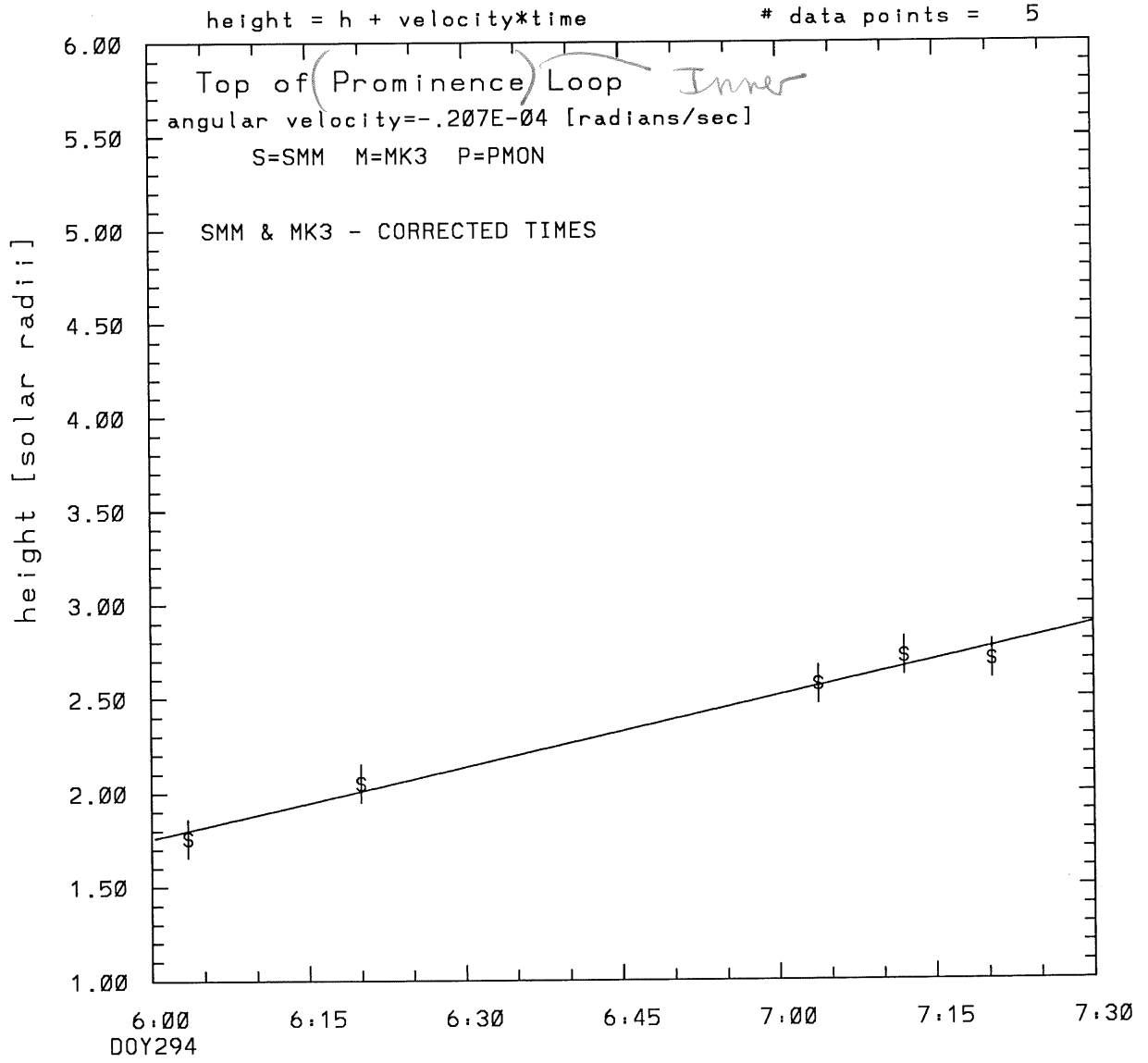
