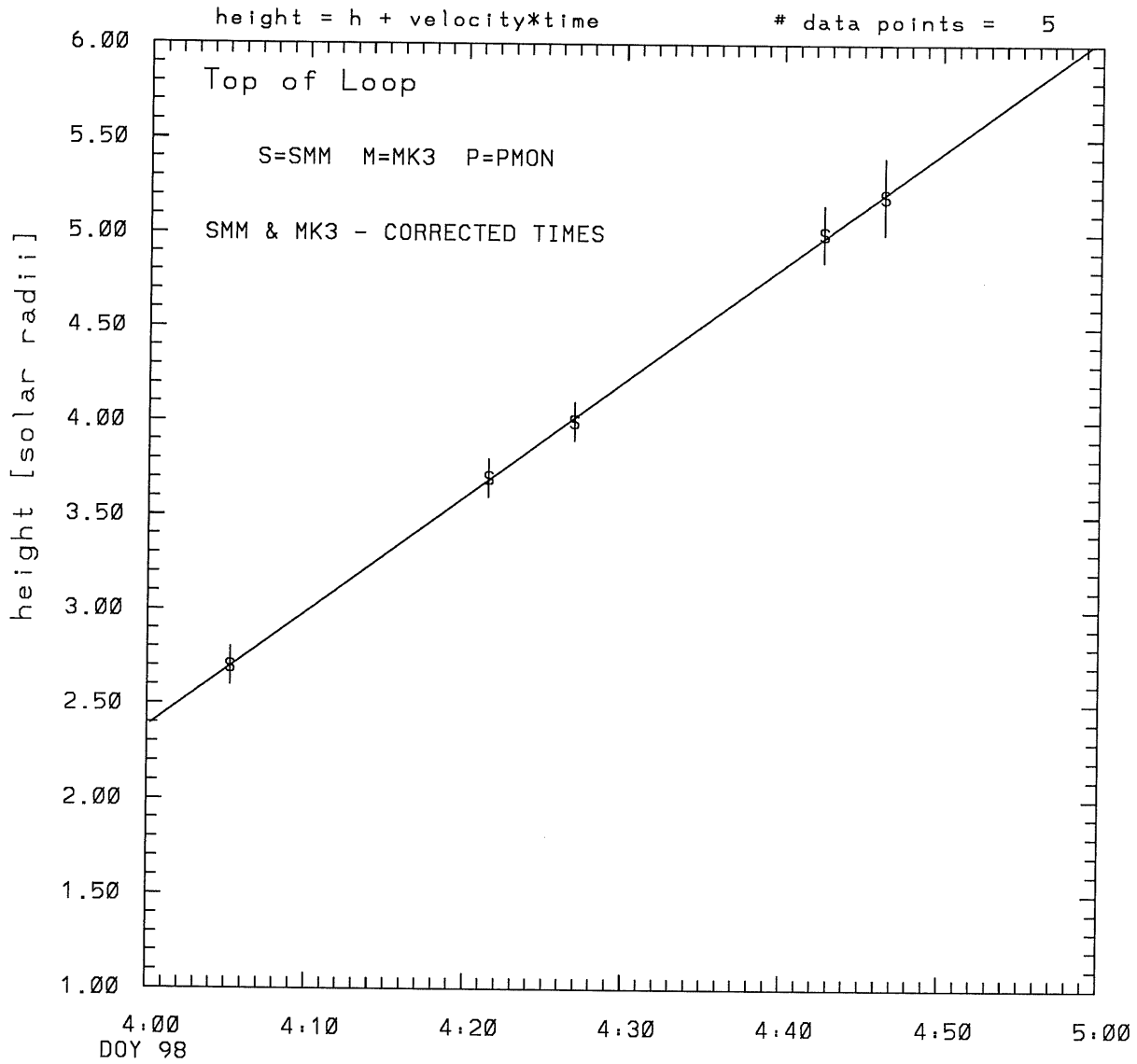
