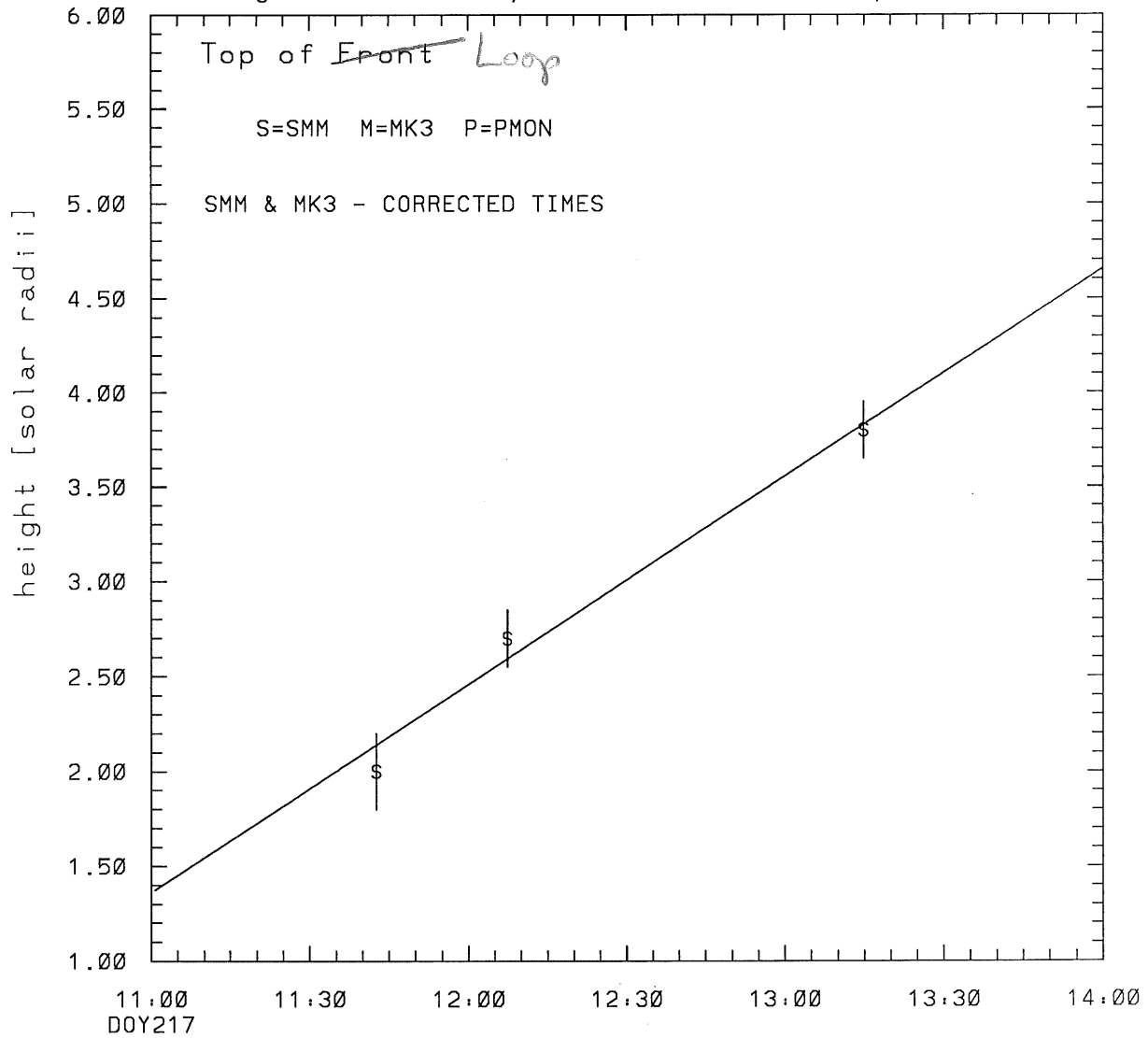


SMM C/P 1989 DOY217 62 +/- 0 degrees

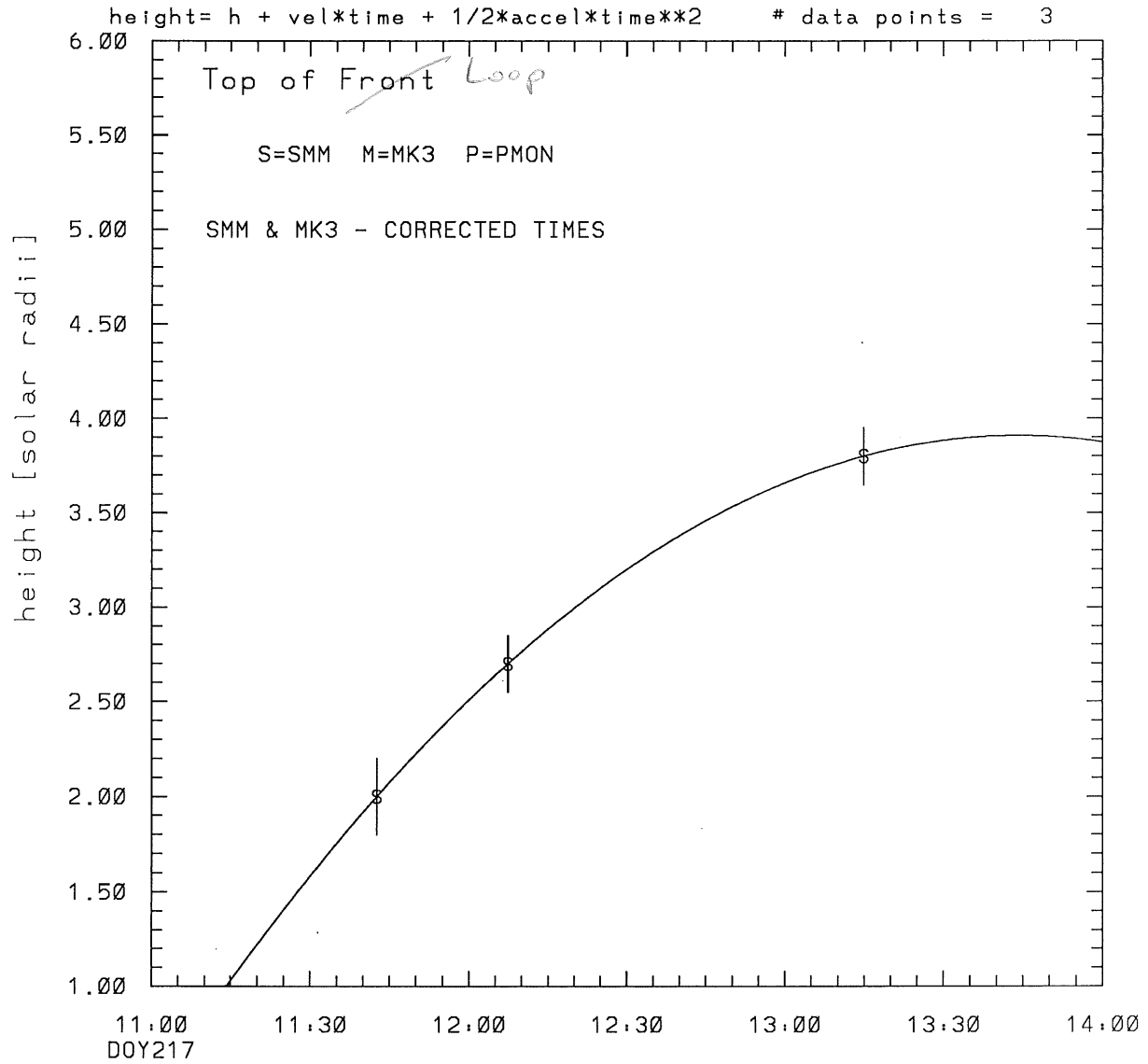
height = h + velocity*time

data points = 3



tstart=DOY217 10:42 +/- 2.5 [min.]
radial velocity= 212. +/- 20. [km/sec]

