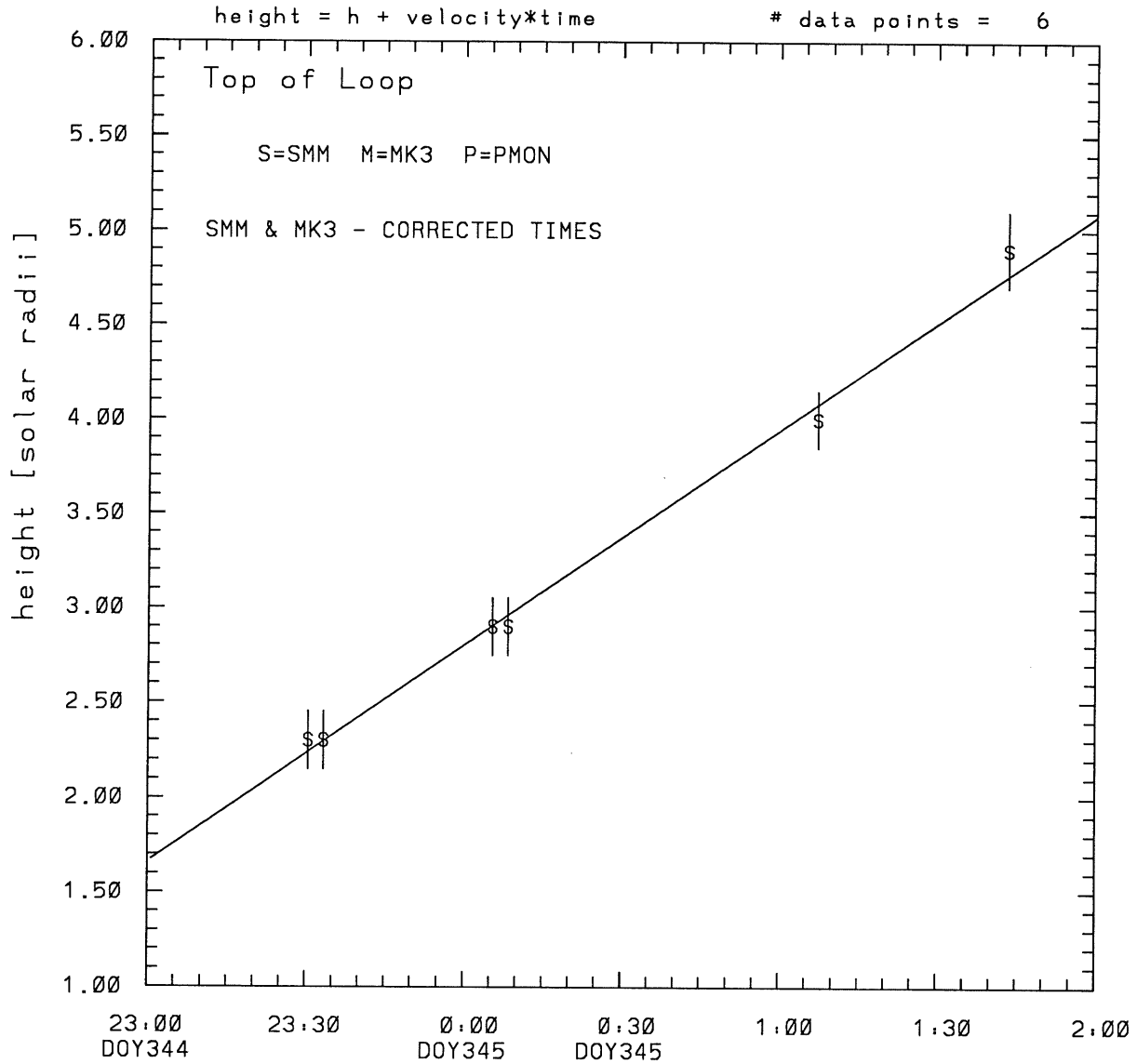
