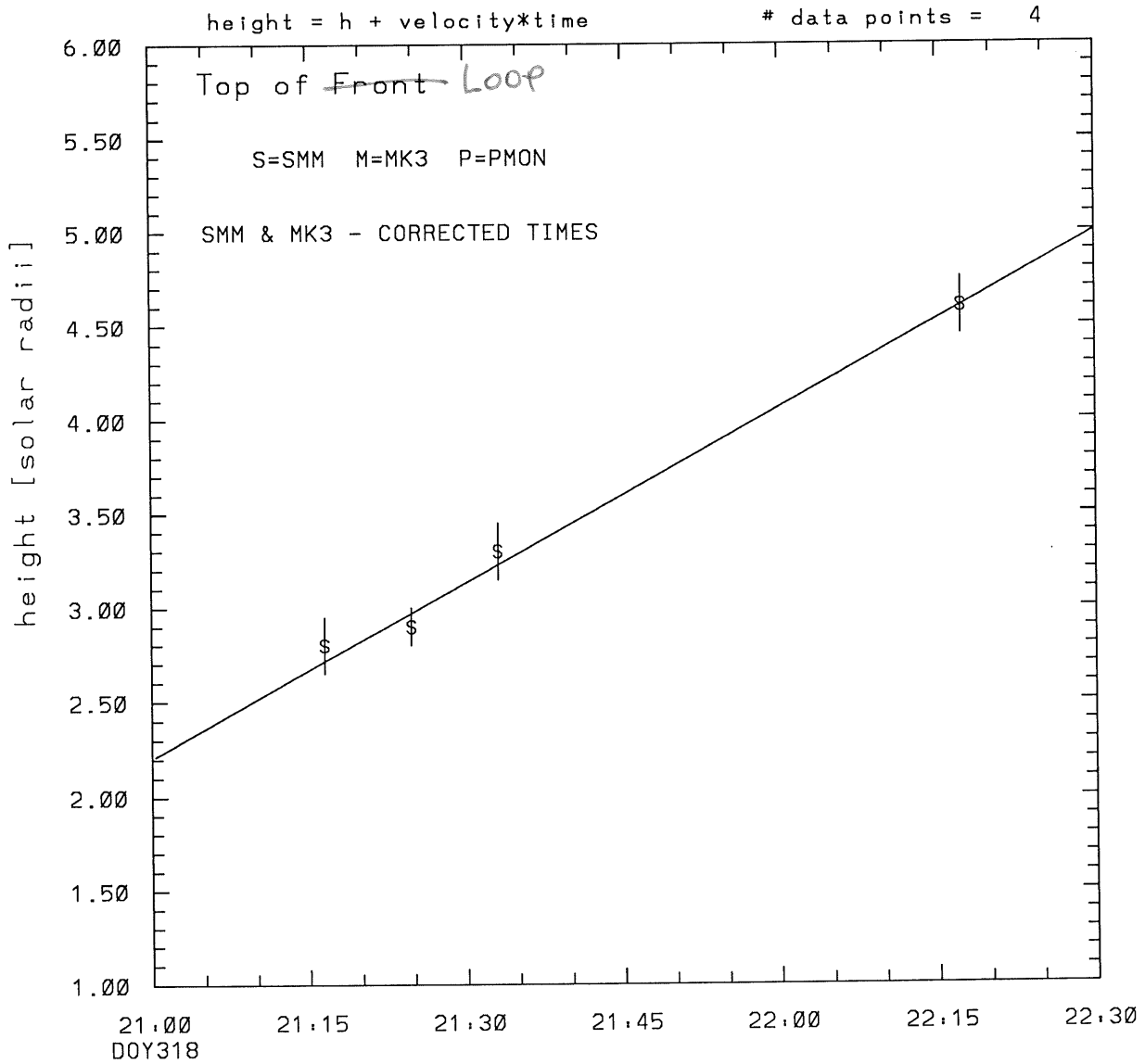
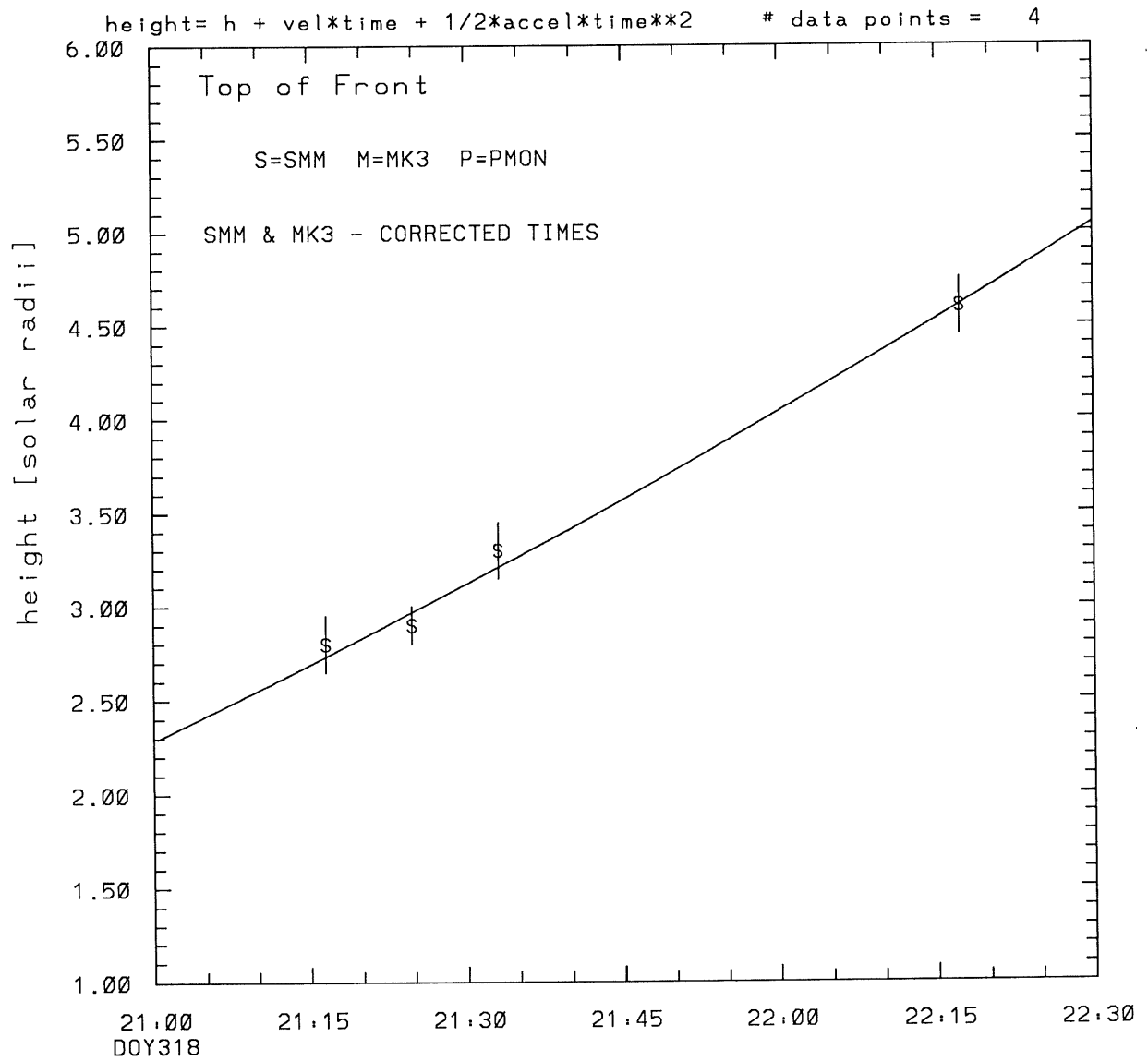


