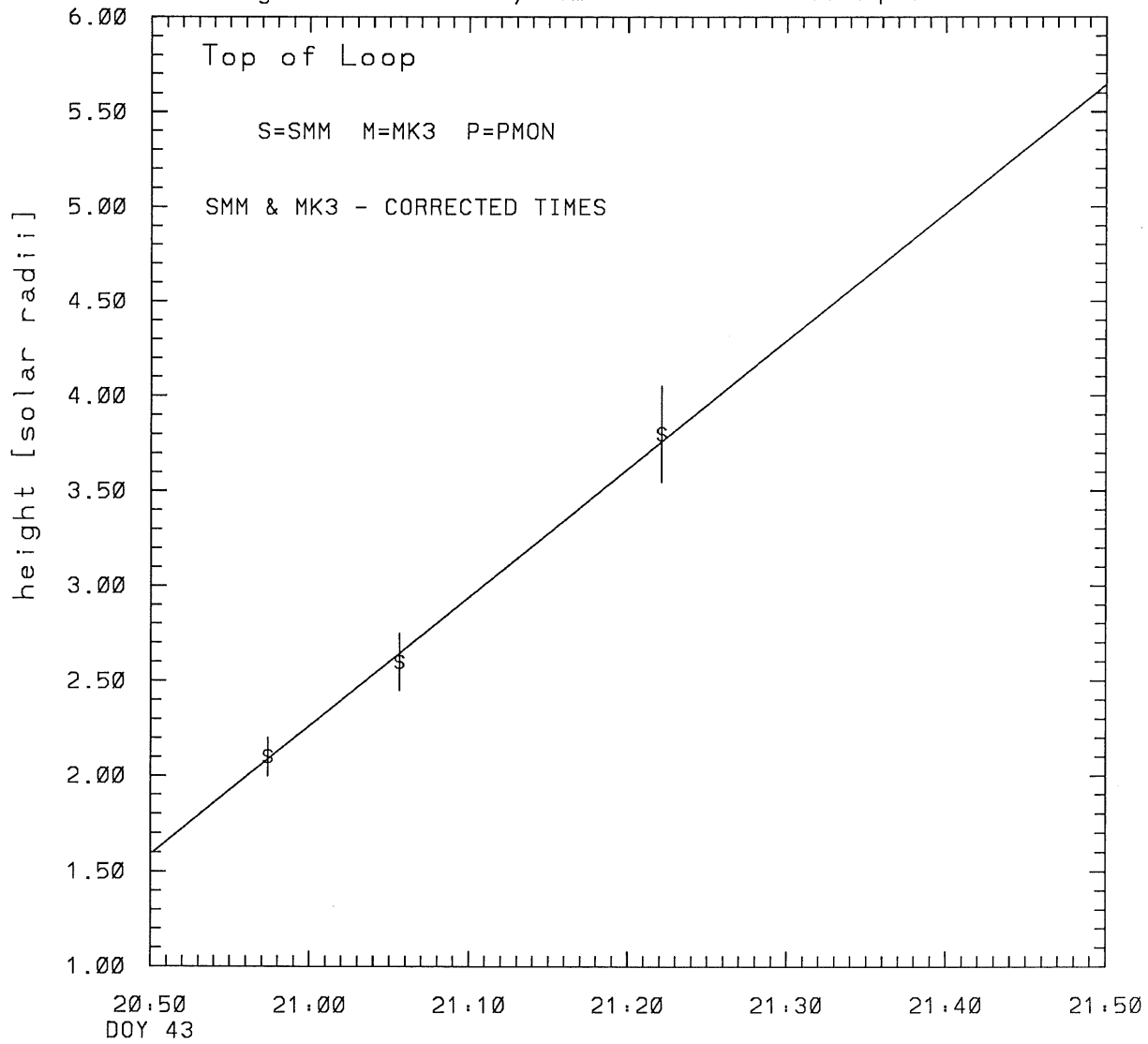


SMM C/P 1989 DOY 43 140 +/- 0 degrees

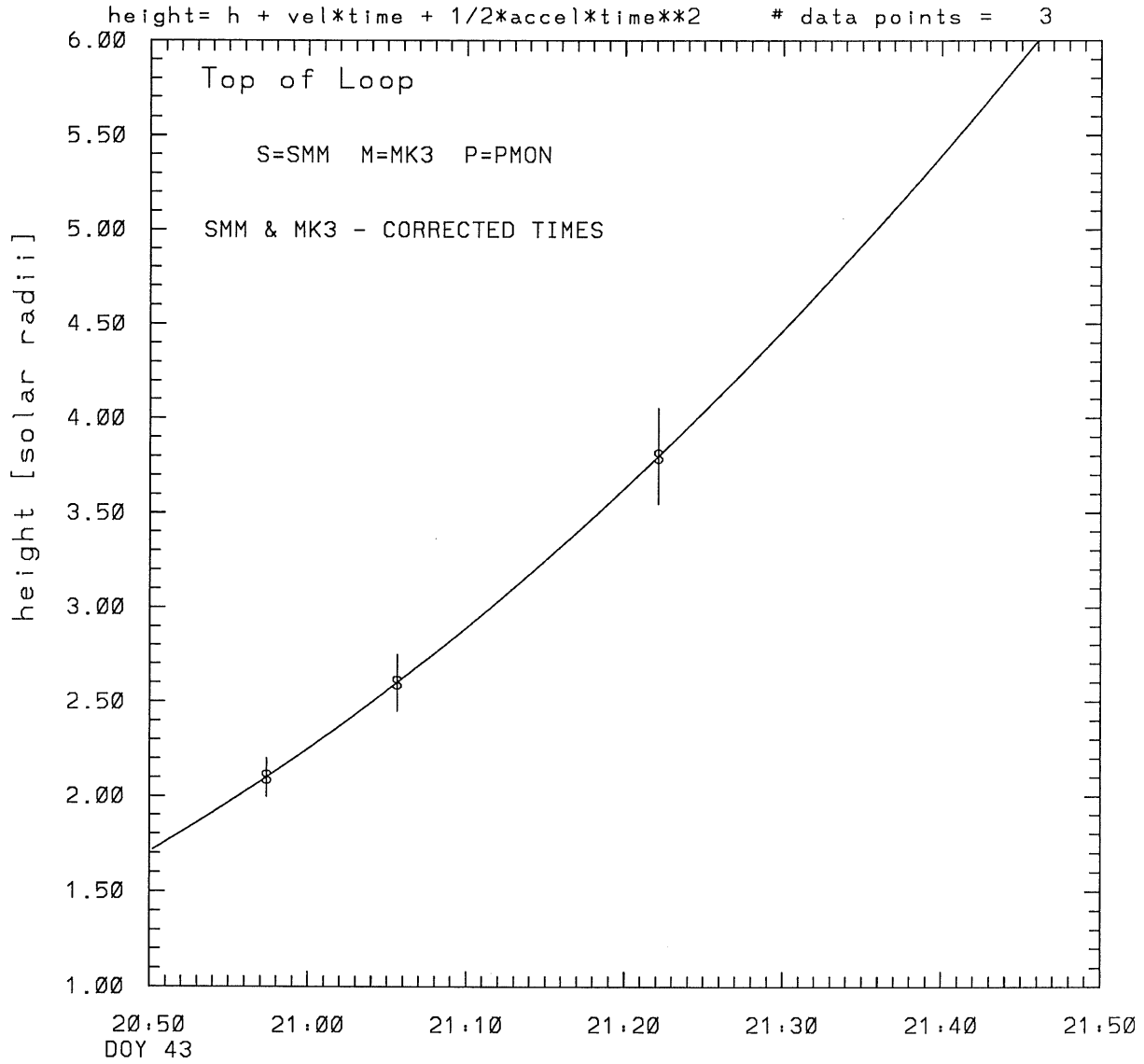
height = h + velocity*time

data points = 3



tstart=DOY 43 20:43 +/- 0.2 [min.]
radial velocity= 784. +/- 30. [km/sec]

