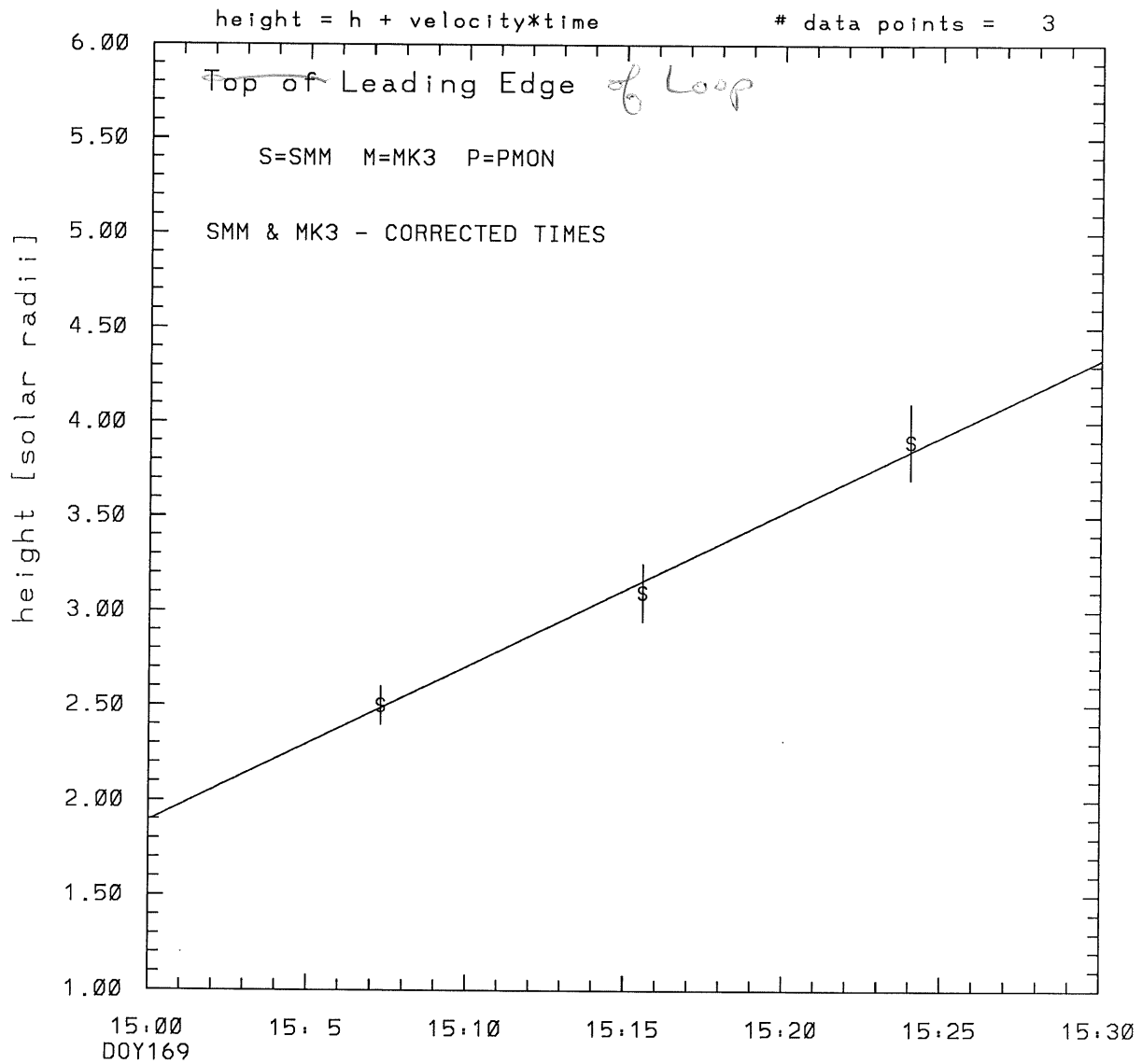
