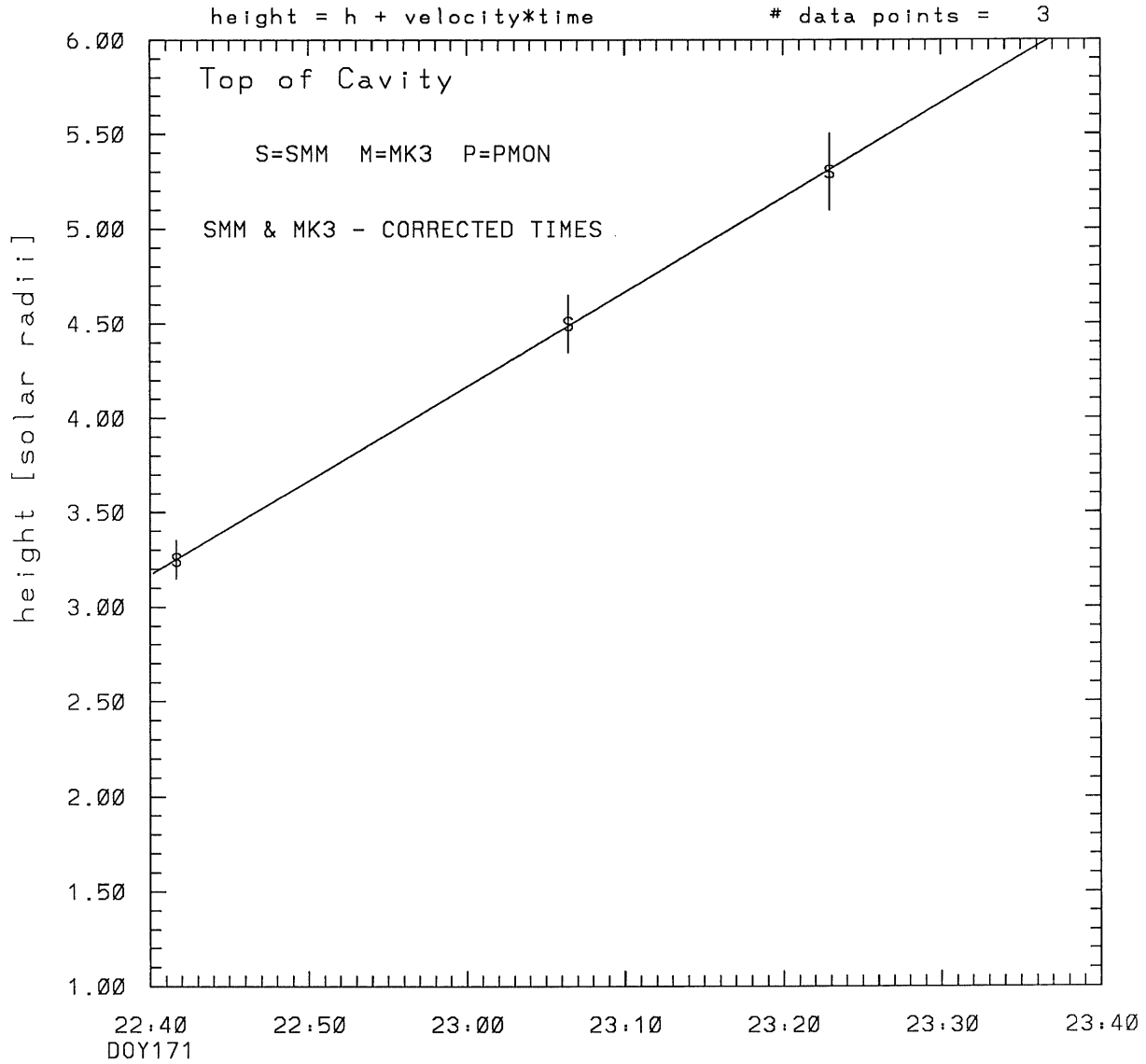
