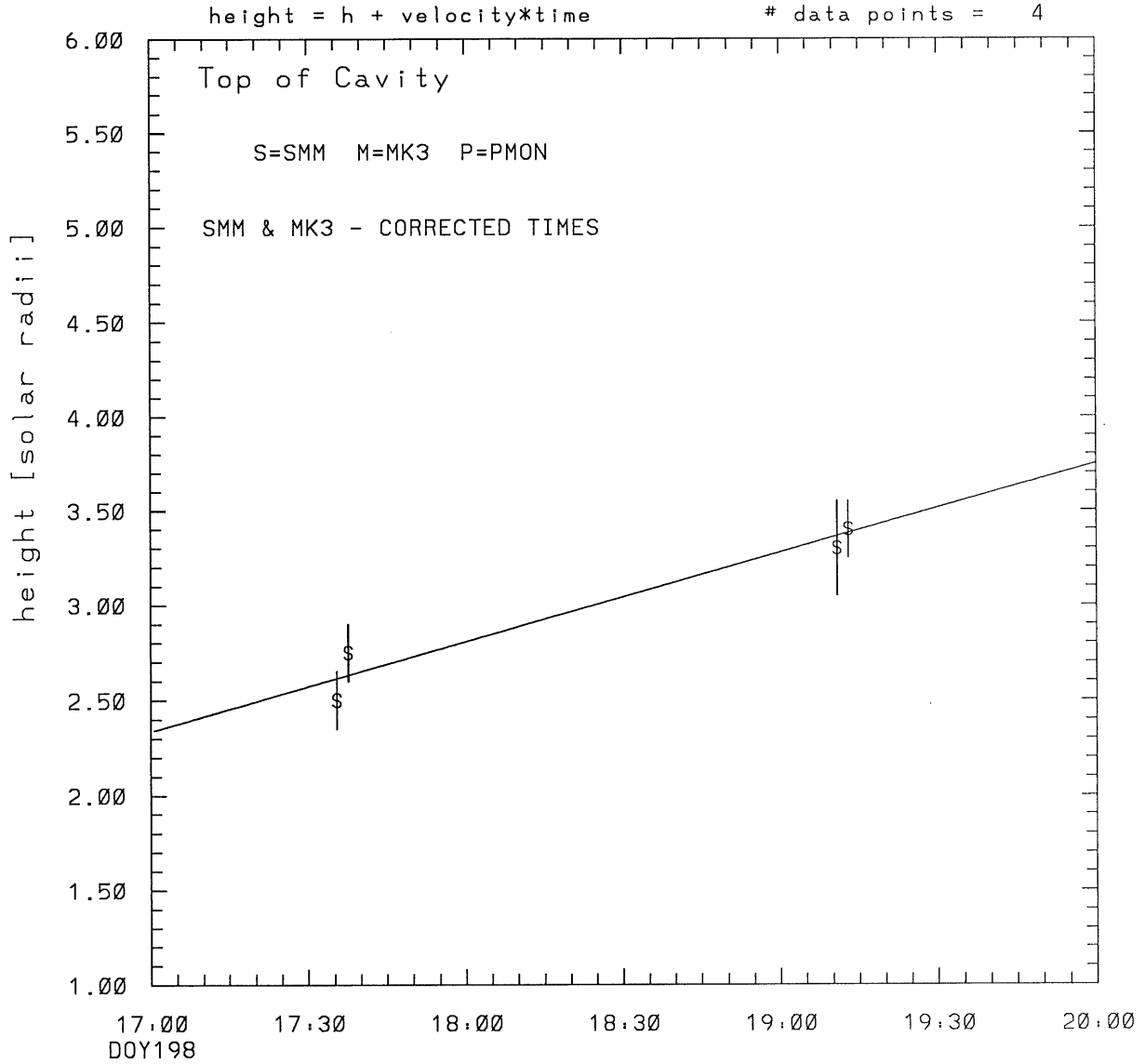
