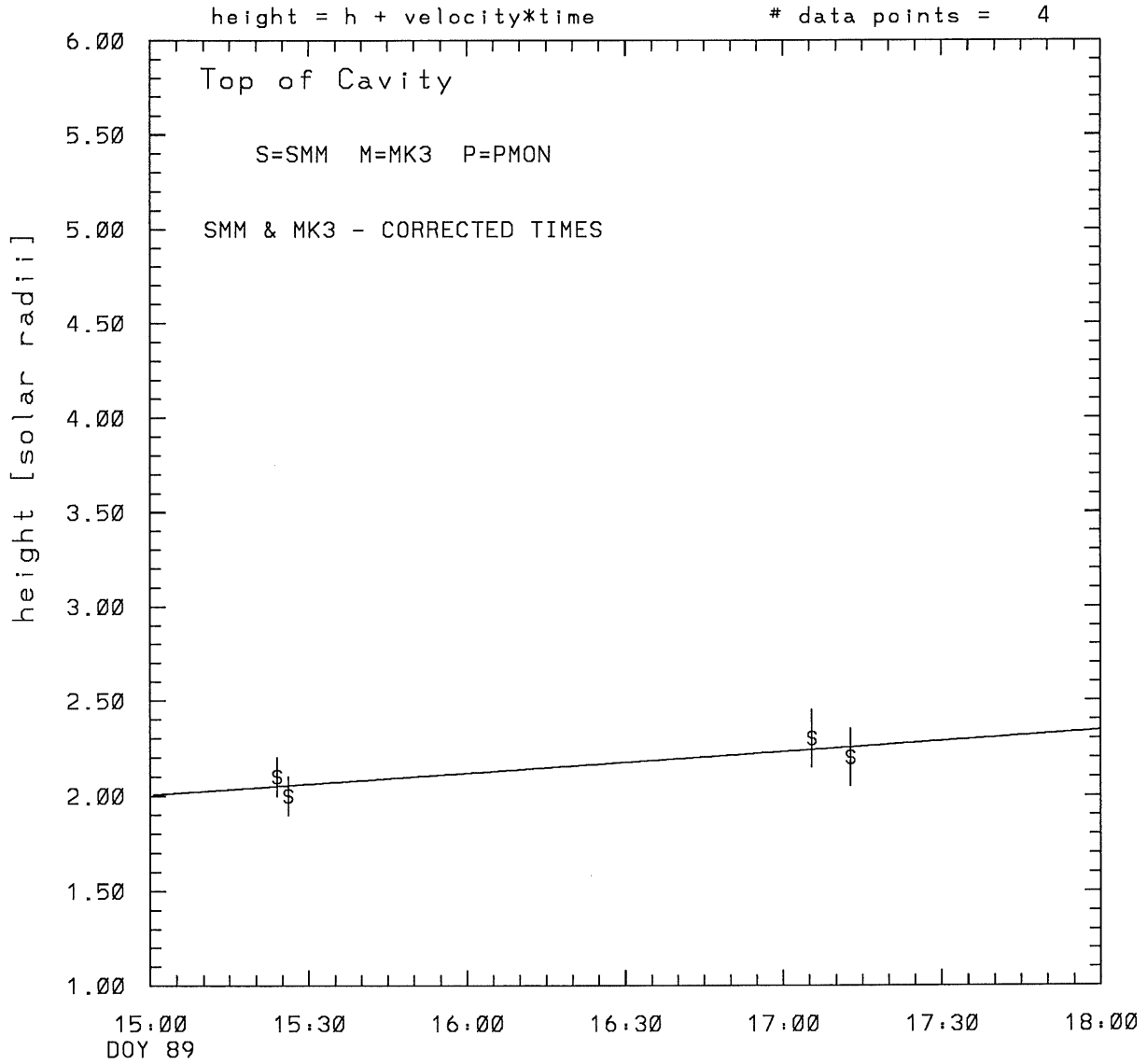