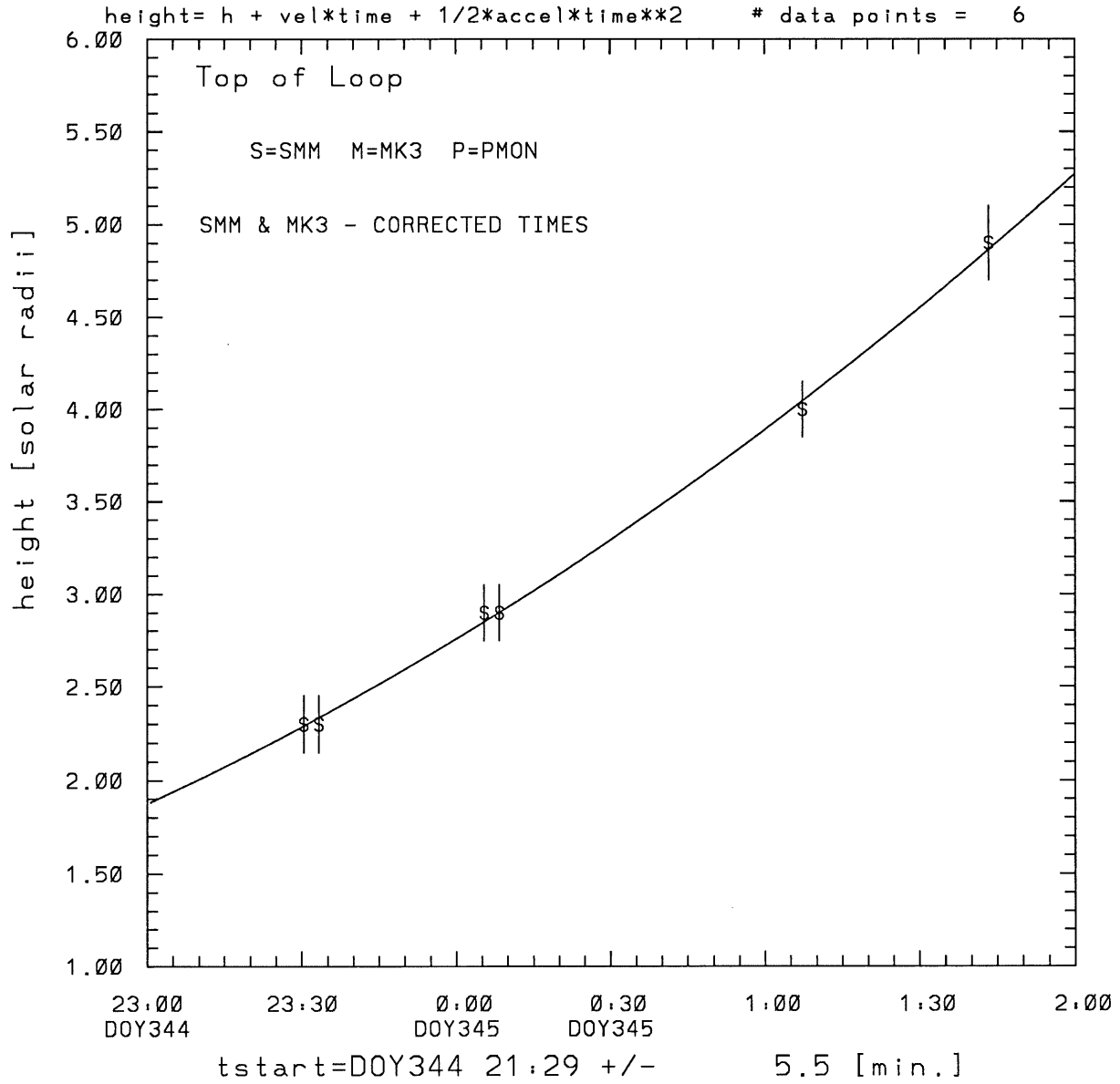