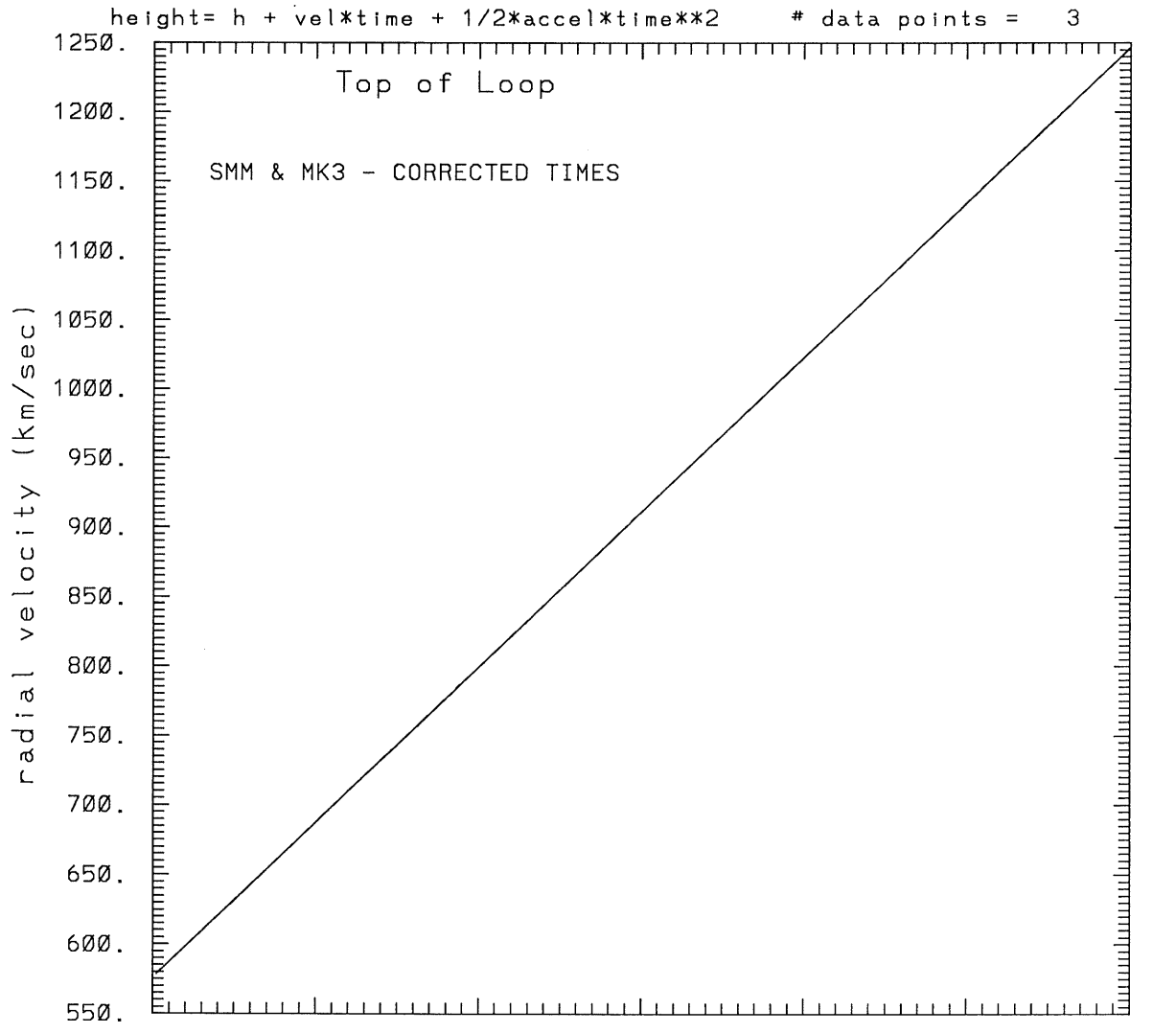
SMM C/P 1989 DOY 43 140 +/- 0 degrees



tstart=DOY 43 20:33 +/- 0.0 [min.]

radial acceleration = 0.1863 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY 43 140 +/- 0 degrees



DOY 43

tstart=DOY 43 20:33 +/- 0.0 [min.]