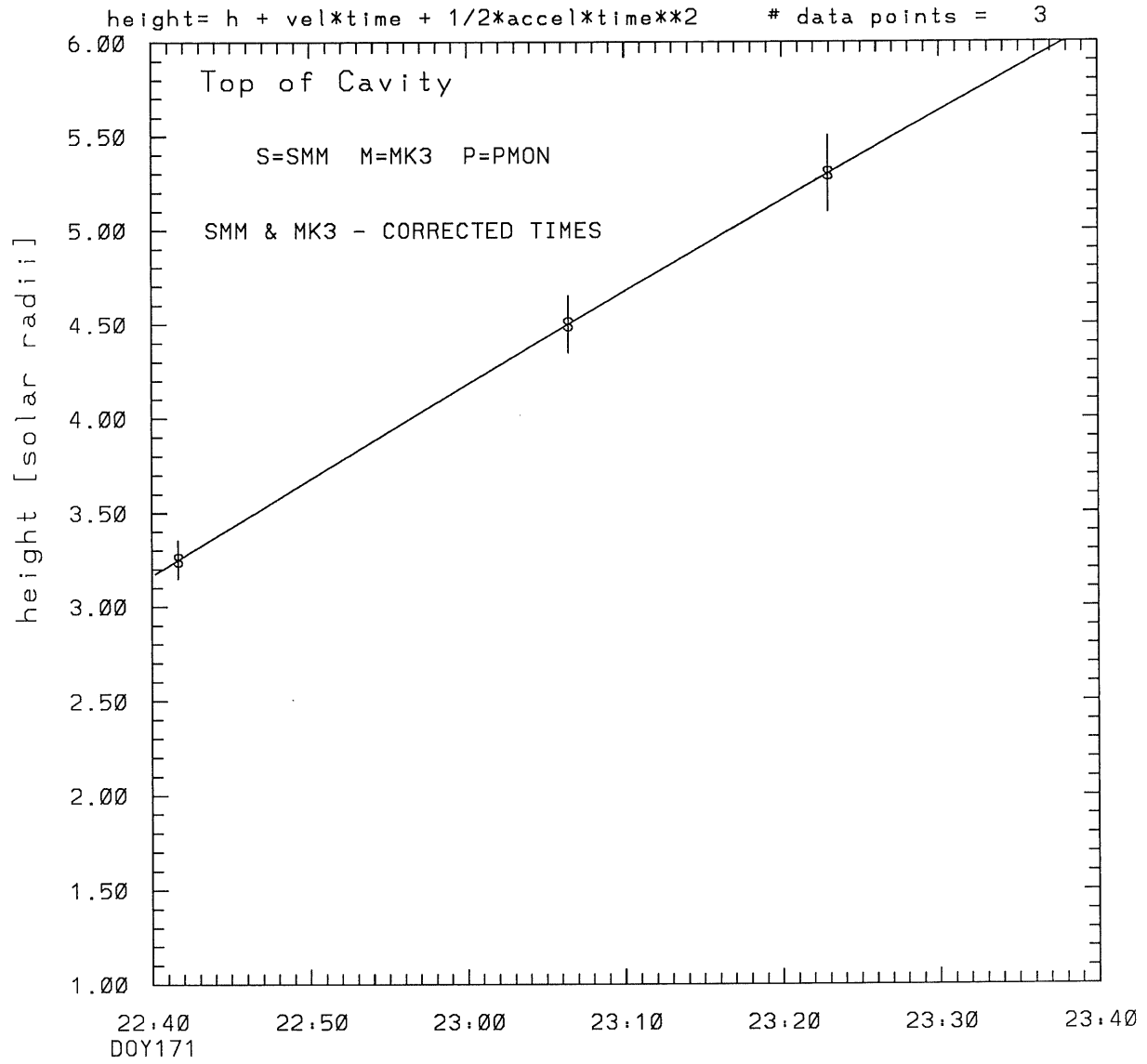