SMM C/P 1984 DOY344 70 +/- 0 degrees



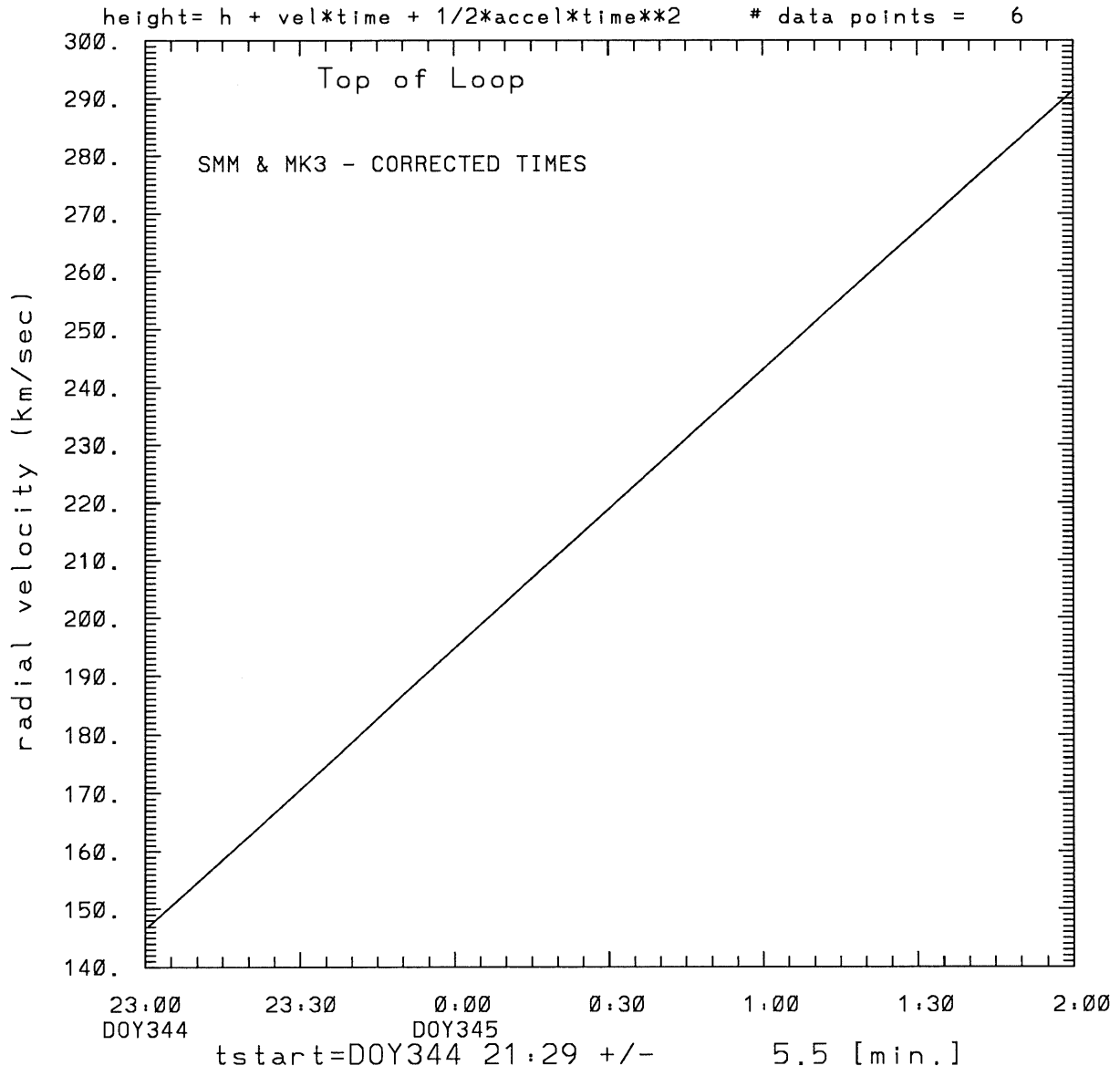
tstart=DOY344 22:27 +/- 0.2 [min.]
radial velocity= 220. +/- 8. [km/sec]

SMM C/P 1984 DOY344 70 +/- 0 degrees



radial acceleration = 0.0134 ± 0.0041 [km/sec**2]

SMM C/P 1984 DOY344 70 +/- 0 degrees



radial acceleration=0.134E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1984	344	23:30:25	2.30	+/- 0.15	70.0	+/- 0.5	SMM
1984	344	23:33:21	2.30	+/- 0.15	70.0	+/- 0.5	SMM
1984	345	0: 5:27	2.90	+/- 0.15	70.0	+/- 0.5	SMM
1984	345	0: 8:23	2.90	+/- 0.15	70.0	+/- 0.5	SMM
1984	345	1: 7:21	4.00	+/- 0.15	70.0	+/- 1.0	SMM
1984	345	1:43:23	4.90	+/- 0.20	70.0	+/- 1.0	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.348E+02 +/- 0.232E+00$ [minutes]
In more convenient units:
Event began at DOY 344 22:27 +/- 0.232E+00 [minutes]

