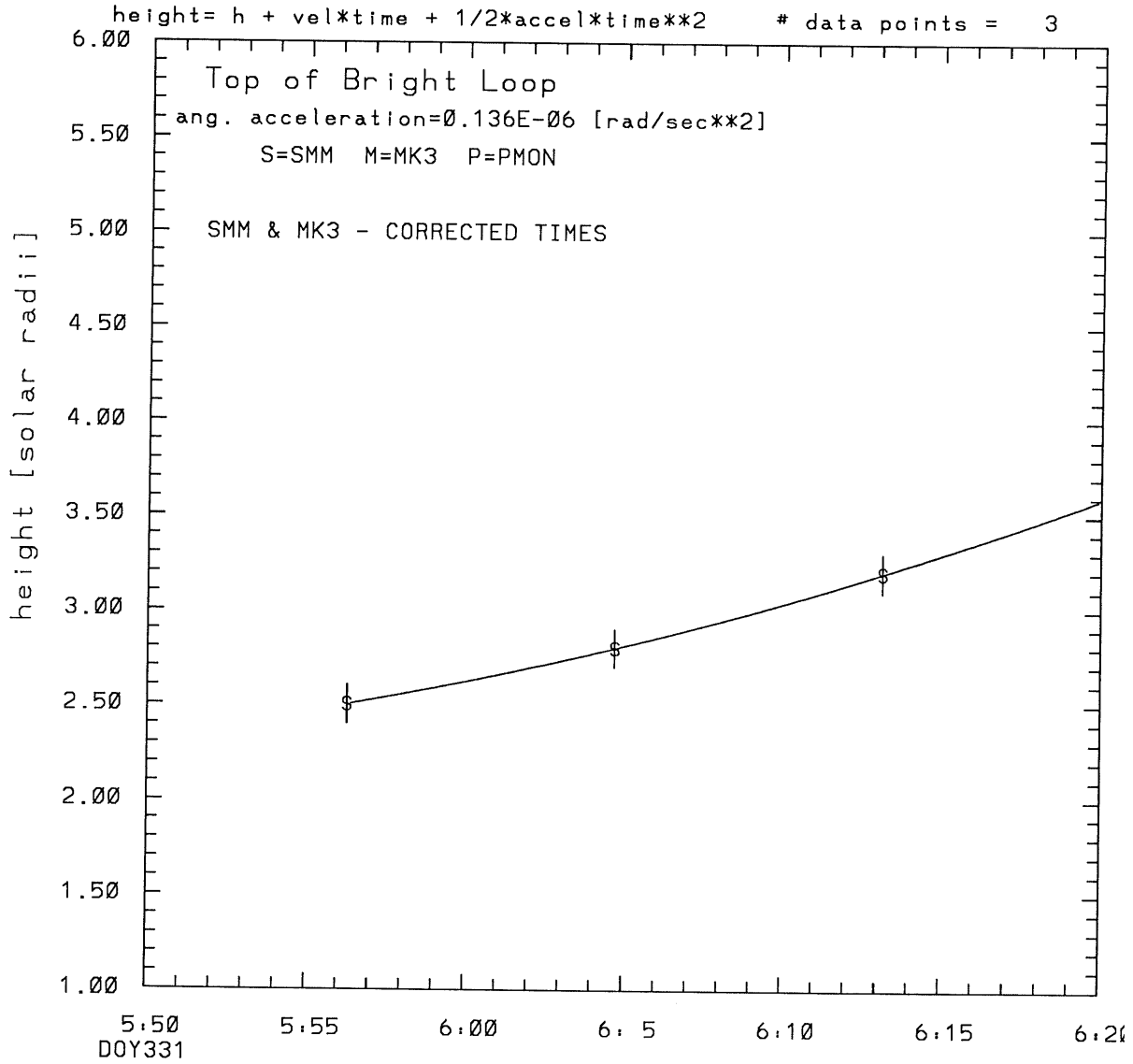
SMM C/P 1988 DOY331 76 +/- 1 degrees

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



angular velocity =  $-.115E-04 \pm 0.163E-04$  [rad/sec]