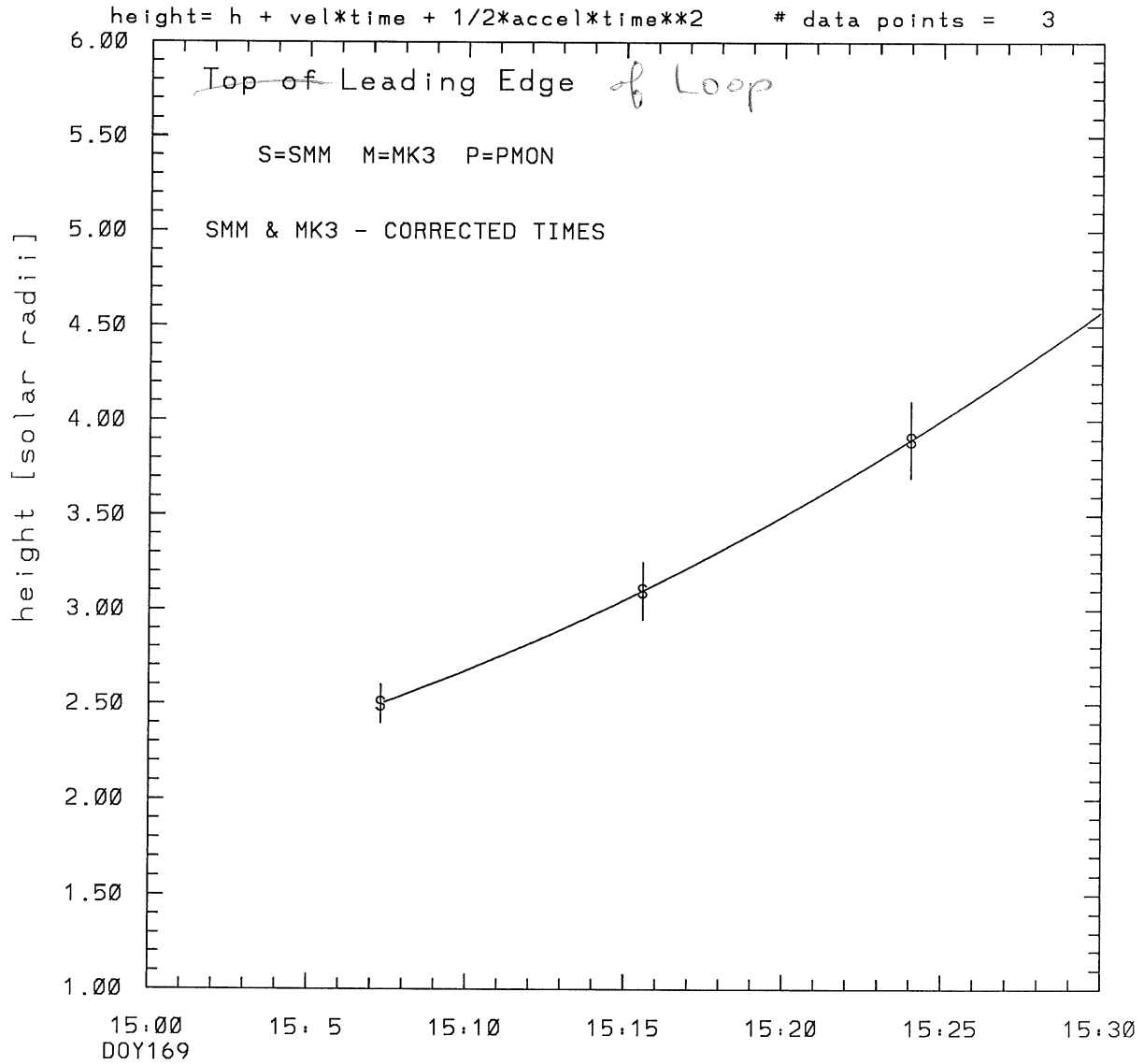