SMM C/P 1989 DOY171 275 +/- 0 degrees



tstart=DOY171 21:57 +/- 0.2 [min.]  
radial velocity= 579. +/- 4. [km/sec]

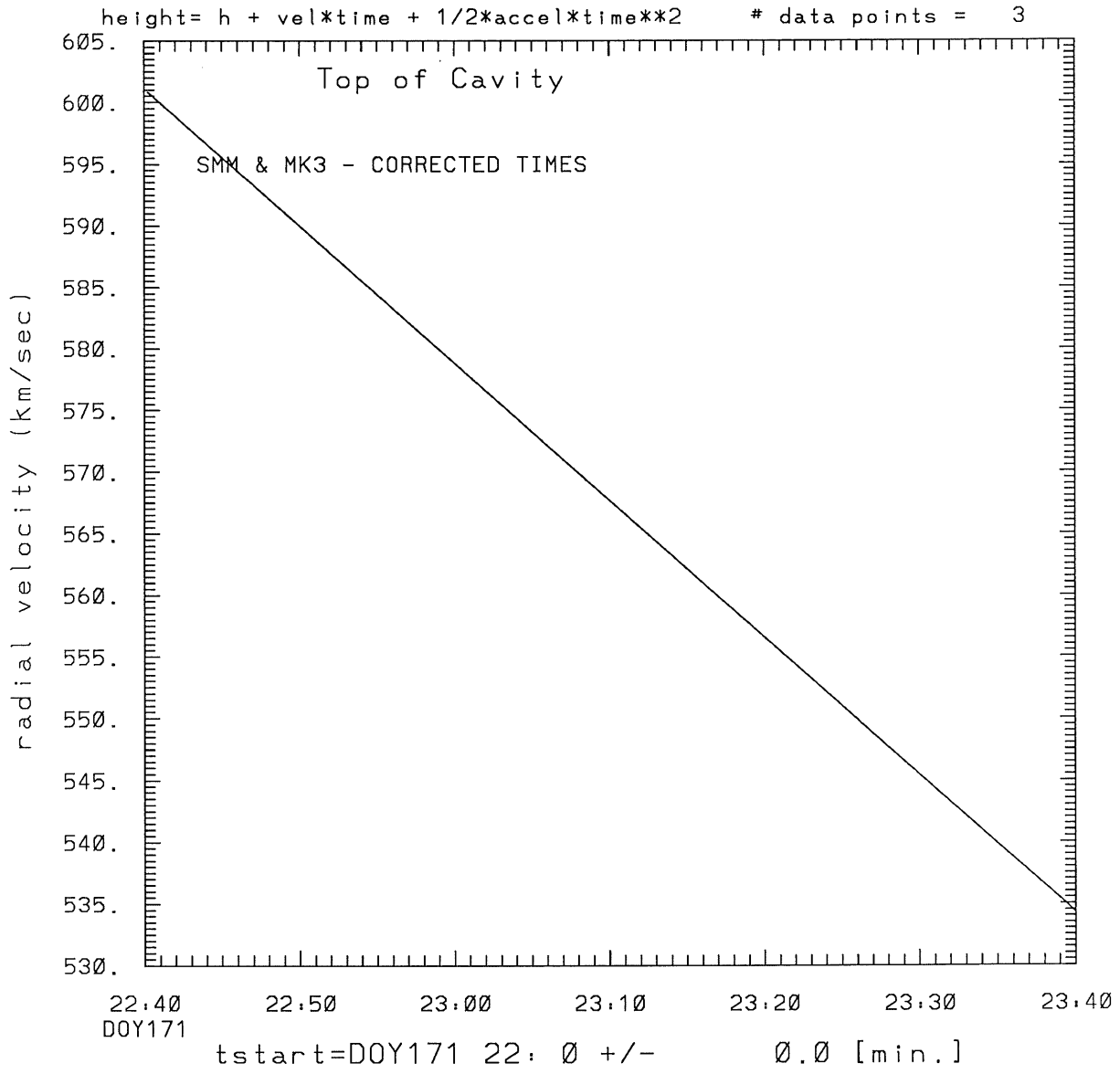
SMM C/P 1989 DOY171 275 +/- 0 degrees



tstart=DOY171 22: 0 +/- 0.0 [min.]