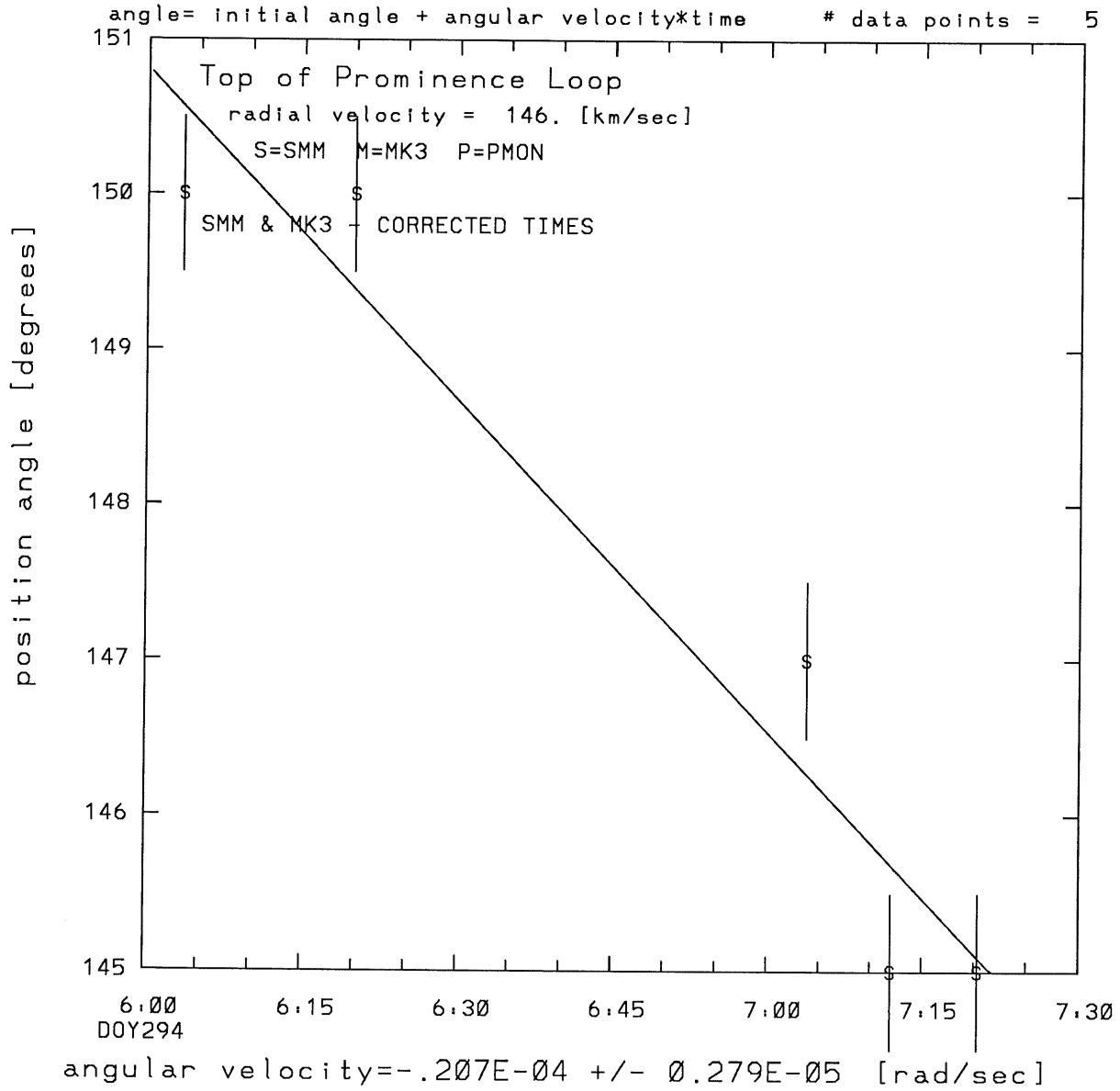