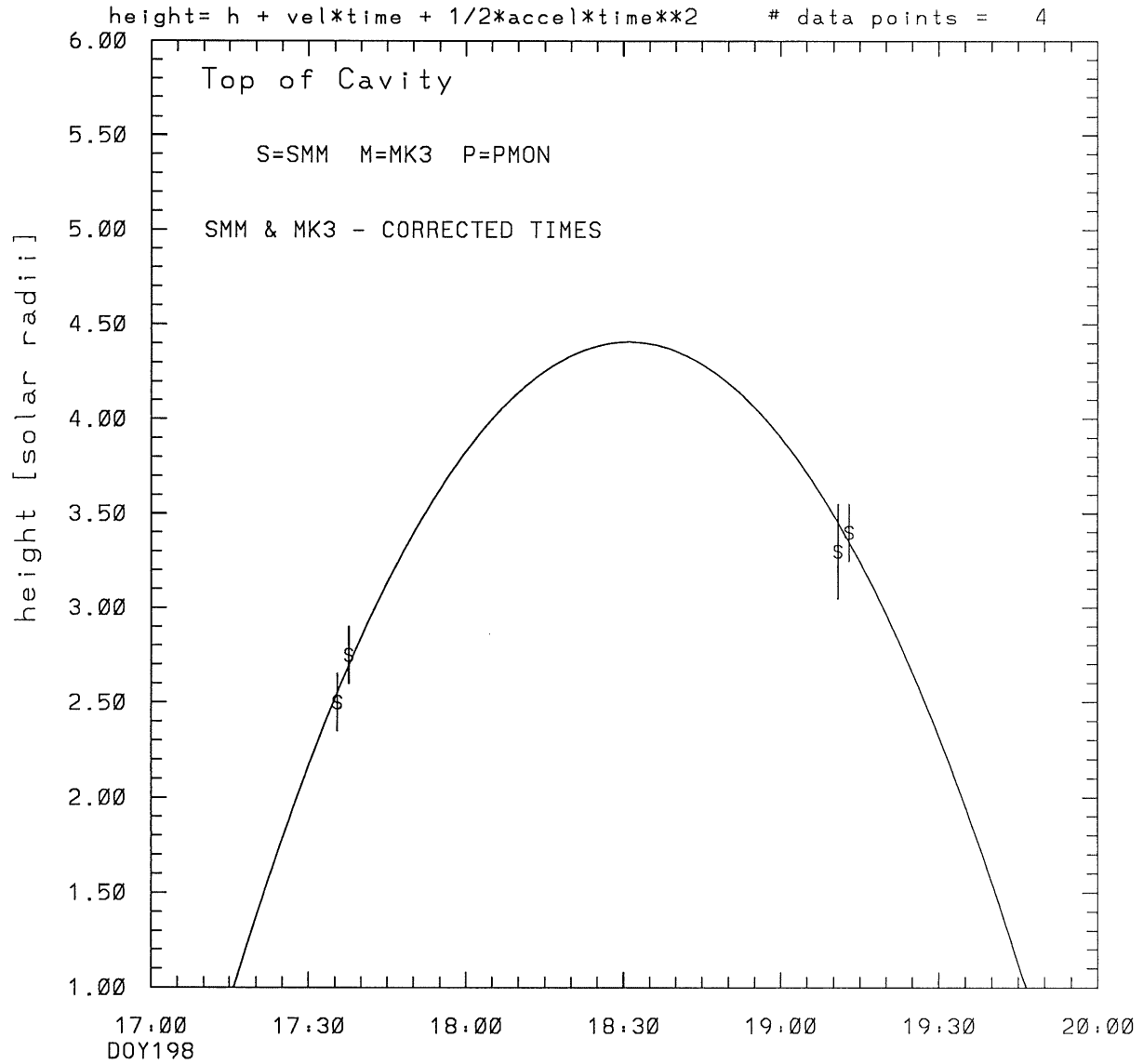


