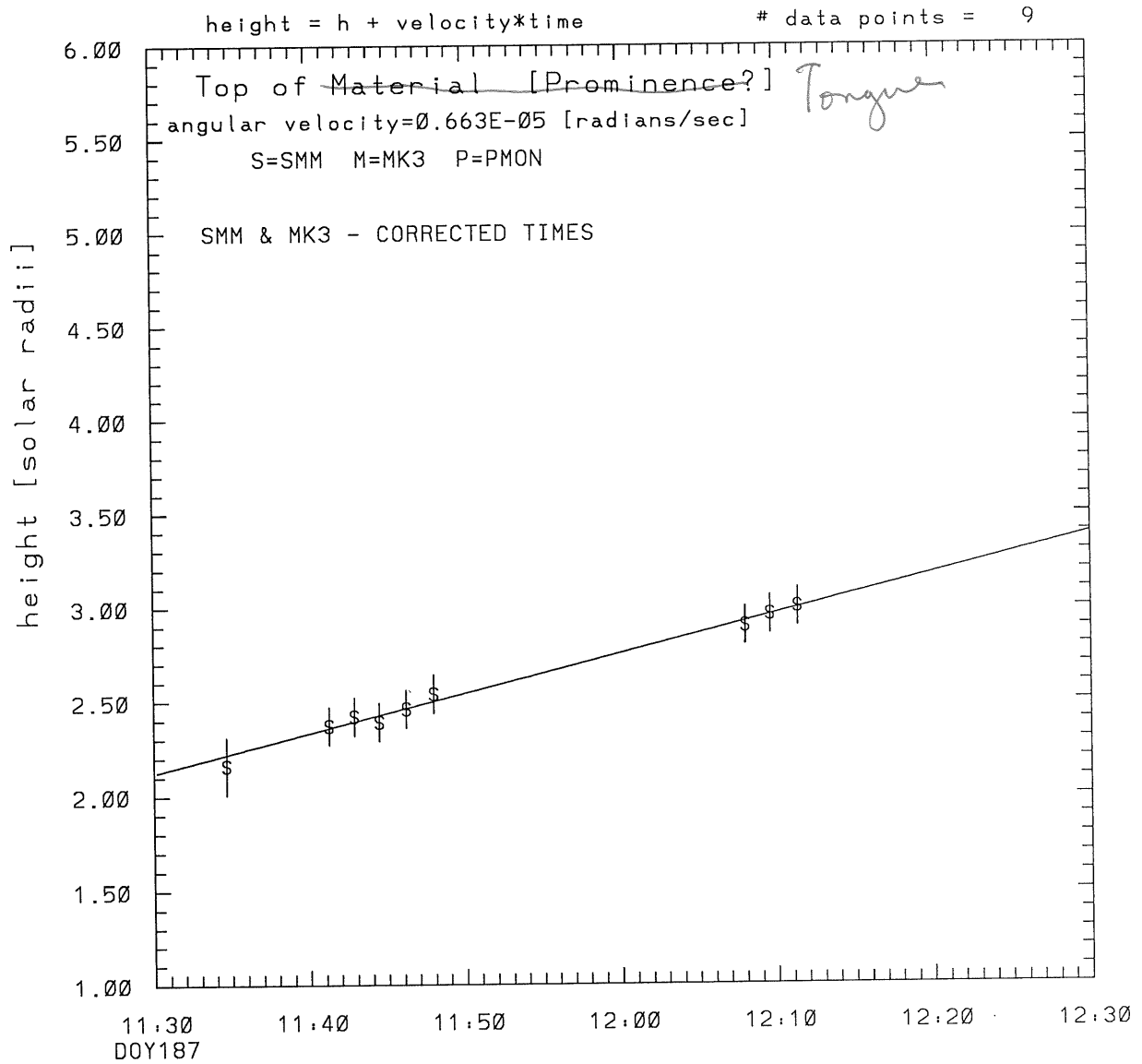


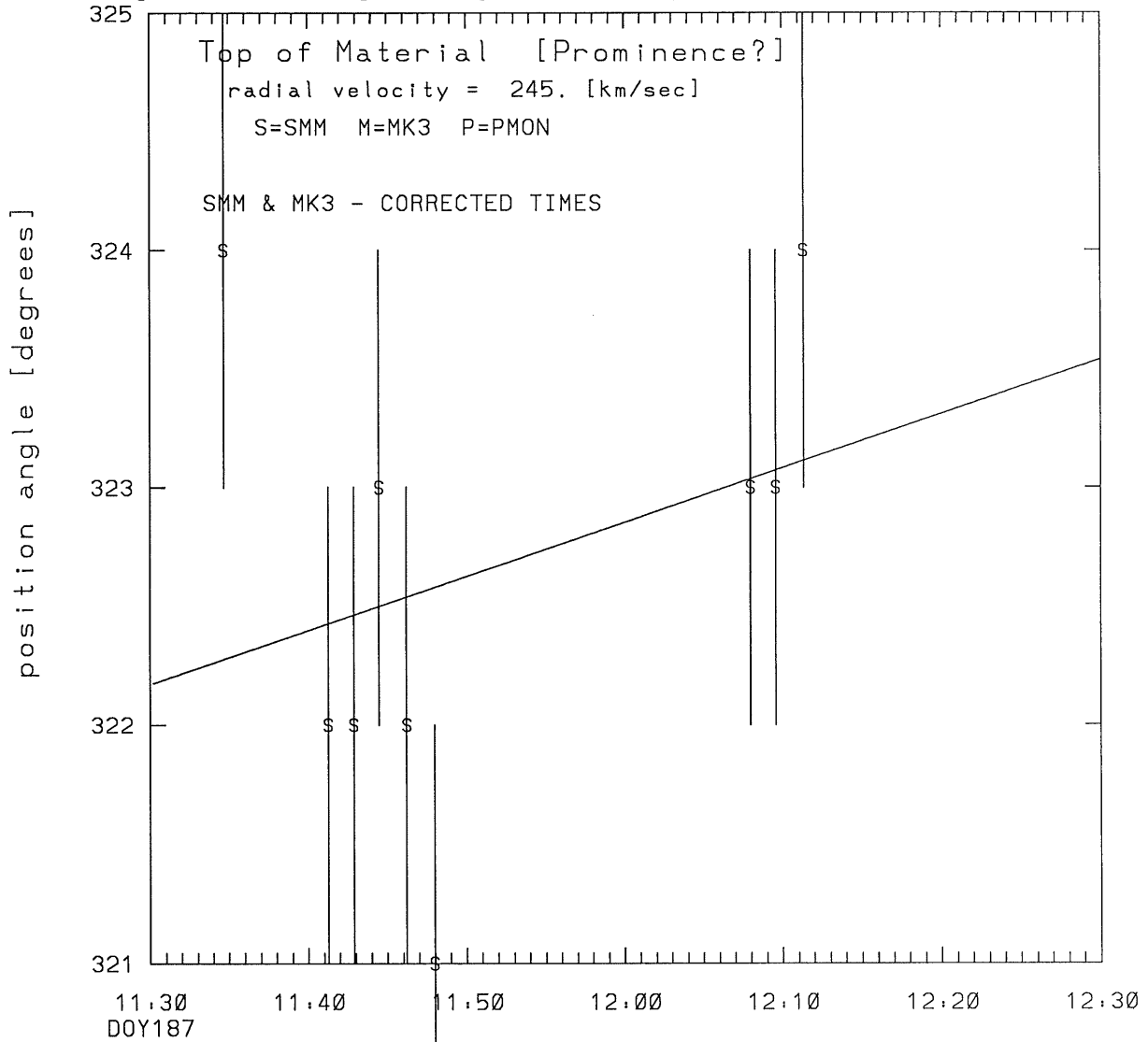
SMM C/P 1980 DOY187 322 +/- 2 degrees



tstart=DOY187 10:37 +/- 0.2 [min.]
radial velocity= 245. +/- 9. [km/sec]

