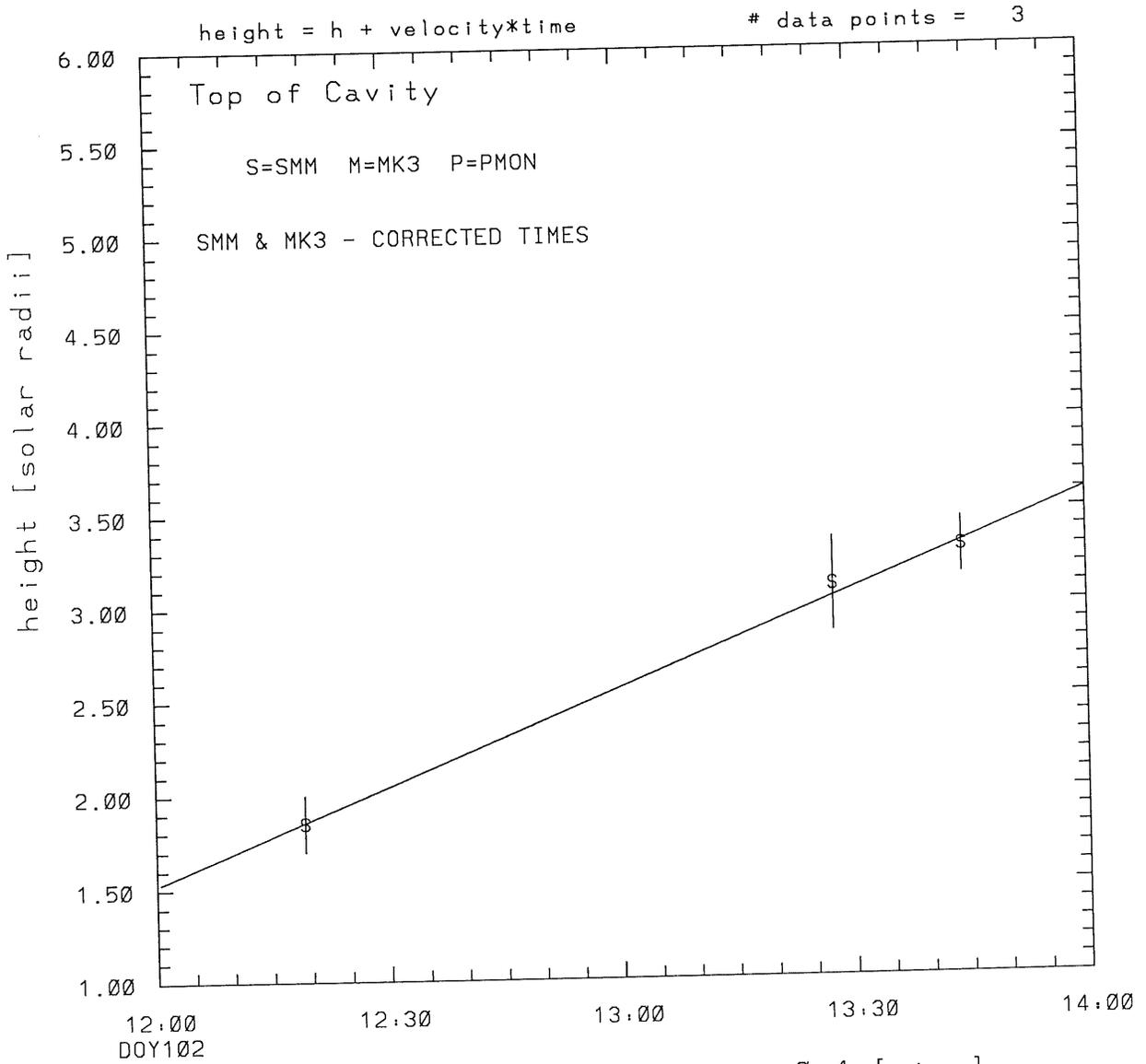
