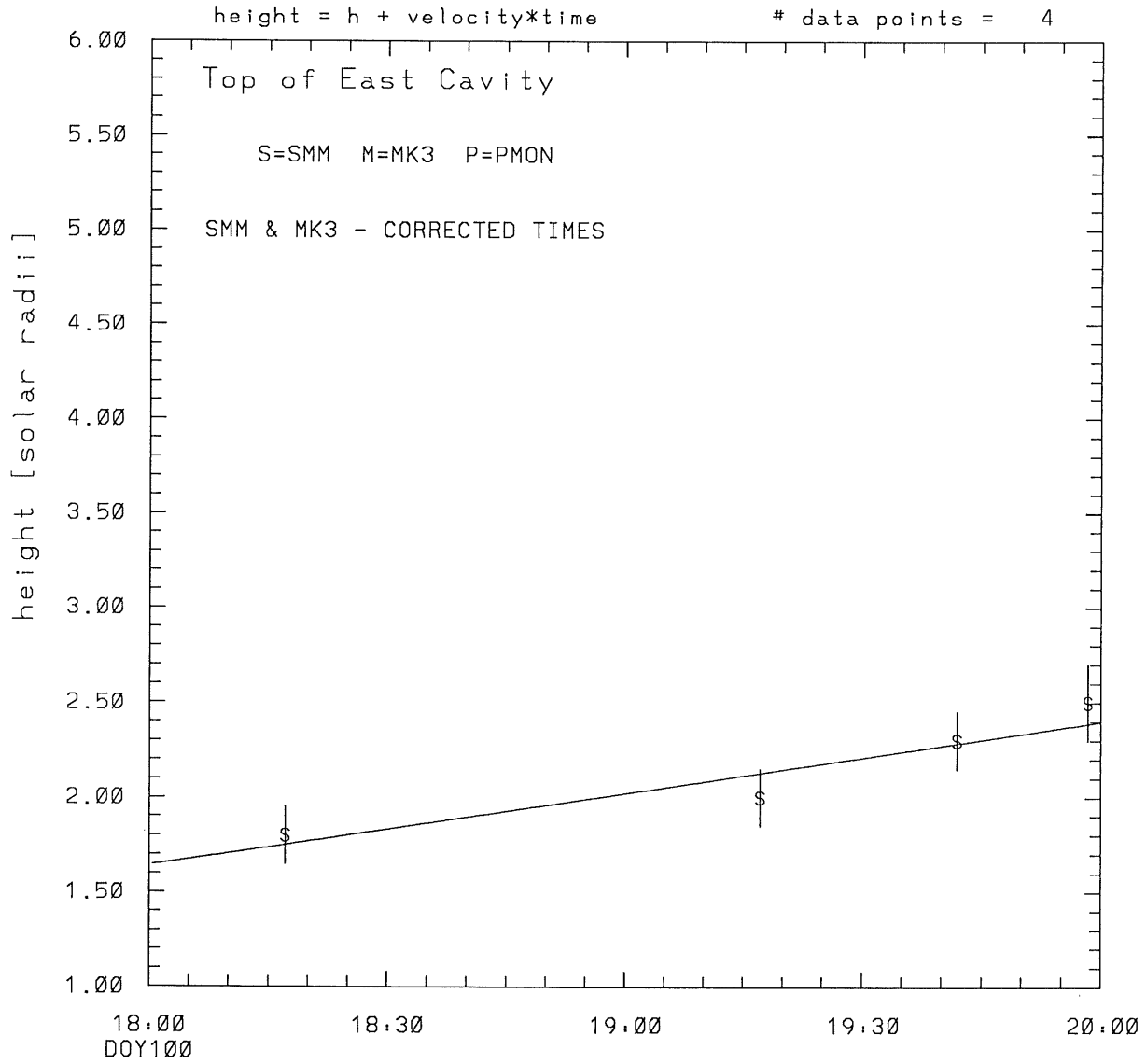