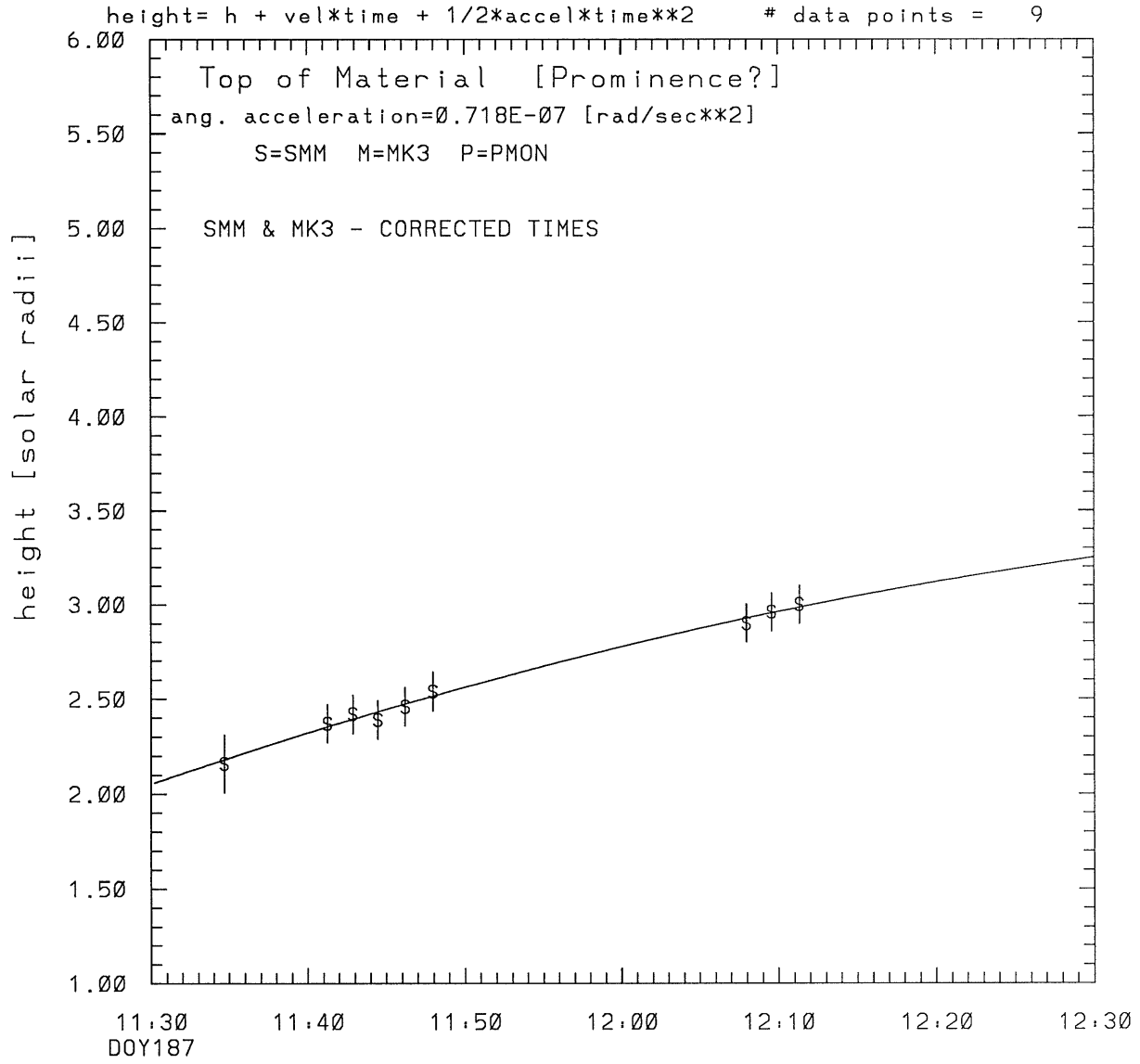
SMM C/P 1980 DOY187 322 +/- 2 degrees

angle= initial angle + angular velocity*time # data points = 9



tstart=DOY187 10:37 +/- 0.2 [min.]
angular velocity=0.663E-05 +/- 0.702E-05 [rad/sec]