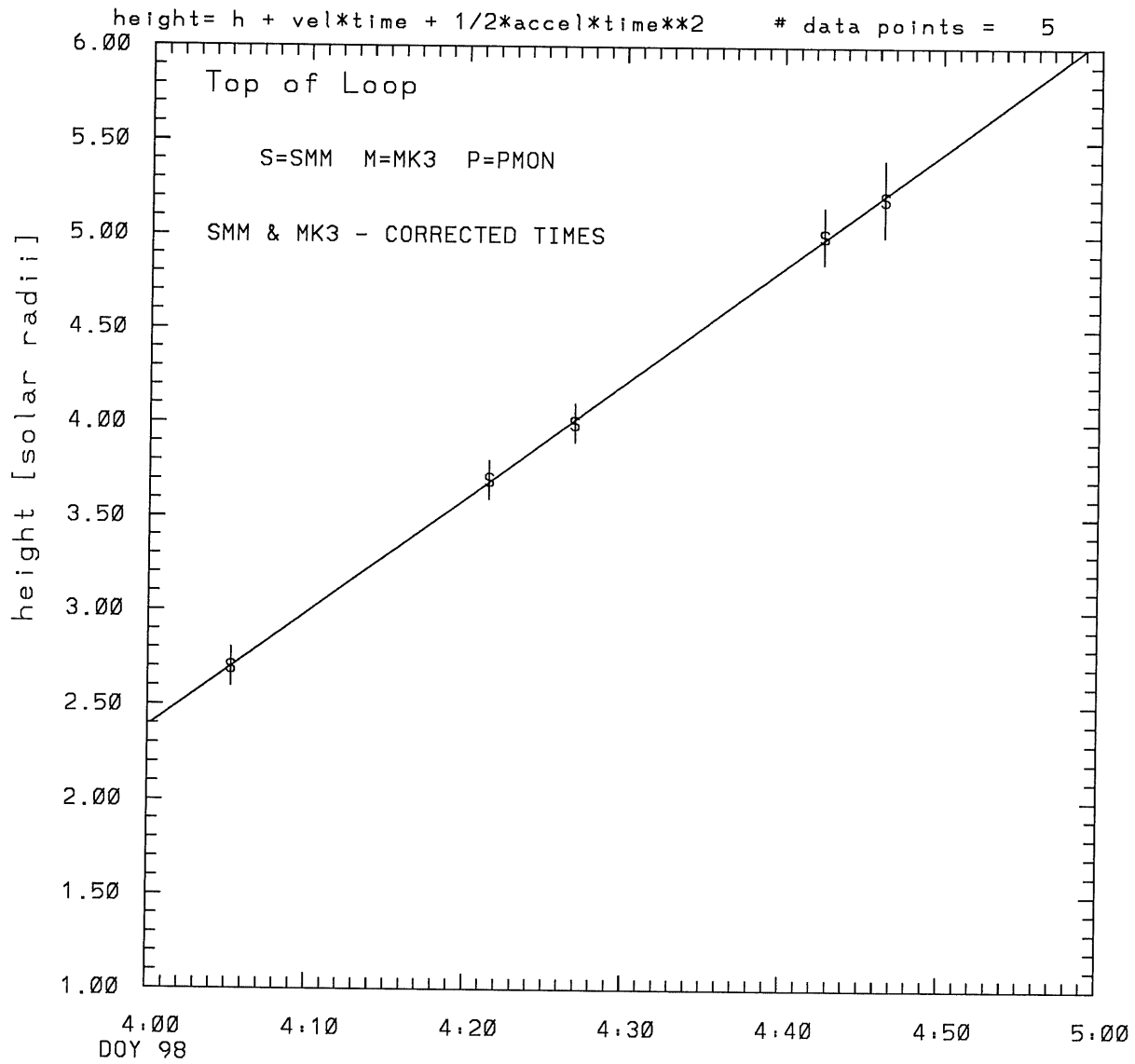