SMM C/P 1988 DOY318 230 +/- 0 degrees



tstart=DOY318 20:23 +/- 1.1 [min.]
radial velocity= 360. +/- 21. [km/sec]

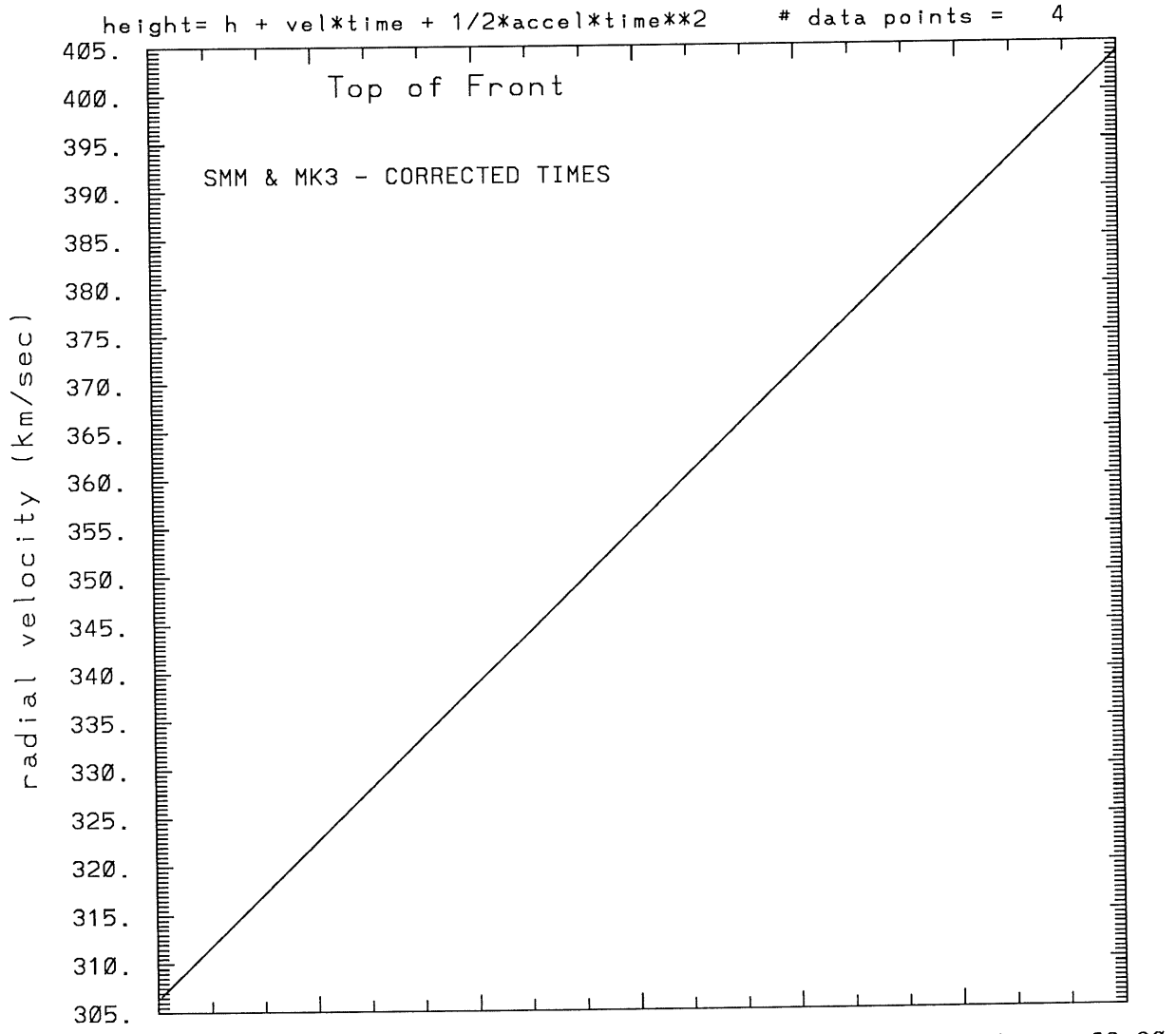
SMM C/P 1988 DOY318 230 +/- 0 degrees



tstart=DOY318 20: 8 +/- 152.4 [min.]