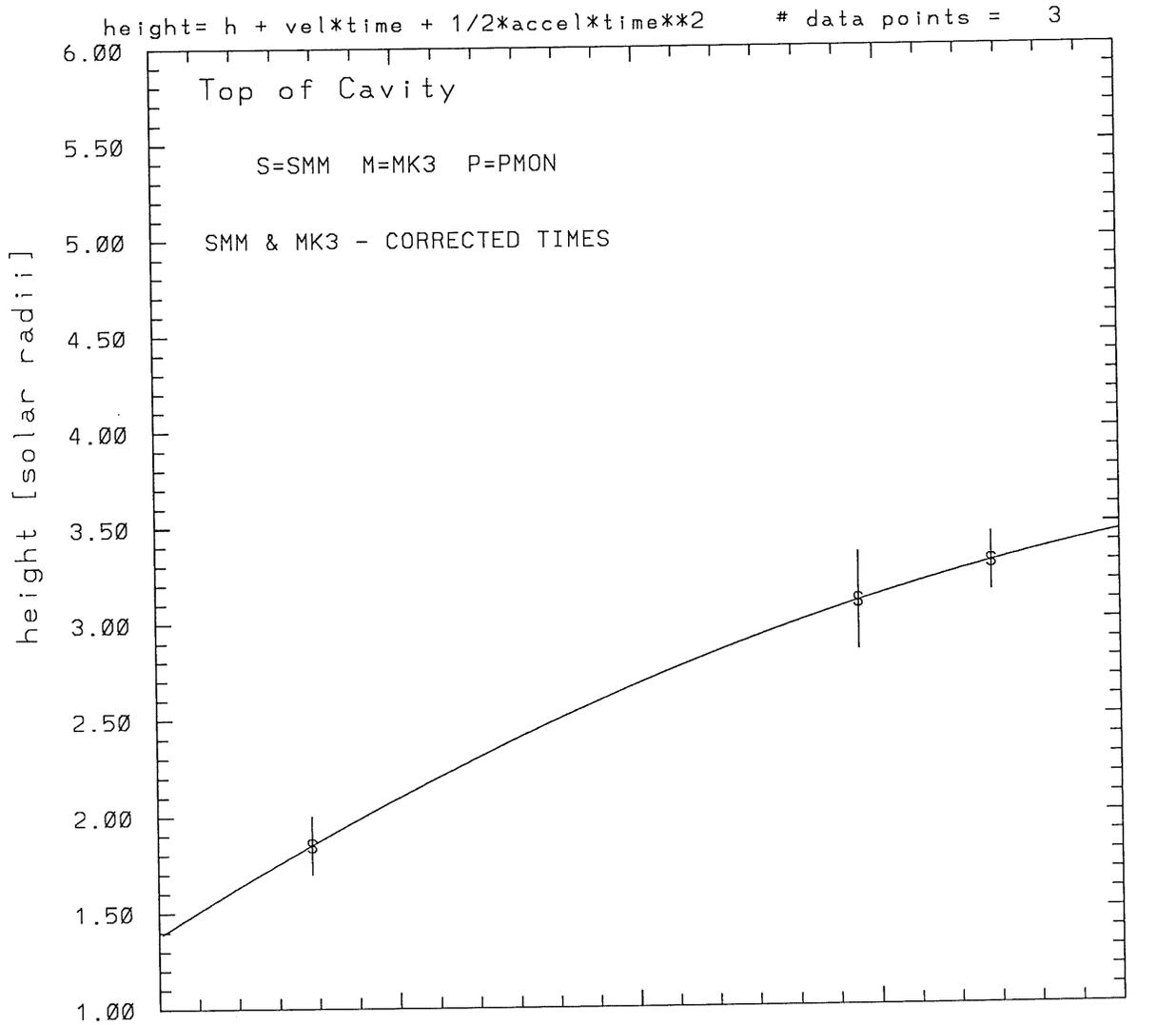