SMM C/P 1980 DOY187 322 +/- 2 degrees



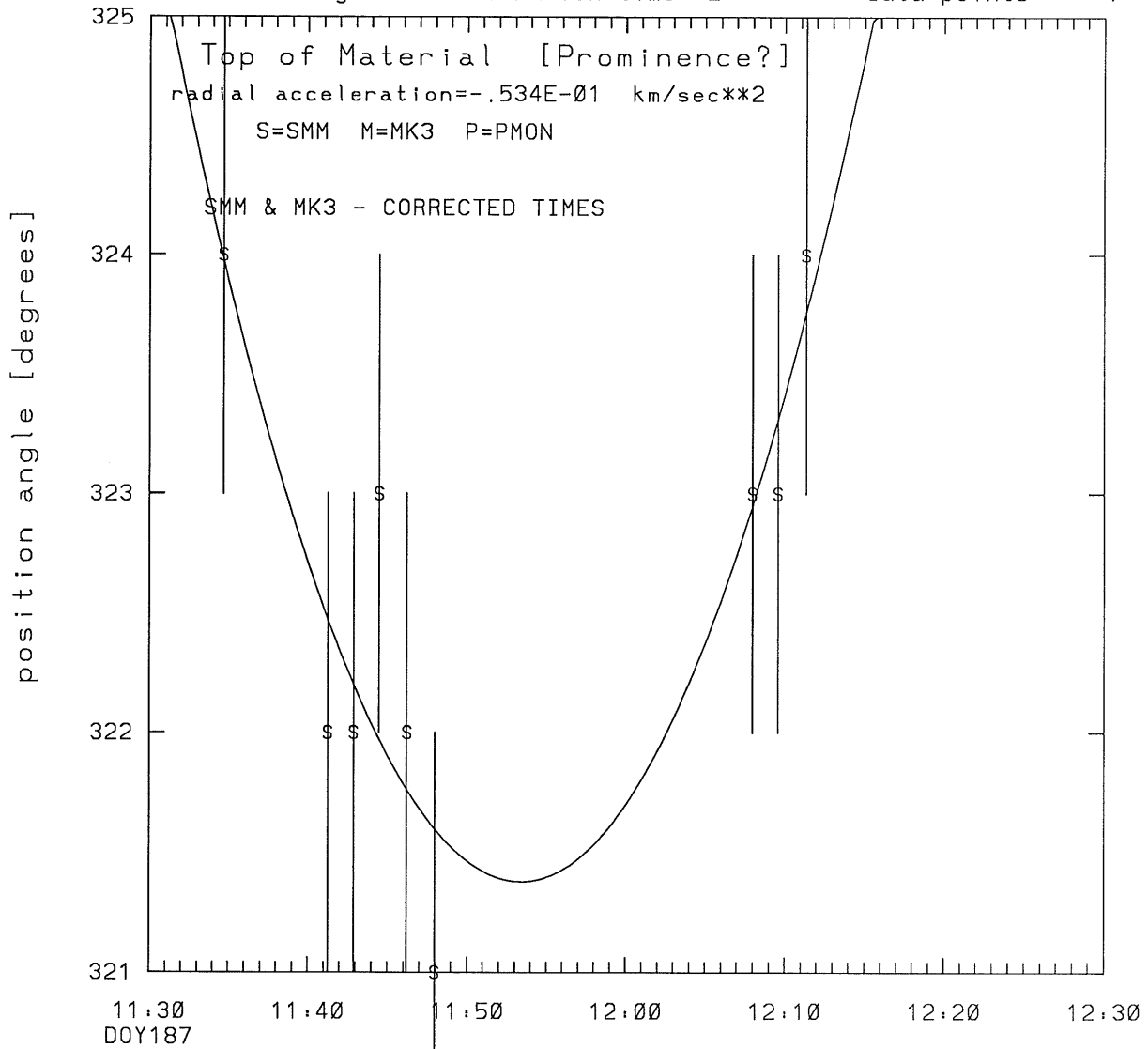
tstart = DOY187 10:58 +/- 6.3 [min.]

radial acceleration = $-0.0534 +/- 0.0409$ [km/sec**2]

