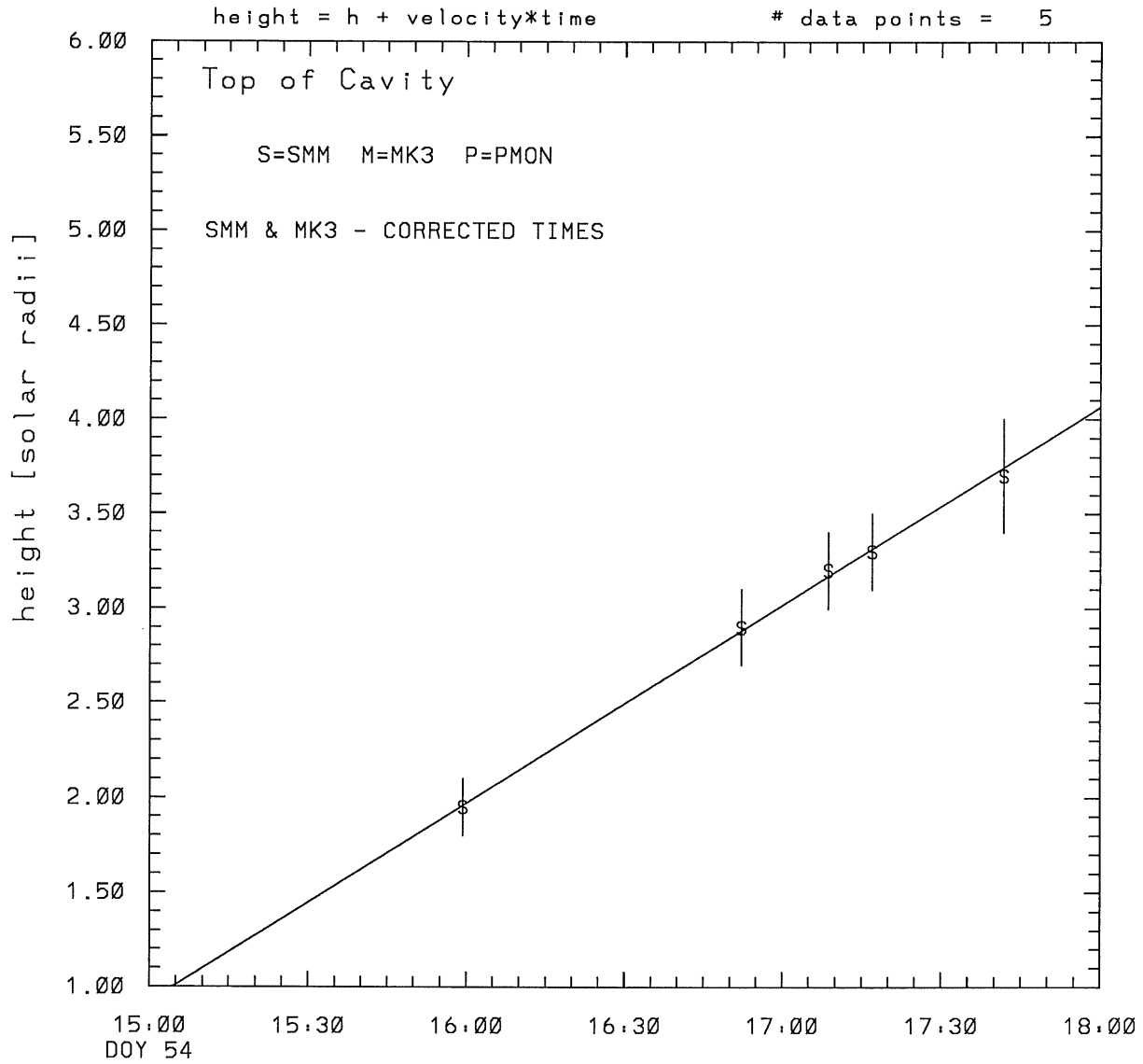