radial acceleration = 0.0181 +/- 0.0704 [km/sec**2]

SMM C/P 1988 DOY318 230 +/- 0 degrees



21:00
DOY318

tstart=DOY318 20: 8 +/- 152.4 [min.]

radial acceleration=0.181E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	318	21:16:29	2.80	+/- 0.15	230.0	+/- 0.5	SMM
1988	318	21:24:46	2.90	+/- 0.10	230.0	+/- 0.5	SMM
1988	318	21:33: 1	3.30	+/- 0.15	230.0	+/- 1.0	SMM
1988	318	22:17:14	4.60	+/- 0.15	230.0	+/- 1.0	SMM

Structure being measured:

Top of ~~Front~~ Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.388E+02 \pm 0.110E+01$ [minutes]

In more convenient units:

Event began at DOY 318 20:23 $\pm 0.110E+01$ [minutes]

Origin defined at DOY318 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 360. \pm 21. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.220E+01 \pm 0.750E-01$ [solar radii]
 $c(2) = 0.310E-01 \pm 0.184E-02$ [radii/min]
 $c(2) = 0.360E+03 \pm 0.214E+02$ [km/sec]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [radii/min**2]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in $c(1) = 0.89358E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.20056E-02$ [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 \pm 0.0000E+00 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 230. +/- 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 21:16 = 0. km/sec
The TOTAL velocity at 21:16 = 360. km/sec

The TANGENTIAL velocity at 21:24 = 0. km/sec
The TOTAL velocity at 21:24 = 360. km/sec

The TANGENTIAL velocity at 21:33 = 0. km/sec
The TOTAL velocity at 21:33 = 360. km/sec

The TANGENTIAL velocity at 22:17 = 0. km/sec
The TOTAL velocity at 22:17 = 360. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.83
Standard Deviation in start time measurement = 0.235E+02
Error in time = 0.42931E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.611E-02
Reduced Chi Squared = 0.167E-01
Chi Squared = 0.334E-01
The probability for exceeding chi square = 0.994E+00

The correlation coefficient = 0.996E+00
The probability that no LINEAR correlation exists between the variables = 0.3675E-02
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1988	318	21:16:29	2.80	+/- 0.15	230.0	+/- 0.5	SMM
1988	318	21:24:46	2.90	+/- 0.10	230.0	+/- 0.5	SMM
1988	318	21:33: 1	3.30	+/- 0.15	230.0	+/- 1.0	SMM
1988	318	22:17:14	4.60	+/- 0.15	230.0	+/- 1.0	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

Event began at $t = 0 + -0.538E+02 +/- 0.152E+03$ [minutes]

In more convenient units:

Event began at DOY 318 20: 8 +/- 0.152E+03 [minutes]

Origin defined at DOY318 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.181E-01 +/- 0.704E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.229E+01 +/- 0.333E+00$ [solar radii]

$c(2) = 0.264E-01 +/- 0.180E-01$ [radii/min]

$c(2) = 0.306E+03 +/- 0.209E+03$ [km/sec]

$c(3) = 0.467E-04 +/- 0.182E-03$ [radii/min**2]

$c(3) = 0.181E-01 +/- 0.704E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.40762E+00$ [radii] Bevington pg 154 (8-30)

Exact error in $c(1) = 0.22679E+00$ [radii] Bevington pg 154 (8-28)

Approximate error in $c(2) = 0.22213E-01$ [radii/min] Bevington pg 154 (8-30)

Exact error in $c(2) = 0.12917E-01$ [radii/min] Bevington pg 154 (8-28)

Approximate error in $c(3) = 0.22502E-03$ [radii/min**] Bevington pg 154 (8-30)

Exact error in $c(3) = 0.13028E-03$ [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) = 230. +/- 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 21:16 = 0. km/sec

The TOTAL velocity at 21:16 = 324. km/sec

The TANGENTIAL velocity at 21:24 = 0. km/sec

The TOTAL velocity at 21:24 = 333. km/sec

The TANGENTIAL velocity at 21:33 = 0. km/sec

The TOTAL velocity at 21:33 = 342. km/sec

The TANGENTIAL velocity at 22:17 = 0. km/sec

The TOTAL velocity at 22:17 = 390. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.83

Standard Deviation in start time measurement = 0.235E+02

Value of reduced Chi Squared returned from nllst2 = 0.888E-02

Reduced Chi Squared = 0.389E-01

Chi Squared = 0.389E-01

The probability for exceeding chi square = 0.925E+00

For a second order fit 3 correlation coefficients are given:

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

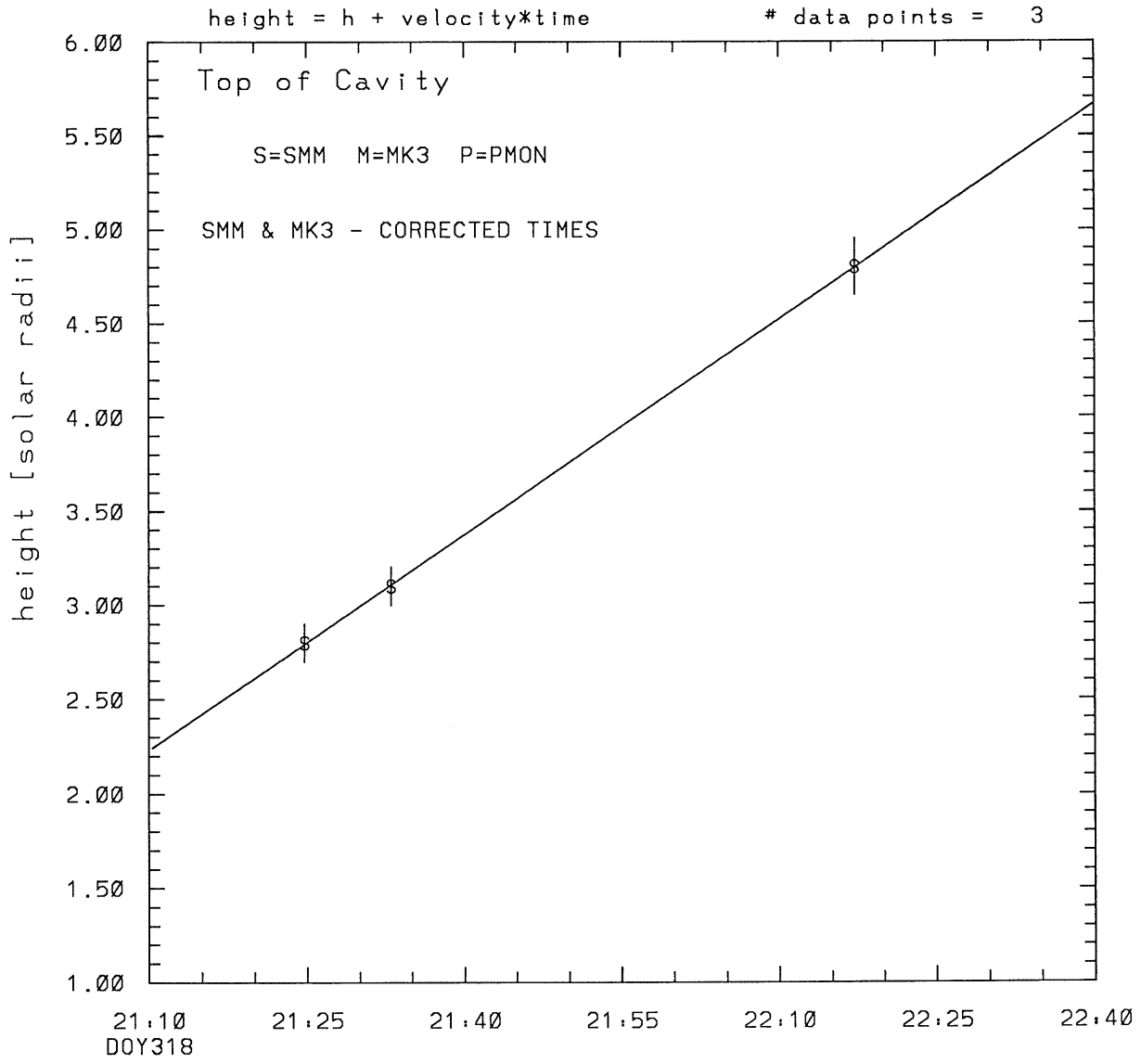
The correlation between the data and the term linear in time = 0.9093E+00

The correlation between the data and the time**2 term = 0.9098E+00

The correlation between the data and the complete equation of motion = 0.9845E+00

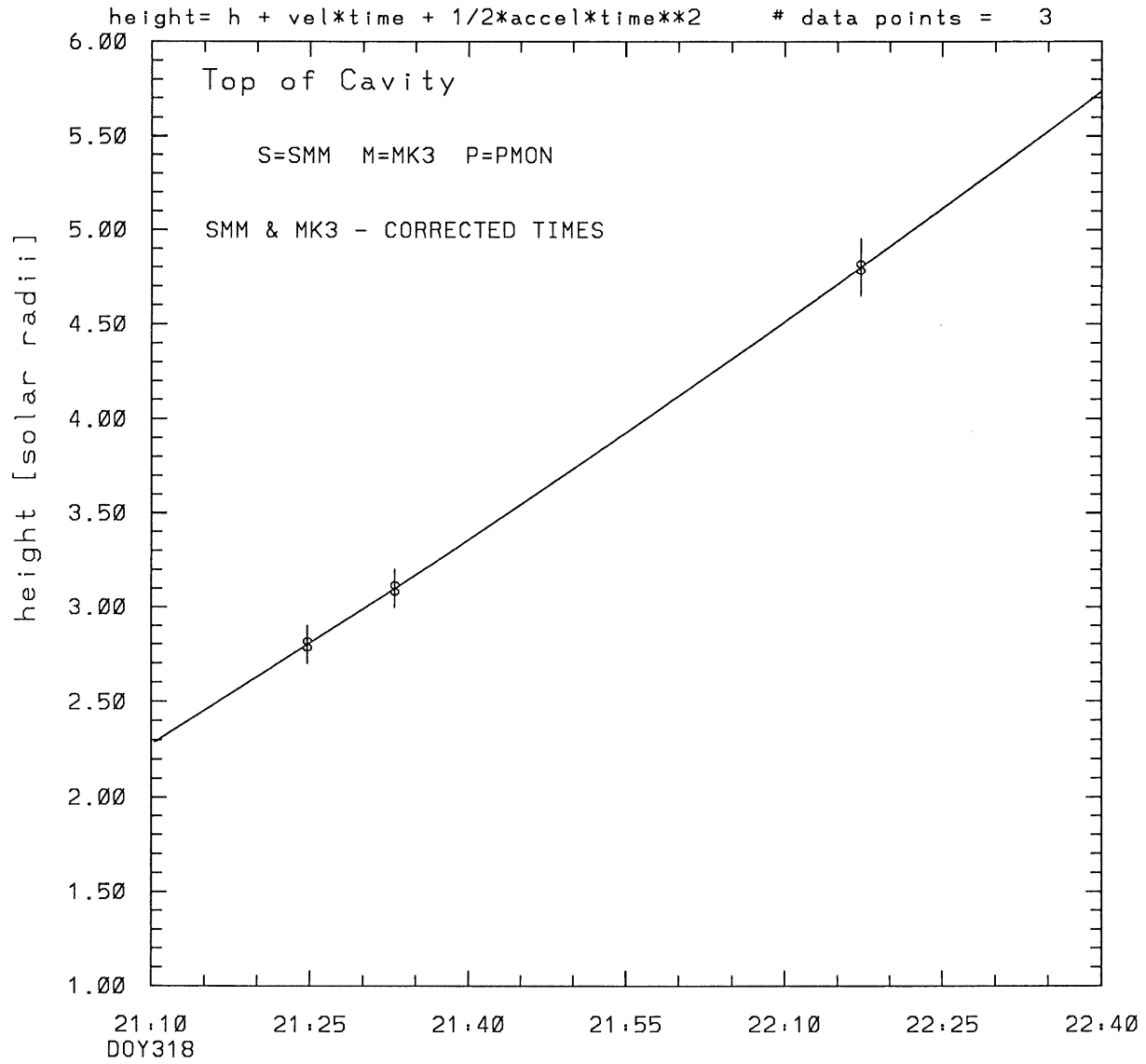
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1988 DOY318 245 +/- 0 degrees



tstart=DOY318 20.38 +/- 0.1 [min.]
radial velocity= 443. +/- 3. [km/sec]