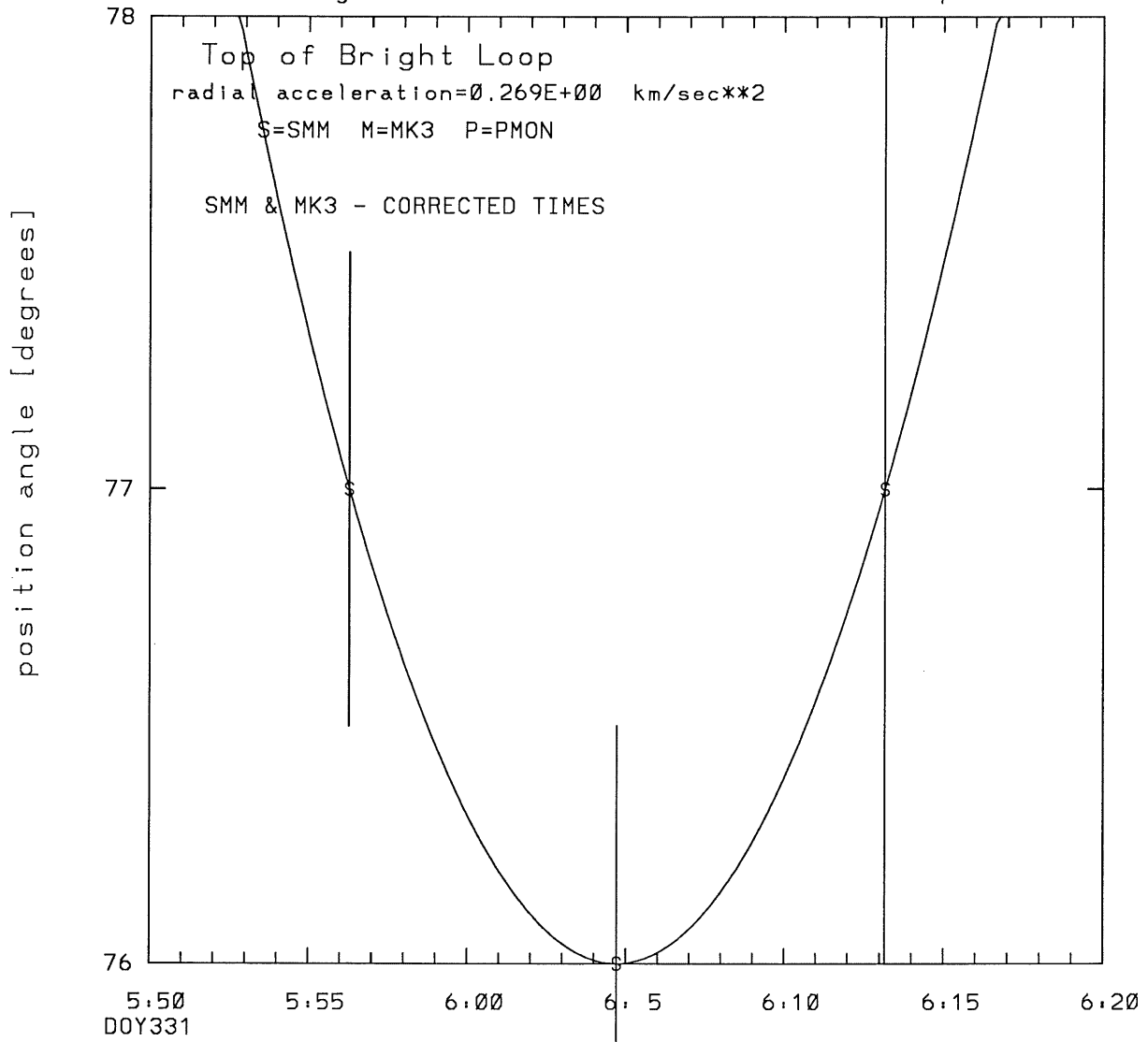
SMM C/P 1988 DOY331 76 +/- 1 degrees



tstart=DOY331 5.35 from derivative=0  
Event begins at 2.18 Solar Radii  
radial acceleration =  $0.2694 +/- 0.0000$  [km/sec\*\*2]