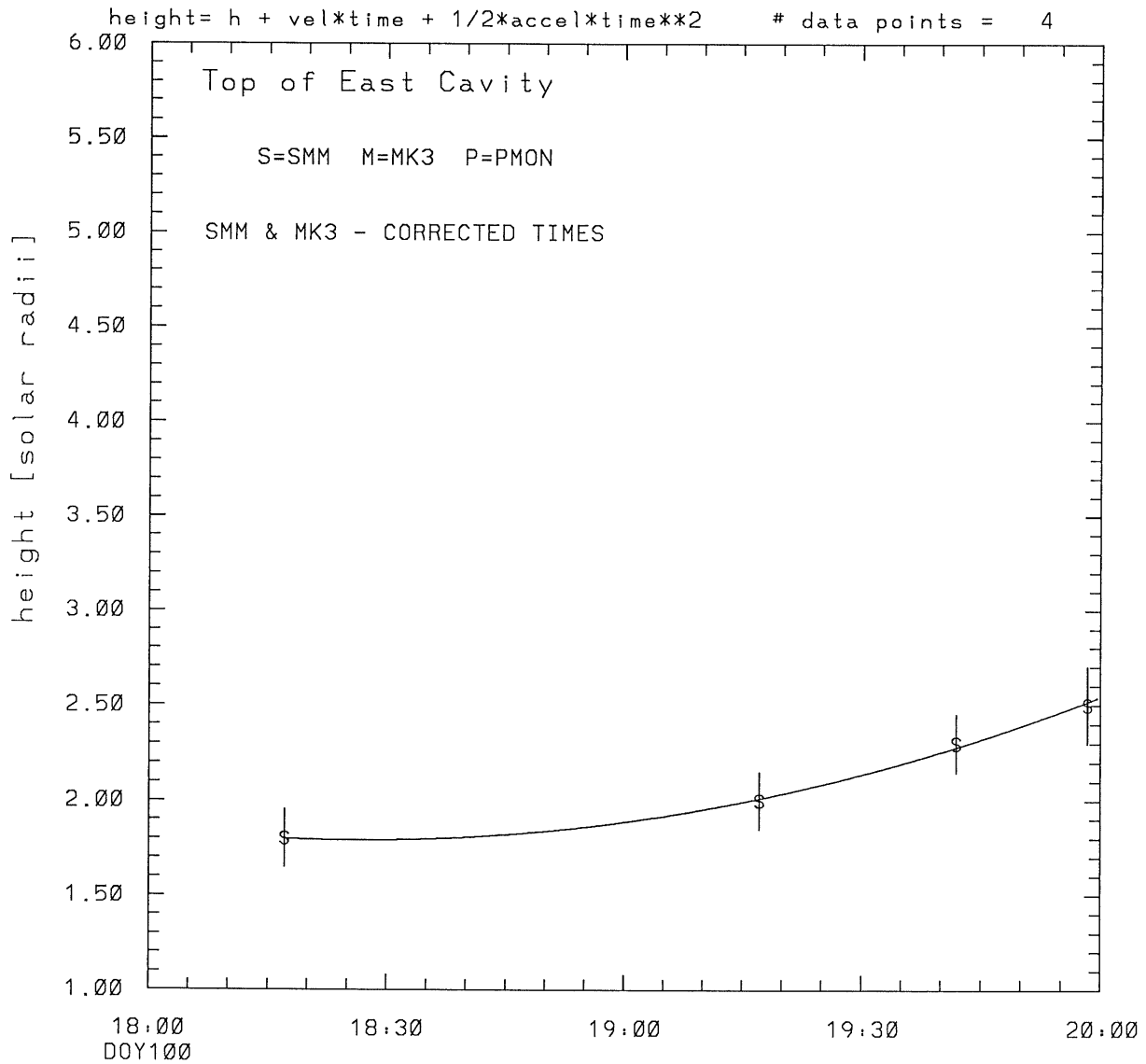


