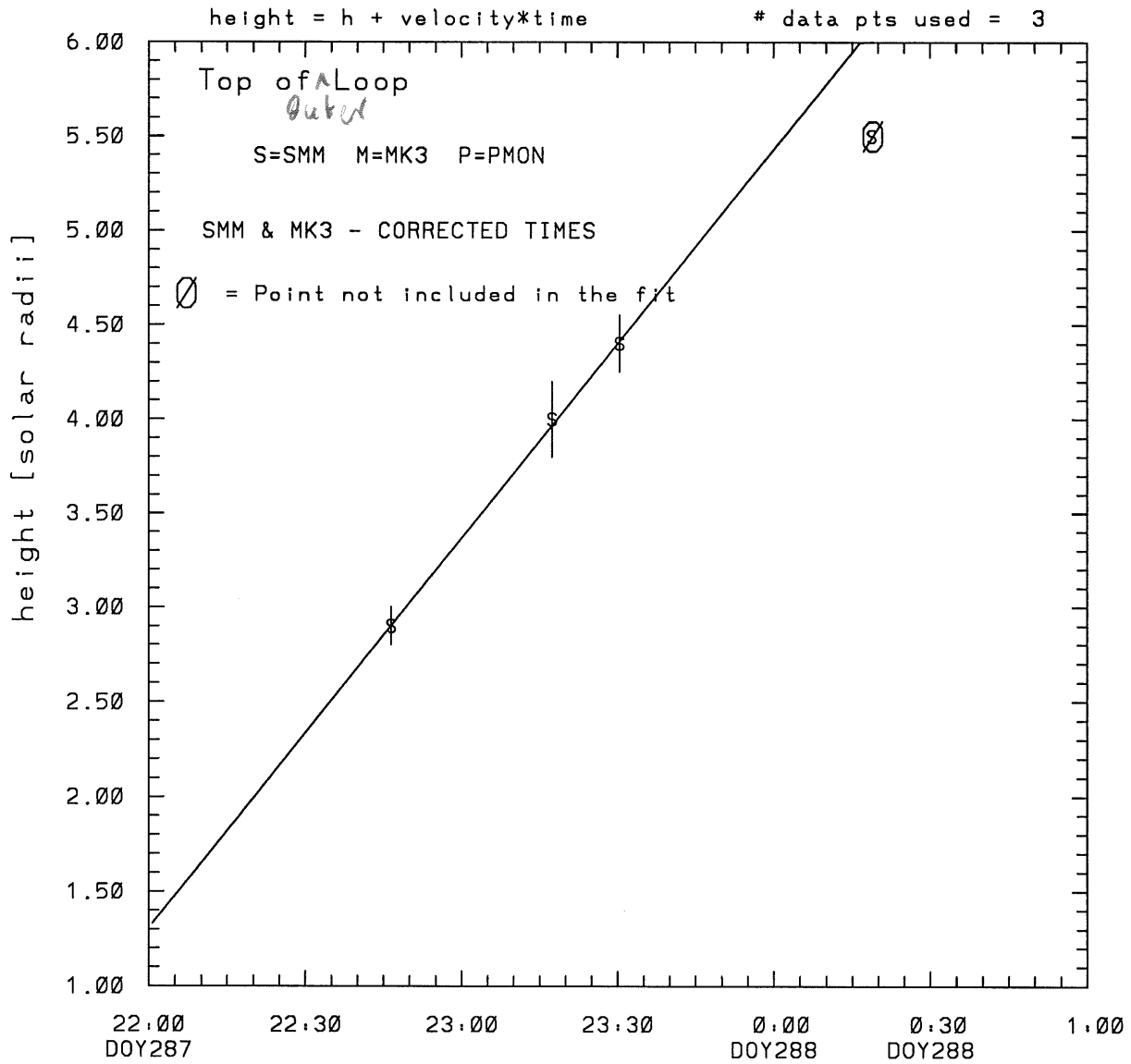
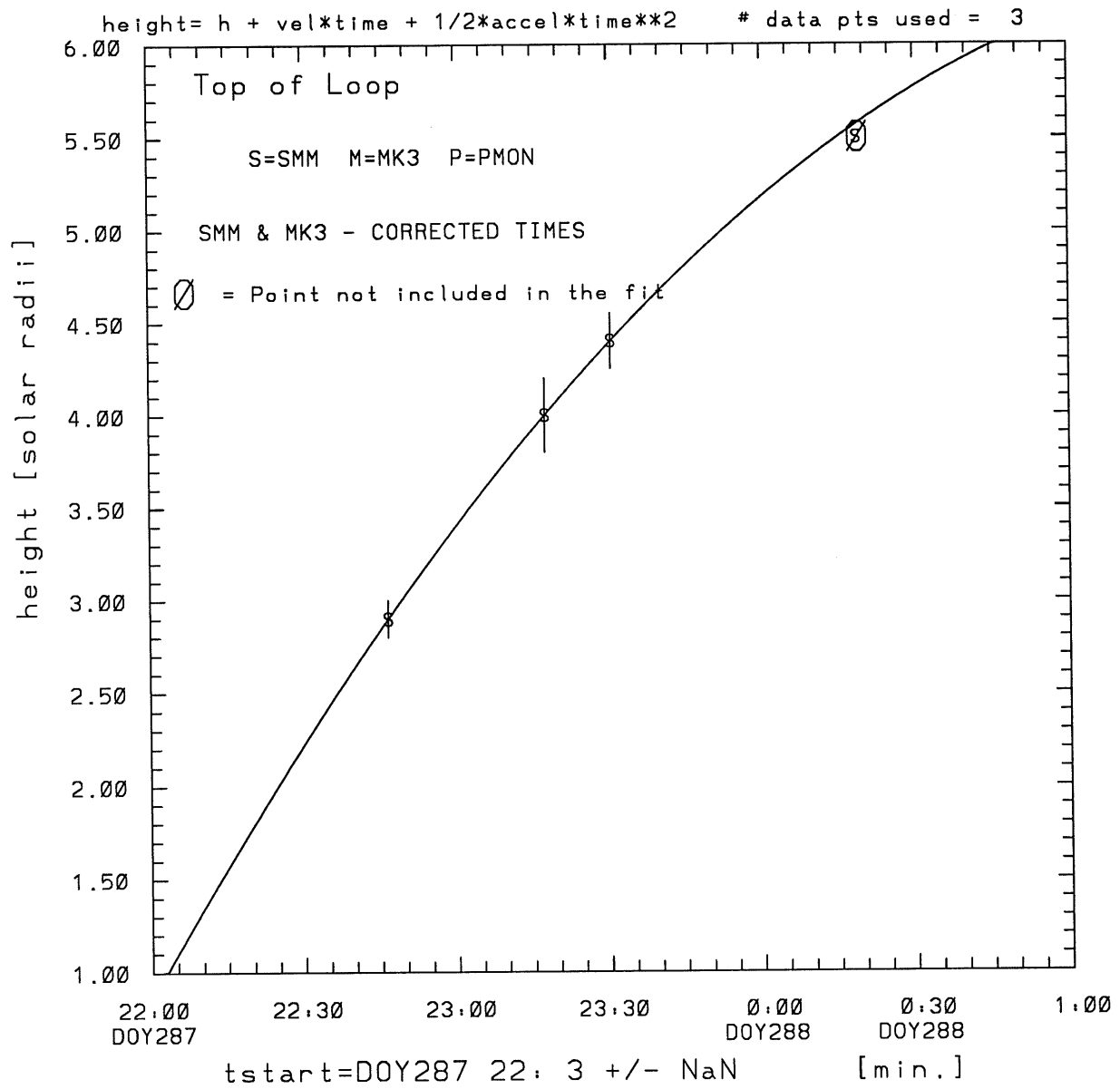