SMM C/P 1980 DOY 98 295 +/- 0 degrees



tstart=DOY 98 3:39 +/- 0.0 [min.]
radial velocity= 708. +/- 6. [km/sec]

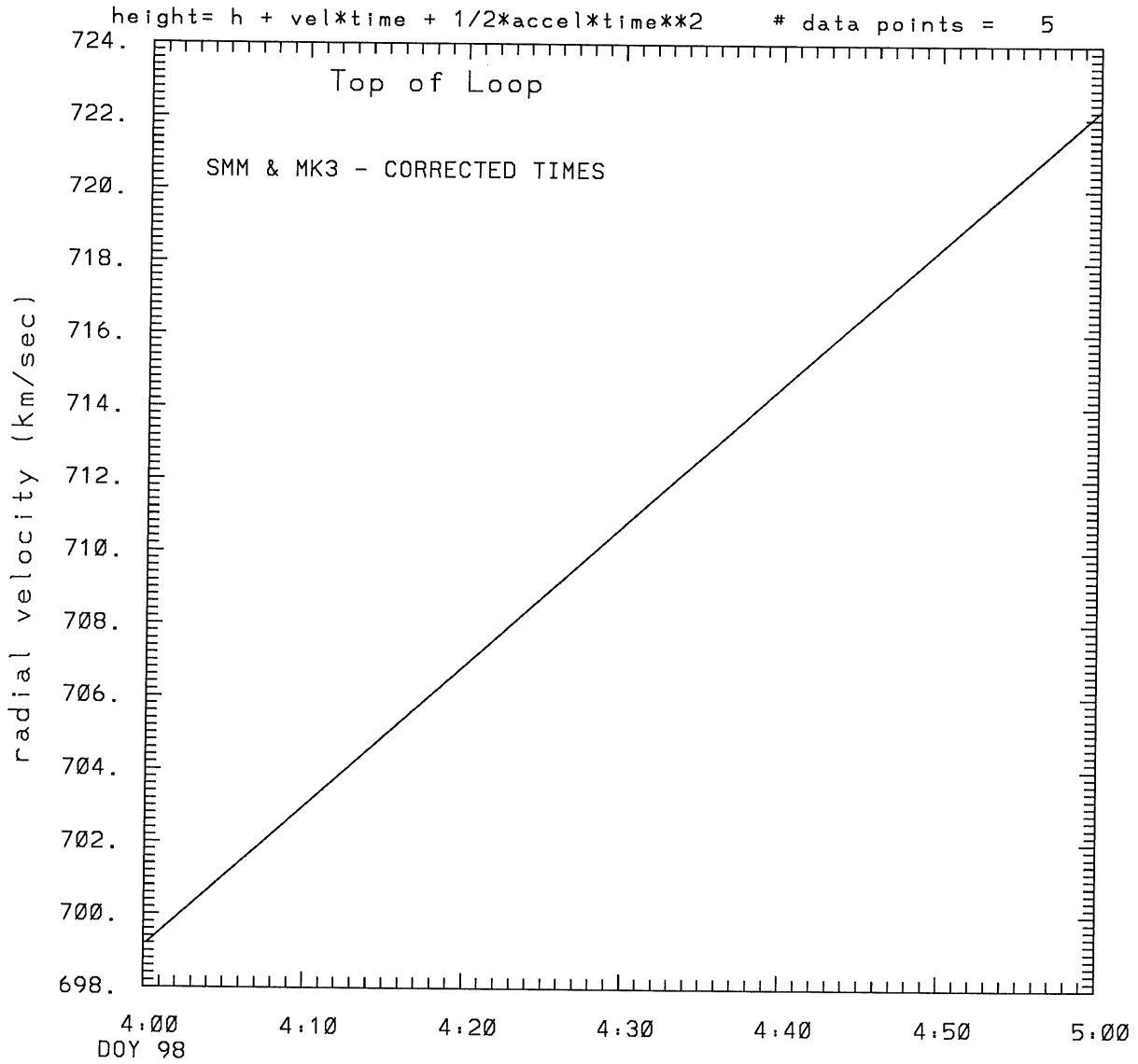
SMM C/P 1980 DOY 98 295 +/- 0 degrees



tstart=DOY 98 3:37 +/- 30.3 [min.]

radial acceleration = 0.0064 +/- 0.0161 [km/sec**2]

SMM C/P 1980 DOY 98 295 +/- 0 degrees



tstart=DOY 98 3.37 +/- 30.3 [min.]