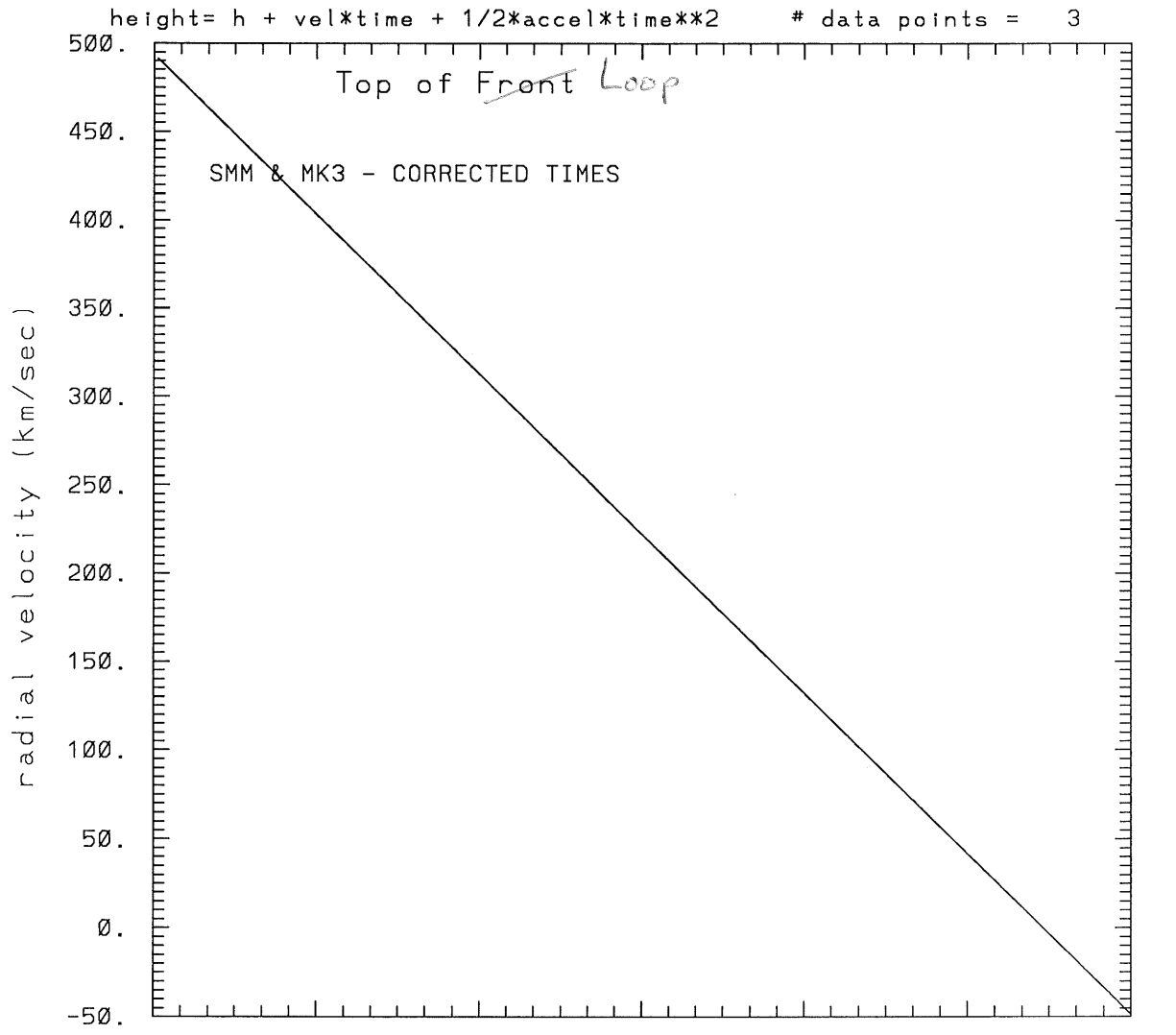
SMM C/P 1989 DOY217 62 +/- 0 degrees



tstart=DOY217 11:14 +/- 0.0 [min.]