SMM C/P 1986 DOY287 295 +/- 0 degrees



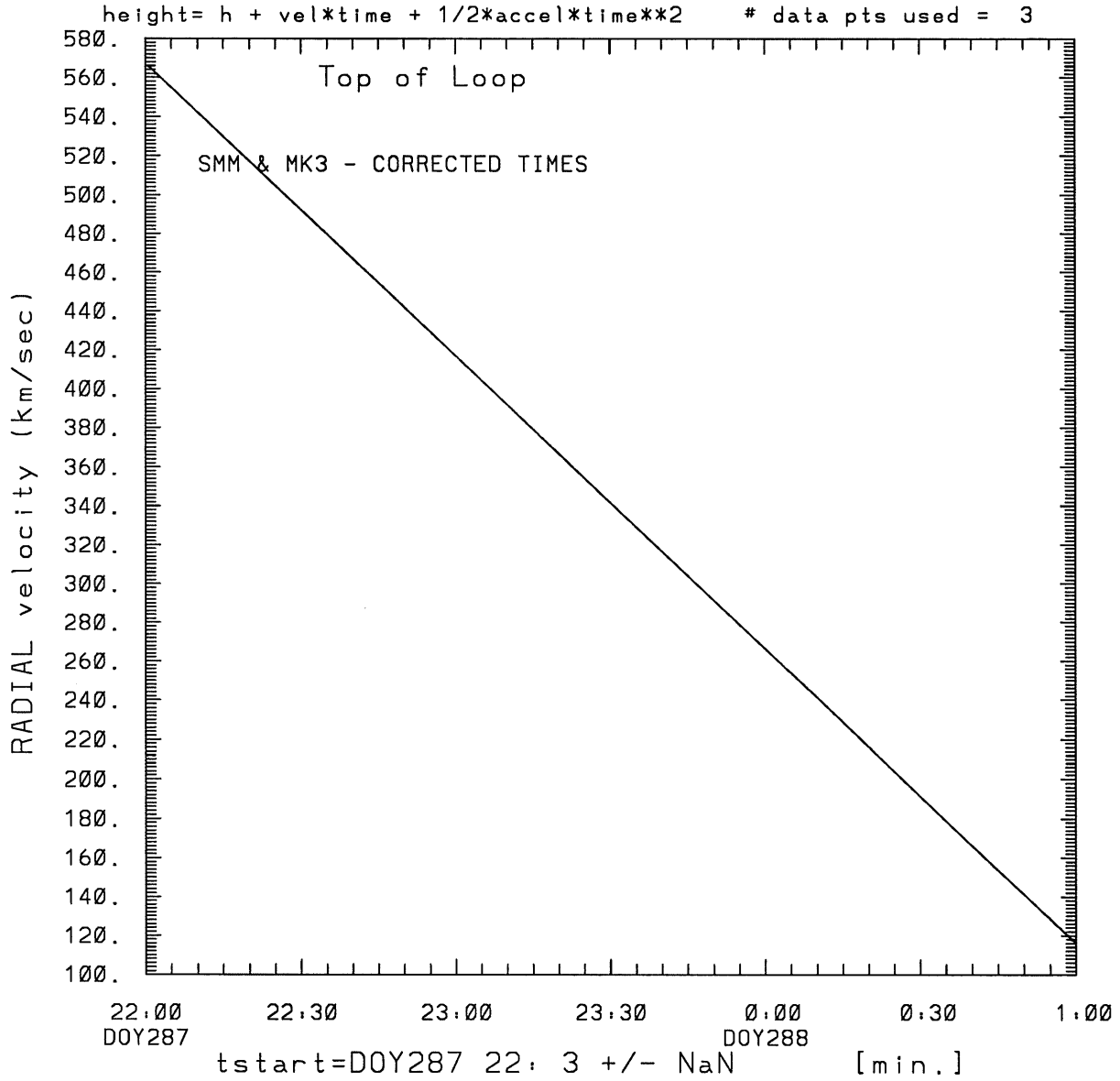
tstart=DOY287 21:53 +/- 0.1 [min.]
radial velocity= 399. +/- 5. [km/sec]