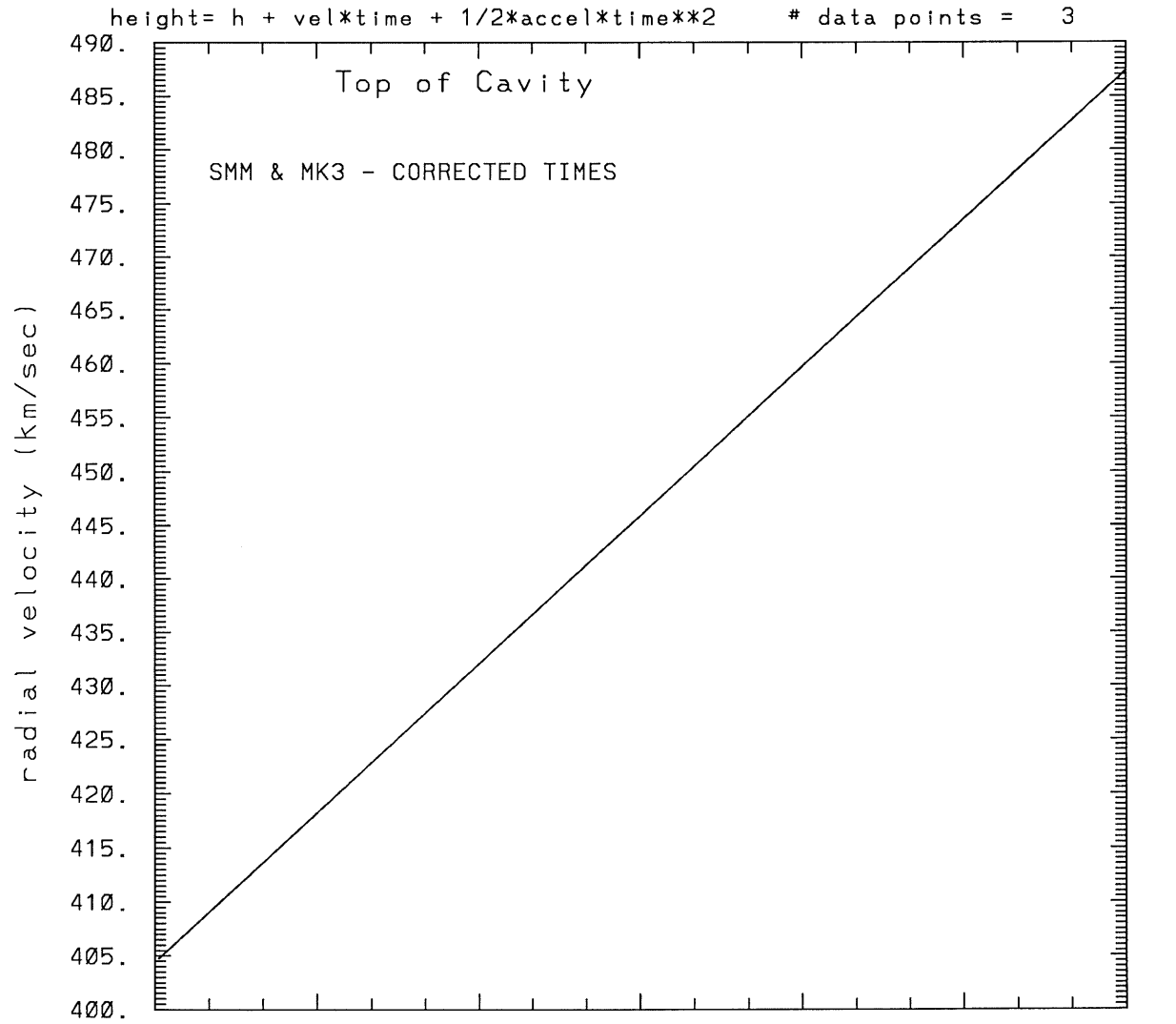
SMM C/P 1988 DOY318 245 +/- 0 degrees



tstart=DOY318 20:32 +/- 0.0 [min.]

radial acceleration = 0.0154 +/- 0.0000 [km/sec**2]

SMM C/P 1988 DOY318 245 +/- 0 degrees



21.10
DOY318

tstart=DOY318 20:32 +/- 0.0 [min.]

radial acceleration=0.154E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	318	21:24:46	2.80	+/- 0.10	245.0	+/- 0.5	SMM
1988	318	21:33: 1	3.10	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	22:17:14	4.80	+/- 0.15	245.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.322E+02 +/- 0.147E+00$ [minutes]

In more convenient units:

Event began at DOY 318 20:38 +/- 0.147E+00 [minutes]

Origin defined at DOY318 21:10

RADIAL INFORMATION:

RADIAL VELOCITY = 443. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.223E+01 +/- 0.871E-02 [solar radii]
c(2) = 0.382E-01 +/- 0.259E-03 [radii/min]
c(2) = 0.443E+03 +/- 0.301E+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)= 0.11672E-01 [radii] see Bevington pg. 114

error in c(2)= 0.27853E-03 [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) = 245. +/- 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 21:24 = 0. km/sec

The TOTAL velocity at 21:24 = 443. km/sec

The TANGENTIAL velocity at 21:33 = 0. km/sec

The TOTAL velocity at 21:33 = 443. km/sec

The TANGENTIAL velocity at 22:17 = 0. km/sec

The TOTAL velocity at 22:17 = 443. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.08
Standard Deviation in start time measurement = 0.230E+02
Error in time = 0.29095E+00 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.729E-04
Reduced Chi Squared = 0.208E-03
Chi Squared = 0.208E-03
The probability for exceeding chi square = 0.993E+00

