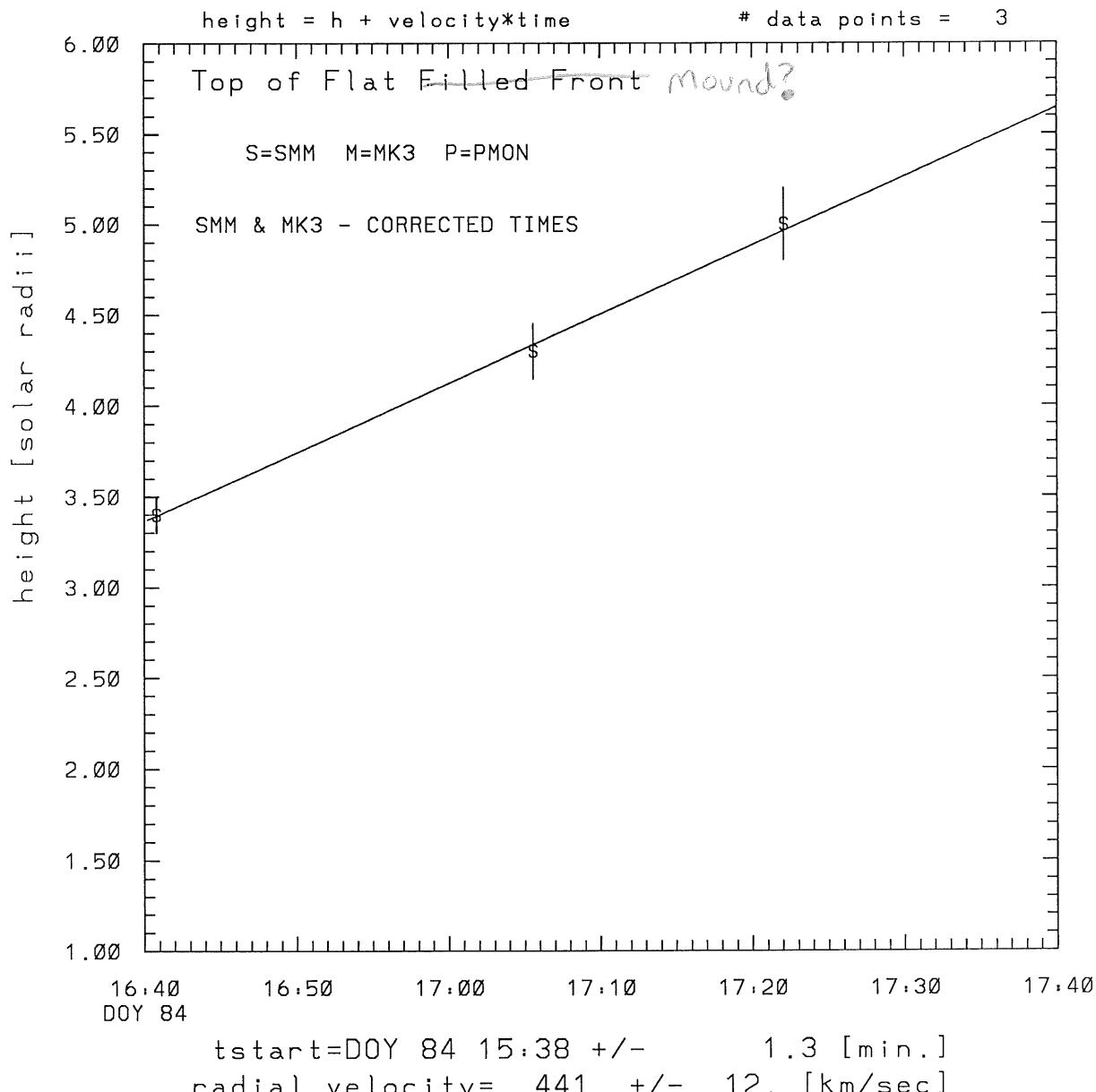