SMM C/P 1986 DOY287 295 +/- 0 degrees



radial acceleration = -0.0418 ± 0.0000 [km/sec**2]

SMM C/P 1986 DOY287 295 +/- 0 degrees



radial acceleration=-.418E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1986	287	22:46:28	2.90 +/-	0.10	295.0 +/-	0.5	SMM
1986	287	23:17:26	4.00 +/-	0.20	295.0 +/-	1.0	SMM
1986	287	23:30:26	4.40 +/-	0.15	295.0 +/-	1.0	SMM
1986	288	0:18:49	5.50	-----	280.00 +/-	----	SMM THIS POINT WASN'T USE

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.890E+01 +/- 0.881E-01$ [minutes]
In more convenient units:
Event began at DOY 287 21:53 +/- 0.881E-01 [minutes]

Origin defined at DOY287 22: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 399. +/- 5. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.131E+01 +/- 0.281E-01 [solar radii]
c(2) = 0.344E-01 +/- 0.429E-03 [radii/min]
c(2) = 0.399E+03 +/- 0.497E+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) = 0.57861E+00 [radii] see Bevington pg. 114
error in c(2) = 0.61329E-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) = 295. +/- 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 RADIAL velocity at 22:46 = 399. km/sec

The RADIAL velocity at 23:17 = 399. km/sec

The RADIAL velocity at 23:30 = 399. km/sec

The RADIAL velocity at 0:18 = 399. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.07
Standard Deviation in start time measurement = 0.333E+02
Error in time = 0.16790E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.286E-03
Reduced Chi Squared = 0.664E+00
Chi Squared = 0.133E+01
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.991E+00
The probability that no LINEAR correlation exists between the variables = 0.86901
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
1986	287	22:46:28	2.90 +/- 0.10		295.0 +/- 0.5		SMM
1986	287	23:17:26	4.00 +/- 0.20		295.0 +/- 1.0		SMM
1986	287	23:30:26	4.40 +/- 0.15		295.0 +/- 1.0		SMM
1986	288	0:18:49	5.50	-----	280.00 +/- ----		SMM THIS POINT WASN'T USE

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + 0.287E+01 +/- NaN [minutes]

In more convenient units:

Event began at DOY 287 22: 3 +/- NaN [minutes]

Origin defined at DOY287 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.418E-01 +/- 0.481E-06 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =	0.860E+00 +/-	0.515E-05 [solar radii]
c(2) =	0.489E-01 +/-	0.168E-06 [radii/min]
c(2) =	0.567E+03 +/-	0.194E-02 [km/sec]
c(3) =	-0.108E-03 +/-	0.124E-08 [radii/min**2]
c(3) =	-0.418E-01 +/-	0.481E-06 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) =	0.27940E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) =	0.00000E+00 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) =	0.64539E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) =	-NaN [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) =	0.33736E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) =	-NaN [radii/min**2] 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) =	295. +/-	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 RADIAL velocity at 22:46 = 451. km/sec

The RADIAL velocity at 23:17 = 373. km/sec

The RADIAL velocity at 23:30 = 341. km/sec

The RADIAL velocity at 0:18 = 219. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.07