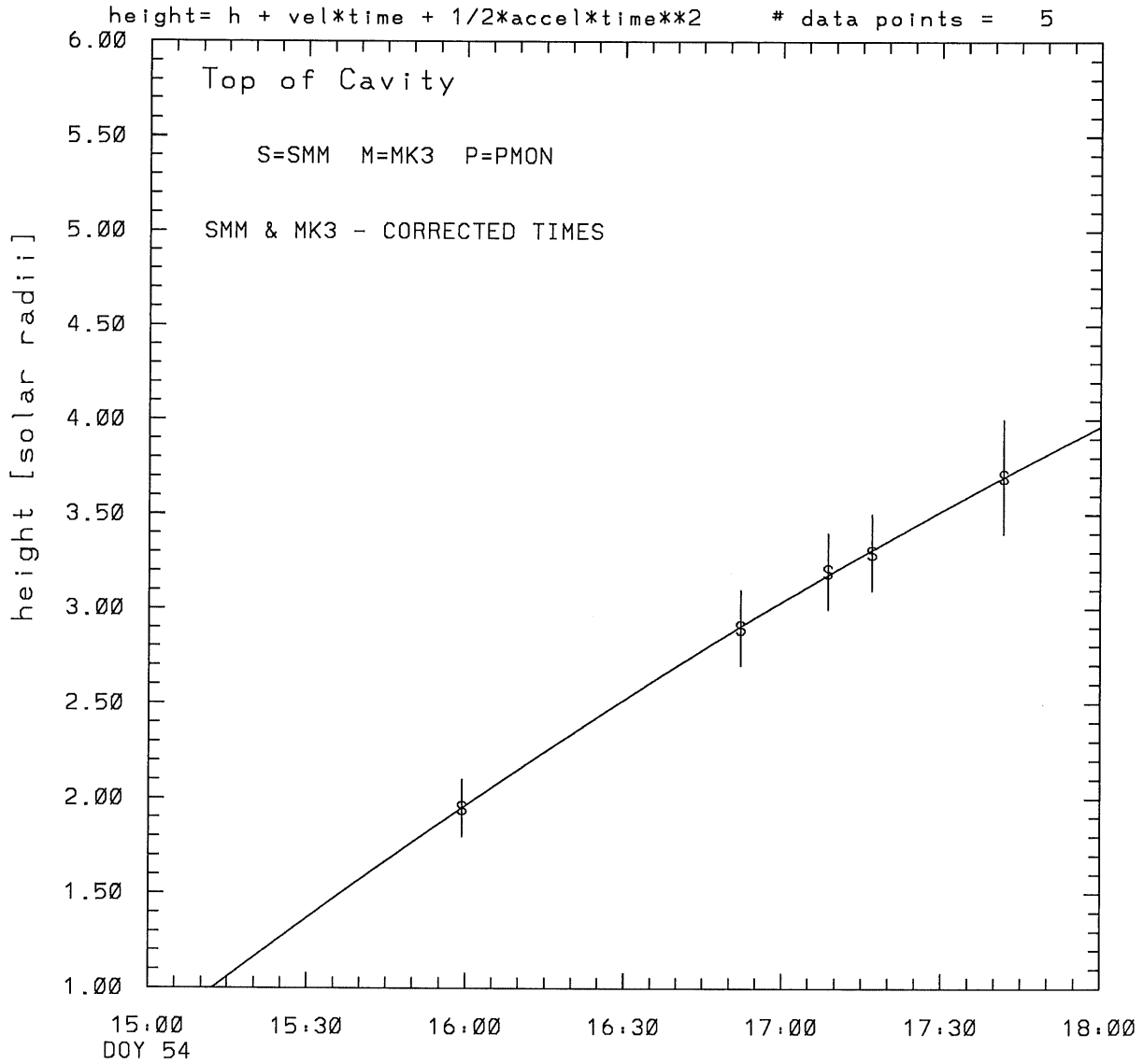