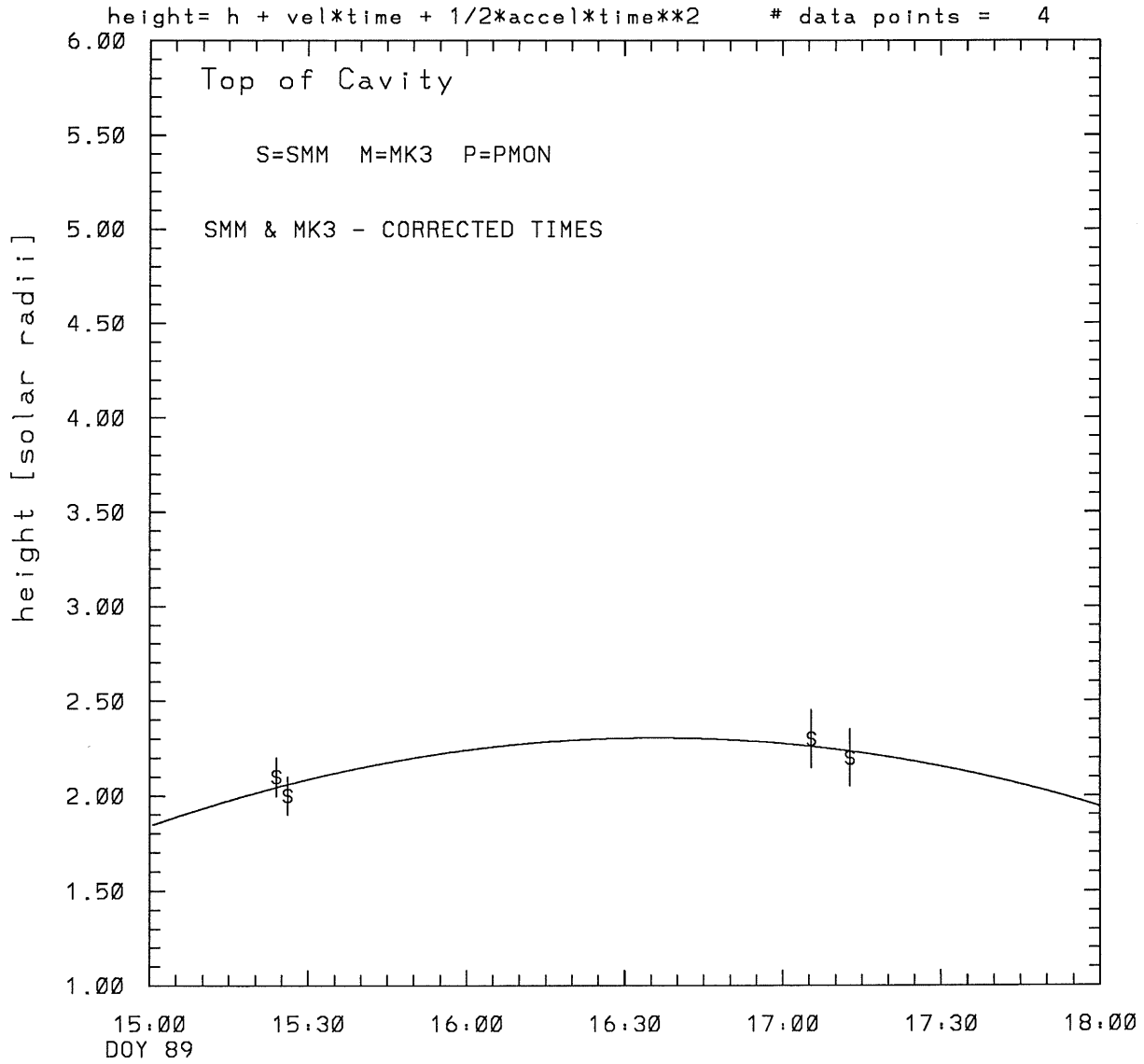


