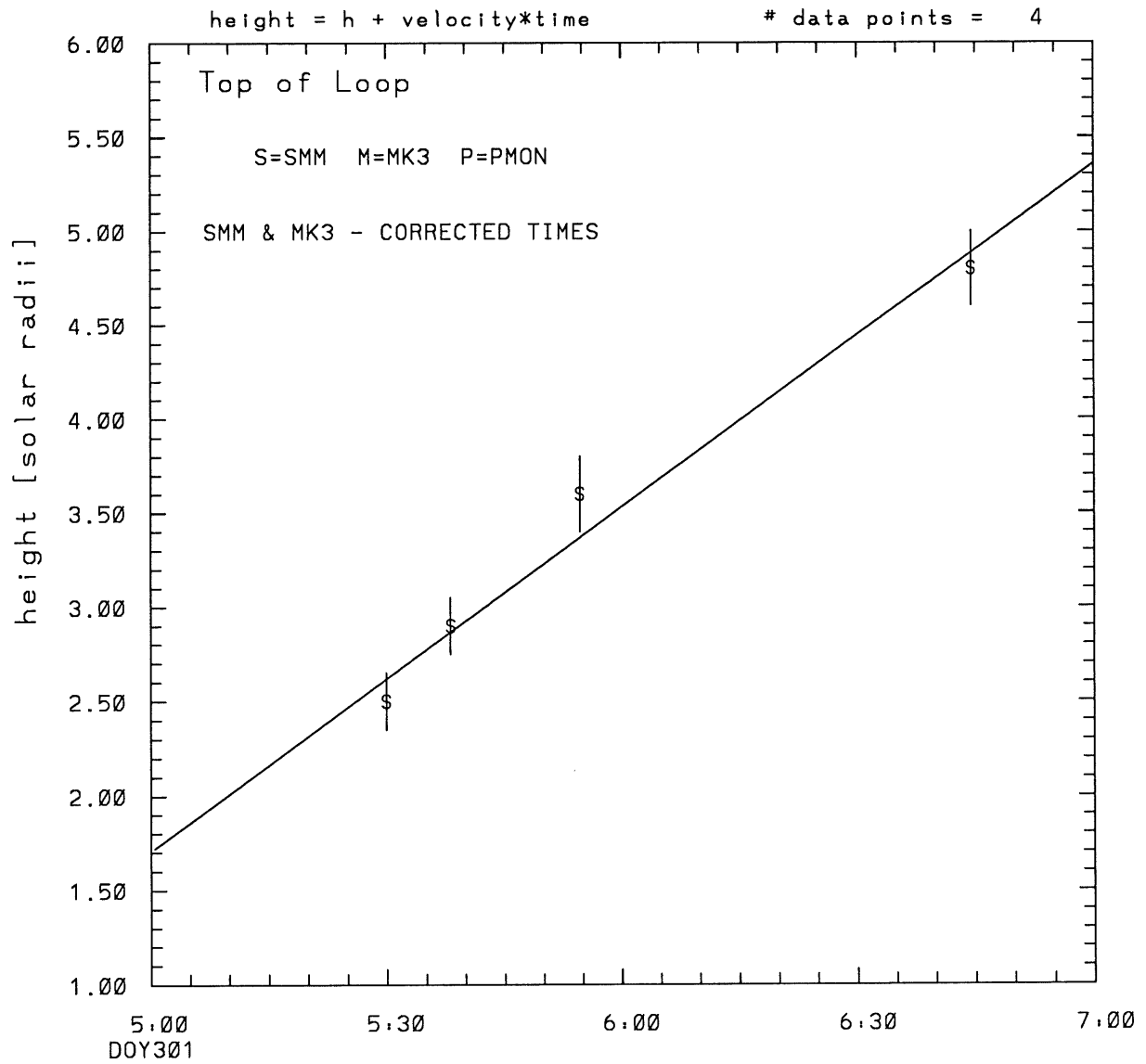