radial acceleration=-0.0186 +/- 0.0001 [km/sec\*\*2]

SMM C/P 1989 DOY171 275 +/- 0 degrees



radial acceleration=-.186E-01 km/sec\*\*2

1989 JUN 17

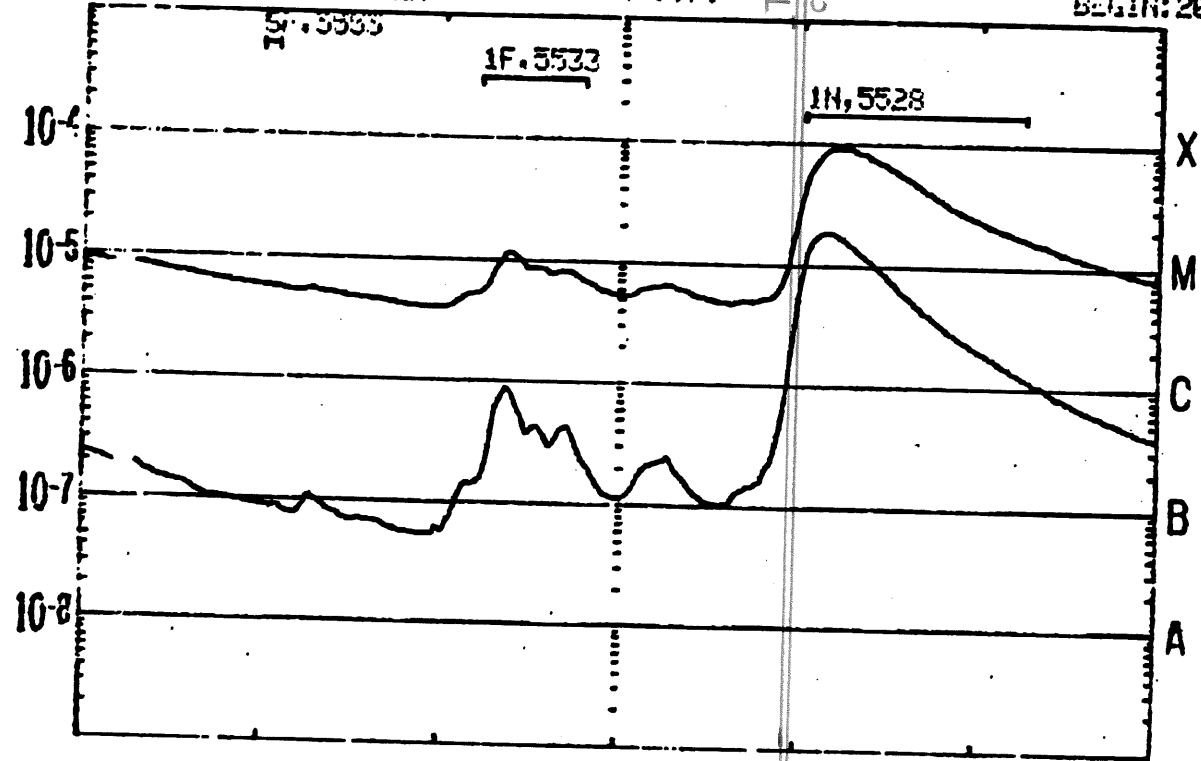
COMBINE OPTICAL DATA TOGETHER

STOP  
Ref. ...