radial acceleration= $0.642E-02$ km/sec**2

This is a 1 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	98	4: 5:14	2.70 +/- 0.10		295.0 +/- 0.5		SMM
1980	98	4:21:27	3.70 +/- 0.10		295.0 +/- 1.0		SMM
1980	98	4:26:51	4.00 +/- 0.10		295.0 +/- 1.0		SMM
1980	98	4:42:35	5.00 +/- 0.15		295.0 +/- 1.0		SMM
1980	98	4:46:23	5.20 +/- 0.20		295.0 +/- 1.0		SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.226E+02 +/- 0.500E-01 [minutes]

In more convenient units:

Event began at DOY 98 3:39 +/- 0.500E-01 [minutes]

Origin defined at DOY 98 4: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 708. +/- 6. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.238E+01 +/- 0.137E-01 [solar radii]
c(2) = 0.611E-01 +/- 0.521E-03 [radii/min]
c(2) = 0.708E+03 +/- 0.604E+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)= 0.17858E-01 [radii] see Bevington pg. 114

error in c(2)= 0.55517E-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) = 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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 4: 5 = 0.000E+00 km/sec

The TOTAL velocity at 4: 5 = 708. km/sec

The TANGENTIAL velocity at 4:21 = 0.000E+00 km/sec

The TOTAL velocity at 4:21 = 708. km/sec

The TANGENTIAL velocity at 4:26 = 0.000E+00 km/sec

The TOTAL velocity at 4:26 = 708. km/sec

The TANGENTIAL velocity at 4:42 = 0.000E+00 km/sec

The TOTAL velocity at 4:42 = 708. km/sec

The TANGENTIAL velocity at 4:46 = 0.000E+00 km/sec

The TOTAL velocity at 4:46 = 708. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.02

Standard Deviation in start time measurement = 0.149E+02

Error in time = 0.52511E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.235E-03

Reduced Chi Squared = 0.121E-02

Chi Squared = 0.364E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.100E+01

The probability that no LINEAR correlation exists between the variables = 0.1703E-05

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
1980	98	4: 5:14	2.70	+/- 0.10	295.0	+/- 0.5	SMM
1980	98	4:21:27	3.70	+/- 0.10	295.0	+/- 1.0	SMM
1980	98	4:26:51	4.00	+/- 0.10	295.0	+/- 1.0	SMM
1980	98	4:42:35	5.00	+/- 0.15	295.0	+/- 1.0	SMM
1980	98	4:46:23	5.20	+/- 0.20	295.0	+/- 1.0	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.231E+02 \pm 0.303E+02$ [minutes]
In more convenient units:
Event began at DOY 98 3:37 $\pm 0.303E+02$ [minutes]

Origin defined at DOY 98 4: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.642E-02 \pm 0.161E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.239E+01 \pm 0.226E-01$ [solar radii]
c(2) = $0.603E-01 \pm 0.207E-02$ [radii/min]
c(2) = $0.699E+03 \pm 0.240E+02$ [km/sec]
c(3) = $0.166E-04 \pm 0.416E-04$ [radii/min**2]
c(3) = $0.642E-02 \pm 0.161E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.34324E-01$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.49257E-02$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.30047E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.10060E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.55183E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.21780E-04$ [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) = 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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 4: 5 = 0.000E+00 km/sec

The TOTAL velocity at 4: 5 = 701. km/sec

The TANGENTIAL velocity at 4:21 = 0.000E+00 km/sec

The TOTAL velocity at 4:21 = 707. km/sec

The TANGENTIAL velocity at 4:26 = 0.000E+00 km/sec

The TOTAL velocity at 4:26 = 709. km/sec

The TANGENTIAL velocity at 4:42 = 0.000E+00 km/sec

The TOTAL velocity at 4:42 = 716. km/sec

The TANGENTIAL velocity at 4:46 = 0.000E+00 km/sec

The TOTAL velocity at 4:46 = 717. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.02