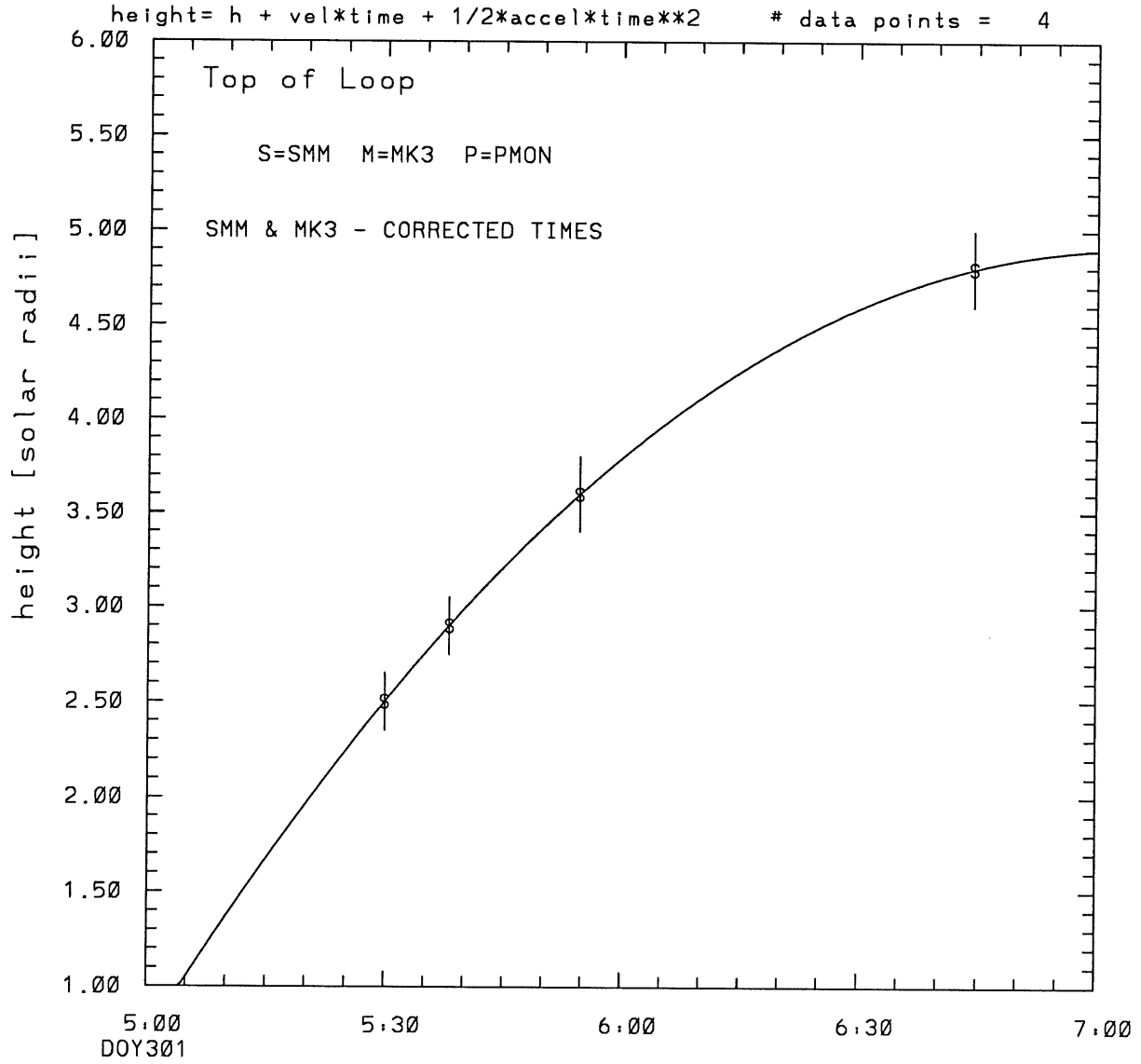