SMM C/P 1988 DOY294 147 +/- 3 degrees

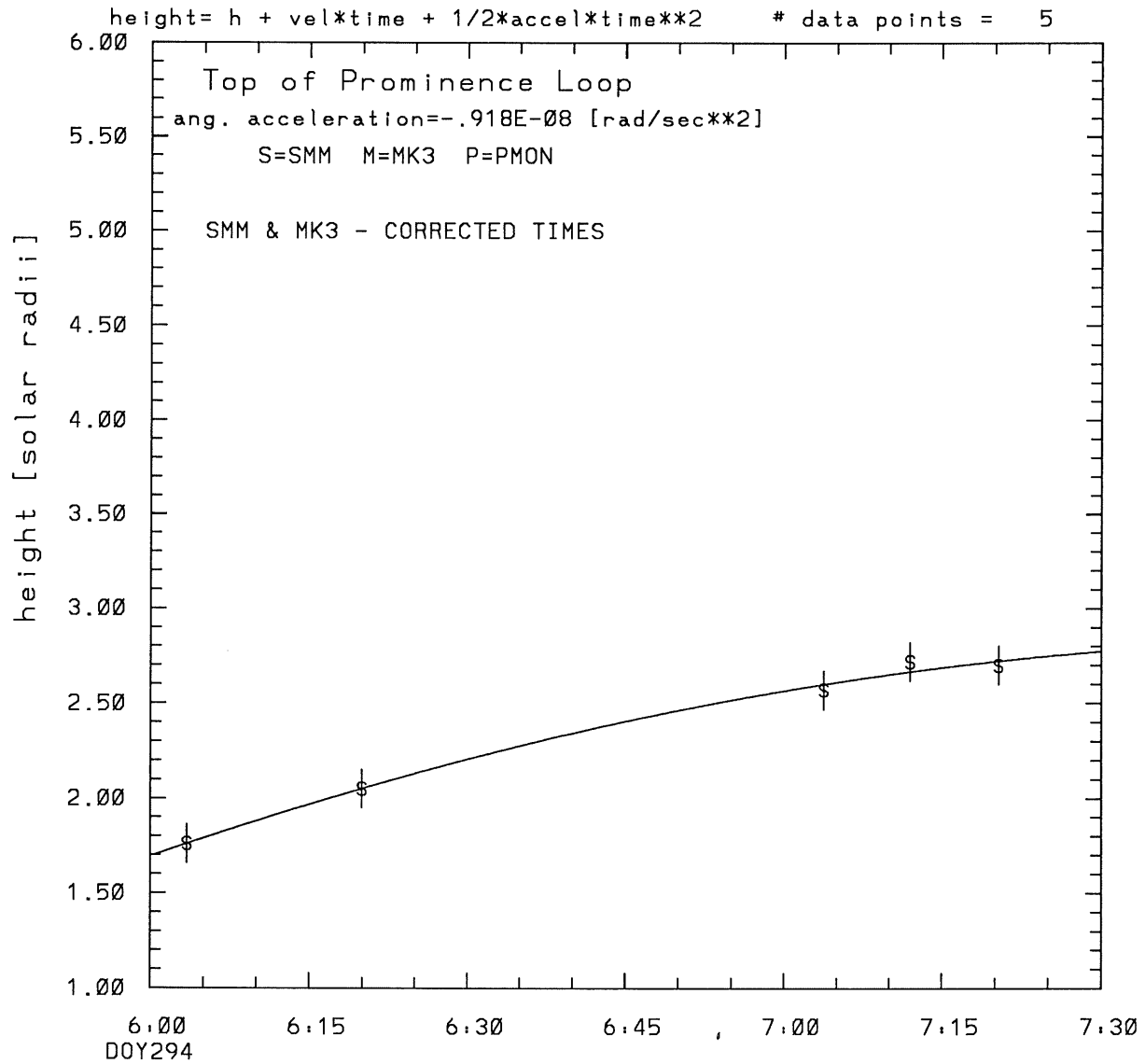


tstart=DOY294 5: 0 +/- 1.7 [min.]
radial velocity= 146. +/- 9. [km/sec]