Standard Deviation in start time measurement = 0.149E+02

Value of reduced Chi Squared returned from nllst2 = 0.297E-03

Reduced Chi Squared = 0.192E-02

Chi Squared = 0.384E-02

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

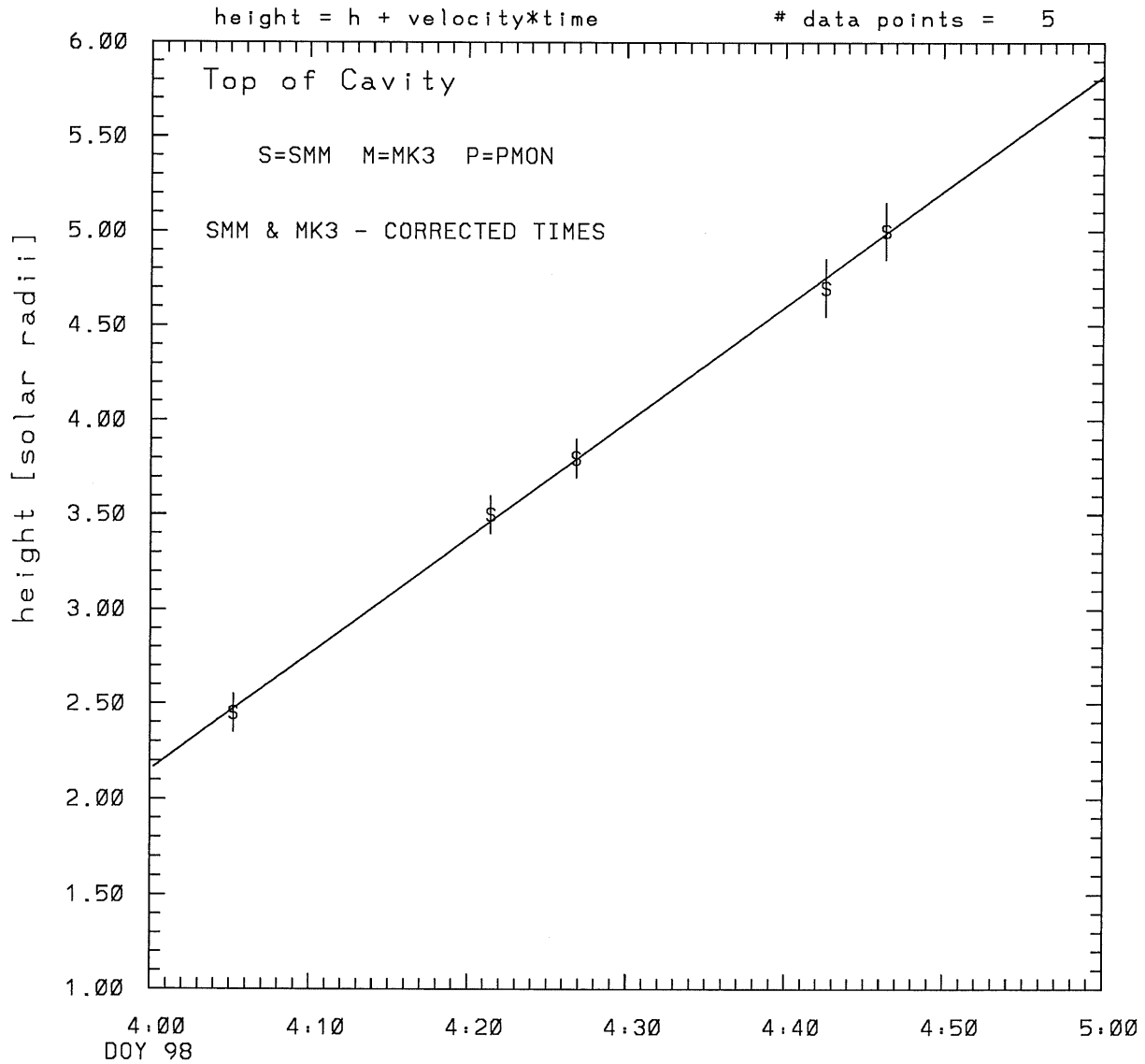
The correlation between the data and the term linear in time = 0.9629E+00