Origin defined at DOY344 23: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 220. +/- 8. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.166E+01 +/- 0.577E-01 [solar radii]
- c(2) = 0.190E-01 +/- 0.663E-03 [radii/min]
- c(2) = 0.220E+03 +/- 0.769E+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)= 0.71416E-01 [radii] see Bevington pg. 114
- error in c(2)= 0.75343E-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) = 70. +/- 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 23:30 = 0.000E+00 km/sec

The TOTAL velocity at 23:30 = 220. km/sec

The TANGENTIAL velocity at 23:33 = 0.000E+00 km/sec

The TOTAL velocity at 23:33 = 220. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec

The TOTAL velocity at 0: 5 = 220. km/sec

The TANGENTIAL velocity at 0: 8 = 0.000E+00 km/sec

The TOTAL velocity at 0: 8 = 220. km/sec

The TANGENTIAL velocity at 1: 7 = 0.000E+00 km/sec

The TOTAL velocity at 1: 7 = 220. km/sec

The TANGENTIAL velocity at 1:43 = 0.000E+00 km/sec

The TOTAL velocity at 1:43 = 220. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.03

Standard Deviation in start time measurement = 0.486E+02

Error in time = 0.94401E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.520E-02

Reduced Chi Squared = 0.401E-01

Chi Squared = 0.160E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.997E+00

The probability that no LINEAR correlation exists between the variables = 0.1186E-04

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	datatype
1984	344	23:30:25	2.30	+/- 0.15	70.0	+/- 0.5	SMM	
1984	344	23:33:21	2.30	+/- 0.15	70.0	+/- 0.5	SMM	
1984	345	0: 5:27	2.90	+/- 0.15	70.0	+/- 0.5	SMM	
1984	345	0: 8:23	2.90	+/- 0.15	70.0	+/- 0.5	SMM	
1984	345	1: 7:21	4.00	+/- 0.15	70.0	+/- 1.0	SMM	
1984	345	1:43:23	4.90	+/- 0.20	70.0	+/- 1.0	SMM	

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.930E+02 +/- 0.554E+01$ [minutes]
In more convenient units:
Event began at DOY 344 21:29 +/- 0.554E+01 [minutes]

Origin defined at DOY344 23: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.134E-01 +/- 0.411E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.187E+01 +/- 0.737E-01$ [solar radii]
 $c(2) = 0.126E-01 +/- 0.199E-02$ [radii/min]
 $c(2) = 0.147E+03 +/- 0.231E+02$ [km/sec]
 $c(3) = 0.347E-04 +/- 0.106E-04$ [radii/min**2]
 $c(3) = 0.134E-01 +/- 0.411E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.86618E-01$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.11897E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.22908E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.28601E-03$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.11803E-04$ [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.18977E-05 [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) = 70. +/- 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 23:30 = 0.000E+00 km/sec

The TOTAL velocity at 23:30 = 171. km/sec

The TANGENTIAL velocity at 23:33 = 0.000E+00 km/sec

The TOTAL velocity at 23:33 = 173. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec

The TOTAL velocity at 0: 5 = 199. km/sec

The TANGENTIAL velocity at 0: 8 = 0.000E+00 km/sec

The TOTAL velocity at 0: 8 = 201. km/sec

The TANGENTIAL velocity at 1: 7 = 0.000E+00 km/sec

The TOTAL velocity at 1: 7 = 249. km/sec

The TANGENTIAL velocity at 1:43 = 0.000E+00 km/sec

The TOTAL velocity at 1:43 = 278. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.03