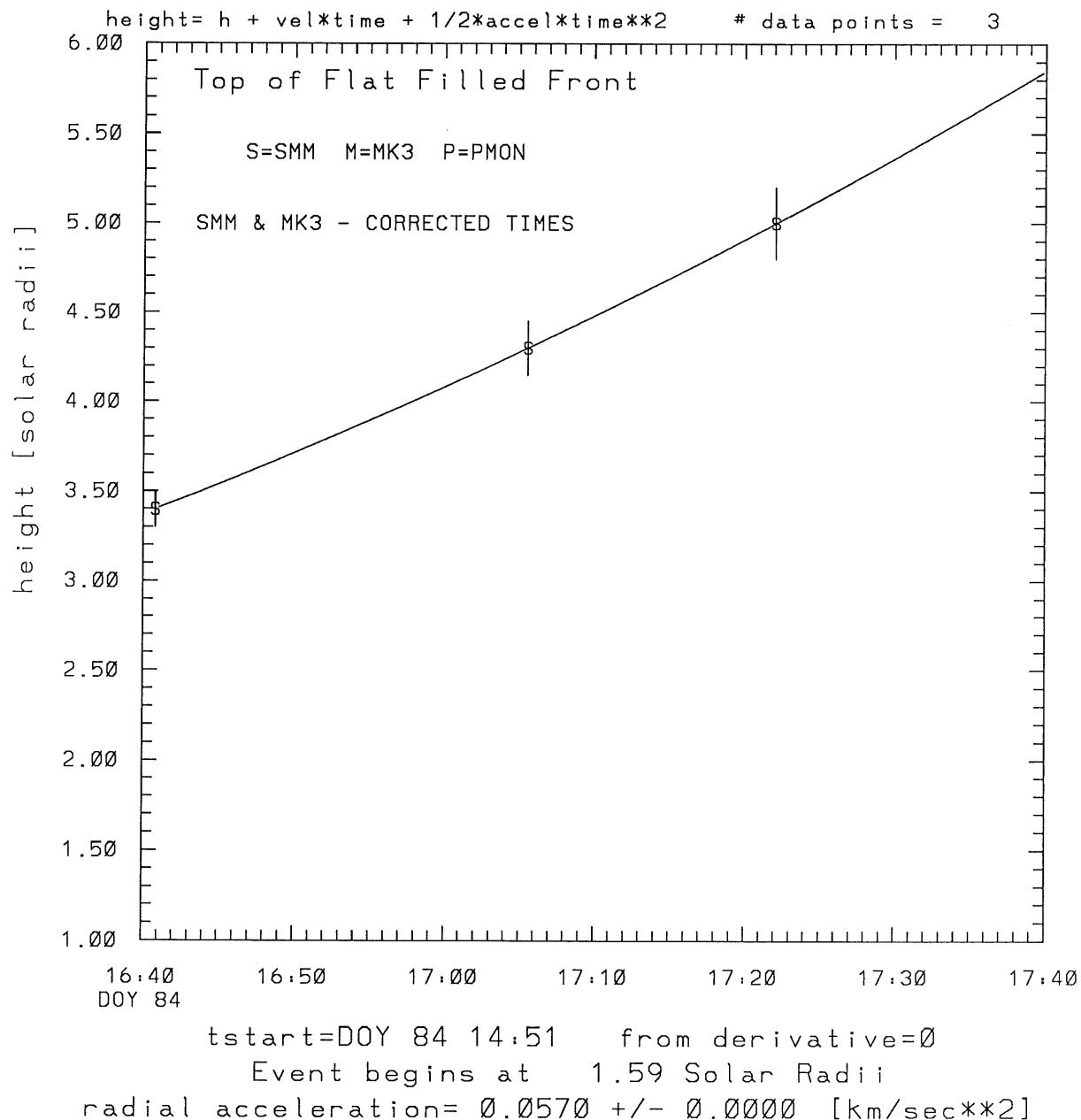