SMM C/P 1980 DOY 89 142 +/- 0 degrees



tstart=DOY 89 6: 5 +/- 105.0 [min.]
radial velocity= 22. +/- 7. [km/sec]

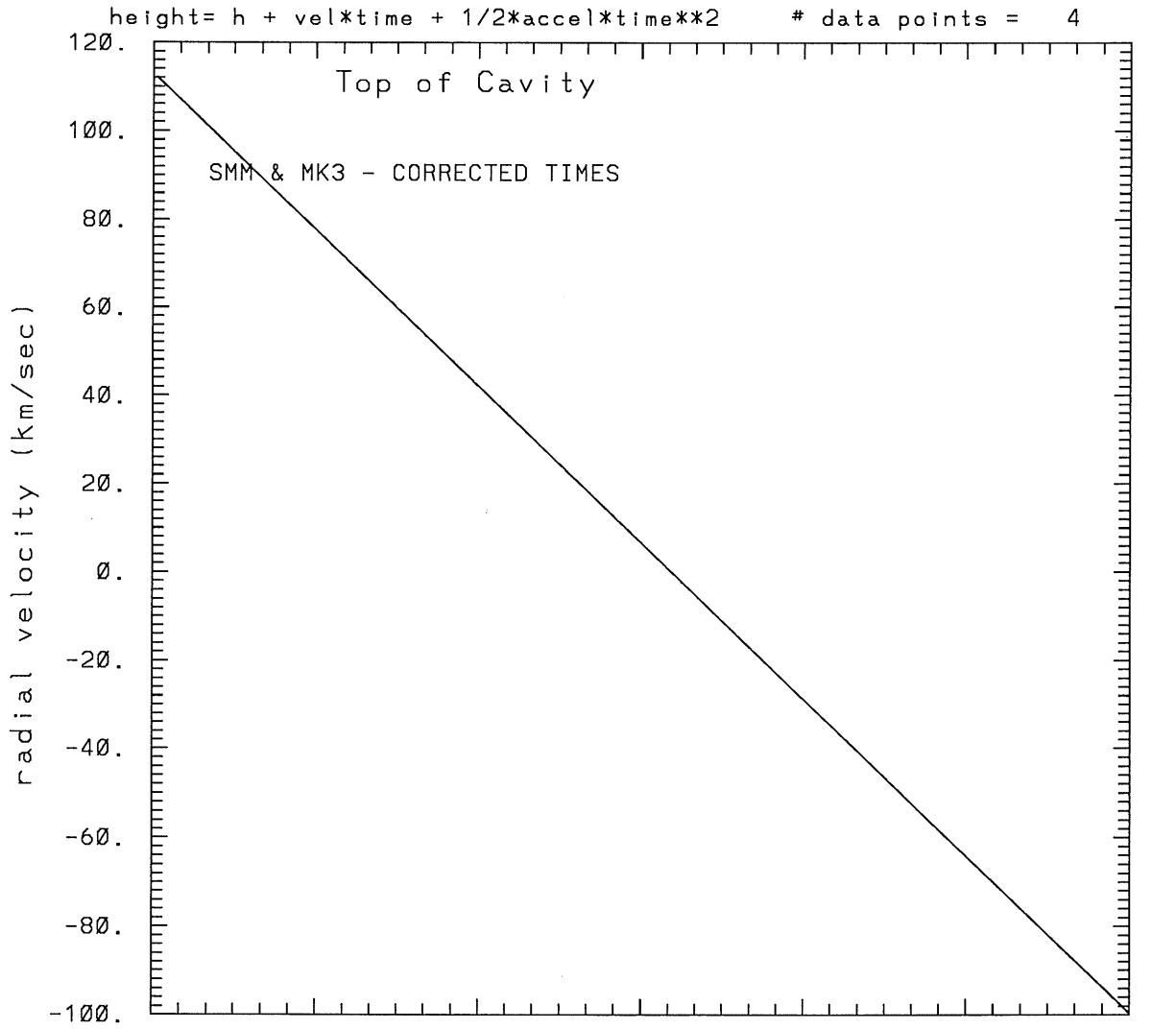
SMM C/P 1980 DOY 89 142 +/- 0 degrees



tstart=DOY 89 13:56 +/- 112.7 [min.]

radial acceleration = $-0.0197 +/- 0.0620$ [km/sec**2]