radial acceleration=-0.0502 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY217 62 +/- 0 degrees



DOY217

tstart=DOY217 11:14 +/- 0.0 [min.]

radial acceleration=-.502E-01 km/sec**2

1989 DOY 217

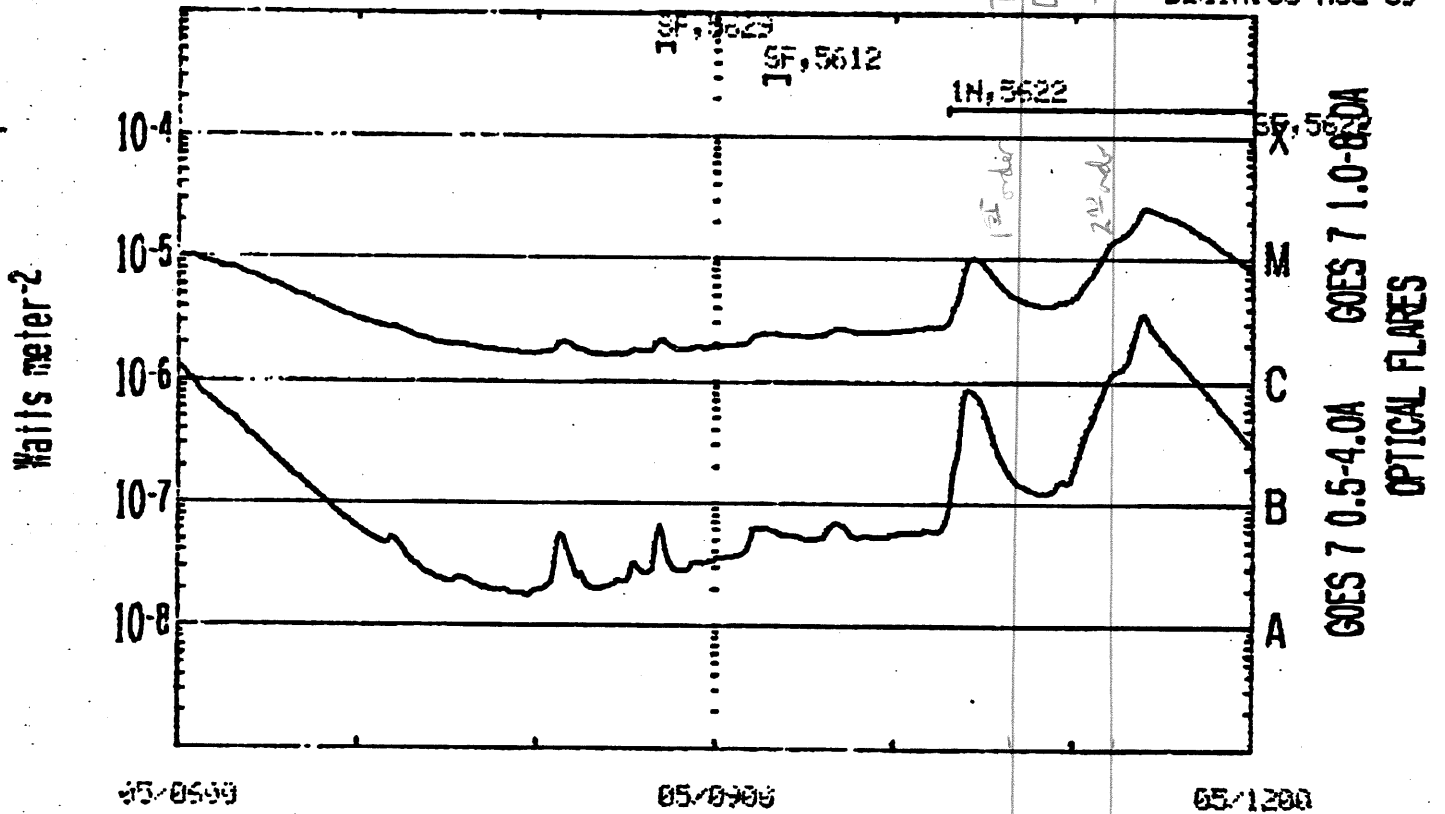
RAY AND OPTICAL DATA TOGETHER

STOP
Recess

Top of Front center = 71°
[10:42] 1st order

Top of Front
[11:14] 2nd order

BEGIN: 05 AUG 89



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

RLN: 1989UT
9 AUG 89

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	error in angle	angle	datatype
1989	217	11:42:37	2.00	+/- 0.20	62.0	+/- 0.5	SMM
1989	217	12: 7:23	2.70	+/- 0.15	62.0	+/- 0.5	SMM
1989	217	13:14:56	3.80	+/- 0.15	62.0	+/- 1.0	SMM

Structure being measured:
Top of Front Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.197E+02 +/- 0.249E+01$ [minutes]
In more convenient units:
Event began at DOY 217 10:42 +/- 0.249E+01 [minutes]

Origin defined at DOY217 11: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 212. +/- 20. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.136E+01 +/- 0.169E+00$ [solar radii]
 $c(2) = 0.183E-01 +/- 0.175E-02$ [radii/min]
 $c(2) = 0.212E+03 +/- 0.203E+02$ [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 $c(1) = 0.23882E+00$ [radii] see Bevington pg. 114
error in $c(2) = 0.26393E-02$ [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) = 62. +/- 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 11:42 = 0. km/sec

The TOTAL velocity at 11:42 = 212. km/sec

The TANGENTIAL velocity at 12: 7 = 0. km/sec

The TOTAL velocity at 12: 7 = 212. km/sec

The TANGENTIAL velocity at 13:14 = 0. km/sec

The TOTAL velocity at 13:14 = 212. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.91