Standard Deviation in start time measurement = 0.486E+02

Value of reduced Chi Squared returned from nllst2 = 0.178E-02

Reduced Chi Squared = 0.942E-02

Chi Squared = 0.283E-01

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

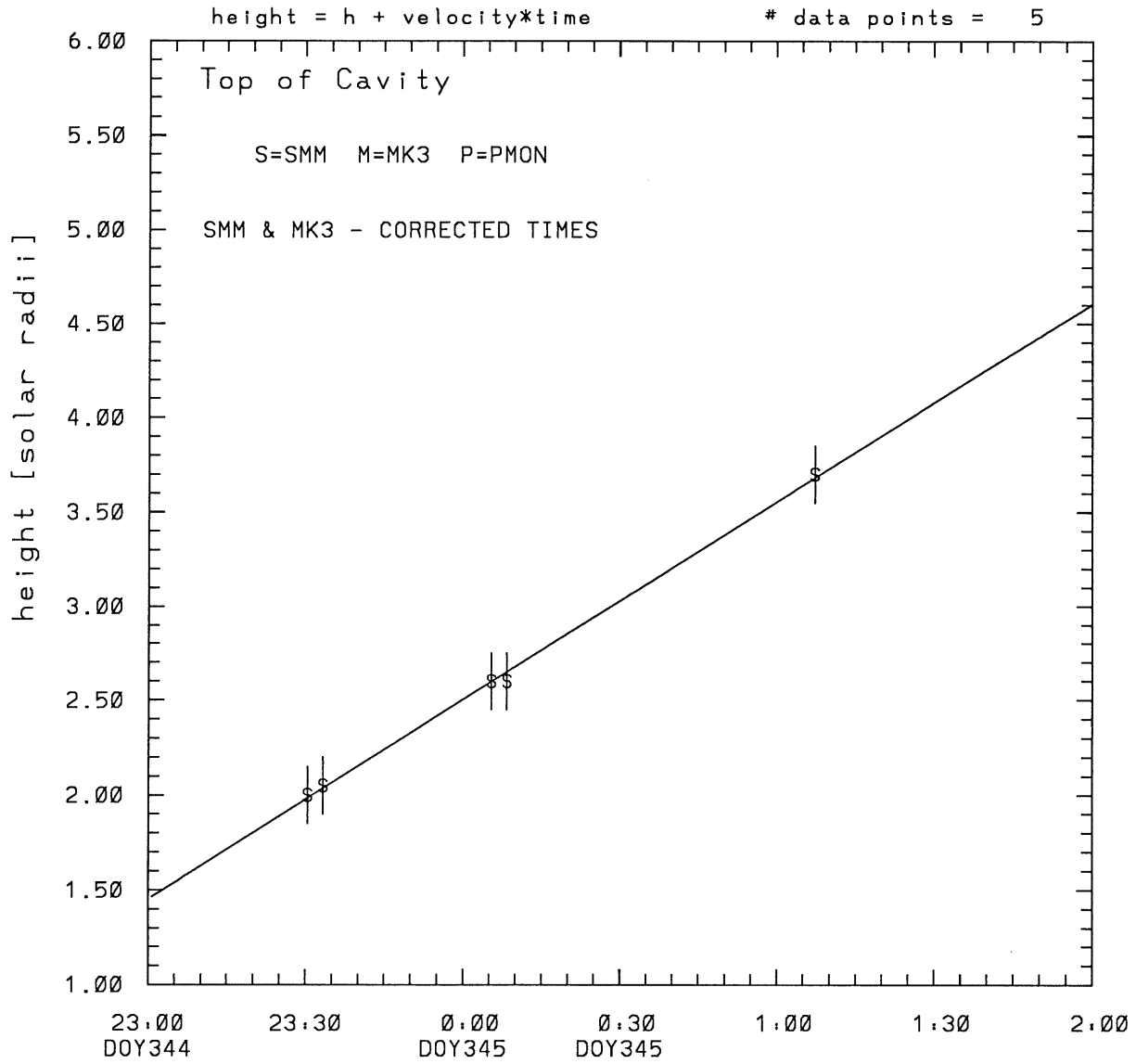
(Using equation of motion: $r = a + bt + at^{**2}$)