SMM C/P 1988 DOY294 147 +/- 3 degrees



SMM C/P 1988 DOY294 147 +/- 3 degrees



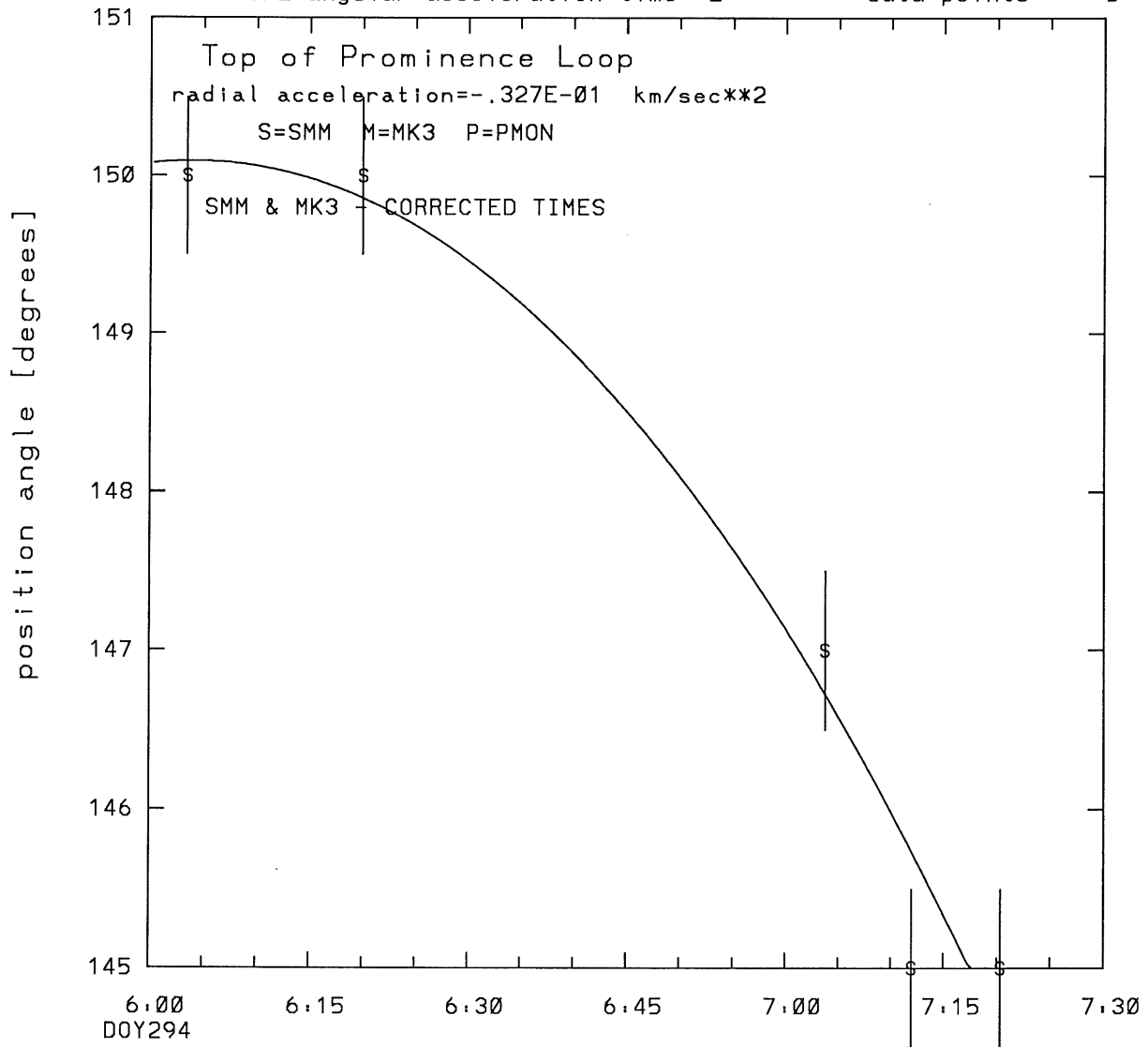
tstart=DOY294 5:29 +/- 1.2 [min.]

radial acceleration = $-0.0327 +/- 0.0146$ [km/sec**2]