Standard Deviation in start time measurement = 0.333E+02

Value of reduced Chi Squared returned from nllst2 = 0.114E-12

Reduced Chi Squared = 0.183E-01

Chi Squared = 0.183E-01

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

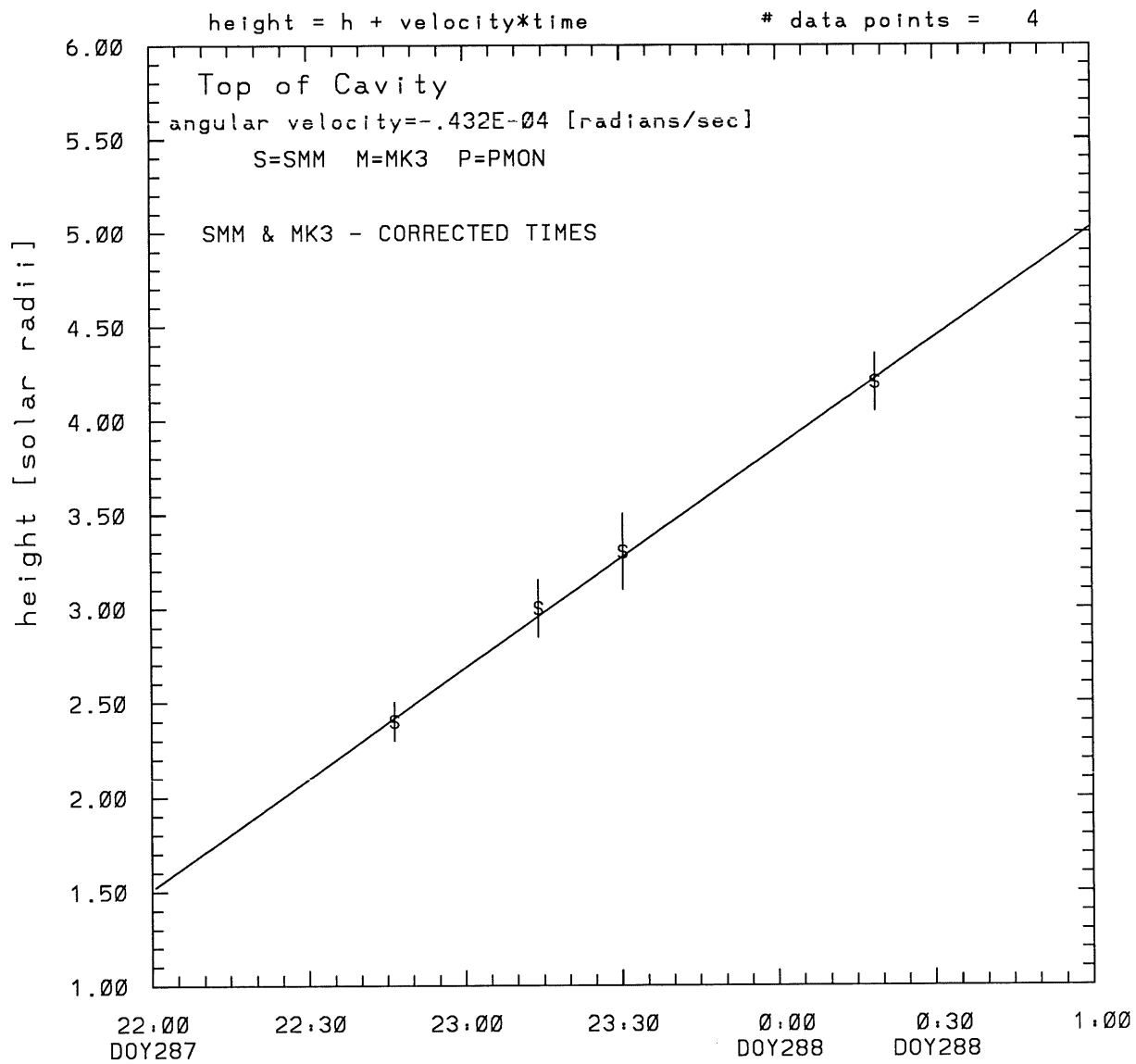
The correlation between the data and the term linear in time = 0.9711E+00

The correlation between the data and the time² term = 0.8148E+00

The correlation between the data and the complete equation of motion=0.1012E+01

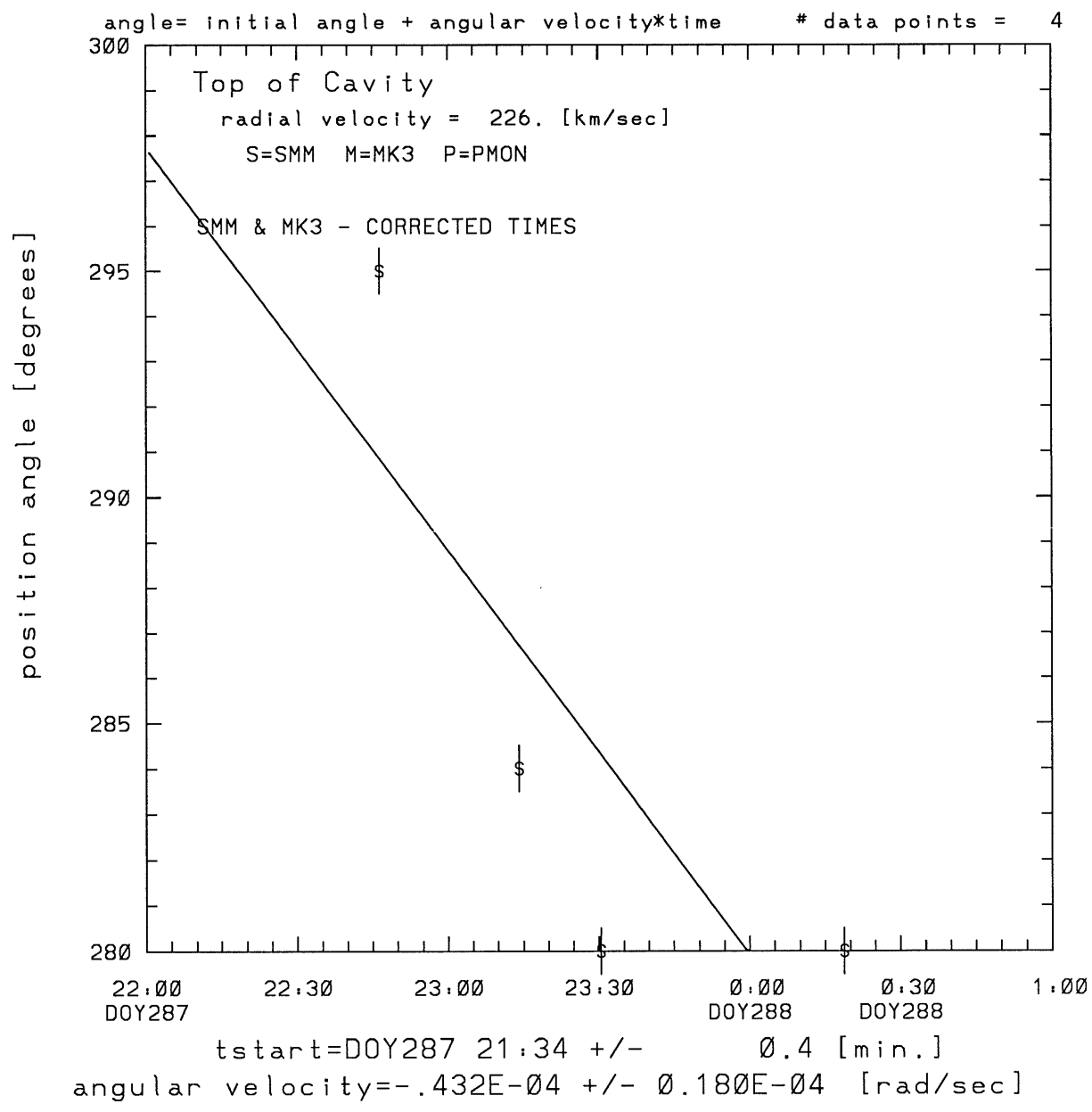
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1986 DOY287 284 +/- 11 degrees