The correlation between the data and the term linear in time = 0.9217E+00

The correlation between the data and the time**2 term = 0.8871E+00

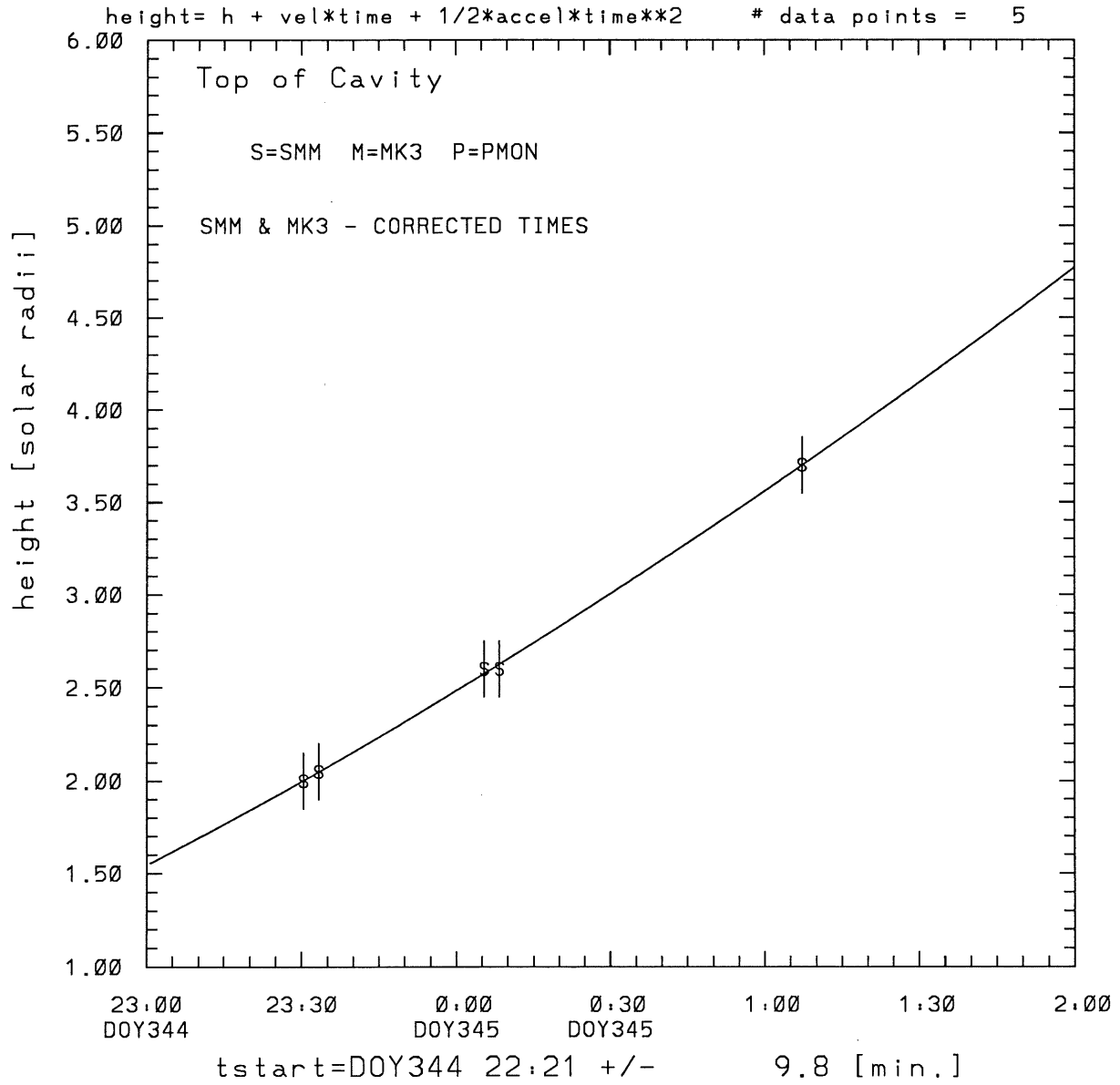
The correlation between the data and the complete equation of motion = 0.9979E+00