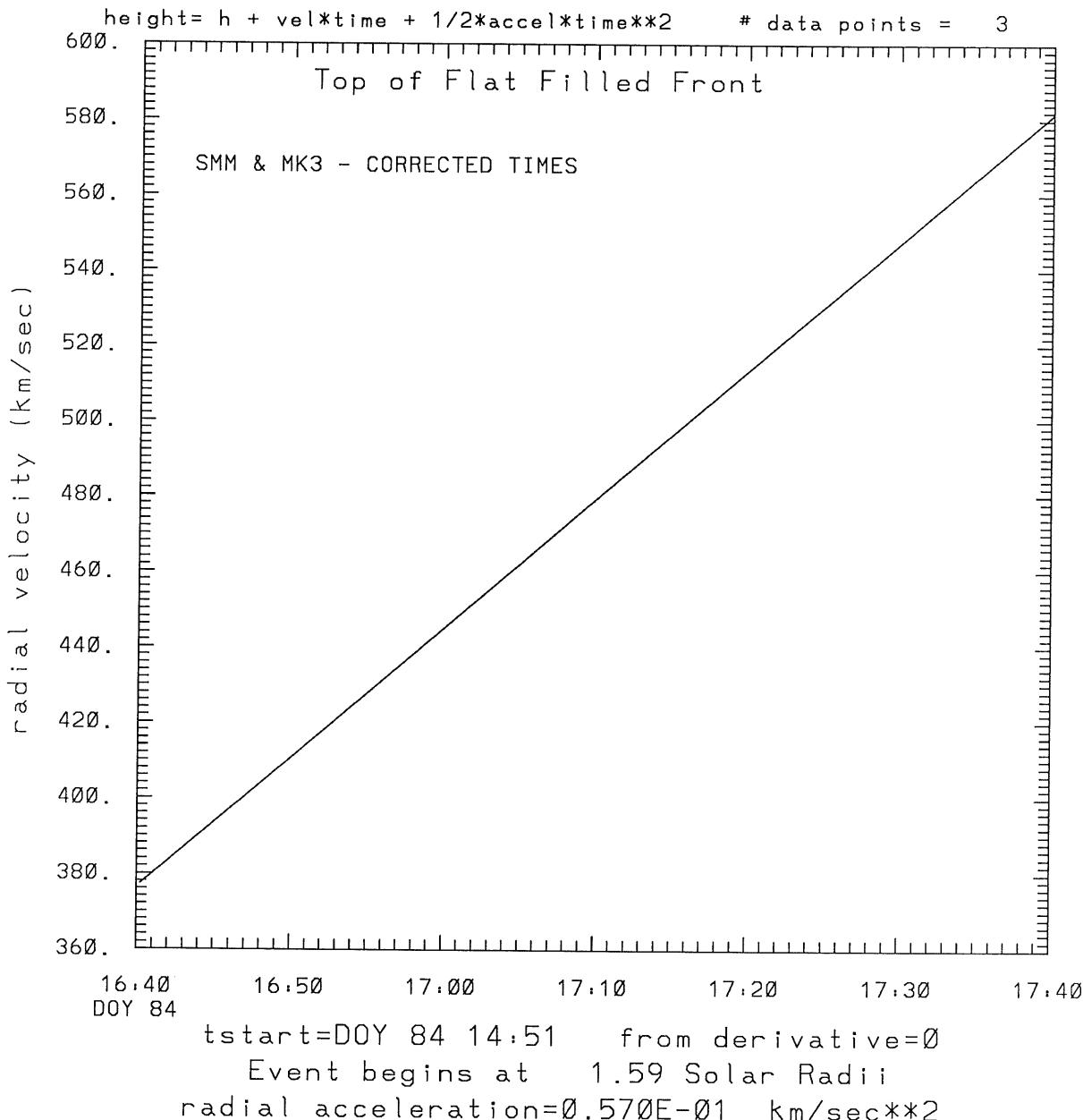
SMM C/P 1989 DOY 84 280 +/- 0 degrees



SMM C/P 1989 DOY 84 280 +/- 0 degrees



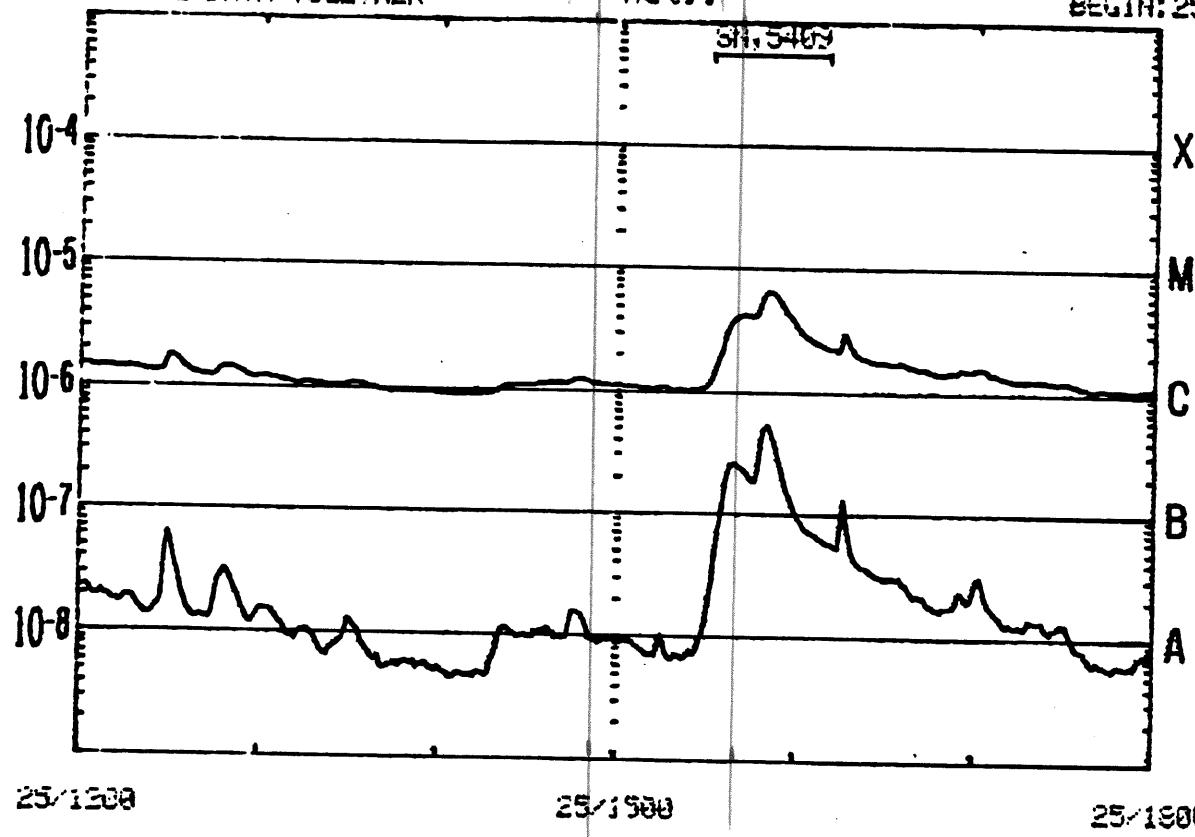
SMM C/P 1989 DOY 84 280 +/- 0 degrees



1989 Day 084

XRAY and OPTICAL DATA TOGETHER

Watts meter<sup>-2</sup>



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

END: 2657UT  
25 MAR 89

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	84	16:40:49	3.40	+/- 0.10	280.0	+/- 0.5	SMM
1989	84	17: 5:35	4.30	+/- 0.15	280.0	+/- 0.5	SMM
1989	84	17:22: 5	5.00	+/- 0.20	280.0	+/- 0.5	SMM

\*\*\*\*\*

Structure being measured:

Top of Flat Filled Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at t = 0 + -0.622E+02 +/- 0.129E+01 [minutes]

In more convenient units:

Event began at DOY 84 15:38 +/- 0.129E+01 [minutes]

Origin defined at DOY 84 16:40

RADIAL INFORMATION:

RADIAL VELOCITY = 441. +/- 12. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.336E+01 +/- 0.218E-01 [solar radii]  
c(2) = 0.380E-01 +/- 0.105E-02 [radii/min]  
c(2) = 0.441E+03 +/- 0.121E+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)= 0.50214E-01 [radii] see Bevington pg. 114

error in c(2)= 0.17657E-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) = 280. +/- 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 16:40 = 0. km/sec  
The TOTAL velocity at 16:40 = 441. km/sec

The TANGENTIAL velocity at 17: 5 = 0. km/sec  
The TOTAL velocity at 17: 5 = 441. km/sec

The TANGENTIAL velocity at 17:22 = 0. km/sec  
The TOTAL velocity at 17:22 = 441. km/sec

\*\*\*\*\*  
The following info is for estimating goodness of the fit  
\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.80  