SMM C/P 1988 DOY 54 70 +/- 0 degrees



tstart=DOY 54 15: 4 +/- 0.1 [min.]
radial velocity= 202. +/- 4. [km/sec]

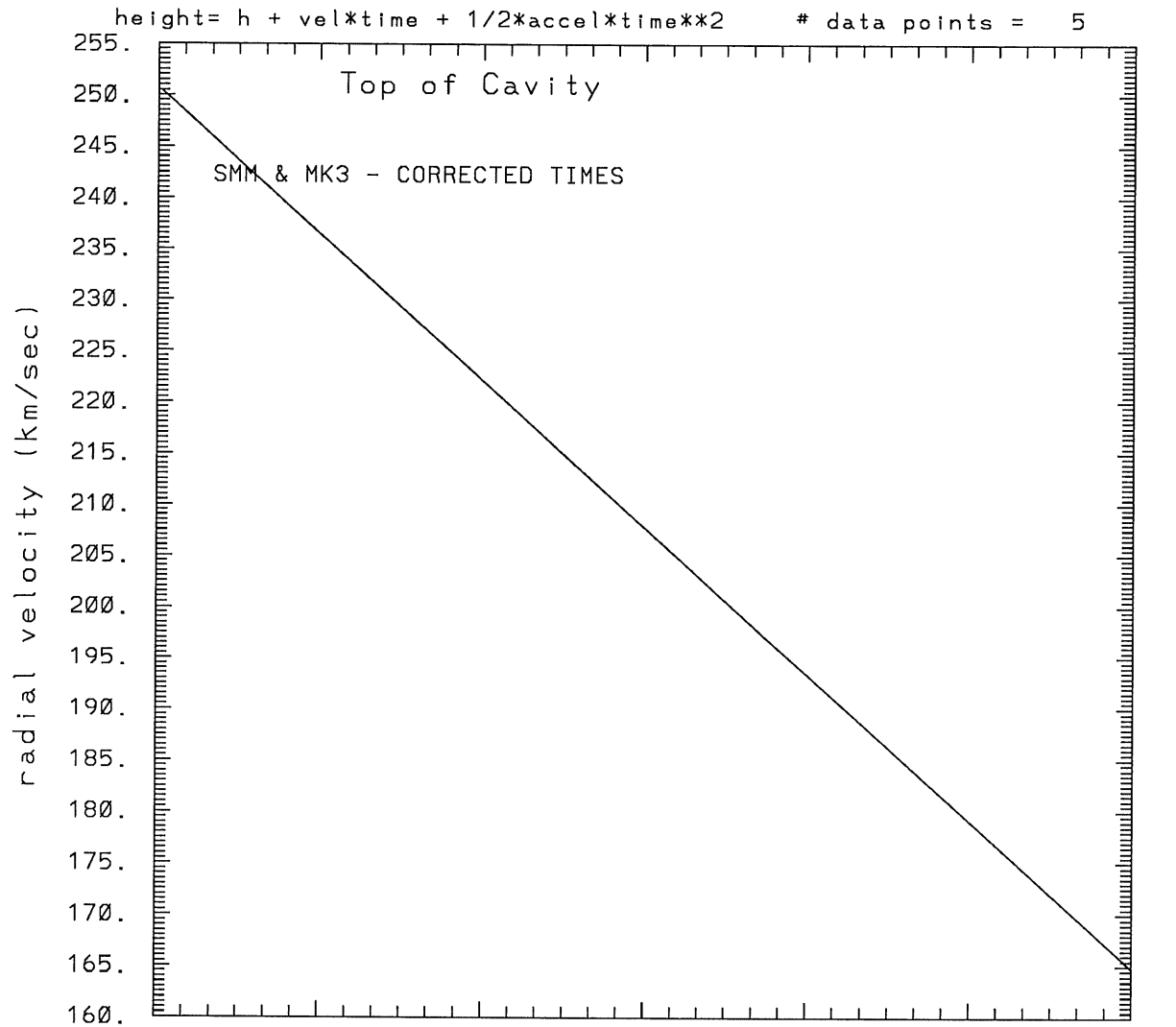
SMM C/P 1988 DOY 54 70 +/- 0 degrees



tstart=DOY 54 15:12 +/- 1.0 [min.]

radial acceleration = -0.0080 ± 0.0026 [km/sec**2]

SMM C/P 1988 DOY 54 70 +/- 0 degrees



15:00
DOY 54

15:30

16:00

16:30

17:00

17:30

18:00

tstart=DOY 54 15:12 +/- 1.0 [min.]