SMM C/P 1984 DOY344 70 +/- 0 degrees



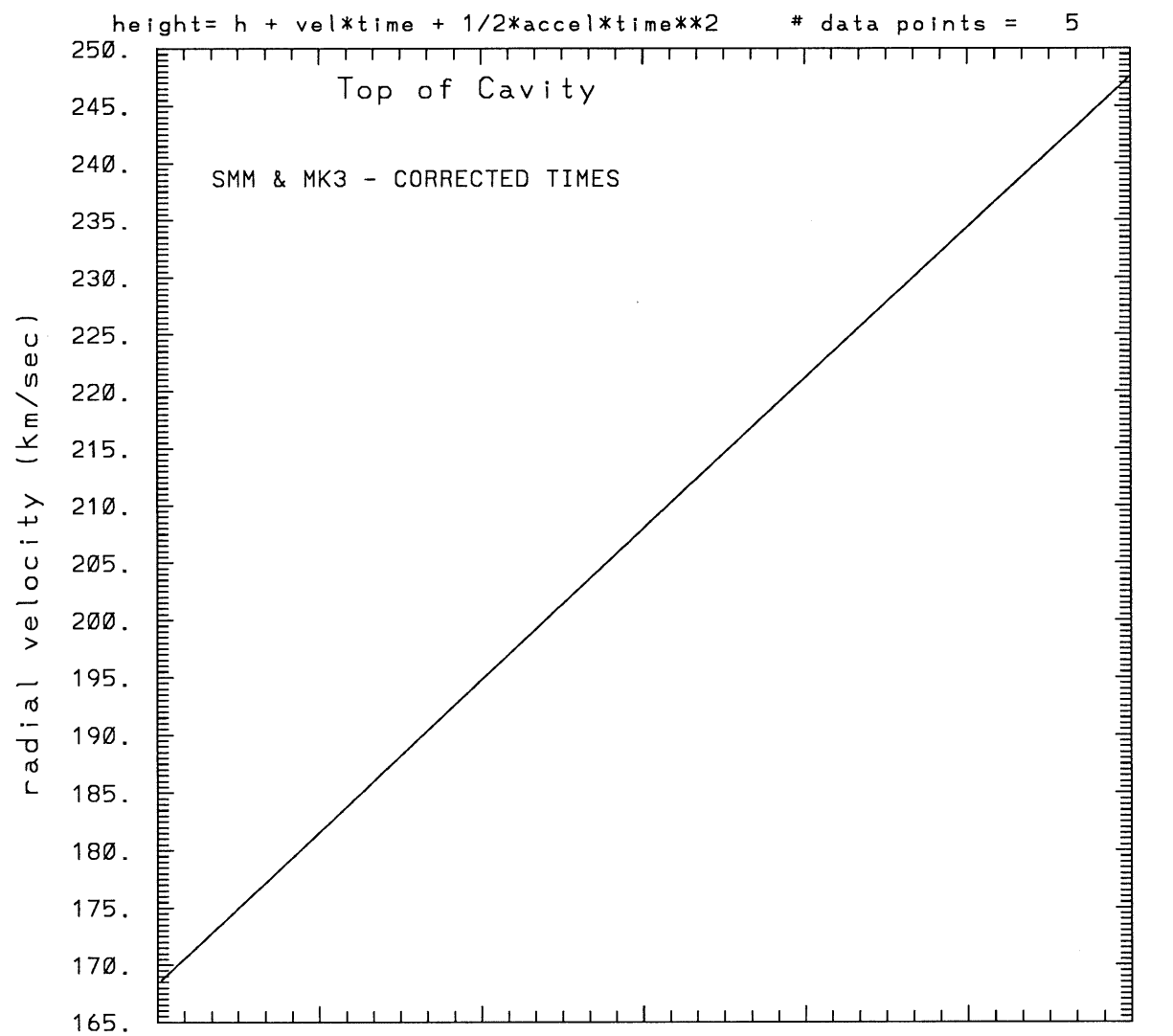
tstart=DOY344 22:36 +/- 0.2 [min.]
radial velocity= 203. +/- 4. [km/sec]

SMM C/P 1984 DOY344 70 +/- 0 degrees



radial acceleration = 0.0073 ± 0.0034 [km/sec**2]

SMM C/P 1984 DOY344 70 +/- 0 degrees



23:00 DOY344 23:30 DOY344 0:00 DOY345 0:30 1:00 1:30 2:00

tstart=DOY344 22:21 +/- 9.8 [min.]