SMM C/P 1989 DOY169 234 +/- 0 degrees



tstart=DOY169 14:51 +/- 0.4 [min.]
radial velocity= 944. +/- 51. [km/sec]

SMM C/P 1989 DOY169 234 +/- 0 degrees

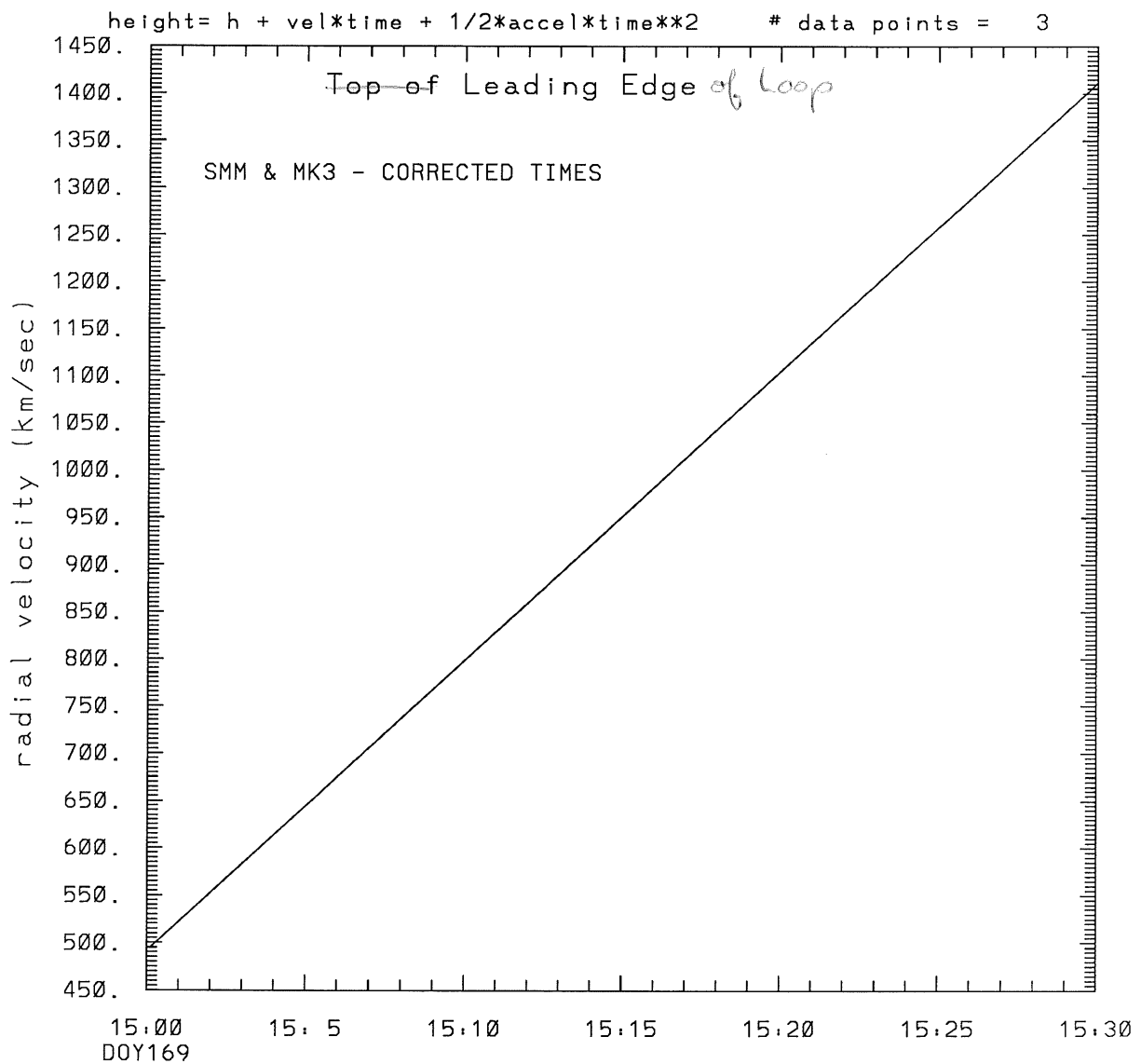


tstart=DOY169 14:44 from derivative=0

Event begins at 1.78 Solar Radii

radial acceleration = 0.5110 ± 0.0000 [km/sec**2]