Standard Deviation in start time measurement = 0.170E+02  
Error in time = 0.13644E+01 using best fit method  
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.835E-03  
Reduced Chi Squared = 0.675E-02  
Chi Squared = 0.675E-02  
The probability for exceeding chi square = 0.977E+00

The correlation coefficient = 0.999E+00  
The probability that no LINEAR correlation exists between the variables = 0.2743E-01  
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

\*\*\*\*\*

This is a 2 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	radius	angle	angle	datatype
1989	84	16:40:49	3.40	+/- 0.10	280.0	+/- 0.5	SMM
1989	84	17: 5:35	4.30	+/- 0.15	280.0	+/- 0.5	SMM
1989	84	17:22: 5	5.00	+/- 0.20	280.0	+/- 0.5	SMM

\*\*\*\*\*

Structure being measured:

Top of Flat Filled Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY 84 14:51 from derivative = 0

Event begins at 1.59 Solar Radii

Origin defined at DOY 84 16:40

(  
RADIAL INFORMATION:

RADIAL ACCELERATION = 0.570E-01 +/- 0.167E-04 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.337E+01 +/- 0.954E-05 [solar radii]  
c(2) = 0.324E-01 +/- 0.168E-05 [radii/min]  
c(2) = 0.376E+03 +/- 0.195E-01 [km/sec]  
c(3) = 0.147E-03 +/- 0.431E-07 [radii/min\*\*2]  
c(3) = 0.570E-01 +/- 0.167E-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) = 280. +/- 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 16:40 = 0. km/sec  
The TOTAL velocity at 16:40 = 379. km/sec

The TANGENTIAL velocity at 17: 5 = 0. km/sec  
The TOTAL velocity at 17: 5 = 464. km/sec

The TANGENTIAL velocity at 17:22 = 0. km/sec  
The TOTAL velocity at 17:22 = 520. 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!