The correlation coefficient = 0.100E+01
The probability that no LINEAR correlation exists between the variables = 0.4499E-02
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	318	21:24:46	2.80	+/- 0.10	245.0	+/- 0.5	SMM
1988	318	21:33: 1	3.10	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	22:17:14	4.80	+/- 0.15	245.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.383E+02 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 318 20:32 +/- 0.000E+00 [minutes]

Origin defined at DOY318 21:10

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.154E-01 +/- 0.257E-05$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.228E+01 +/- 0.822E-05$ [solar radii]
c(2) = $0.349E-01 +/- 0.562E-06$ [radii/min]
c(2) = $0.404E+03 +/- 0.652E-02$ [km/sec]
c(3) = $0.397E-04 +/- 0.665E-08$ [radii/min**2]
c(3) = $0.154E-01 +/- 0.257E-05$ [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= $0.0000E+00 +/- 0.0000E+00$ [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 245. +/- 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]

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec**2]}$$

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 21:24 = 0. km/sec

The TOTAL velocity at 21:24 = 418. km/sec

The TANGENTIAL velocity at 21:33 = 0. km/sec

The TOTAL velocity at 21:33 = 426. km/sec

The TANGENTIAL velocity at 22:17 = 0. km/sec

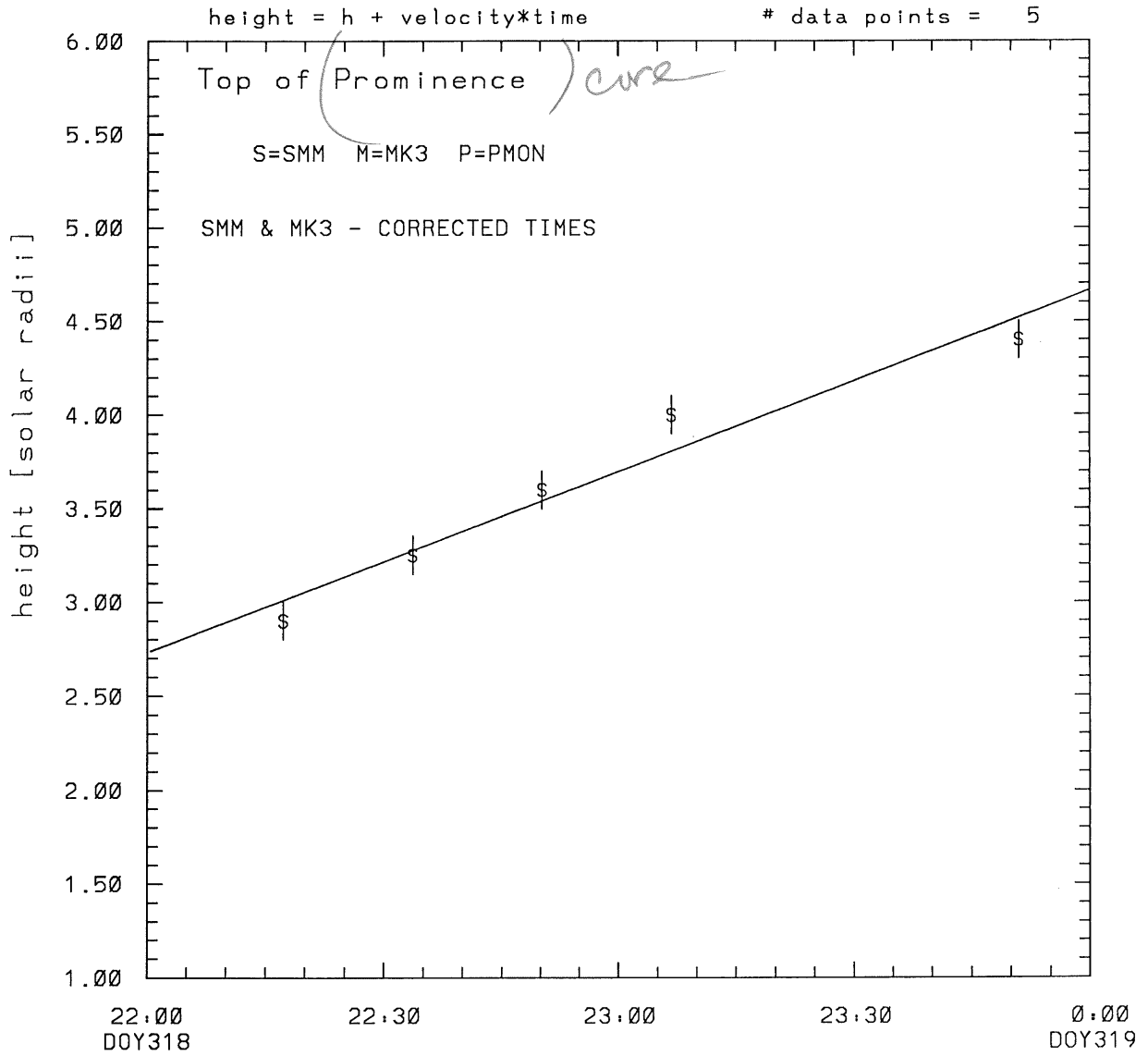
The TOTAL velocity at 22:17 = 466. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