SMM C/P 1989 DOY301 252 +/- 0 degrees



tstart=DOY301 4.37 +/- 1.0 [min.]
radial velocity= 353. +/- 31. [km/sec]

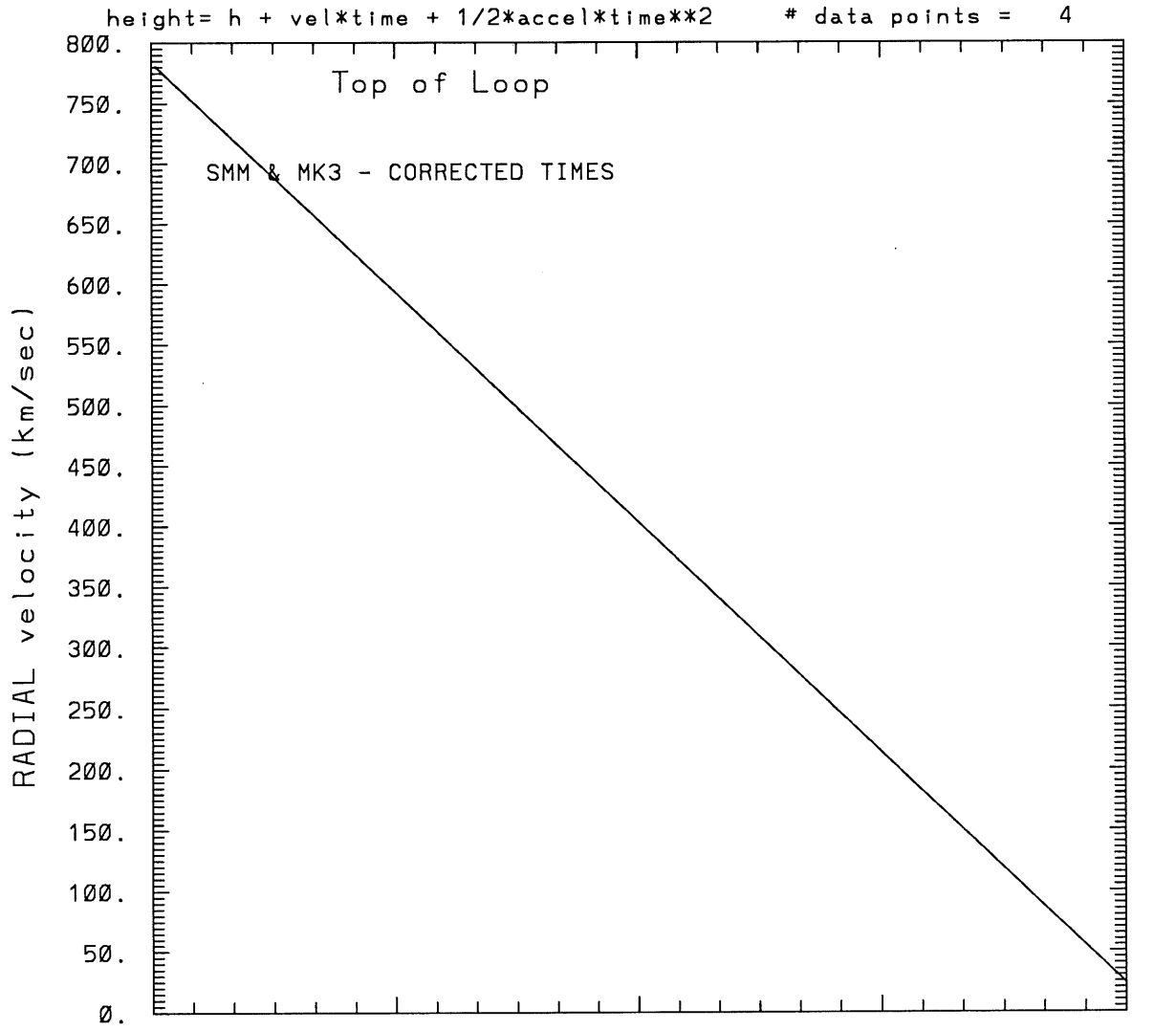
SMM C/P 1989 DOY301 252 +/- 0 degrees



tstart=DOY301 5: 4 +/- 0.0 [min.]