SMM C/P 1989 DOY169 234 +/- 0 degrees



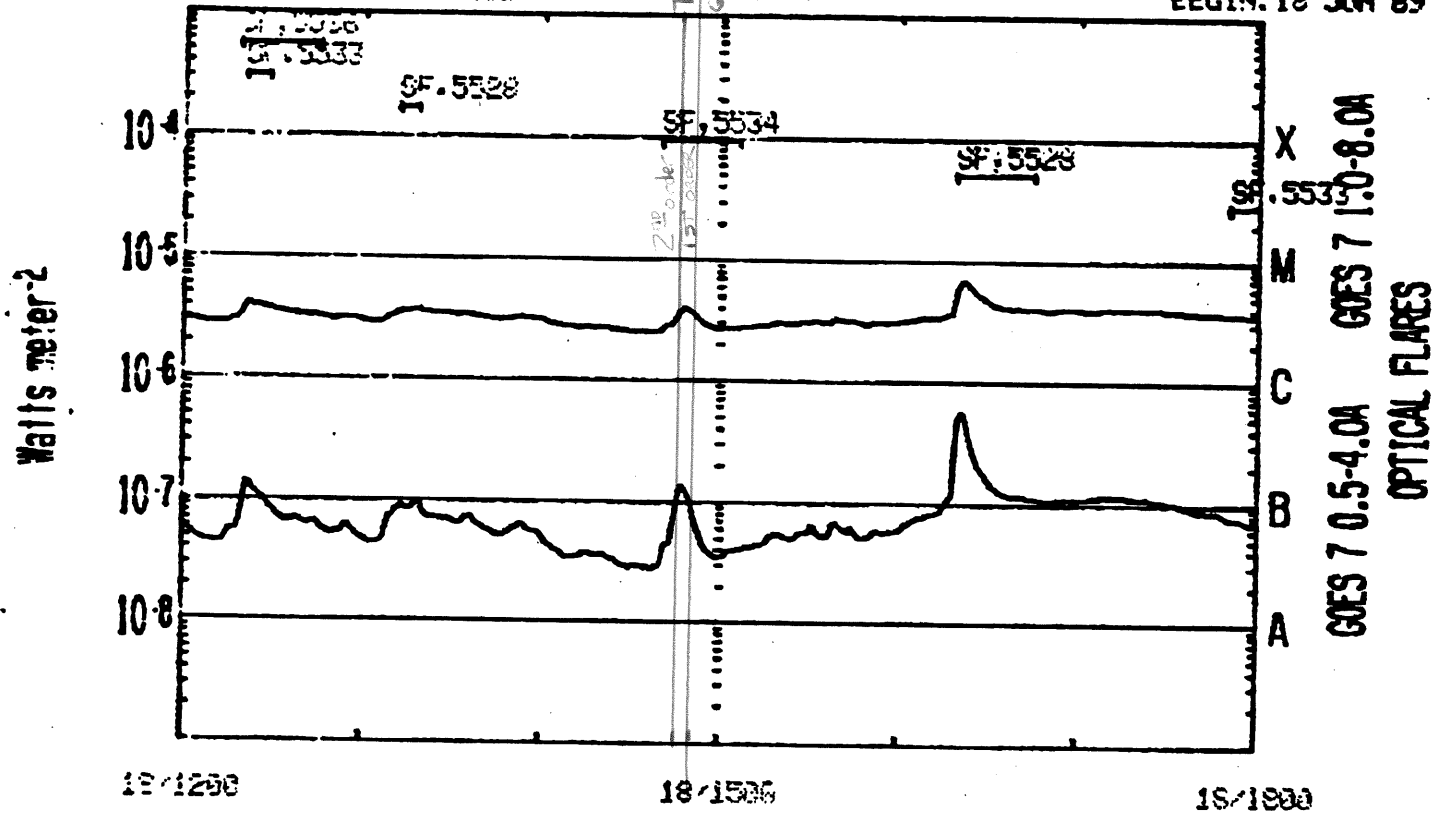
tstart=DOY169 14:44 from derivative=0
Event begins at 1.78 Solar Radii
radial acceleration=0.511E+00 km/sec**2