SMM C/P 1980 DOY187 322 +/- 2 degrees

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

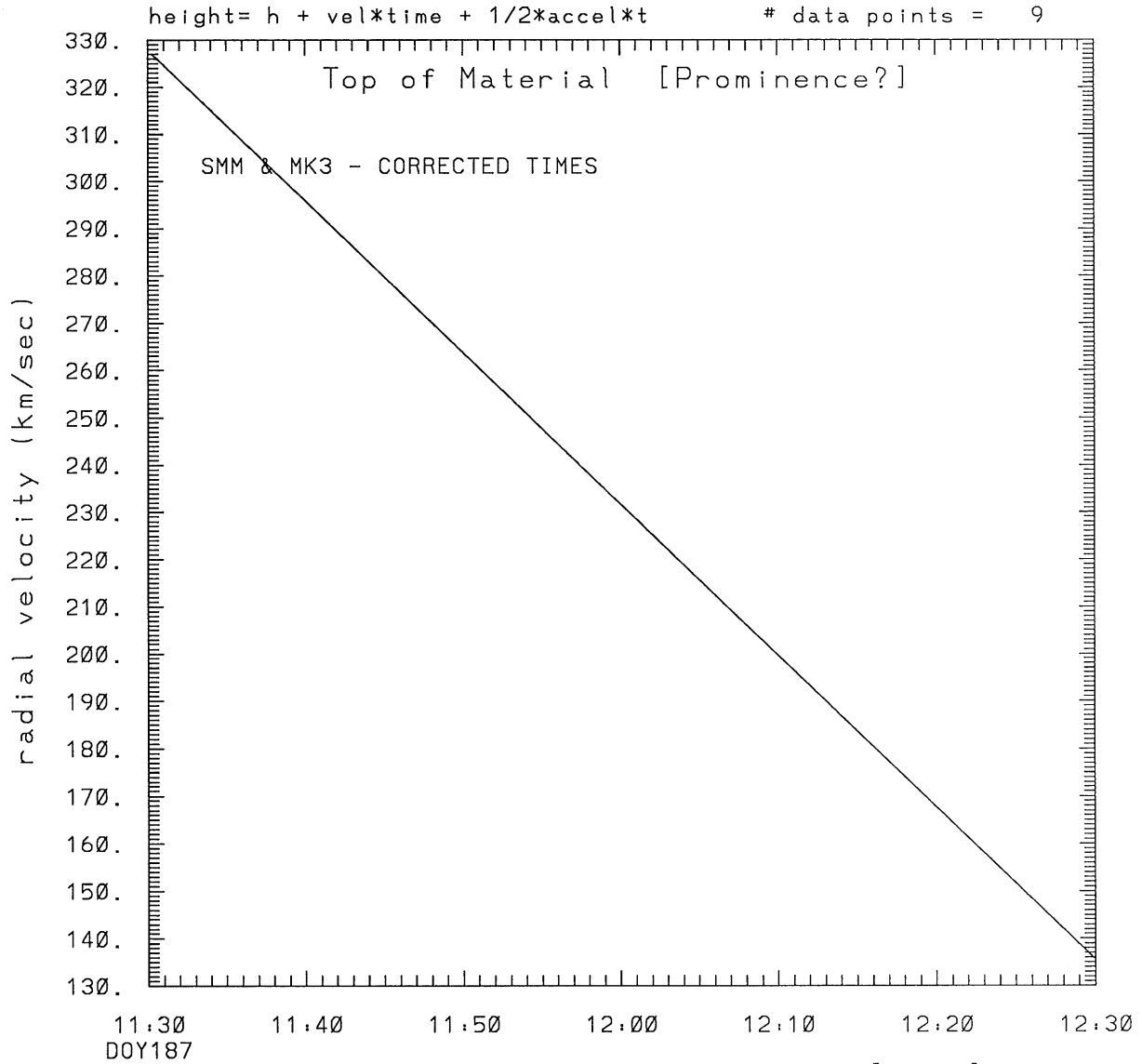
data points = 9



tstart = DOY187 10:58 +/- 6.3 [min.]

angular acceleration = $0.718E-07$ +/- $0.163E-07$ [rad/sec**2]