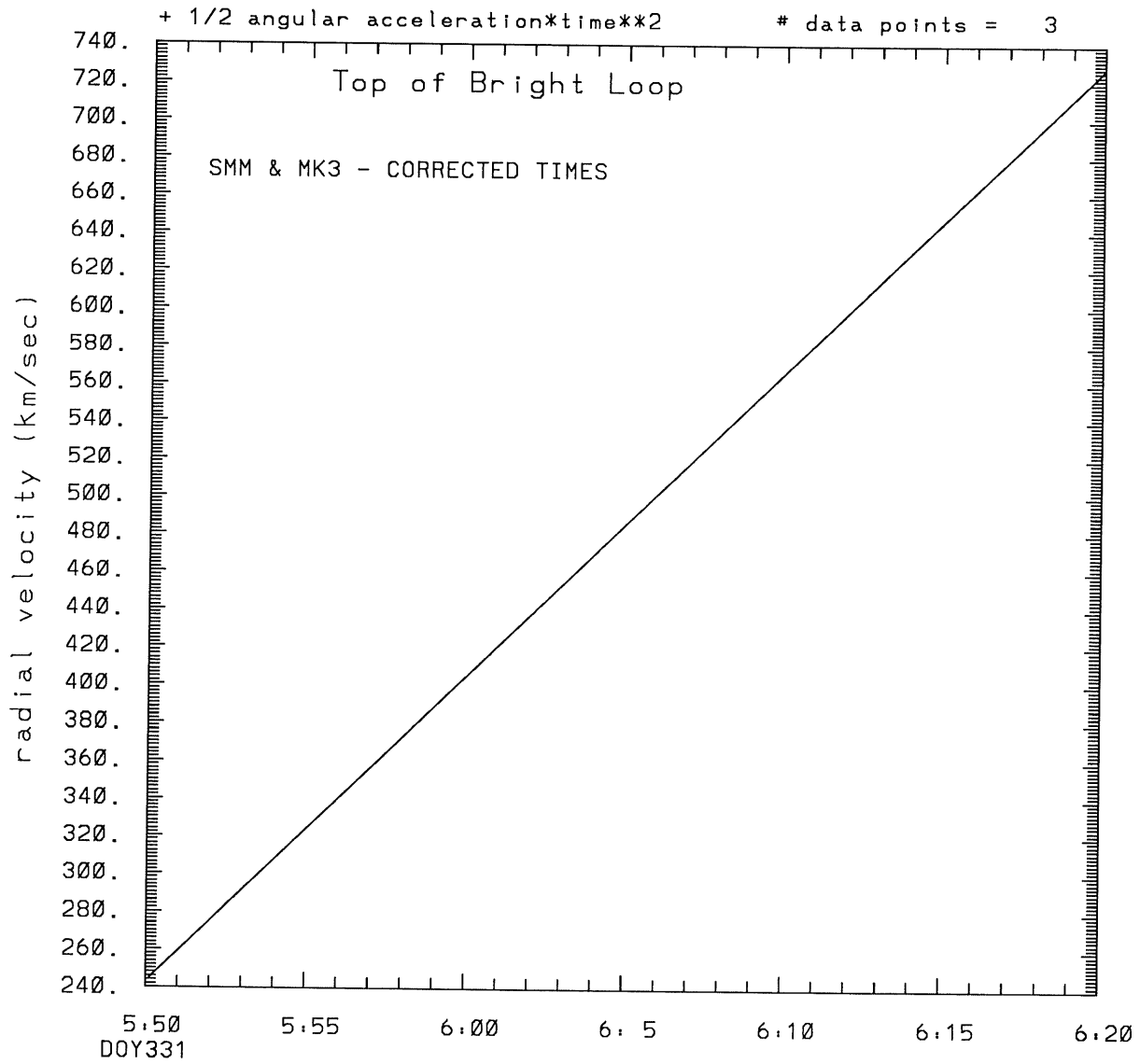
SMM C/P 1988 DOY331 76 +/- 1 degrees

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



Event begins at 2.18 Solar Radii  
angular acceleration=0.136E-06 +/- 0.151E-11 [rad/sec\*\*2]