The correlation between the data and the time**2 term = 0.8798E+00

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

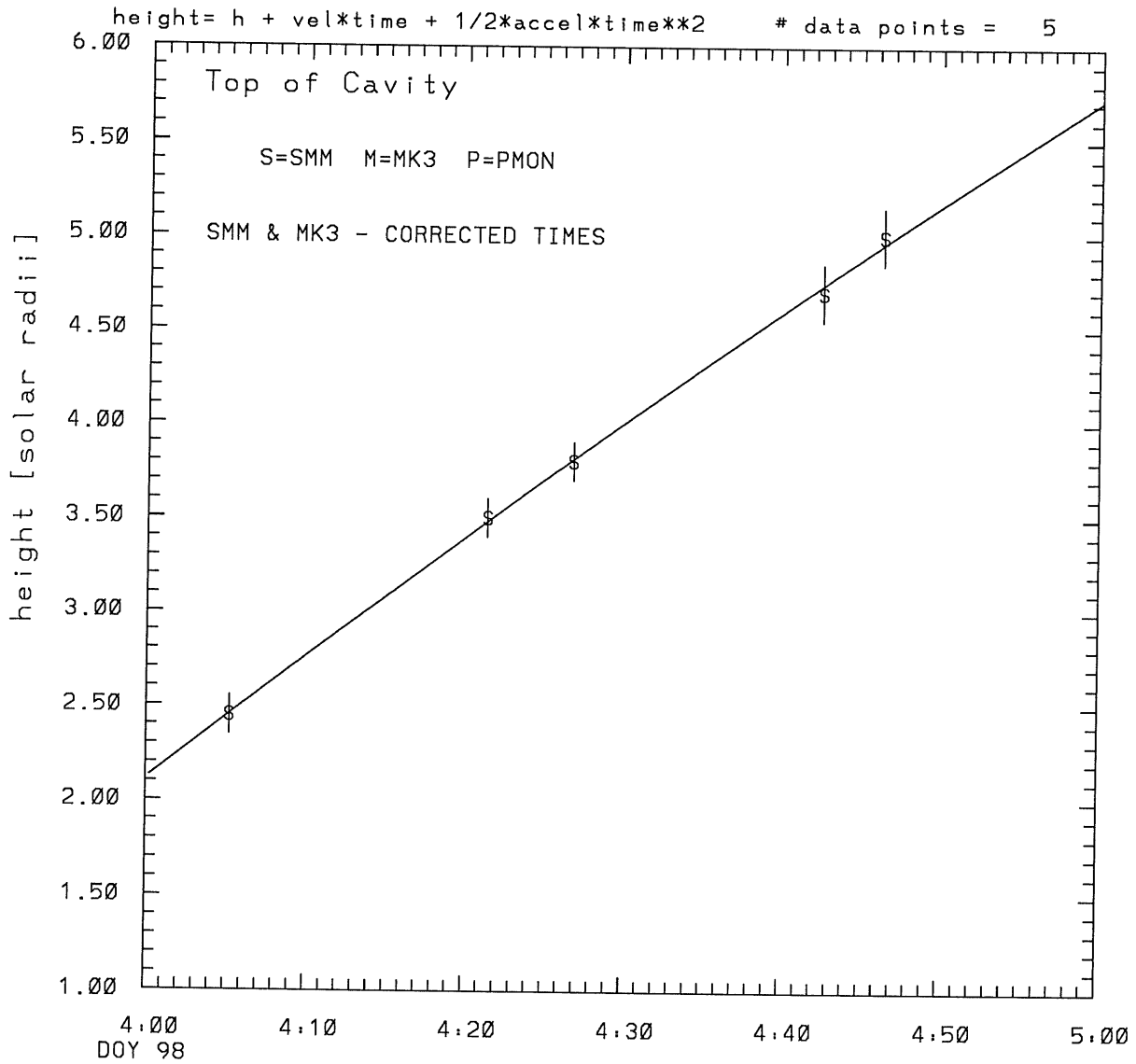
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1980 DOY 98 295 +/- 0 degrees



tstart=DOY 98 3.43 +/- 0.1 [min.]
radial velocity= 709. +/- 12. [km/sec]