SMM C/P 1989 DOY102 163 +/- 0 degrees



tstart=DOY102 11:30 +/- 0.4 [min.]  
radial velocity= 200. +/- 6. [km/sec]

SMM C/P 1989 DOY102 163 +/- 0 degrees



12:00  
DOY102

12:30

13:00

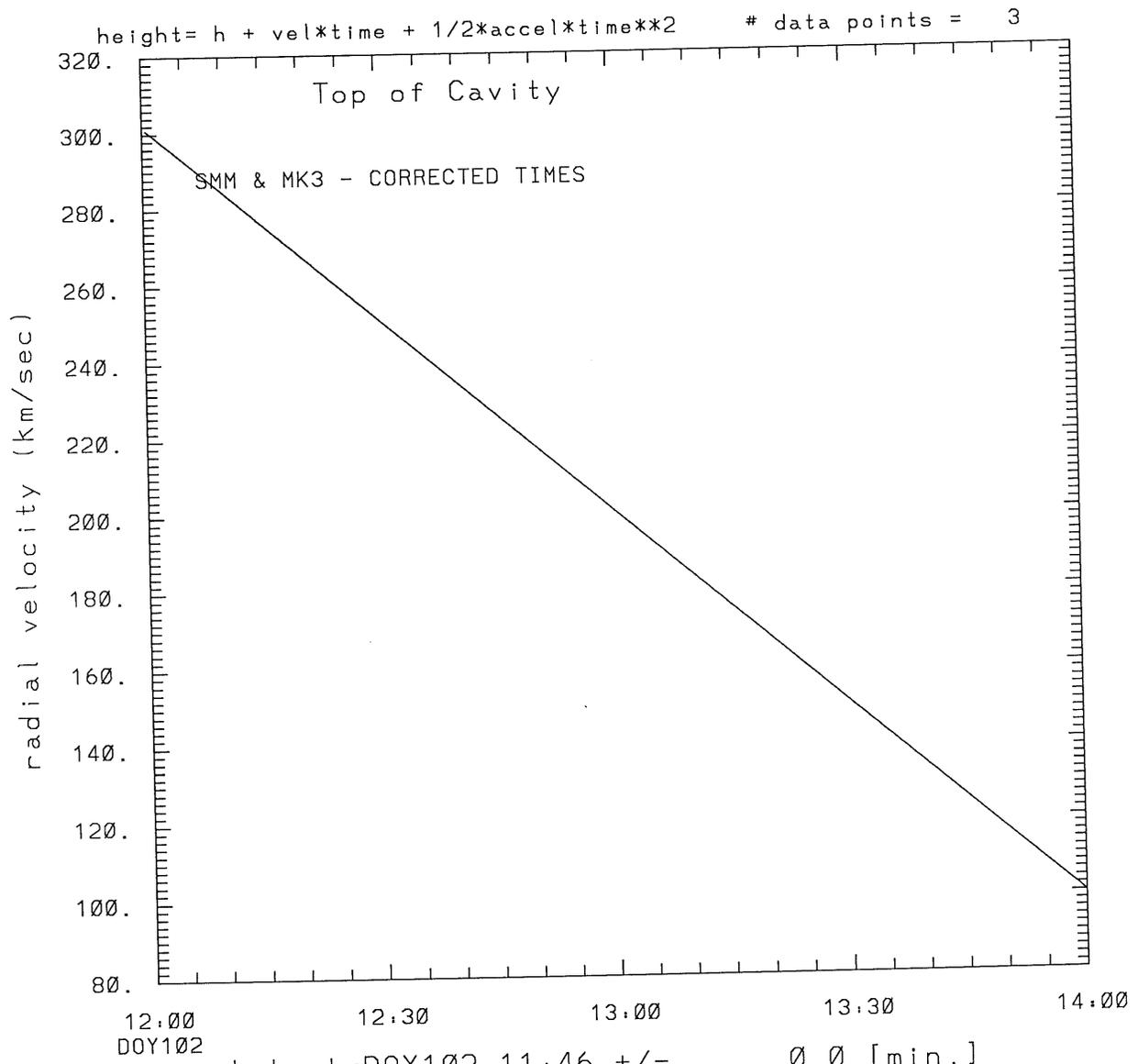
13:30

14:00

tstart=DOY102 11:46 +/- 0.0 [min.]