radial acceleration=0.186E+00 km/sec**2

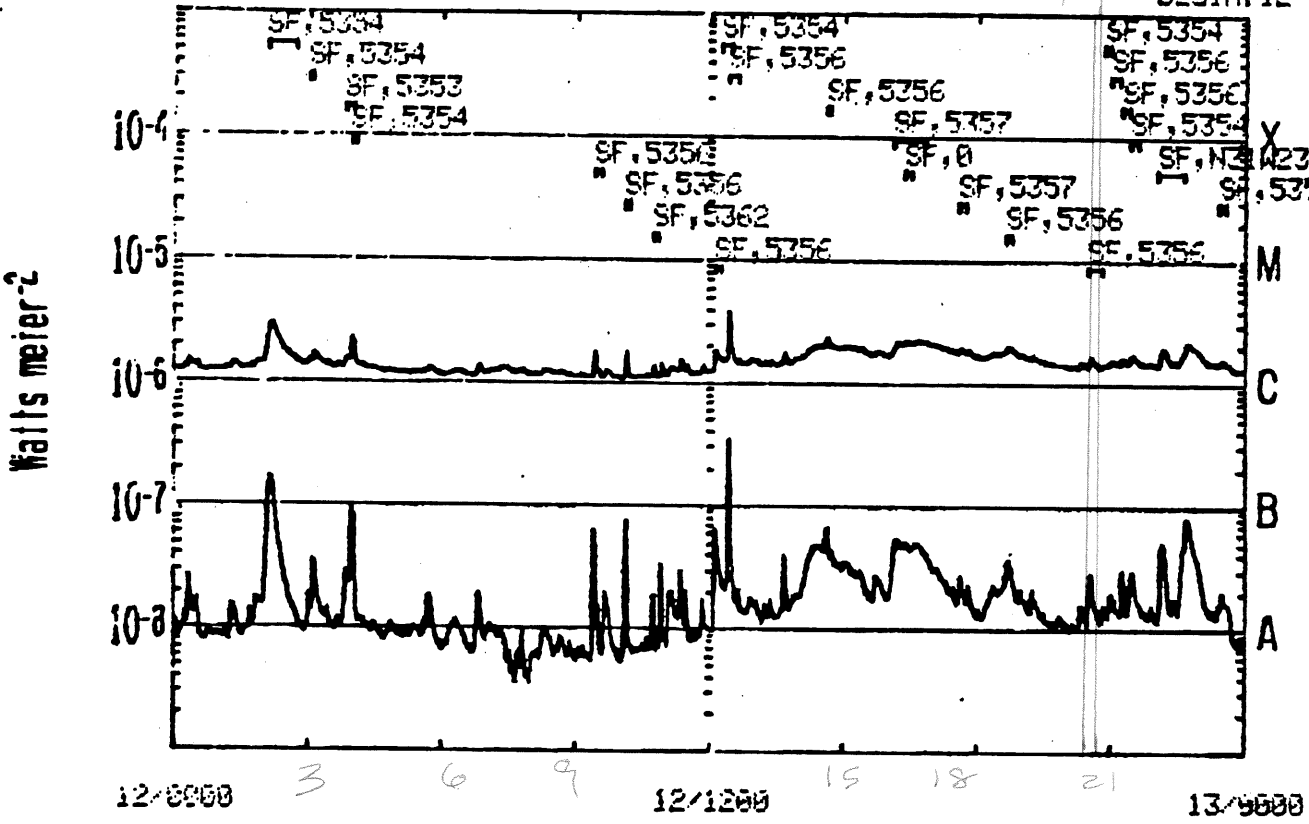
1989 Day 43

RAY and OPTICAL DATA TOGETHER

STOP
Ret.

BEGIN: 12 FEB 89

Top of Loop @ 1507
[20:43] [SF order]
[20:58] [2nd order]



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

SAA's
NIGHT

RUN: 1512UT
13 FEB 89

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

→ 24 hour plot ←

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	43	20:57:23	2.10	+/- 0.10	140.0	+/- 0.5	SMM
1989	43	21: 5:37	2.60	+/- 0.15	140.0	+/- 0.5	SMM
1989	43	21:22: 8	3.80	+/- 0.25	140.0	+/- 0.5	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.870E+01 +/- 0.242E+00$ [minutes]
In more convenient units:
Event began at DOY 43 20:43 +/- 0.242E+00 [minutes]

Origin defined at DOY 43 20:50

RADIAL INFORMATION:

RADIAL VELOCITY = 784. +/- 30. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.159E+01 +/- 0.375E-01 [solar radii]
- c(2) = 0.676E-01 +/- 0.263E-02 [radii/min]
- c(2) = 0.784E+03 +/- 0.305E+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)= 0.71675E-01 [radii] see Bevington pg. 114
error in c(2)= 0.34029E-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) = 140. +/- 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 20:57 = 0. km/sec

The TOTAL velocity at 20:57 = 784. km/sec

The TANGENTIAL velocity at 21: 5 = 0. km/sec

The TOTAL velocity at 21: 5 = 784. km/sec

The TANGENTIAL velocity at 21:22 = 0. km/sec

The TOTAL velocity at 21:22 = 784. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.87

Standard Deviation in start time measurement = 0.103E+02

Error in time = 0.89748E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.119E-02

Reduced Chi Squared = 0.881E-02

Chi Squared = 0.881E-02

The probability for exceeding chi square = 0.973E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.2705E-01

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
1989	43	20:57:23	2.10	+/- 0.10	140.0	+/- 0.5	SMM
1989	43	21: 5:37	2.60	+/- 0.15	140.0	+/- 0.5	SMM
1989	43	21:22: 8	3.80	+/- 0.25	140.0	+/- 0.5	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.171E+02 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 43 20:33 +/- 0.000E+00 [minutes]

Origin defined at DOY 43 20:50

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.186E+00 +/- 0.000E+00$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.171E+01 +/- 0.000E+00$ [solar radii]
c(2) = $0.496E-01 +/- 0.000E+00$ [radii/min]
c(2) = $0.576E+03 +/- 0.000E+00$ [km/sec]
c(3) = $0.482E-03 +/- 0.000E+00$ [radii/min**2]
c(3) = $0.186E+00 +/- 0.000E+00$ [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) = 140. +/- 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 20:57 = 0. km/sec

The TOTAL velocity at 20:57 = 658. km/sec

The TANGENTIAL velocity at 21: 5 = 0. km/sec

The TOTAL velocity at 21: 5 = 750. km/sec

The TANGENTIAL velocity at 21:22 = 0. km/sec

The TOTAL velocity at 21:22 = 935. 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!