SMM C/P 1988 DOY331 76 +/- 1 degrees

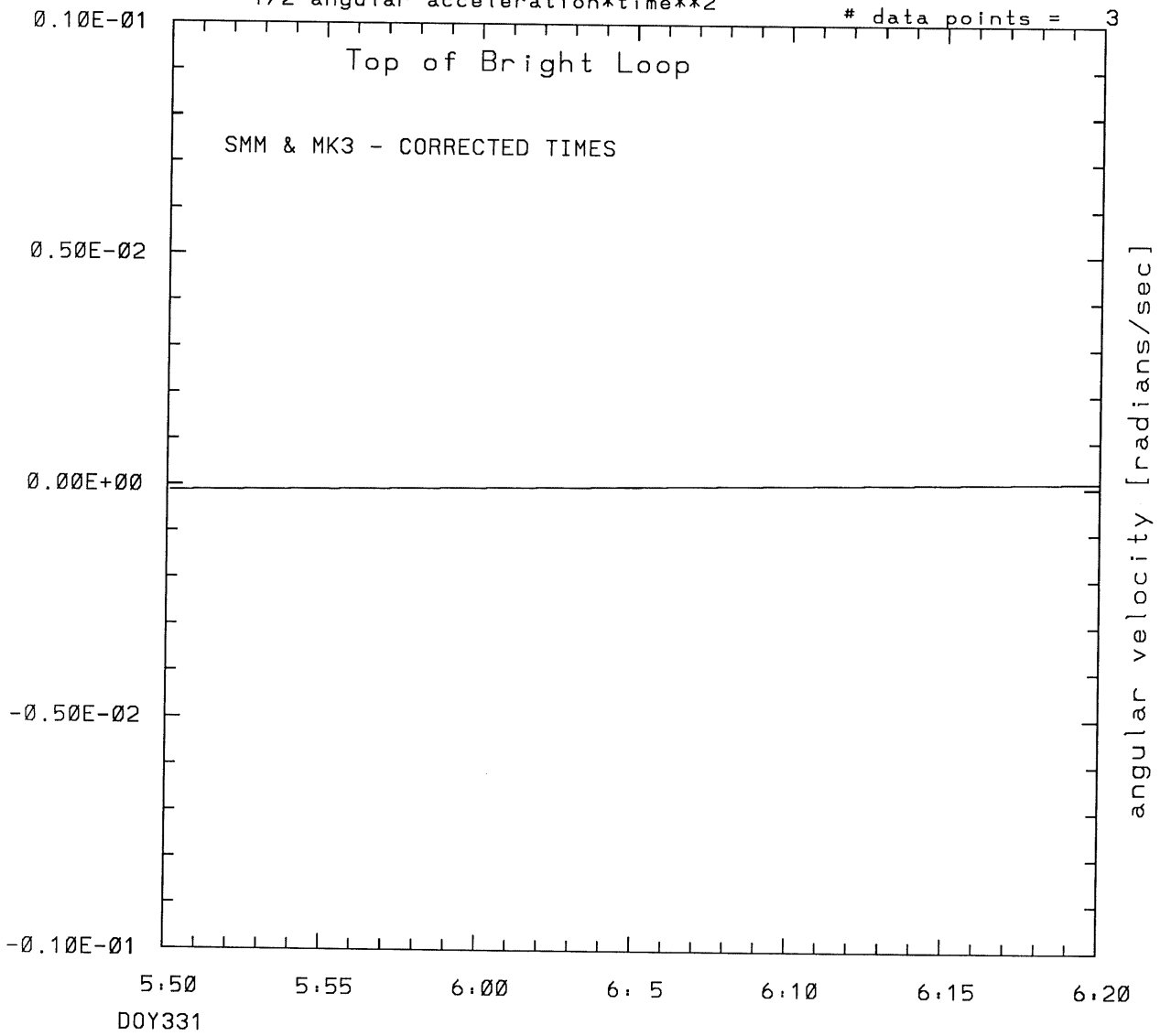


tstart=DOY331 5:35 from derivative=0  
Event begins at 2.18 Solar Radii  
radial acceleration=0.269E+00 km/sec\*\*2

SMM C/P 1988 DOY331 76 +/- 1 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 =  $0.136E-06$  +/-  $0.151E-11$  [rad/sec\*\*2]