radial acceleration=-0.0281 +/- 0.0000 [km/sec\*\*2]

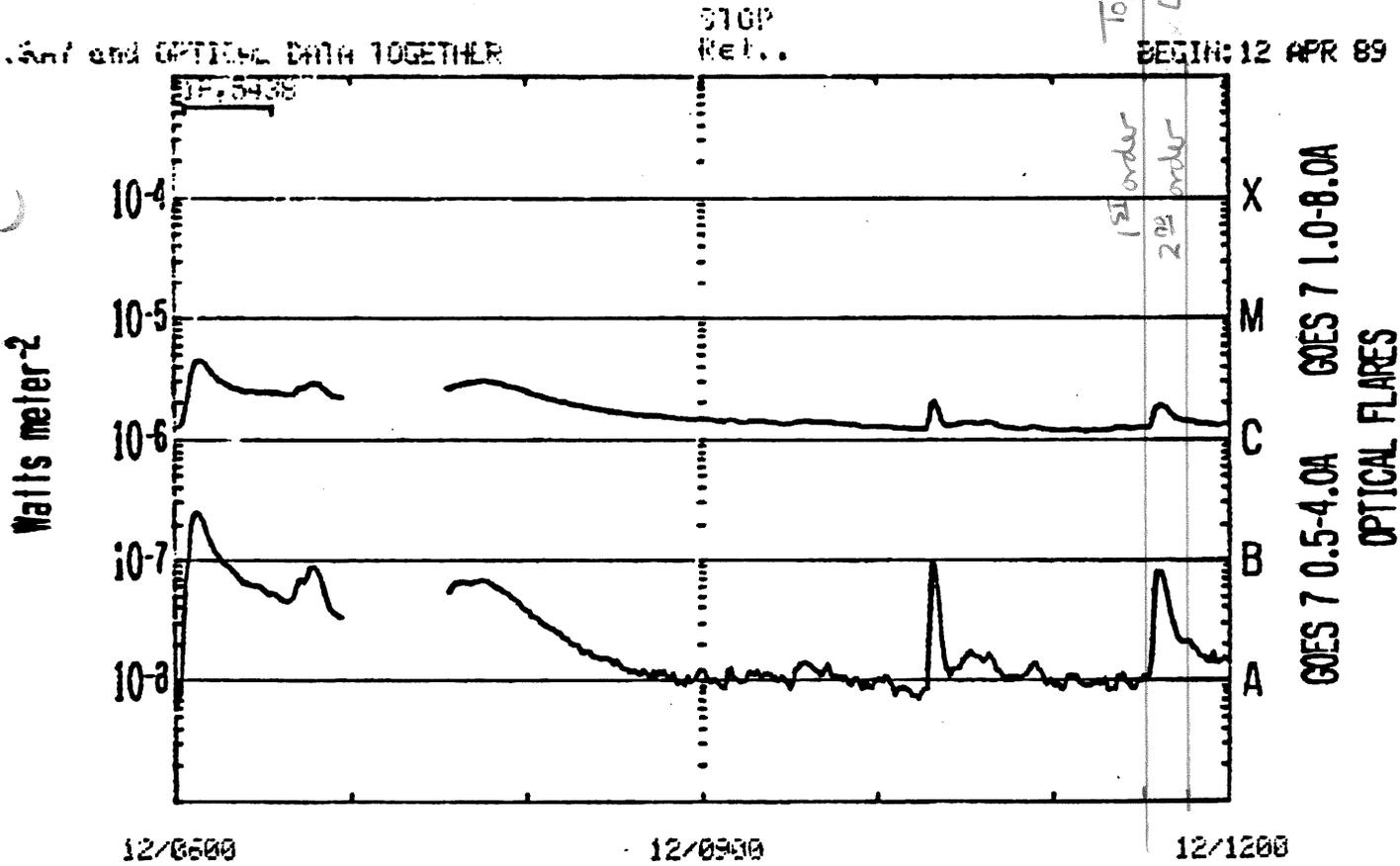
SMM C/P 1989 DOY102 163 +/- 0 degrees



radial acceleration=-.281E-01 km/sec\*\*2

1989 Day 102

Top of Cavity, center = 157°  
[11:30], 1st order ; [11:46], 2nd order



GOES 7 0.5-4.0A GOES 7 1.0-8.0A  
OPTICAL FLARES

\_\_\_\_ SAA's  
\_\_\_\_ NIGHT

GOES-7 1 MIN DATA; OPTICAL FLARE DUR, IMP, REGION

RUN: 1657UT  
15 APR 89

\*\*\*\*\*  
This is a 1 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	102	12:19: 8	1.85	+/- 0.15	163.0	+/- 0.5	SMM
1989	102	13:27:31	3.10	+/- 0.25	163.0	+/- 1.0	SMM
1989	102	13:44: 1	3.30	+/- 0.15	163.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Cavity  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.304E+02 +/- 0.421E+00$  [minutes]  
In more convenient units:  
Event began at DOY 102 11:30 +/- 0.421E+00 [minutes]

Origin defined at DOY102 12: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 200. +/- 6. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.152E+01 +/- 0.387E-01$  [solar radii]  
 $c(2) = 0.173E-01 +/- 0.504E-03$  [radii/min]  
 $c(2) = 0.200E+03 +/- 0.585E+01$  [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  $c(1) = 0.85283E-01$  [radii] see Bevington pg. 114  
error in  $c(2) = 0.10760E-02$  [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) = 163. +/- 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 12:19 = 0. km/sec

The TOTAL velocity at 12:19 = 200. km/sec

The TANGENTIAL velocity at 13:27 = 0. km/sec

The TOTAL velocity at 13:27 = 200. km/sec

The TANGENTIAL velocity at 13:44 = 0. km/sec

The TOTAL velocity at 13:44 = 200. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.79