radial acceleration = -0.1055 ± 0.0007 [km/sec**2]

SMM C/P 1989 DOY301 252 +/- 0 degrees



5.00
DOY301

tstart=DOY301 5: 4 +/- 0.0 [min.]

radial acceleration=-.106E+00 km/sec**2

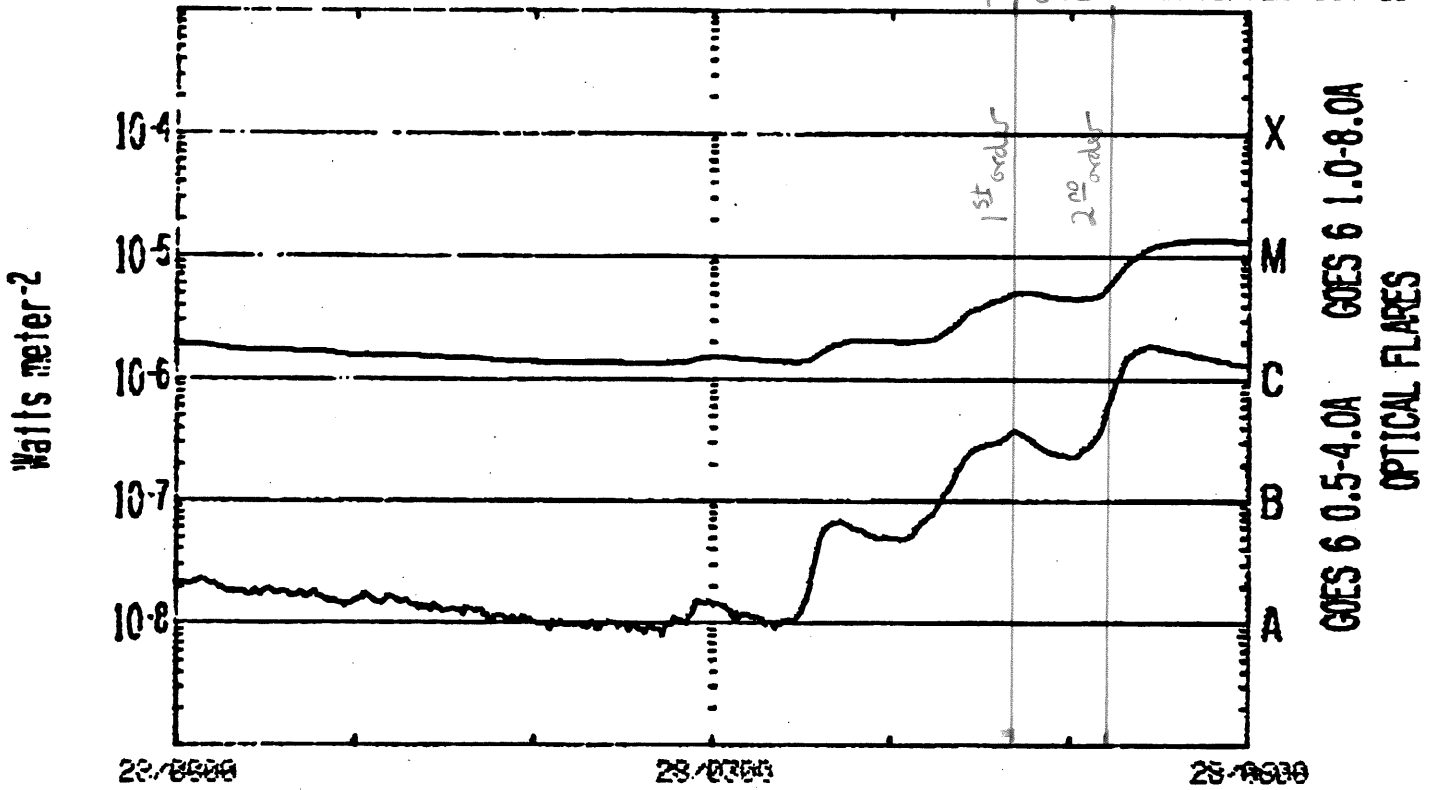
1989 DOY 301

1989 and OPTICAL DATA TOGETHER

STOP
Ret...