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

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	331	5:56:17	2.50 +/-	0.10	77.0 +/-	0.5	SMM
1988	331	6: 4:43	2.80 +/-	0.10	76.0 +/-	0.5	SMM
1988	331	6:13:10	3.20 +/-	0.10	77.0 +/-	1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Bright Loop  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at t = 0 + -0.295E+02 +/- 0.103E+01 [minutes]  
In more convenient units:  
Event began at DOY 331 5:21 +/- 0.103E+01 [minutes]

Origin defined at DOY331 5:50

RADIAL INFORMATION:

RADIAL VELOCITY = 481. +/- 28. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.222E+01 +/- 0.390E-01 [solar radii]  
c(2) = 0.415E-01 +/- 0.240E-02 [radii/min]  
c(2) = 0.481E+03 +/- 0.279E+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)= 0.55205E-01 [radii] see Bevington pg. 114  
error in c(2)= 0.33960E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = -0.1147E-04 +/- 0.1625E-04[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 77. +/- 1. [degrees]  
a(2) = -0.394E-01 +/- 0.559E-01 [degrees/min]  
a(2) = -0.115E-04 +/- 0.163E-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 5:56 = 481. km/sec

The RADIAL velocity at 6: 4 = 481. km/sec

The RADIAL velocity at 6:13 = 481. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.35  
Standard Deviation in start time measurement = 0.689E+01  
Error in time = 0.97781E+00 using best fit method  
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.822E-03  
Reduced Chi Squared = 0.329E-02  
Chi Squared = 0.329E-02  
The probability for exceeding chi square = 0.977E+00

The correlation coefficient = 0.997E+00  
The probability that no LINEAR correlation exists between the variables = 0.52071  
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	331	5:56:17	2.50 +/-	0.10	77.0 +/-	0.5	SMM
1988	331	6: 4:43	2.80 +/-	0.10	76.0 +/-	0.5	SMM
1988	331	6:13:10	3.20 +/-	0.10	77.0 +/-	1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Bright Loop  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

tstart=DOY331 5:35 from derivative = 0  
Event begins at 2.18 Solar Radii  
Origin defined at DOY331 5:50

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.269E+00 +/- 0.653E-05 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =	0.234E+01 +/-	0.316E-05 [solar radii]
c(2) =	0.209E-01 +/-	0.504E-06 [radii/min]
c(2) =	0.243E+03 +/-	0.585E-02 [km/sec]
c(3) =	0.697E-03 +/-	0.169E-07 [radii/min**2]
c(3) =	0.269E+00 +/-	0.653E-05 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.1361E-06 +/- 0.1507E-11[radians/sec\*\*2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) =	79. +/-	0. [degrees]
a(2) =	-0.413E+00 +/-	0.423E-05 [degrees/min]
a(2) =	-0.120E-03 +/-	0.123E-08 [rad/sec]
a(3) =	0.140E-01 +/-	0.155E-06 [degrees/min**2]
a(3) =	0.136E-06 +/-	0.151E-11 [rad/sec**2]