SMM C/P 1980 DOY198 225 +/- 0 degrees



tstart=DOY198 14:10 +/- 14.7 [min.]
radial velocity= 91. +/- 13. [km/sec]

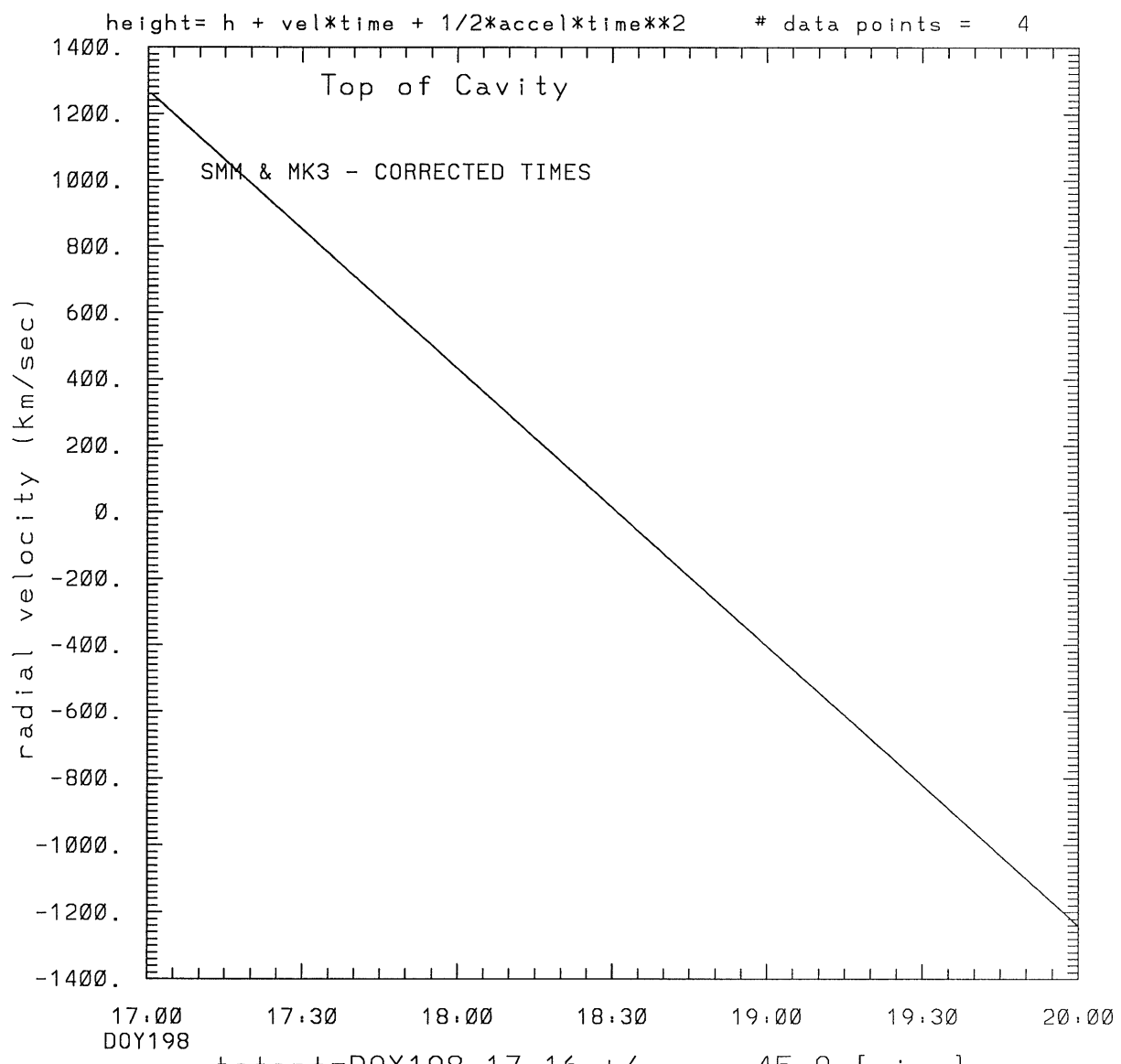
SMM C/P 1980 DOY198 225 +/- 0 degrees



tstart=DOY198 17:16 +/- 45.9 [min.]

radial acceleration = -0.2323 ± 0.1978 [km/sec**2]