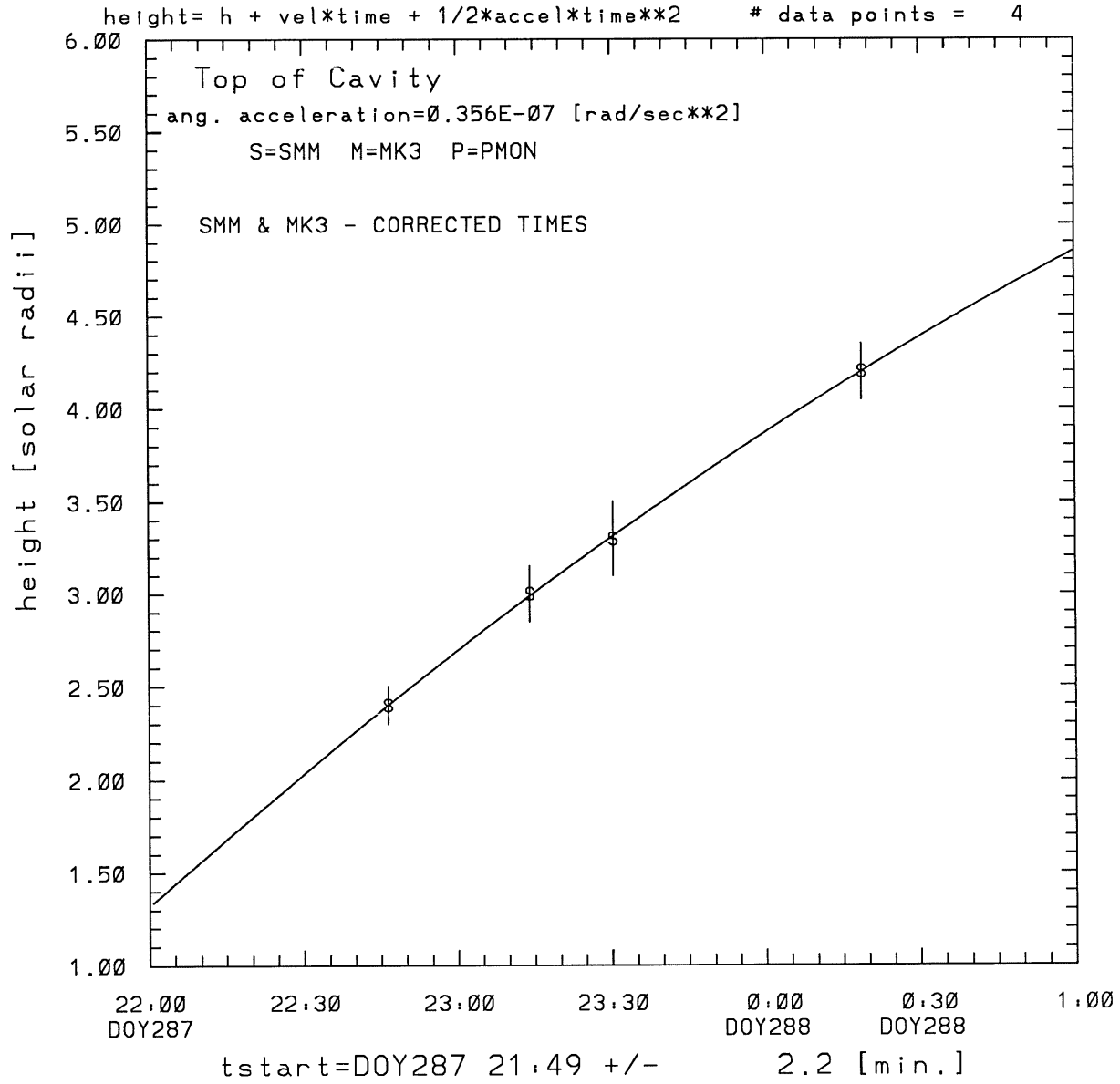


tstart=DOY287 21:34 +/- 0.4 [min.]
radial velocity= 226. +/- 5. [km/sec]