The RADIAL velocity at 5:56 = 344. km/sec

The RADIAL velocity at 6: 4 = 481. km/sec

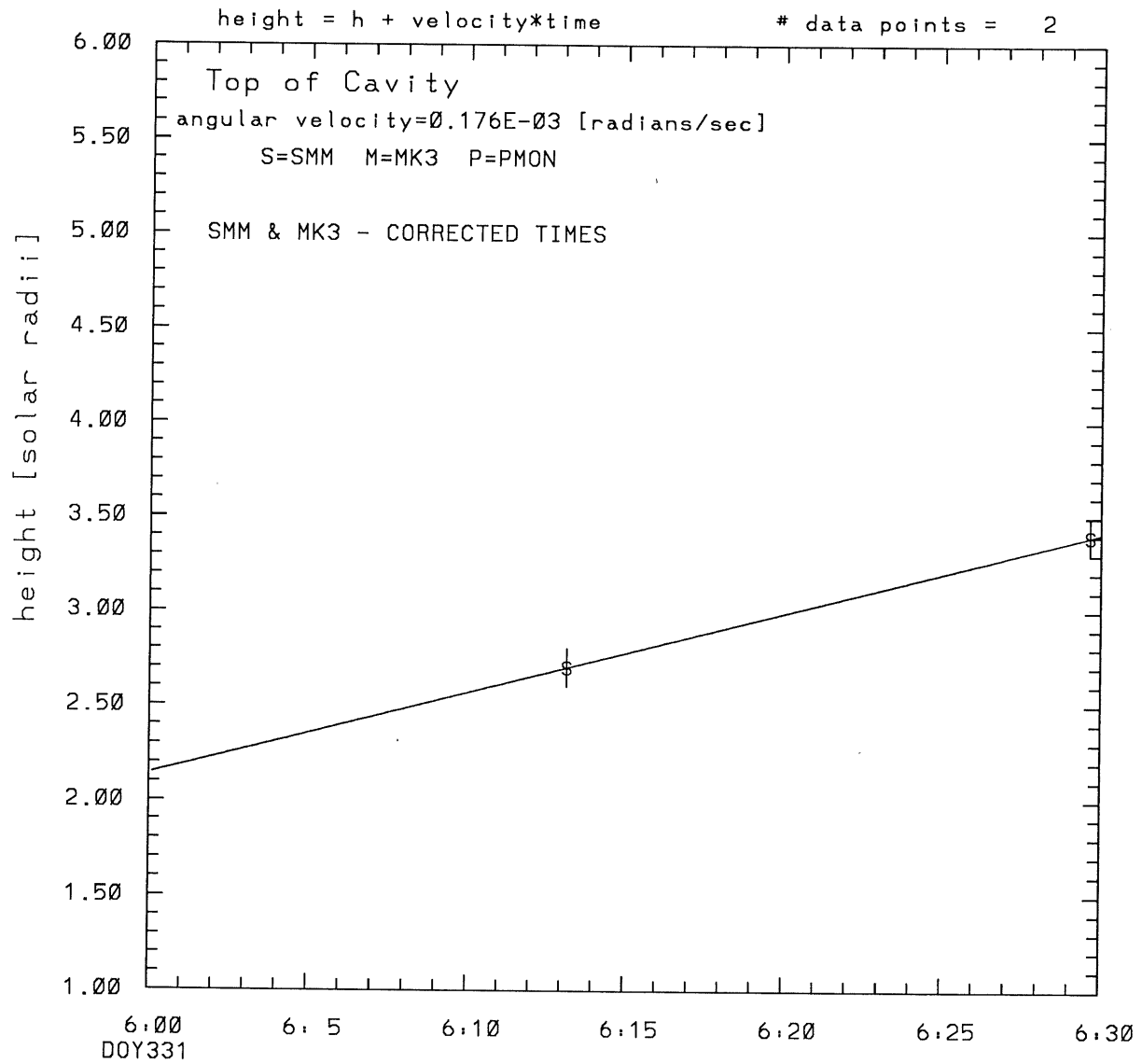
The RADIAL velocity at 6:13 = 617. km/sec

\*\*\*\*\*  
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!