SMM C/P 1988 DOY294 147 +/- 3 degrees

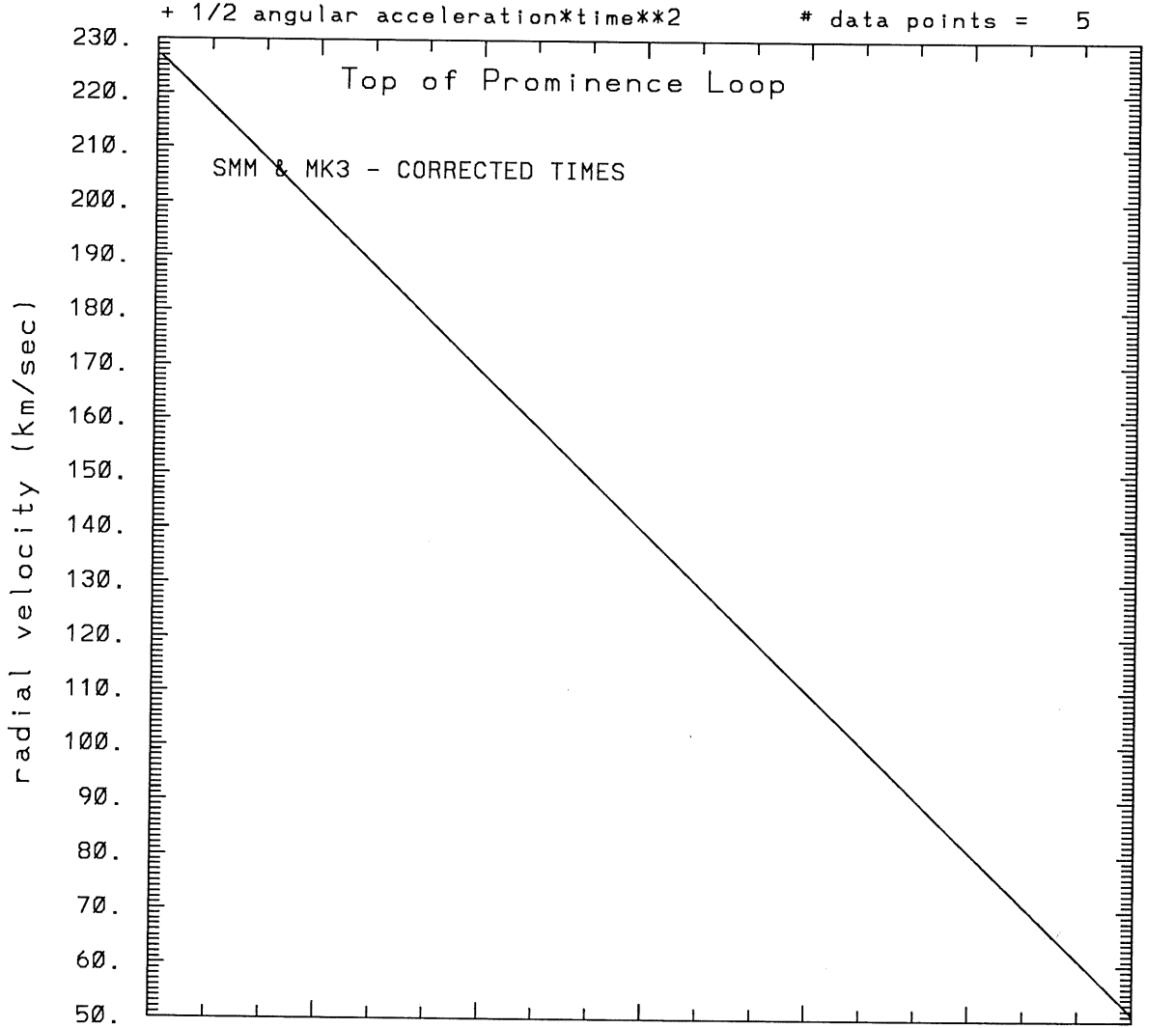
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2

data points = 5



angular acceleration = $-.918E-08$ +/- $0.503E-08$ [rad/sec**2]