radial acceleration=-.796E-02 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1988	54	15:59:20	1.95	+/- 0.15	70.0	+/- 0.5	SMM
1988	54	16:52:12	2.90	+/- 0.20	70.0	+/- 0.5	SMM
1988	54	17: 8:42	3.20	+/- 0.20	70.0	+/- 0.5	SMM
1988	54	17:16:58	3.30	+/- 0.20	70.0	+/- 0.5	SMM
1988	54	17:41:43	3.70	+/- 0.30	70.0	+/- 0.5	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + 0.439E+01 +/- 0.557E-01 [minutes]

In more convenient units:

Event began at DOY 54 15: 4 +/- 0.557E-01 [minutes]

Origin defined at DOY 54 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 202. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.923E+00 +/- 0.343E-01 [solar radii]
c(2) = 0.175E-01 +/- 0.306E-03 [radii/min]
c(2) = 0.202E+03 +/- 0.355E+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)= 0.56569E-01 [radii] see Bevington pg. 114

error in c(2)= 0.45412E-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 15:59 = 0. km/sec

The TOTAL velocity at 15:59 = 202. km/sec

The TANGENTIAL velocity at 16:52 = 0. km/sec

The TOTAL velocity at 16:52 = 202. km/sec

The TANGENTIAL velocity at 17: 8 = 0. km/sec

The TOTAL velocity at 17: 8 = 202. km/sec

The TANGENTIAL velocity at 17:16 = 0. km/sec

The TOTAL velocity at 17:16 = 202. km/sec

The TANGENTIAL velocity at 17:41 = 0. km/sec

The TOTAL velocity at 17:41 = 202. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.66

Standard Deviation in start time measurement = 0.342E+02

Error in time = 0.34460E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.606E-03

Reduced Chi Squared = 0.489E-02

Chi Squared = 0.147E-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 = 0.3334E-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
1988	54	15:59:20	1.95 +/- 0.15		70.0 +/- 0.5		SMM
1988	54	16:52:12	2.90 +/- 0.20		70.0 +/- 0.5		SMM
1988	54	17: 8:42	3.20 +/- 0.20		70.0 +/- 0.5		SMM
1988	54	17:16:58	3.30 +/- 0.20		70.0 +/- 0.5		SMM
1988	54	17:41:43	3.70 +/- 0.30		70.0 +/- 0.5		SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + 0.122E+02 \pm 0.975E+00$ [minutes]

In more convenient units:

Event began at DOY 54 15:12 $\pm 0.975E+00$ [minutes]

Origin defined at DOY 54 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.796E-02 \pm 0.260E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.740E+00 \pm 0.630E-01$ [solar radii]
 $c(2) = 0.216E-01 \pm 0.137E-02$ [radii/min]
 $c(2) = 0.251E+03 \pm 0.159E+02$ [km/sec]
 $c(3) = -0.206E-04 \pm 0.671E-05$ [radii/min**2]
 $c(3) = -0.796E-02 \pm 0.260E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.77465E-01$ [radii] Bevington pg 154 (8-30)

Exact error in $c(1) = 0.14735E-01$ [radii] Bevington pg 154 (8-28)

Approximate error in $c(2) = 0.15263E-02$ [radii/min] Bevington pg 154 (8-30)

Exact error in $c(2) = 0.34074E-03$ [radii/min] Bevington pg 154 (8-28)

Approximate error in $c(3) = 0.70084E-05$ [radii/min**] Bevington pg 154 (8-30)

Exact error in $c(3) = 0.15610E-05$ [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 15:59 = 0. km/sec

The TOTAL velocity at 15:59 = 222. km/sec

The TANGENTIAL velocity at 16:52 = 0. km/sec

The TOTAL velocity at 16:52 = 197. km/sec

The TANGENTIAL velocity at 17: 8 = 0. km/sec

The TOTAL velocity at 17: 8 = 189. km/sec

The TANGENTIAL velocity at 17:16 = 0. km/sec

The TOTAL velocity at 17:16 = 185. km/sec

The TANGENTIAL velocity at 17:41 = 0. km/sec

The TOTAL velocity at 17:41 = 174. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.66

Standard Deviation in start time measurement = 0.342E+02

Value of reduced Chi Squared returned from nllst2 = 0.195E-03

Reduced Chi Squared = 0.102E-02

Chi Squared = 0.203E-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 = 0.1123E+01

The correlation between the data and the time**2 term = 0.1050E+01

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

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