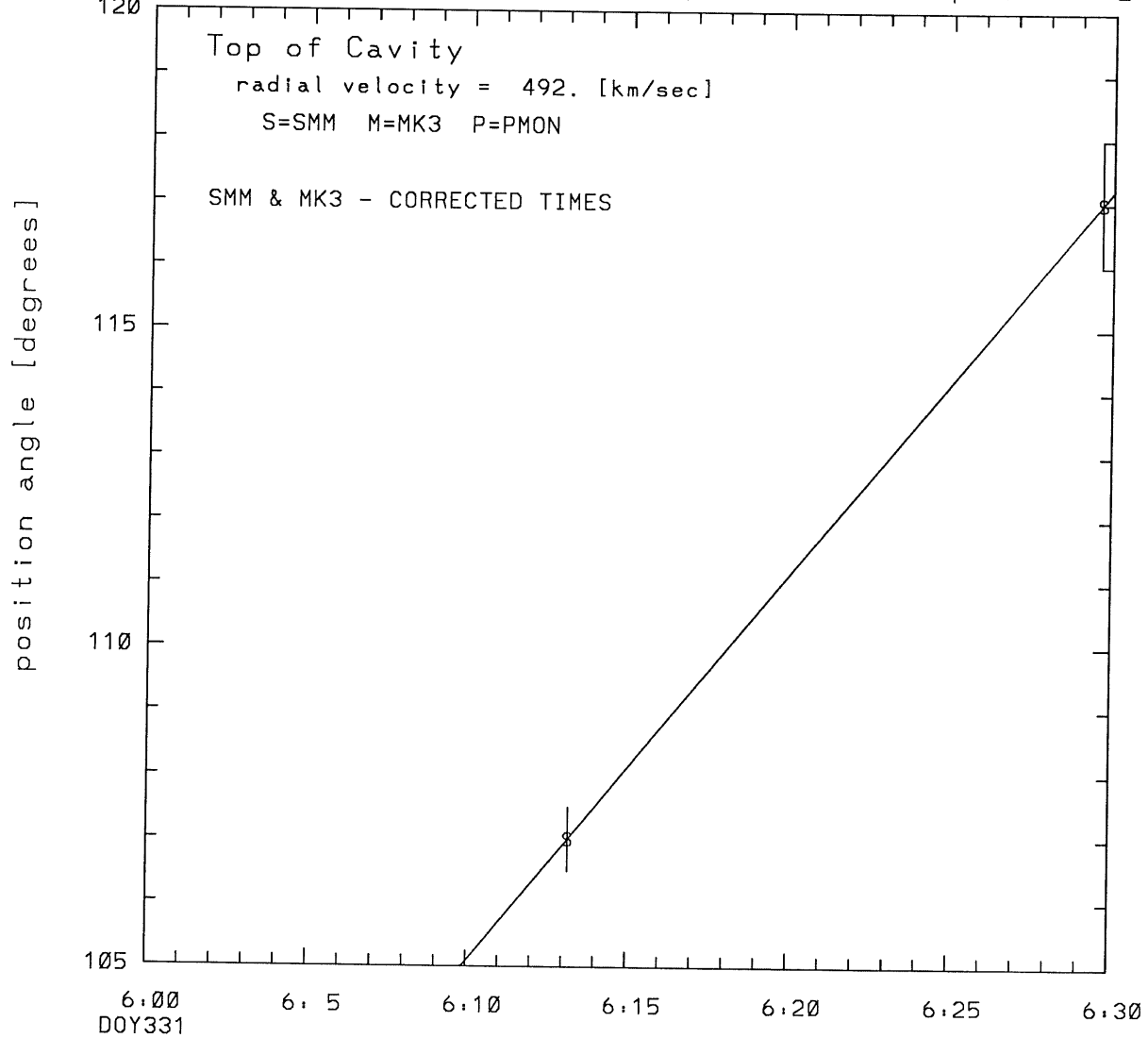
SMM C/P 1988 DOY331 112 +/- 5 degrees



tstart=DOY331 5.35 +/- 0.0 [min.]  
radial velocity= 492. +/- 0. [km/sec]

SMM C/P 1988 DOY331 112 +/- 5 degrees

angle = initial angle + angular velocity \* time # data points = 2



angular velocity = 0.176E-03 +/- 0.000E+00 [rad/sec]

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

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	331	6:13:10	2.70 +/-	0.10	107.0 +/-	0.5	SMM
1988	331	6:29:40	3.40 +/-	0.10	117.0 +/-	1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Cavity  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at t = 0 + -0.269E+02 +/- 0.000E+00 [minutes]  
In more convenient units:  
Event began at DOY 331 5:35 +/- 0.000E+00 [minutes]  
Origin defined at DOY331 6: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 492. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.214E+01 +/- 0.210E-05 [solar radii]  
c(2) = 0.424E-01 +/- 0.914E-07 [radii/min]  
c(2) = 0.492E+03 +/- 0.106E-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]

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.1763E-03 +/- 0.0000E+00[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 99. +/- 0. [degrees]  
a(2) = 0.606E+00 +/- 0.000E+00 [degrees/min]  
a(2) = 0.176E-03 +/- 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 RADIAL velocity at 6:13 = 492. km/sec

The RADIAL velocity at 6:29 = 492. 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!