SMM C/P 1988 DOY294 147 +/- 3 degrees



6:00
DOY294

6:15

6:30

6:45

7:00

7:15

7:30

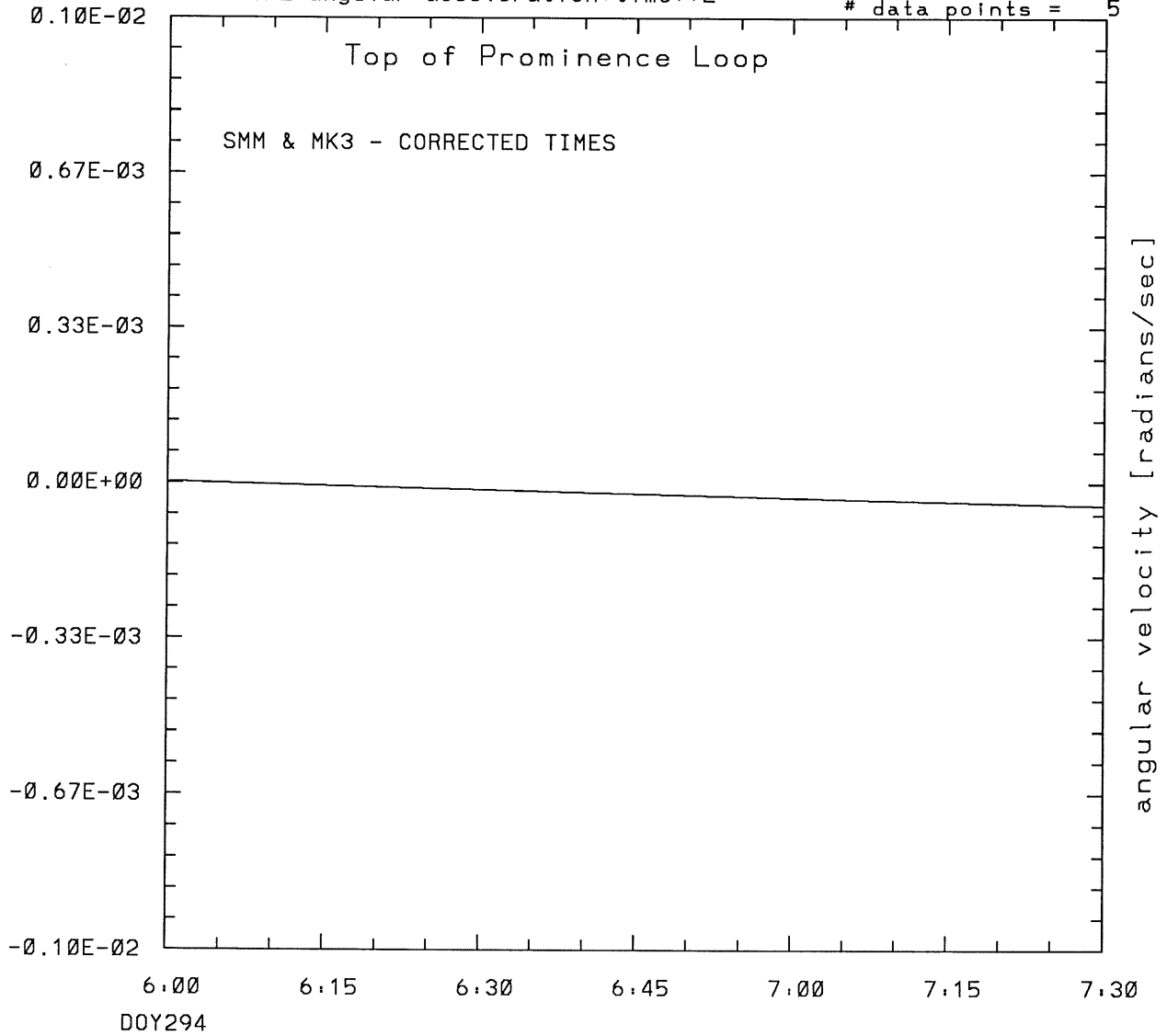
tstart=DOY294 5:29 +/- 1.2 [min.]

radial acceleration=-.327E-01 km/sec**2

SMM C/P 1988 DOY294 147 +/- 3 degrees

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

data points = 5



angular acceleration = $-0.918E-08 \pm 0.503E-08$ [rad/sec**2]