SMM C/P 1980 DOY 98 295 +/- 0 degrees

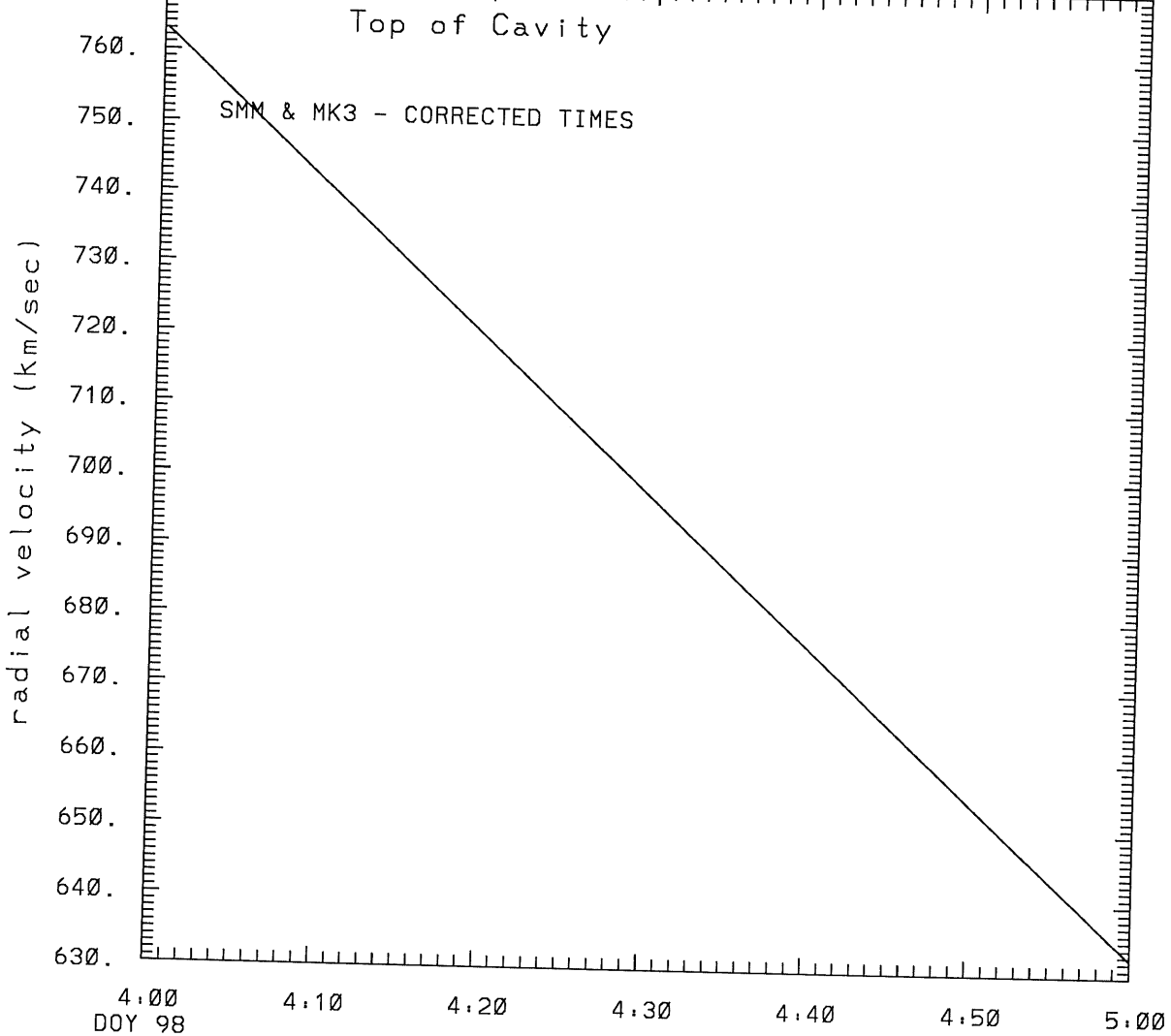


tstart=DOY 98 3:45 +/- 5.6 [min.]

radial acceleration = -0.0364 ± 0.0264 [km/sec**2]

SMM C/P 1980 DOY 98 295 +/- 0 degrees

height = $h + vel*time + 1/2*accel*time**2$ # data points = 5



tstart=DOY 98 3.45 +/- 5.6 [min.]