radial acceleration=0.734E-02 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	error in	angle	datatype
1984	344	23:30:25	2.00	+/- 0.15	70.0	+/- 0.5			SMM
1984	344	23:33:21	2.05	+/- 0.15	70.0	+/- 0.5			SMM
1984	345	0: 5:27	2.60	+/- 0.15	70.0	+/- 0.5			SMM
1984	345	0: 8:23	2.60	+/- 0.15	70.0	+/- 0.5			SMM
1984	345	1: 7:21	3.70	+/- 0.15	70.0	+/- 1.0			SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.258E+02 +/- 0.231E+00$ [minutes]

In more convenient units:

Event began at DOY 344 22:36 +/- 0.231E+00 [minutes]

Origin defined at DOY344 23: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 203. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.145E+01 +/- 0.267E-01 [solar radii]
c(2) = 0.175E-01 +/- 0.363E-03 [radii/min]
c(2) = 0.203E+03 +/- 0.421E+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)= 0.30886E-01 [radii] see Bevington pg. 114

error in c(2)= 0.41864E-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) = 70. +/- 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 23:30 = 0.000E+00 km/sec

The TOTAL velocity at 23:30 = 203. km/sec

The TANGENTIAL velocity at 23:33 = 0.000E+00 km/sec

The TOTAL velocity at 23:33 = 203. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec

The TOTAL velocity at 0: 5 = 203. km/sec

The TANGENTIAL velocity at 0: 8 = 0.000E+00 km/sec

The TOTAL velocity at 0: 8 = 203. km/sec

The TANGENTIAL velocity at 1: 7 = 0.000E+00 km/sec

The TOTAL velocity at 1: 7 = 203. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.68

Standard Deviation in start time measurement = 0.349E+02

Error in time = 0.32339E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.801E-03

Reduced Chi Squared = 0.402E-02

Chi Squared = 0.121E-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 = 0.3010E-04

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

This is a 2 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1984	344	23:30:25	2.00 +/- 0.15	70.0 +/- 0.5			SMM
1984	344	23:33:21	2.05 +/- 0.15	70.0 +/- 0.5			SMM
1984	345	0: 5:27	2.60 +/- 0.15	70.0 +/- 0.5			SMM
1984	345	0: 8:23	2.60 +/- 0.15	70.0 +/- 0.5			SMM
1984	345	1: 7:21	3.70 +/- 0.15	70.0 +/- 1.0			SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.395E+02 +/- 0.979E+01$ [minutes]
In more convenient units:
Event began at DOY 344 22:21 +/- 0.979E+01 [minutes]

Origin defined at DOY344 23: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.734E-02 +/- 0.341E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = $0.154E+01 +/- 0.466E-01$ [solar radii]
- c(2) = $0.145E-01 +/- 0.142E-02$ [radii/min]
- c(2) = $0.168E+03 +/- 0.164E+02$ [km/sec]
- c(3) = $0.190E-04 +/- 0.881E-05$ [radii/min**2]
- c(3) = $0.734E-02 +/- 0.341E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = $0.57099E-01$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.19182E-01$ [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = $0.17334E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.73618E-03$ [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = $0.10795E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.45999E-05$ [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) = 70. +/- 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 23:30 = 0.000E+00 km/sec

The TOTAL velocity at 23:30 = 182. km/sec

The TANGENTIAL velocity at 23:33 = 0.000E+00 km/sec

The TOTAL velocity at 23:33 = 183. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec

The TOTAL velocity at 0: 5 = 197. km/sec

The TANGENTIAL velocity at 0: 8 = 0.000E+00 km/sec

The TOTAL velocity at 0: 8 = 198. km/sec

The TANGENTIAL velocity at 1: 7 = 0.000E+00 km/sec

The TOTAL velocity at 1: 7 = 224. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.68

Standard Deviation in start time measurement = 0.349E+02

Value of reduced Chi Squared returned from nllst2 = 0.420E-03

Reduced Chi Squared = 0.219E-02

Chi Squared = 0.438E-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 = 0.9991E+00

The correlation between the data and the time**2 term = 0.9878E+00

The correlation between the data and the complete equation of motion = 0.9993E+00

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