SMM C/P 1986 DOY287 284 +/- 11 degrees



SMM C/P 1986 DOY287 284 +/- 11 degrees

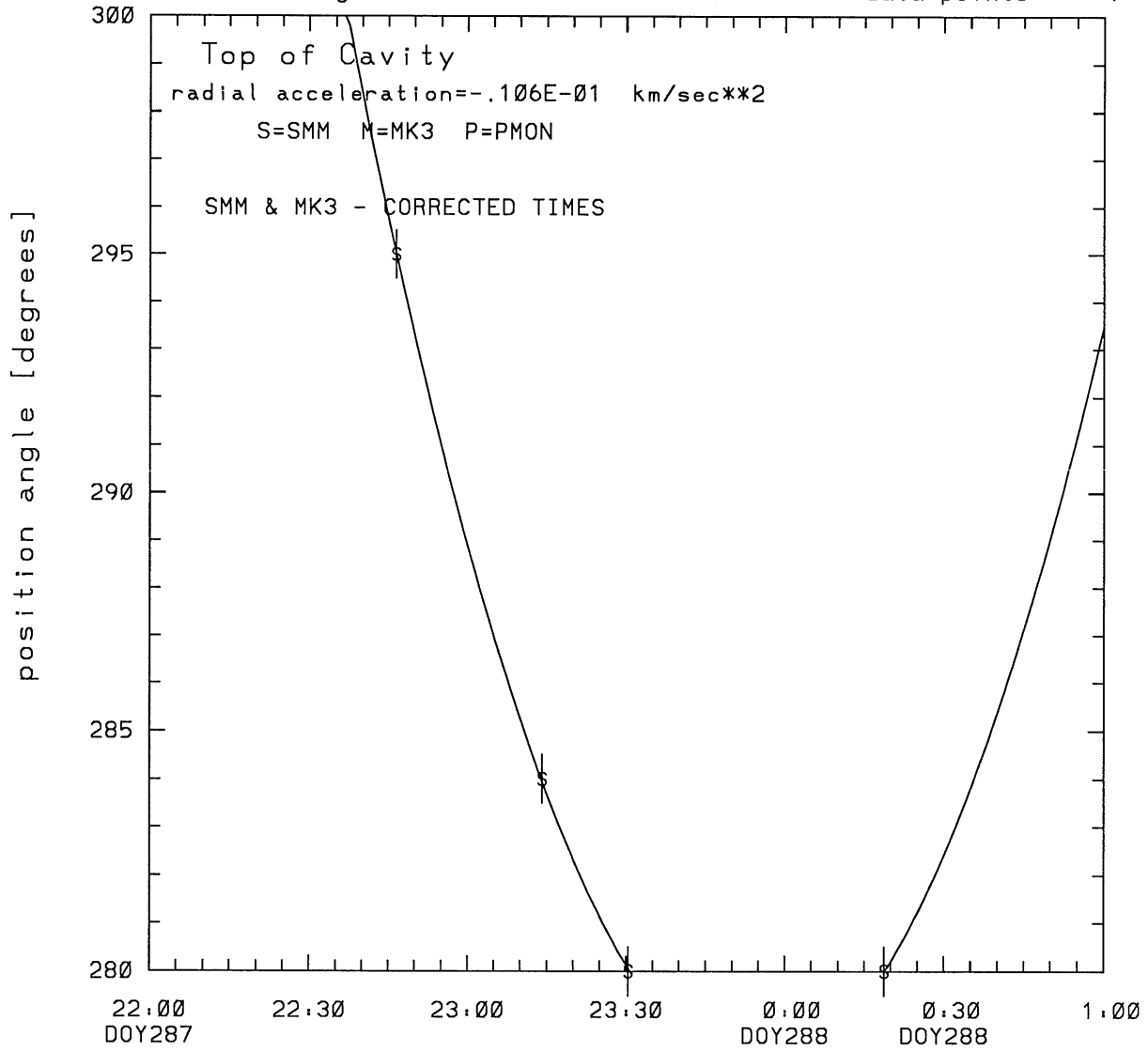


radial acceleration = $-0.0106 +/- 0.0022$ [km/sec**2]