Standard Deviation in start time measurement = 0.367E+02

Error in time = 0.39698E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.123E-02

Reduced Chi Squared = 0.972E-02

Chi Squared = 0.972E-02

The probability for exceeding chi square = 0.972E+00

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.3611E-01

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
1989	102	12:19: 8	1.85	+/- 0.15	163.0	+/- 0.5	SMM
1989	102	13:27:31	3.10	+/- 0.25	163.0	+/- 1.0	SMM
1989	102	13:44: 1	3.30	+/- 0.15	163.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.140E+02 +/- 0.000E+00$  [minutes]

In more convenient units:

Event began at DOY 102 11:46 +/- 0.000E+00 [minutes]

Origin defined at DOY102 12: 0

RADIAL INFORMATION:

RADIAL ACCELERATION =  $-0.281E-01 +/- 0.302E-06$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =  $0.138E+01 +/- 0.167E-05$  [solar radii]  
c(2) =  $0.260E-01 +/- 0.945E-07$  [radii/min]  
c(2) =  $0.302E+03 +/- 0.110E-02$  [km/sec]  
c(3) =  $-0.725E-04 +/- 0.780E-09$  [radii/min\*\*2]  
c(3) =  $-0.281E-01 +/- 0.302E-06$  [km/sec\*\*2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION=  $0.0000E+00 +/- 0.0000E+00$ [radians/sec\*\*2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) =  $163. +/- 0.$  [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]

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec**2]}$$

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 12:19 = 0. km/sec

The TOTAL velocity at 12:19 = 270. km/sec

The TANGENTIAL velocity at 13:27 = 0. km/sec

The TOTAL velocity at 13:27 = 154. km/sec

The TANGENTIAL velocity at 13:44 = 0. km/sec

The TOTAL velocity at 13:44 = 127. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!