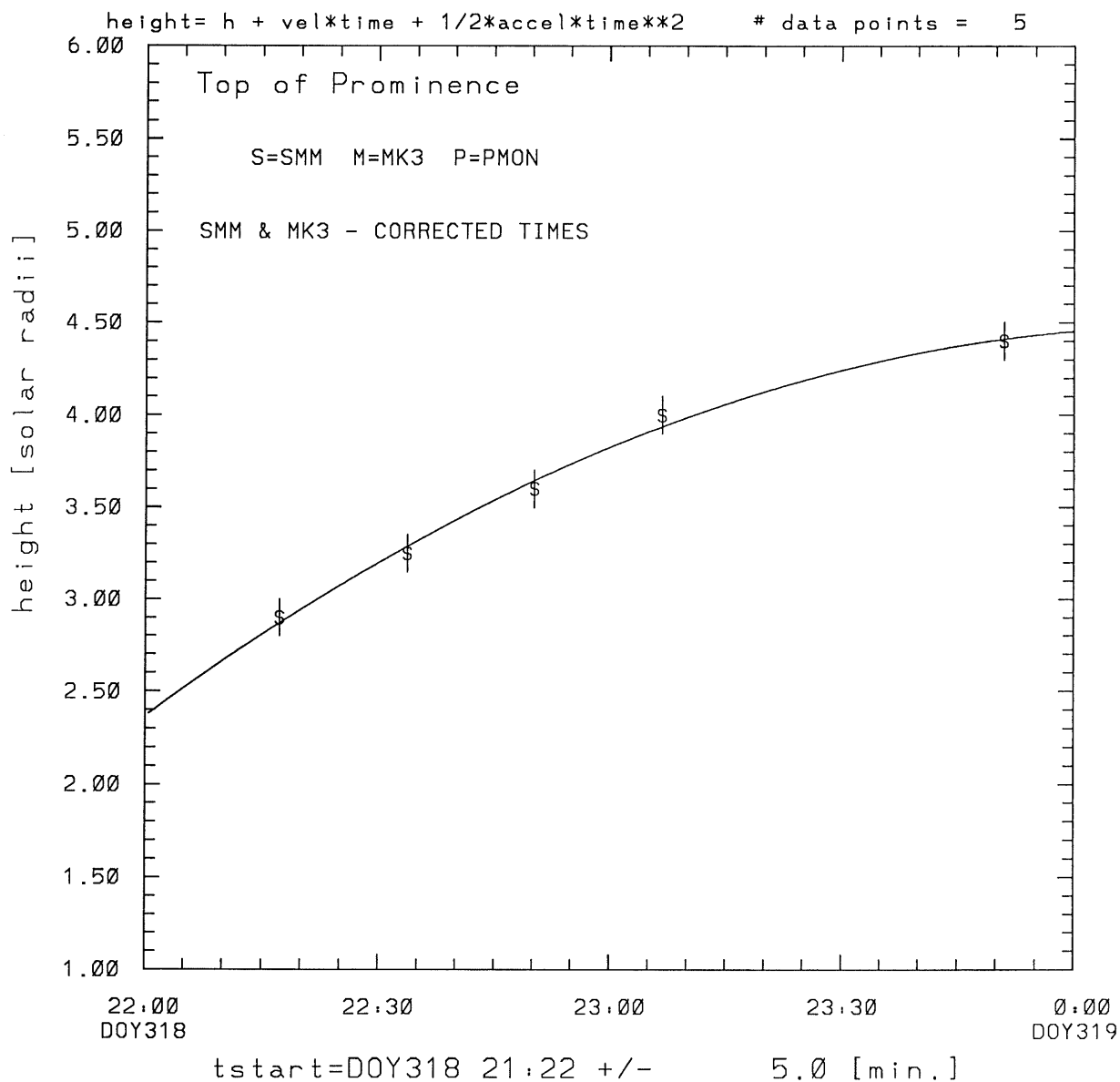
Correlation coefficient is not computable!

SMM C/P 1988 DOY318 245 +/- 0 degrees



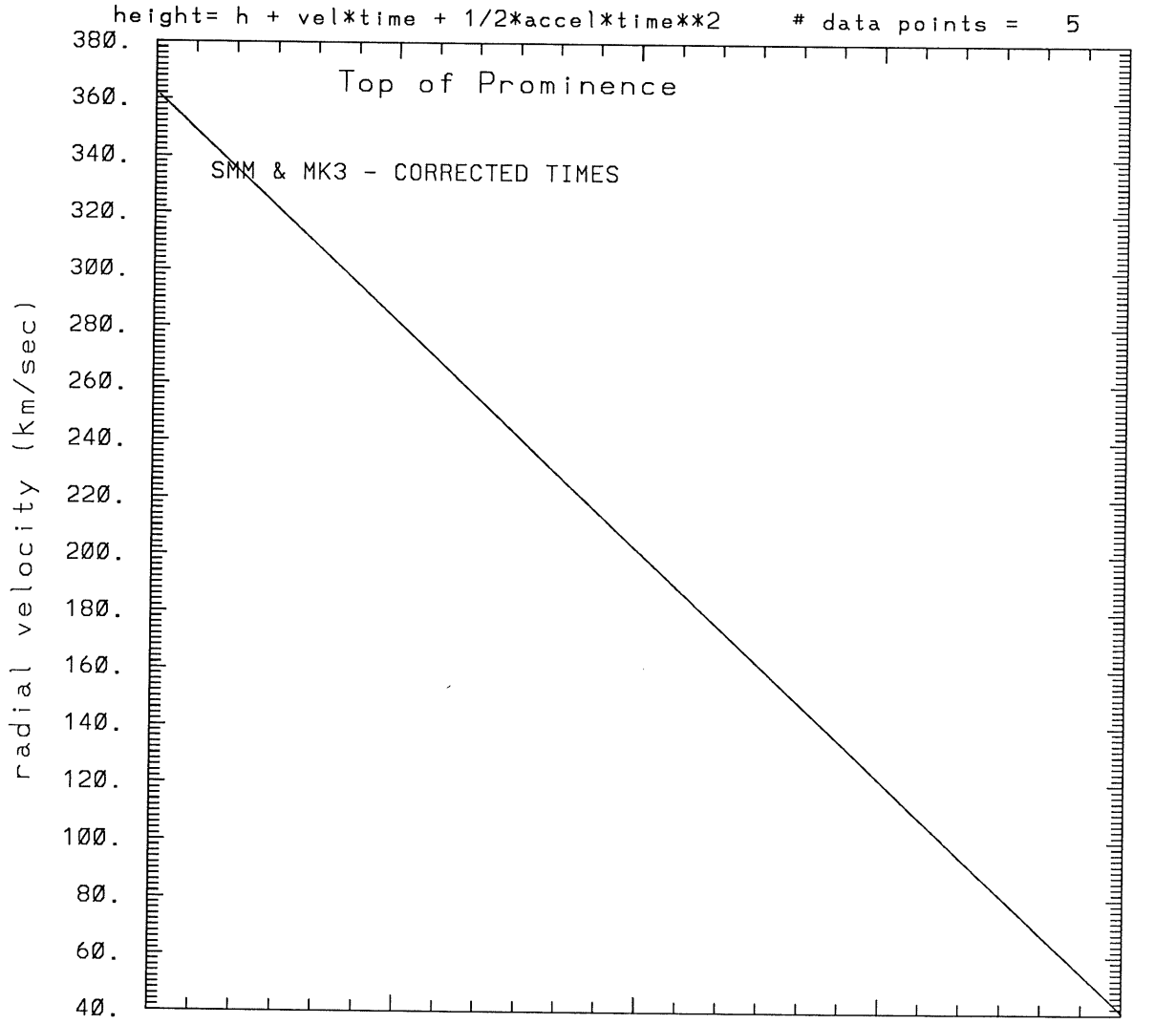
tstart=DOY318 20:14 +/- 5.6 [min.]
radial velocity= 187. +/- 21. [km/sec]