SMM C/P 1986 DOY287 284 +/- 11 degrees

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

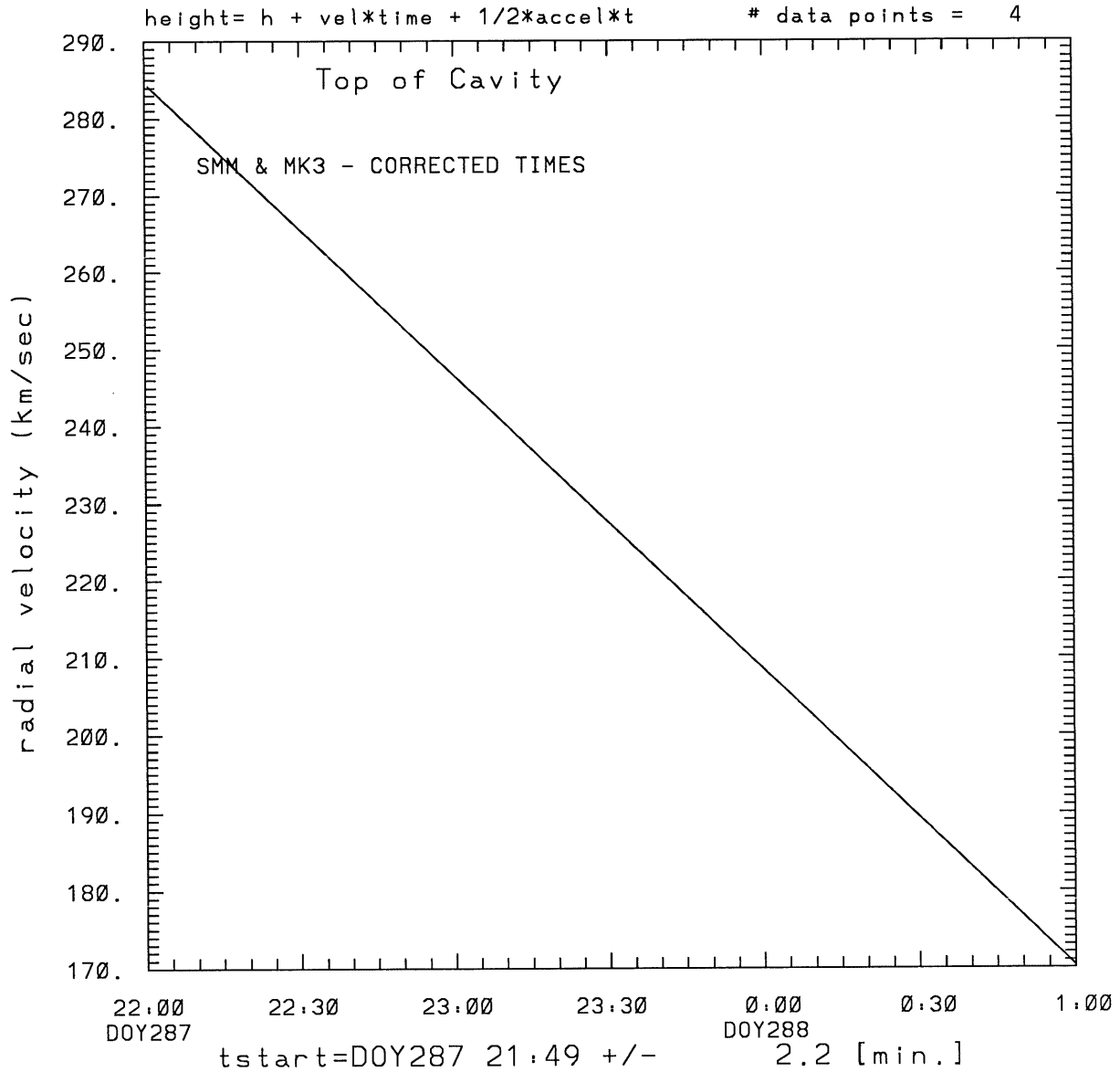
data points = 4



tstart = DOY287 21:49 +/- 2.2 [min.]

angular acceleration = $0.356E-07$ +/- $0.314E-09$ [rad/sec**2]