SMM C/P 1980 DOY187 322 +/- 2 degrees



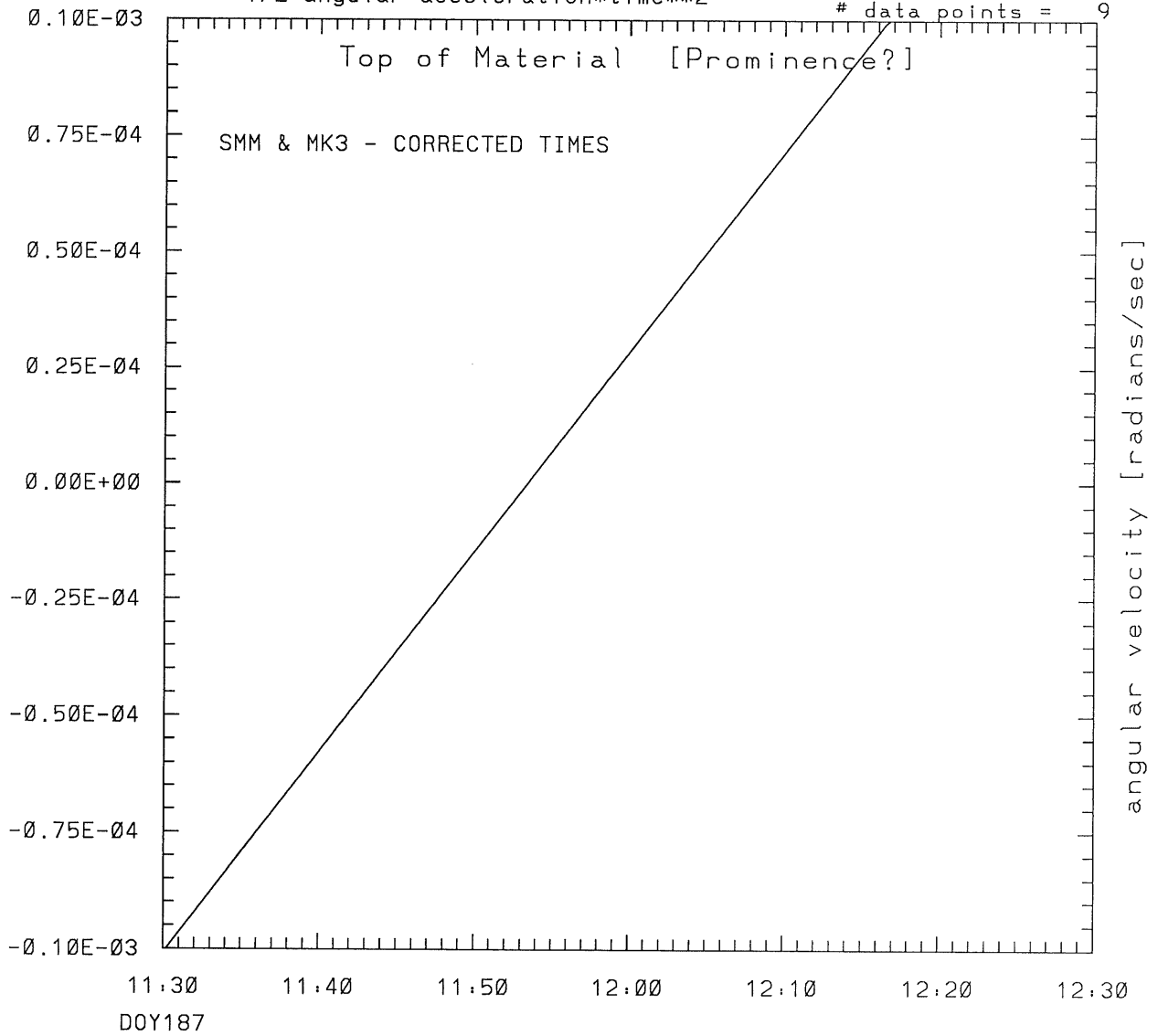
tstart=DOY187 10:58 +/- 6.3 [min.]

radial acceleration=-.534E-01 km/sec**2

SMM C/P 1980 DOY187 322 +/- 2 degrees

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

data points = 9



DOY187

tstart=DOY187 10:58 +/- 6.3 [min.]

angular acceleration=0.718E-07 +/-

0.163E-07 [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1980	187	11:34:40	2.16 +/-	0.15	324.0 +/-	0.5	SMM
1980	187	11:41:15	2.37 +/-	0.10	322.0 +/-	0.5	SMM
1980	187	11:42:52	2.42 +/-	0.10	322.0 +/-	0.5	SMM
1980	187	11:44:28	2.39 +/-	0.10	323.0 +/-	0.5	SMM
1980	187	11:46:13	2.46 +/-	0.10	322.0 +/-	0.5	SMM
1980	187	11:47:57	2.54 +/-	0.10	321.0 +/-	0.5	SMM
1980	187	12: 7:59	2.90 +/-	0.10	323.0 +/-	0.5	SMM
1980	187	12: 9:35	2.96 +/-	0.10	323.0 +/-	0.5	SMM
1980	187	12:11:20	3.00 +/-	0.10	324.0 +/-	1.0	SMM

Structure being measured:
Top of (Prominence?) Material

OUTPUT:

START TIME:

Event began at t = 0 + -0.530E+02 +/- 0.164E+00 [minutes]
In more convenient units:
Event began at DOY 187 10:37 +/- 0.164E+00 [minutes]

Origin defined at DOY187 11:30

RADIAL INFORMATION:

RADIAL VELOCITY = 245. +/- 9. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.212E+01 +/- 0.194E-01 [solar radii]
c(2) = 0.211E-01 +/- 0.738E-03 [radii/min]
c(2) = 0.245E+03 +/- 0.856E+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)= 0.21761E-01 [radii] see Bevington pg. 114
error in c(2)= 0.85526E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.3283E-05 +/- 0.7405E-05 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 322. +/- 1. [degrees]
a(2) = 0.113E-01 +/- 0.255E-01 [degrees/min]
a(2) = 0.328E-05 +/- 0.740E-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 11:34 = 245. km/sec

The RADIAL velocity at 11:41 = 245. km/sec
The RADIAL velocity at 11:42 = 245. km/sec
The RADIAL velocity at 11:44 = 245. km/sec
The RADIAL velocity at 11:46 = 245. km/sec
The RADIAL velocity at 11:47 = 245. km/sec
The RADIAL velocity at 12: 7 = 245. km/sec
The RADIAL velocity at 12: 9 = 245. km/sec
The RADIAL velocity at 12:11 = 245. 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 = 0.131E+02
Error in time = 0.42070E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.796E-03
Reduced Chi Squared = 0.360E-02
Chi Squared = 0.252E-01
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.995E+00
The probability that no LINEAR correlation exists between the variables = 0.34711
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	radius	angle	error in angle	datatype
1980	187	11:34:40	2.16 +/- 0.15	324.0 +/- 0.5			SMM
1980	187	11:41:15	2.37 +/- 0.10	322.0 +/- 0.5			SMM
1980	187	11:42:52	2.42 +/- 0.10	322.0 +/- 0.5			SMM
1980	187	11:44:28	2.39 +/- 0.10	323.0 +/- 0.5			SMM
1980	187	11:46:13	2.46 +/- 0.10	322.0 +/- 0.5			SMM
1980	187	11:47:57	2.54 +/- 0.10	321.0 +/- 0.5			SMM
1980	187	12: 7:59	2.90 +/- 0.10	323.0 +/- 0.5			SMM
1980	187	12: 9:35	2.96 +/- 0.10	323.0 +/- 0.5			SMM
1980	187	12:11:20	3.00 +/- 0.10	324.0 +/- 1.0			SMM

Structure being measured:
Top of (Prominence?) Material

OUTPUT:

START TIME:

Event began at $t = 0 + -0.322E+02 +/- 0.630E+01$ [minutes]
In more convenient units:
Event began at DOY 187 10:58 +/- 0.630E+01 [minutes]

Origin defined at DOY187 11:30

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.534E-01 +/- 0.409E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.205E+01 +/- 0.556E-01 [solar radii]
c(2) = 0.283E-01 +/- 0.551E-02 [radii/min]
c(2) = 0.328E+03 +/- 0.639E+02 [km/sec]
c(3) = -0.138E-03 +/- 0.106E-03 [radii/min**2]
c(3) = -0.534E-01 +/- 0.409E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.45245E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.13040E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.47129E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.13469E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.93253E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.26219E-04 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION = $0.6938E-07 +/- 0.1664E-07$ [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 325. +/- 1. [degrees]
a(2) = -0.338E+00 +/- 0.850E-01 [degrees/min]

a(2) = -0.983E-04 +/- 0.247E-04 [rad/sec]
a(3) = 0.716E-02 +/- 0.172E-02 [degrees/min**2]
a(3) = 0.694E-07 +/- 0.166E-07 [rad/sec**2]

The RADIAL velocity at 11:34 = 313. km/sec
The RADIAL velocity at 11:41 = 292. km/sec
The RADIAL velocity at 11:42 = 287. km/sec
The RADIAL velocity at 11:44 = 282. km/sec
The RADIAL velocity at 11:46 = 276. km/sec
The RADIAL velocity at 11:47 = 270. km/sec
The RADIAL velocity at 12: 7 = 206. km/sec
The RADIAL velocity at 12: 9 = 201. km/sec
The RADIAL velocity at 12:11 = 195. 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 = 0.131E+02
Value of reduced Chi Squared returned from nllst2 = 0.731E-03
Reduced Chi Squared = 0.374E-02
Chi Squared = 0.224E-01
The probability for exceeding chi square = 0.100E+01

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 = 0.9715E+00
The correlation between the data and the time**2 term = 0.9841E+00
The correlation between the data and the complete equation of motion=0.9918E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]