SMM C/P 1988 DOY318 245 +/- 0 degrees



radial acceleration = $-0.0446 +/- 0.0097$ [km/sec**2]

SMM C/P 1988 DOY318 245 +/- 0 degrees



22:00
DOY318

22:30

23:00

23:30

0:00
DOY319

tstart=DOY318 21:22 +/- 5.0 [min.]

radial acceleration = $-.446E-01$ km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	318	22:17:14	2.90	+/- 0.10	245.0	+/- 0.5	SMM
1988	318	22:33:44	3.25	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	22:50:17	3.60	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	23: 6:48	4.00	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	23:51: 1	4.40	+/- 0.10	245.0	+/- 1.0	SMM

Structure being measured:

Top of Prominence

OUTPUT:

START TIME:

Event began at $t = 0 + -0.108E+03 +/- 0.556E+01$ [minutes]

In more convenient units:

Event began at $DOY 318 20:14 +/- 0.556E+01$ [minutes]

Origin defined at $DOY318 22: 0$

RADIAL INFORMATION:

RADIAL VELOCITY = $187. +/- 21.$ km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.273E+01 +/- 0.116E+00$ [solar radii]
 $c(2) = 0.161E-01 +/- 0.180E-02$ [radii/min]
 $c(2) = 0.187E+03 +/- 0.209E+02$ [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 $c(1) = 0.13417E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.20827E-02$ [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) = 245. +/- 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 22:17 = 0. km/sec

The TOTAL velocity at 22:17 = 187. km/sec

The TANGENTIAL velocity at 22:33 = 0. km/sec

The TOTAL velocity at 22:33 = 187. km/sec

The TANGENTIAL velocity at 22:50 = 0. km/sec

The TOTAL velocity at 22:50 = 187. km/sec

The TANGENTIAL velocity at 23: 6 = 0. km/sec

The TOTAL velocity at 23: 6 = 187. km/sec

The TANGENTIAL velocity at 23:51 = 0. km/sec

The TOTAL velocity at 23:51 = 187. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.59

Standard Deviation in start time measurement = 0.322E+02

Error in time = 0.16122E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.168E-01

Reduced Chi Squared = 0.810E-01

Chi Squared = 0.243E+00

The probability for exceeding chi square = 0.997E+00

The correlation coefficient = 0.976E+00

The probability that no LINEAR correlation exists between the variables = 0.4504E-02

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	318	22:17:14	2.90	+/- 0.10	245.0	+/- 0.5	SMM
1988	318	22:33:44	3.25	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	22:50:17	3.60	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	23: 6:48	4.00	+/- 0.10	245.0	+/- 1.0	SMM
1988	318	23:51: 1	4.40	+/- 0.10	245.0	+/- 1.0	SMM

Structure being measured:
Top of Prominence

OUTPUT:

START TIME:

Event began at $t = 0 + -0.383E+02 +/- 0.498E+01$ [minutes]
In more convenient units:
Event began at DOY 318 21:22 +/- 0.498E+01 [minutes]

Origin defined at DOY318 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.446E-01 +/- 0.973E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.237E+01 +/- 0.929E-01$ [solar radii]
c(2) = $0.312E-01 +/- 0.338E-02$ [radii/min]
c(2) = $0.362E+03 +/- 0.392E+02$ [km/sec]
c(3) = $-0.115E-03 +/- 0.252E-04$ [radii/min**2]
c(3) = $-0.446E-01 +/- 0.973E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.11373E+00$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.43952E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.41439E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.18262E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.30833E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.13237E-04$ [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) = 245. +/- 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 22:17 = 0. km/sec

The TOTAL velocity at 22:17 = 316. km/sec

The TANGENTIAL velocity at 22:33 = 0. km/sec

The TOTAL velocity at 22:33 = 272. km/sec

The TANGENTIAL velocity at 22:50 = 0. km/sec

The TOTAL velocity at 22:50 = 228. km/sec

The TANGENTIAL velocity at 23: 6 = 0. km/sec

The TOTAL velocity at 23: 6 = 183. km/sec

The TANGENTIAL velocity at 23:51 = 0. km/sec

The TOTAL velocity at 23:51 = 65. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.59

Standard Deviation in start time measurement = 0.322E+02

Value of reduced Chi Squared returned from nllst2 = 0.280E-02

Reduced Chi Squared = 0.131E-01

Chi Squared = 0.261E-01

The probability for exceeding chi square = 0.997E+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 = 0.9758E+00

The correlation between the data and the time**2 term = 0.9079E+00

The correlation between the data and the complete equation of motion = 0.9940E+00

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