1989 Day 169

Top of Leading Edge
measured @ 234
[14:51] 1st order
[14:44] 2nd order

SHOW 002 OPTICAL DATA TOGETHER

BEGIN: 18 JUN 89



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

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

SAA's NIGHT
RWH: 1915UT
19 JUN 89

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	169	15: 7:18	2.50	+/- 0.10	234.0	+/- 0.5	SMM
1989	169	15:15:34	3.10	+/- 0.15	234.0	+/- 1.0	SMM
1989	169	15:24: 1	3.90	+/- 0.20	234.0	+/- 1.0	SMM

Structure being measured:
Top of Leading Edge of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.110E+02 +/- 0.440E+00$ [minutes]
In more convenient units:
Event began at DOY 169 14:51 +/- 0.440E+00 [minutes]

Origin defined at DOY169 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 944. +/- 51. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.189E+01 +/- 0.588E-01$ [solar radii]
 $c(2) = 0.814E-01 +/- 0.438E-02$ [radii/min]
 $c(2) = 0.944E+03 +/- 0.508E+02$ [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 $c(1) = 0.11616E+00$ [radii] see Bevington pg. 114
error in $c(2) = 0.68116E-02$ [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) = 234. +/- 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 15: 7 = 0. km/sec

The TOTAL velocity at 15: 7 = 944. km/sec

The TANGENTIAL velocity at 15:15 = 0. km/sec

The TOTAL velocity at 15:15 = 944. km/sec

The TANGENTIAL velocity at 15:24 = 0. km/sec

The TOTAL velocity at 15:24 = 944. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.70

Standard Deviation in start time measurement = 0.682E+01

Error in time = 0.98899E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.217E-02

Reduced Chi Squared = 0.155E-01

Chi Squared = 0.155E-01

The probability for exceeding chi square = 0.963E+00

The correlation coefficient = 0.997E+00

The probability that no LINEAR correlation exists between the variables = 0.4836E-01

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	169	15: 7:18	2.50	+/- 0.10	234.0	+/- 0.5	SMM
1989	169	15:15:34	3.10	+/- 0.15	234.0	+/- 1.0	SMM
1989	169	15:24: 1	3.90	+/- 0.20	234.0	+/- 1.0	SMM

Structure being measured:
Top-of Leading Edge *of Loop*

OUTPUT:

START TIME:

tstart=DOY169 14:44 from derivative = 0
Event begins at 1.78 Solar Radii
Origin defined at DOY169 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.511E+00 +/- 0.262E-05 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.212E+01 +/- 0.124E-05 [solar radii]
c(2) = 0.424E-01 +/- 0.203E-06 [radii/min]
c(2) = 0.491E+03 +/- 0.235E-02 [km/sec]
c(3) = 0.132E-02 +/- 0.677E-08 [radii/min**2]
c(3) = 0.511E+00 +/- 0.262E-05 [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) = 234. +/- 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 15: 7 = 0. km/sec

The TOTAL velocity at 15: 7 = 715. km/sec

The TANGENTIAL velocity at 15:15 = 0. km/sec

The TOTAL velocity at 15:15 = 969. km/sec

The TANGENTIAL velocity at 15:24 = 0. km/sec

The TOTAL velocity at 15:24 = 1228. 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!