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1988	294	6: 3:28	1.76 +/- 0.10	150.0 +/- 0.5	0.5	SMM	
1988	294	6:19:58	2.05 +/- 0.10	150.0 +/- 0.5	0.5	SMM	
1988	294	7: 3:46	2.57 +/- 0.10	147.0 +/- 0.5	0.5	SMM	
1988	294	7:11:59	2.72 +/- 0.10	145.0 +/- 0.5	0.5	SMM	
1988	294	7:20:20	2.70 +/- 0.10	145.0 +/- 0.5	0.5	SMM	

Structure being measured:
Top of Prominence Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.602E+02 +/- 0.172E+01 [minutes]

In more convenient units:

Event began at DOY 294 5:00 +/- 0.172E+01 [minutes]

Event began at DOY 294 5: 0 +/- 0.172E+01 [minutes]

Origin defined at DOY294 6: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 146. +/- 9. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.176E+01 +/- 0.445E-01 [solar radii]
c(2) = 0.126E-01 +/- 0.783E-03 [radii/min]
c(2) = 0.146E+03 +/- 0.909E+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)= 0.51344E-01 [radii] see Bevington pg. 114

error in c(2)= 0.90449E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = -0.2070E-04 +/- 0.2786E-05[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 151. +/- 1. [degrees]
a(2) = -0.712E-01 +/- 0.958E-02 [degrees/min]
a(2) = -0.207E-04 +/- 0.279E-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 6: 3 = 146. km/sec

The RADIAL velocity at 6:19 = 146. km/sec

The RADIAL velocity at 7: 3 = 146. km/sec

The RADIAL velocity at 7:11 = 146. km/sec

The RADIAL velocity at 7:20 = 146. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.43

Standard Deviation in start time measurement = 0.305E+02

Error in time = 0.84814E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.285E-02

Reduced Chi Squared = 0.139E-01

Chi Squared = 0.416E-01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.992E+00

The probability that no LINEAR correlation exists between the variables = 0.80481

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	294	6: 3:28	1.76 +/-	0.10	150.0 +/-	0.5	SMM
1988	294	6:19:58	2.05 +/-	0.10	150.0 +/-	0.5	SMM
1988	294	7: 3:46	2.57 +/-	0.10	147.0 +/-	0.5	SMM
1988	294	7:11:59	2.72 +/-	0.10	145.0 +/-	0.5	SMM
1988	294	7:20:20	2.70 +/-	0.10	145.0 +/-	0.5	SMM

Structure being measured:
Top of Prominence Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.311E+02 +/- 0.118E+01 [minutes]
In more convenient units:
Event began at DOY 294 5:29 +/- 0.118E+01 [minutes]

Origin defined at DOY294 6: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.327E-01 +/- 0.146E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.169E+01 +/- 0.428E-01 [solar radii]
c(2) = 0.196E-01 +/- 0.319E-02 [radii/min]
c(2) = 0.228E+03 +/- 0.370E+02 [km/sec]
c(3) = -0.845E-04 +/- 0.377E-04 [radii/min**2]
c(3) = -0.327E-01 +/- 0.146E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.52475E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.85635E-03 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.39101E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.91203E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.46168E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.31787E-05 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= -0.9175E-08 +/- 0.5033E-08 [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 150. +/- 1. [degrees]
a(2) = 0.775E-02 +/- 0.440E-01 [degrees/min]
a(2) = 0.226E-05 +/- 0.128E-04 [rad/sec]
a(3) = -0.946E-03 +/- 0.519E-03 [degrees/min**2]
a(3) = -0.918E-08 +/- 0.503E-08 [rad/sec**2]

The RADIAL velocity at 6: 3 = 221. km/sec
The RADIAL velocity at 6:19 = 189. km/sec
The RADIAL velocity at 7: 3 = 103. km/sec
The RADIAL velocity at 7:11 = 87. km/sec
The RADIAL velocity at 7:20 = 70. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.43
Standard Deviation in start time measurement = 0.305E+02
Value of reduced Chi Squared returned from nllst2 = 0.142E-02
Reduced Chi Squared = 0.834E-02
Chi Squared = 0.167E-01
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 = 0.9923E+00
The correlation between the data and the time**2 term = 0.9604E+00
The correlation between the data and the complete equation of motion=0.9943E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]