SMM C/P 1980 DOY 89 142 +/- 0 degrees



15:00
DOY 89

tstart=DOY 89 13:56 +/- 112.7 [min.]

radial acceleration=-.197E-01 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	89	15:23:58	2.10	+/- 0.10	142.0	+/- 0.5	SMM
1980	89	15:26: 5	2.00	+/- 0.10	142.0	+/- 0.5	SMM
1980	89	17: 5:28	2.30	+/- 0.15	142.0	+/- 0.5	SMM
1980	89	17:12:48	2.20	+/- 0.15	142.0	+/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.535E+03 +/- 0.105E+03$ [minutes]
In more convenient units:
Event began at DOY 89 6: 5 +/- 0.105E+03 [minutes]

Origin defined at DOY 89 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 22. +/- 7. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.200E+01 +/- 0.480E-01$ [solar radii]
 $c(2) = 0.188E-02 +/- 0.643E-03$ [radii/min]
 $c(2) = 0.218E+02 +/- 0.746E+01$ [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 $c(1) = 0.68851E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.73995E-03$ [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) = 142. +/- 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 15:23 = 0.000E+00 km/sec

The TOTAL velocity at 15:23 = 22. km/sec

The TANGENTIAL velocity at 15:26 = 0.000E+00 km/sec

The TOTAL velocity at 15:26 = 22. km/sec

The TANGENTIAL velocity at 17: 5 = 0.000E+00 km/sec

The TOTAL velocity at 17: 5 = 22. km/sec

The TANGENTIAL velocity at 17:12 = 0.000E+00 km/sec

The TOTAL velocity at 17:12 = 22. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.13

Standard Deviation in start time measurement = 0.521E+02

Error in time = 0.58126E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.383E-02

Reduced Chi Squared = 0.153E-01

Chi Squared = 0.306E-01

The probability for exceeding chi square = 0.996E+00

The correlation coefficient = 0.873E+00

The probability that no LINEAR correlation exists between the variables = 0.1271E+00

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
1980	89	15:23:58	2.10	+/- 0.10	142.0	+/- 0.5	SMM
1980	89	15:26: 5	2.00	+/- 0.10	142.0	+/- 0.5	SMM
1980	89	17: 5:28	2.30	+/- 0.15	142.0	+/- 0.5	SMM
1980	89	17:12:48	2.20	+/- 0.15	142.0	+/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.645E+02 +/- 0.113E+03$ [minutes]
In more convenient units:
Event began at DOY 89 13:56 +/- 0.113E+03 [minutes]

Origin defined at DOY 89 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.197E-01 +/- 0.620E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.184E+01 +/- 0.523E+00$ [solar radii]
 $c(2) = 0.974E-02 +/- 0.248E-01$ [radii/min]
 $c(2) = 0.113E+03 +/- 0.287E+03$ [km/sec]
 $c(3) = -0.509E-04 +/- 0.160E-03$ [radii/min**2]
 $c(3) = -0.197E-01 +/- 0.620E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.57073E+00$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.23177E+00$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.26821E-01$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.10705E-01$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.17348E-03$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.68934E-04$ [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) = 142. +/- 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 15:23 = 0.000E+00 km/sec

The TOTAL velocity at 15:23 = 85. km/sec

The TANGENTIAL velocity at 15:26 = 0.000E+00 km/sec

The TOTAL velocity at 15:26 = 82. km/sec

The TANGENTIAL velocity at 17: 5 = 0.000E+00 km/sec

The TOTAL velocity at 17: 5 = -35. km/sec

The TANGENTIAL velocity at 17:12 = 0.000E+00 km/sec

The TOTAL velocity at 17:12 = -44. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.13

Standard Deviation in start time measurement = 0.521E+02

Value of reduced Chi Squared returned from nllst2 = 0.547E-02

Reduced Chi Squared = 0.198E-01

Chi Squared = 0.198E-01

The probability for exceeding chi square = 0.941E+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 = 0.8773E+00

The correlation between the data and the time**2 term = 0.8731E+00

The correlation between the data and the complete equation of motion = 0.7791E+00

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