Top of Front
center = 250°
[4:40] 1st order
[5:07] 2nd order

BEGIN: 28 OCT 89



GOES-6 1 MIN DATA; OPTICAL FLARE DUR, IMP, REGION

SAA's
NIGHT
RUN: 2182UT
1 NOV 89

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	301	5:29:57	2.50 +/- 0.15	252.0 +/- 0.5			SMM
1989	301	5:38:10	2.90 +/- 0.15	252.0 +/- 0.5			SMM
1989	301	5:54:41	3.60 +/- 0.20	252.0 +/- 1.0			SMM
1989	301	6:44:29	4.80 +/- 0.20	252.0 +/- 1.0			SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.232E+02 +/- 0.972E+00 [minutes]
In more convenient units:
Event began at DOY 301 4:37 +/- 0.972E+00 [minutes]

Origin defined at DOY301 5: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 353. +/- 31. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.171E+01 +/- 0.154E+00 [solar radii]
c(2) = 0.304E-01 +/- 0.270E-02 [radii/min]
c(2) = 0.353E+03 +/- 0.313E+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)= 0.21359E+00 [radii] see Bevington pg. 114
error in c(2)= 0.33500E-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) = 252. +/- 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 RADIAL velocity at 5:29 = 353. km/sec

The RADIAL velocity at 5:38 = 353. km/sec

The RADIAL velocity at 5:54 = 353. km/sec

The RADIAL velocity at 6:44 = 353. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.01
Standard Deviation in start time measurement = 0.289E+02
Error in time = 0.90119E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.208E-01
Reduced Chi Squared = 0.102E+00
Chi Squared = 0.204E+00
The probability for exceeding chi square = 0.979E+00

The correlation coefficient = 0.988E+00
The probability that no LINEAR correlation exists between the variables = 0.1203]
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	301	5:29:57	2.50 +/- 0.15	252.0 +/- 0.5			SMM
1989	301	5:38:10	2.90 +/- 0.15	252.0 +/- 0.5			SMM
1989	301	5:54:41	3.60 +/- 0.20	252.0 +/- 1.0			SMM
1989	301	6:44:29	4.80 +/- 0.20	252.0 +/- 1.0			SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + 0.421E+01 +/- 0.301E-01 [minutes]
In more convenient units:
Event began at DOY 301 5: 4 +/- 0.301E-01 [minutes]

Origin defined at DOY301 5: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.106E+00 +/- 0.657E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.720E+00 +/- 0.636E-02 [solar radii]
c(2) = 0.676E-01 +/- 0.233E-03 [radii/min]
c(2) = 0.784E+03 +/- 0.270E+01 [km/sec]
c(3) = -0.273E-03 +/- 0.170E-05 [radii/min**2]
c(3) = -0.106E+00 +/- 0.657E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.83541E-02 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.40391E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.29508E-03 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.14783E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.21182E-05 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.10536E-05 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 252. +/- 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 RADIAL velocity at 5:29 = 594. km/sec

The RADIAL velocity at 5:38 = 542. km/sec

The RADIAL velocity at 5:54 = 437. km/sec

The RADIAL velocity at 6:44 = 122. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.01
Standard Deviation in start time measurement = 0.289E+02
Value of reduced Chi Squared returned from nllst2 = 0.242E-05
Reduced Chi Squared = 0.937E-05
Chi Squared = 0.937E-05
The probability for exceeding chi square = 0.999E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)
The correlation between the data and the term linear in time = 0.9377E+00
The correlation between the data and the time**2 term = 0.8959E+00
The correlation between the data and the complete equation of motion=0.1000E+01
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]