Top of CAVITY, 1st order  
Center = 274° [21:57]  
2nd order = [22:00]

BEGIN: 20 JUN 89

Watts meter<sup>2</sup>



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

20/1900

20/2100

21/0000

— SAA's  
— NIGHT

GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

RLN: 1548UT  
24 JUN 89

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

| year | doy | time     | radii | error in<br>radius | angle | error in<br>angle | datatype |
|------|-----|----------|-------|--------------------|-------|-------------------|----------|
| 1989 | 171 | 22:41:41 | 3.25  | +/- 0.10           | 275.0 | +/- 1.0           | SMM      |
| 1989 | 171 | 23: 6:27 | 4.50  | +/- 0.15           | 275.0 | +/- 1.0           | SMM      |
| 1989 | 171 | 23:22:57 | 5.30  | +/- 0.20           | 275.0 | +/- 1.0           | SMM      |

\*\*\*\*\*

Structure being measured:

Top of Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.434E+02 +/- 0.226E+00$  [minutes]

In more convenient units:

Event began at DOY 171 21:57 +/- 0.226E+00 [minutes]

Origin defined at DOY171 22:40

RADIAL INFORMATION:

RADIAL VELOCITY = 579. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.317E+01 +/- 0.731E-02 [solar radii]  
c(2) = 0.499E-01 +/- 0.342E-03 [radii/min]  
c(2) = 0.579E+03 +/- 0.396E+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)= 0.16794E-01 [radii] see Bevington pg. 114

error in c(2)= 0.57634E-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) = 275. +/- 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 22:41 = 0. km/sec

The TOTAL velocity at 22:41 = 579. km/sec

The TANGENTIAL velocity at 23: 6 = 0. km/sec

The TOTAL velocity at 23: 6 = 579. km/sec

The TANGENTIAL velocity at 23:22 = 0. km/sec

The TOTAL velocity at 23:22 = 579. 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 = 0.170E+02

Error in time = 0.33911E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.889E-04

Reduced Chi Squared = 0.719E-03

Chi Squared = 0.719E-03

The probability for exceeding chi square = 0.992E+00

The correlation coefficient = 0.100E+01

The probability that no LINEAR correlation exists between the variables = 0.7013E-02

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 |
|------|-----|----------|-------|-----------------|----------------|---------|----------|
| 1989 | 171 | 22:41:41 | 3.25  | +/- 0.10        | 275.0          | +/- 1.0 | SMM      |
| 1989 | 171 | 23: 6:27 | 4.50  | +/- 0.15        | 275.0          | +/- 1.0 | SMM      |
| 1989 | 171 | 23:22:57 | 5.30  | +/- 0.20        | 275.0          | +/- 1.0 | SMM      |

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

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

START TIME:

Event began at  $t = 0 + -0.402E+02 +/- 0.000E+00$  [minutes]

In more convenient units:

Event began at DOY 171 22:00 +/- 0.000E+00 [minutes]

Event began at DOY 171 22: 0 +/- 0.000E+00 [minutes]

Origin defined at DOY171 22:40

RADIAL INFORMATION:

RADIAL ACCELERATION =  $-0.186E-01 +/- 0.555E-04$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.316E+01 +/- 0.344E-04$  [solar radii]  
 $c(2) = 0.518E-01 +/- 0.585E-05$  [radii/min]  
 $c(2) = 0.601E+03 +/- 0.678E-01$  [km/sec]  
 $c(3) = -0.480E-04 +/- 0.144E-06$  [radii/min\*\*2]  
 $c(3) = -0.186E-01 +/- 0.555E-04$  [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:

$a(1) = 275. +/- 0.$  [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 22:41 = 0. km/sec

The TOTAL velocity at 22:41 = 599. km/sec

The TANGENTIAL velocity at 23: 6 = 0. km/sec

The TOTAL velocity at 23: 6 = 572. km/sec

The TANGENTIAL velocity at 23:22 = 0. km/sec

The TOTAL velocity at 23:22 = 553. km/sec

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The following info is for estimating goodness of the fit

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

Correlation coefficient is not computable!