Standard Deviation in start time measurement = 0.390E+02

Error in time = 0.97466E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.136E-01

Reduced Chi Squared = 0.450E-01

Chi Squared = 0.450E-01

The probability for exceeding chi square = 0.907E+00

The correlation coefficient = 0.991E+00

The probability that no LINEAR correlation exists between the variables = 0.8521E-01

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	217	11:42:37	2.00	+/- 0.20	62.0	+/- 0.5	SMM
1989	217	12: 7:23	2.70	+/- 0.15	62.0	+/- 0.5	SMM
1989	217	13:14:56	3.80	+/- 0.15	62.0	+/- 1.0	SMM

Structure being measured:
Top of Front Loop

OUTPUT:

START TIME:

Event began at $t = 0 + 0.142E+02 \pm 0.000E+00$ [minutes]
In more convenient units:
Event began at DOY 217 11:14 $\pm 0.000E+00$ [minutes]

Origin defined at DOY217 11: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.502E-01 \pm 0.725E-07$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.423E+00 \pm 0.140E-05$ [solar radii]
c(2) = $0.425E-01 \pm 0.352E-07$ [radii/min]
c(2) = $0.493E+03 \pm 0.408E-03$ [km/sec]
c(3) = $-0.130E-03 \pm 0.187E-09$ [radii/min**2]
c(3) = $-0.502E-01 \pm 0.725E-07$ [km/sec**2]

ANGULAR INFORMATION:

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = $62. \pm 0.$ [degrees]
a(2) = $0.000E+00 \pm 0.000E+00$ [degrees/min]
a(2) = $0.000E+00 \pm 0.000E+00$ [rad/sec]
a(3) = $0.000E+00 \pm 0.000E+00$ [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 11:42 = 0. km/sec

The TOTAL velocity at 11:42 = 365. km/sec

The TANGENTIAL velocity at 12: 7 = 0. km/sec

The TOTAL velocity at 12: 7 = 291. km/sec

The TANGENTIAL velocity at 13:14 = 0. km/sec

The TOTAL velocity at 13:14 = 87. 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!