SMM C/P 1986 DOY287 284 +/- 11 degrees

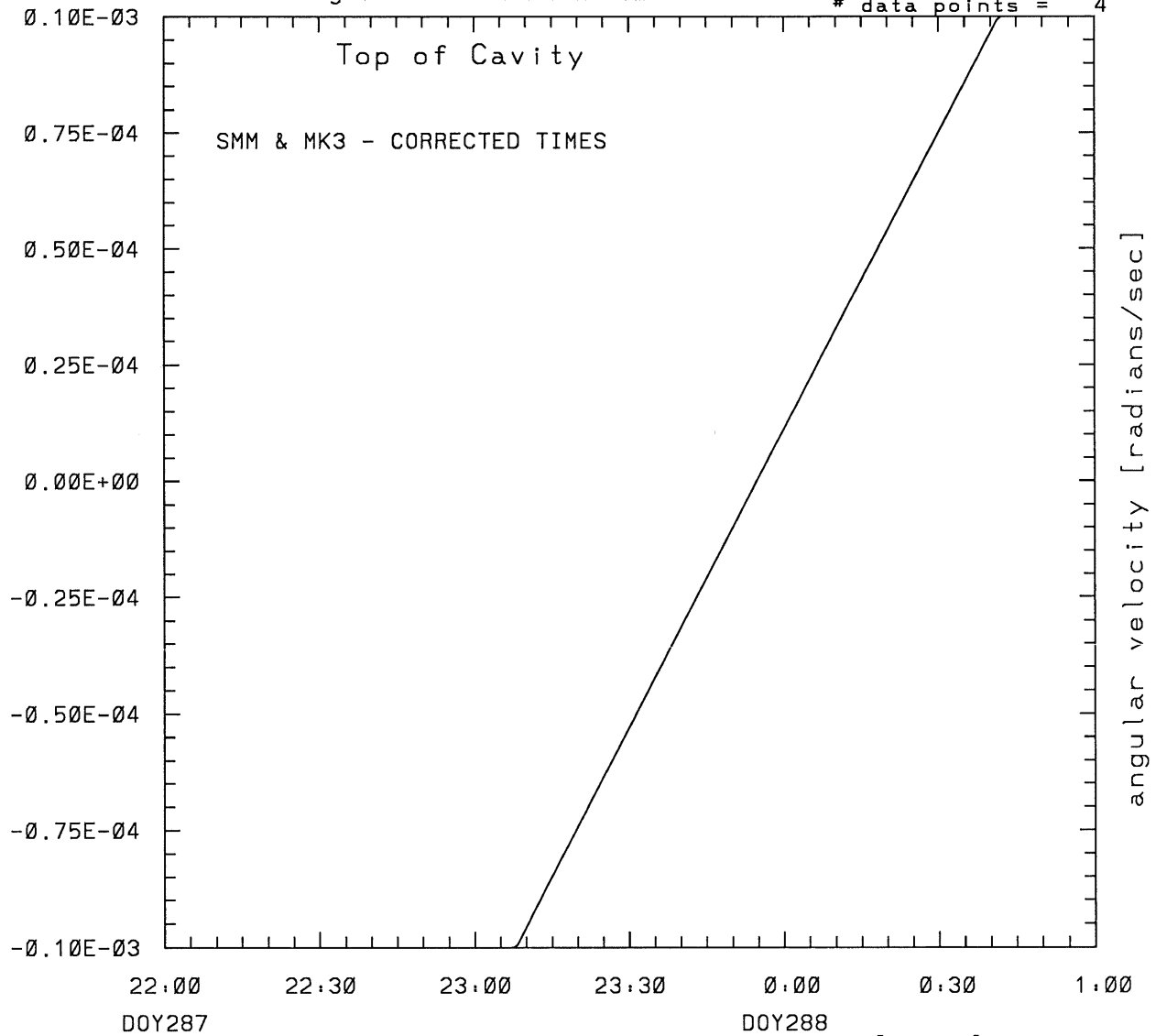


radial acceleration = $-0.106E-01$ km/sec**2

SMM C/P 1986 DOY287 284 +/- 11 degrees

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

data points = 4



tstart=DOY287 21:49 +/- 2.2 [min.]
angular acceleration=0.356E-07 +/-
0.314E-09 [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1986	287	22:46:28	2.40	+/- 0.10	295.0	+/- 0.5	SMM
1986	287	23:14:11	3.00	+/- 0.15	284.0	+/- 1.0	SMM
1986	287	23:30:26	3.30	+/- 0.20	280.0	+/- 1.0	SMM
1986	288	0:18:49	4.20	+/- 0.15	280.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.261E+02 \pm 0.409E+00$ [minutes]
In more convenient units:
Event began at DOY 287 21:34 $\pm 0.409E+00$ [minutes]

Origin defined at DOY287 22: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 226. +/- 5. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =	0.151E+01 +/-	0.352E-01 [solar radii]
c(2) =	0.195E-01 +/-	0.417E-03 [radii/min]
c(2) =	0.226E+03 +/-	0.484E+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) = 0.54790E-01 [radii] see Bevington pg. 114

error in c(2) = 0.58480E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = $-0.5470E-04 \pm 0.1631E-04$ [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) =	302. +/-	4. [degrees]
a(2) =	-0.188E+00 +/-	0.561E-01 [degrees/min]
a(2) =	-0.547E-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 22:46 = 226. km/sec

The RADIAL velocity at 23:14 = 226. km/sec

The RADIAL velocity at 23:30 = 226. km/sec

The RADIAL velocity at 0:18 = 226. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.75
Standard Deviation in start time measurement = 0.336E+02
Error in time = 0.28427E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.871E-03
Reduced Chi Squared = 0.364E-02
Chi Squared = 0.728E-02
The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.999E+00
The probability that no LINEAR correlation exists between the variables = 0.79441
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
1986	287	22:46:28	2.40 +/-	0.10	295.0 +/-	0.5	SMM
1986	287	23:14:11	3.00 +/-	0.15	284.0 +/-	1.0	SMM
1986	287	23:30:26	3.30 +/-	0.20	280.0 +/-	1.0	SMM
1986	288	0:18:49	4.20 +/-	0.15	280.0 +/-	1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.129E+02 +/- 0.218E+01 [minutes]
In more convenient units:
Event began at DOY 287 21:49 +/- 0.218E+01 [minutes]

Origin defined at DOY287 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.106E-01 +/- 0.215E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =	0.132E+01 +/-	0.403E-01 [solar radii]
c(2) =	0.245E-01 +/-	0.103E-02 [radii/min]
c(2) =	0.285E+03 +/-	0.120E+02 [km/sec]
c(3) =	-0.274E-04 +/-	0.557E-05 [radii/min**2]
c(3) =	-0.106E-01 +/-	0.215E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) =	0.77787E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) =	0.29209E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) =	0.18077E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) =	0.83435E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) =	0.94443E-05 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) =	0.44987E-05 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.3555E-07 +/- 0.2741E-09 [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) =	326. +/-	0. [degrees]
a(2) =	-0.842E+00 +/-	0.510E-02 [degrees/min]
a(2) =	-0.245E-03 +/-	0.148E-05 [rad/sec]
a(3) =	0.367E-02 +/-	0.283E-04 [degrees/min**2]
a(3) =	0.356E-07 +/-	0.274E-09 [rad/sec**2]

The RADIAL velocity at 22:46 = 255. km/sec

The RADIAL velocity at 23:14 = 238. km/sec

The RADIAL velocity at 23:30 = 227. km/sec

The RADIAL velocity at 0:18 = 196. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.75

Standard Deviation in start time measurement = 0.336E+02

Value of reduced Chi Squared returned from nllst2 = 0.100E-03

Reduced Chi Squared = 0.918E-03

Chi Squared = 0.918E-03

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 = 0.1103E+01

The correlation between the data and the time² term = 0.1035E+01

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

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