SMM C/P 1980 DOY198 225 +/- 0 degrees



tstart=DOY198 17:16 +/- 45.9 [min.]

radial acceleration=-.232E+00 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	198	17:35:30	2.50	+/- 0.15	225.0	+/- 0.5	SMM
1980	198	17:37:40	2.75	+/- 0.15	225.0	+/- 0.5	SMM
1980	198	19:10:53	3.30	+/- 0.25	225.0	+/- 1.0	SMM
1980	198	19:13: 3	3.40	+/- 0.15	225.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.170E+03 +/- 0.147E+02$ [minutes]
In more convenient units:
Event began at DOY 198 14:10 +/- 0.147E+02 [minutes]

Origin defined at DOY198 17: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 91. +/- 13. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.234E+01 +/- 0.101E+00$ [solar radii]
 $c(2) = 0.785E-02 +/- 0.114E-02$ [radii/min]
 $c(2) = 0.910E+02 +/- 0.132E+02$ [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 $c(1) = 0.12748E+00$ [radii] see Bevington pg. 114
error in $c(2) = 0.13164E-02$ [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) = 225. +/- 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 17:35 = 0.000E+00 km/sec

The TOTAL velocity at 17:35 = 91. km/sec

The TANGENTIAL velocity at 17:37 = 0.000E+00 km/sec

The TOTAL velocity at 17:37 = 91. km/sec

The TANGENTIAL velocity at 19:10 = 0.000E+00 km/sec

The TOTAL velocity at 19:10 = 91. km/sec

The TANGENTIAL velocity at 19:13 = 0.000E+00 km/sec

The TOTAL velocity at 19:13 = 91. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.43

Standard Deviation in start time measurement = 0.477E+02

Error in time = 0.22637E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.115E-01

Reduced Chi Squared = 0.273E-01

Chi Squared = 0.547E-01

The probability for exceeding chi square = 0.989E+00

The correlation coefficient = 0.972E+00

The probability that no LINEAR correlation exists between the variables = 0.2774E-01

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1980	198	17:35:30	2.50	+/- 0.15	225.0	+/- 0.5	SMM
1980	198	17:37:40	2.75	+/- 0.15	225.0	+/- 0.5	SMM
1980	198	19:10:53	3.30	+/- 0.25	225.0	+/- 1.0	SMM
1980	198	19:13: 3	3.40	+/- 0.15	225.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + 0.157E+02 \pm 0.459E+02$ [minutes]
In more convenient units:
Event began at DOY 198 17:16 $\pm 0.459E+02$ [minutes]

Origin defined at DOY198 17: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.232E+00 \pm 0.198E+00$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = -0.574E+00 \pm 0.248E+01$ [solar radii]
 $c(2) = 0.109E+00 \pm 0.865E-01$ [radii/min]
 $c(2) = 0.127E+04 \pm 0.100E+04$ [km/sec]
 $c(3) = -0.601E-03 \pm 0.511E-03$ [radii/min**2]
 $c(3) = -0.232E+00 \pm 0.198E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.42042E+01$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.16166E+01$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.14669E+00$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.56419E-01$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.87023E-03$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.33318E-03$ [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) = 225. +/- 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 17:35 = 0.000E+00 km/sec

The TOTAL velocity at 17:35 = 774. km/sec

The TANGENTIAL velocity at 17:37 = 0.000E+00 km/sec

The TOTAL velocity at 17:37 = 744. km/sec

The TANGENTIAL velocity at 19:10 = 0.000E+00 km/sec

The TOTAL velocity at 19:10 = -555. km/sec

The TANGENTIAL velocity at 19:13 = 0.000E+00 km/sec

The TOTAL velocity at 19:13 = -585. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.43

Standard Deviation in start time measurement = 0.477E+02

Value of reduced Chi Squared returned from nllst2 = 0.102E-01

Reduced Chi Squared = 0.909E-01

Chi Squared = 0.909E-01

The probability for exceeding chi square = 0.920E+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 = 0.9744E+00

The correlation between the data and the time**2 term = 0.9748E+00

The correlation between the data and the complete equation of motion = 0.9755E+00

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