radial acceleration = $-.364E-01$ km/sec**2

This is a 1 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	98	4: 5:14	2.45 +/- 0.10	295.0 +/- 0.5			SMM
1980	98	4:21:27	3.50 +/- 0.10	295.0 +/- 1.0			SMM
1980	98	4:26:51	3.80 +/- 0.10	295.0 +/- 1.0			SMM
1980	98	4:42:35	4.70 +/- 0.15	295.0 +/- 1.0			SMM
1980	98	4:46:23	5.00 +/- 0.15	295.0 +/- 1.0			SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.188E+02 +/- 0.126E+00$ [minutes]

In more convenient units:

Event began at DOY 98 3:43 +/- 0.126E+00 [minutes]

Origin defined at DOY 98 4: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 709. +/- 12. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.215E+01 +/- 0.291E-01$ [solar radii]
 $c(2) = 0.611E-01 +/- 0.105E-02$ [radii/min]
 $c(2) = 0.709E+03 +/- 0.122E+02$ [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 $c(1) = 0.39813E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.12378E-02$ [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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 4: 5 = 0.000E+00 km/sec

The TOTAL velocity at 4: 5 = 709. km/sec

The TANGENTIAL velocity at 4:21 = 0.000E+00 km/sec

The TOTAL velocity at 4:21 = 709. km/sec

The TANGENTIAL velocity at 4:26 = 0.000E+00 km/sec

The TOTAL velocity at 4:26 = 709. km/sec

The TANGENTIAL velocity at 4:42 = 0.000E+00 km/sec

The TOTAL velocity at 4:42 = 709. km/sec

The TANGENTIAL velocity at 4:46 = 0.000E+00 km/sec

The TOTAL velocity at 4:46 = 709. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.02

Standard Deviation in start time measurement = 0.149E+02

Error in time = 0.11693E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.106E-02

Reduced Chi Squared = 0.548E-02

Chi Squared = 0.164E-01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.1741E-04

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
1980	98	4: 5:14	2.45	+/- 0.10	295.0	+/- 0.5	SMM
1980	98	4:21:27	3.50	+/- 0.10	295.0	+/- 1.0	SMM
1980	98	4:26:51	3.80	+/- 0.10	295.0	+/- 1.0	SMM
1980	98	4:42:35	4.70	+/- 0.15	295.0	+/- 1.0	SMM
1980	98	4:46:23	5.00	+/- 0.15	295.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.165E+02 +/- 0.559E+01$ [minutes]
In more convenient units:
Event began at DOY 98 3:45 +/- 0.559E+01 [minutes]

Origin defined at DOY 98 4: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.364E-01 +/- 0.264E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.211E+01 +/- 0.392E-01$ [solar radii]
c(2) = $0.658E-01 +/- 0.352E-02$ [radii/min]
c(2) = $0.763E+03 +/- 0.409E+02$ [km/sec]
c(3) = $-0.940E-04 +/- 0.682E-04$ [radii/min**2]
c(3) = $-0.364E-01 +/- 0.264E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.66074E-01$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.69662E-02$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.57841E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.12386E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.10623E-03$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.31794E-04$ [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) = 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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 4: 5 = 0.000E+00 km/sec

The TOTAL velocity at 4: 5 = 752. km/sec

The TANGENTIAL velocity at 4:21 = 0.000E+00 km/sec

The TOTAL velocity at 4:21 = 717. km/sec

The TANGENTIAL velocity at 4:26 = 0.000E+00 km/sec

The TOTAL velocity at 4:26 = 705. km/sec

The TANGENTIAL velocity at 4:42 = 0.000E+00 km/sec

The TOTAL velocity at 4:42 = 671. km/sec

The TANGENTIAL velocity at 4:46 = 0.000E+00 km/sec

The TOTAL velocity at 4:46 = 662. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.02

Standard Deviation in start time measurement = 0.149E+02

Value of reduced Chi Squared returned from nllst2 = 0.864E-03

Reduced Chi Squared = 0.800E-02

Chi Squared = 0.160E-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 = 0.9756E+00

The correlation between the data and the time**2 term = 0.9027E+00

The correlation between the data and the complete equation of motion = 0.9996E+00

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