SMM C/P 1989 DOY100 117 +/- 0 degrees



tstart=DOY100 16:18 +/- 7.4 [min.]
radial velocity= 73. +/- 15. [km/sec]

SMM C/P 1989 DOY100 117 +/- 0 degrees

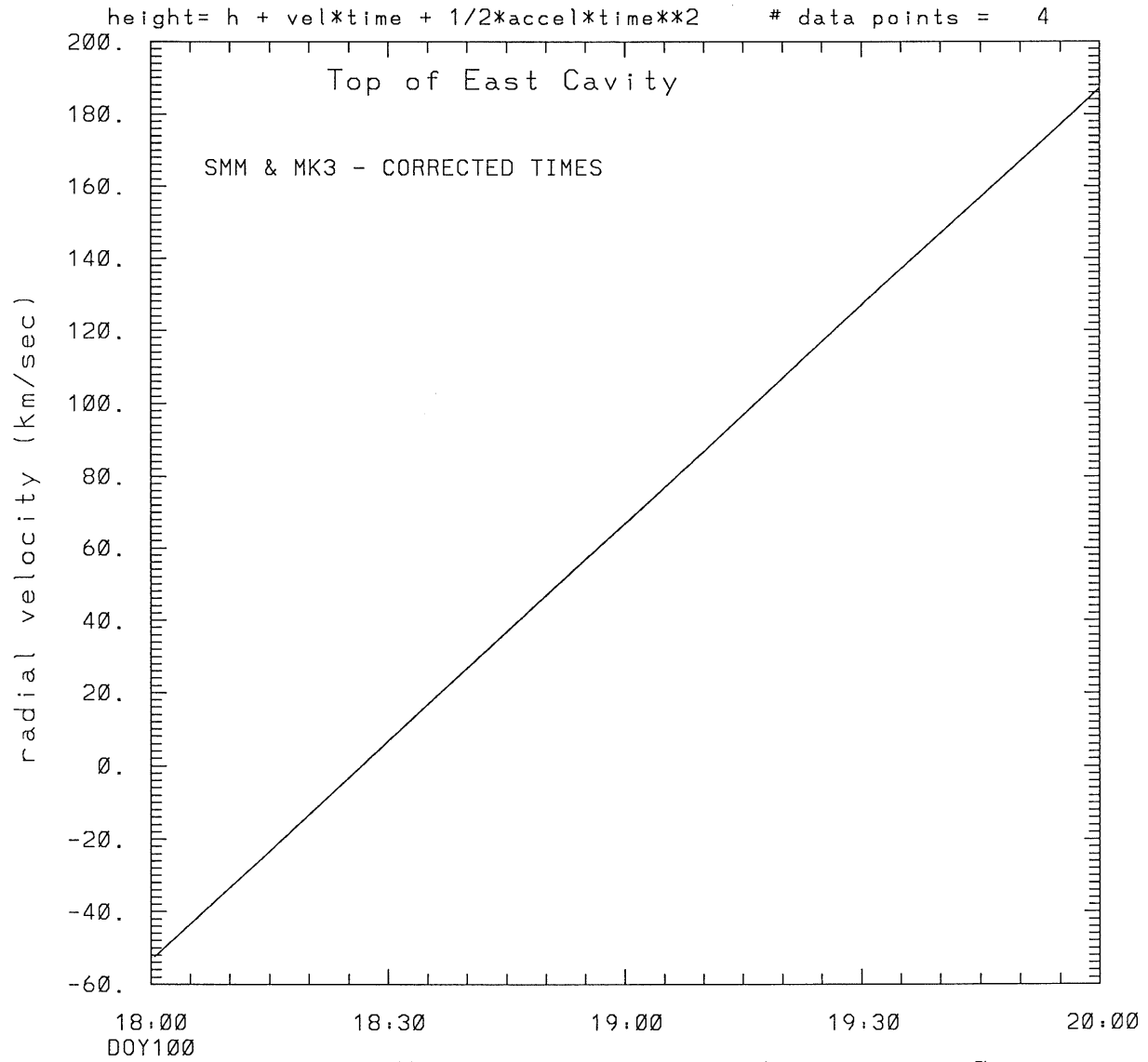


tstart=DOY100 18:26 from derivative=0

Event begins at 1.79 Solar Radii

radial acceleration = 0.0334 ± 0.0039 [km/sec**2]

SMM C/P 1989 DOY100 117 +/- 0 degrees



tstart=DOY100 18:26 from derivative=0
Event begins at 1.79 Solar Radii
radial acceleration=0.334E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1989	100	18:17: 6	1.80	+/- 0.15	117.0	+/- 0.5	SMM
1989	100	19:17: 9	2.00	+/- 0.15	117.0	+/- 0.5	SMM
1989	100	19:41:55	2.30	+/- 0.15	117.0	+/- 0.5	SMM
1989	100	19:58:23	2.50	+/- 0.20	117.0	+/- 0.5	SMM

Structure being measured:

Top of East Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.102E+03 +/- 0.743E+01$ [minutes]

In more convenient units:

Event began at DOY 100 16:18 +/- 0.743E+01 [minutes]

Origin defined at DOY100 18: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 73. +/- 15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.164E+01 +/- 0.108E+00 [solar radii]
c(2) = 0.630E-02 +/- 0.131E-02 [radii/min]
c(2) = 0.730E+02 +/- 0.151E+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)= 0.14343E+00 [radii] see Bevington pg. 114

error in c(2)= 0.16386E-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) = 117. +/- 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 18:17 = 0. km/sec

The TOTAL velocity at 18:17 = 73. km/sec

The TANGENTIAL velocity at 19:17 = 0. km/sec

The TOTAL velocity at 19:17 = 73. km/sec

The TANGENTIAL velocity at 19:41 = 0. km/sec

The TOTAL velocity at 19:41 = 73. km/sec

The TANGENTIAL velocity at 19:58 = 0. km/sec

The TOTAL velocity at 19:58 = 73. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.31

Standard Deviation in start time measurement = 0.384E+02

Error in time = 0.28296E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.983E-02

Reduced Chi Squared = 0.432E-01

Chi Squared = 0.863E-01

The probability for exceeding chi square = 0.990E+00

The correlation coefficient = 0.946E+00

The probability that no LINEAR correlation exists between the variables = 0.5404E-01

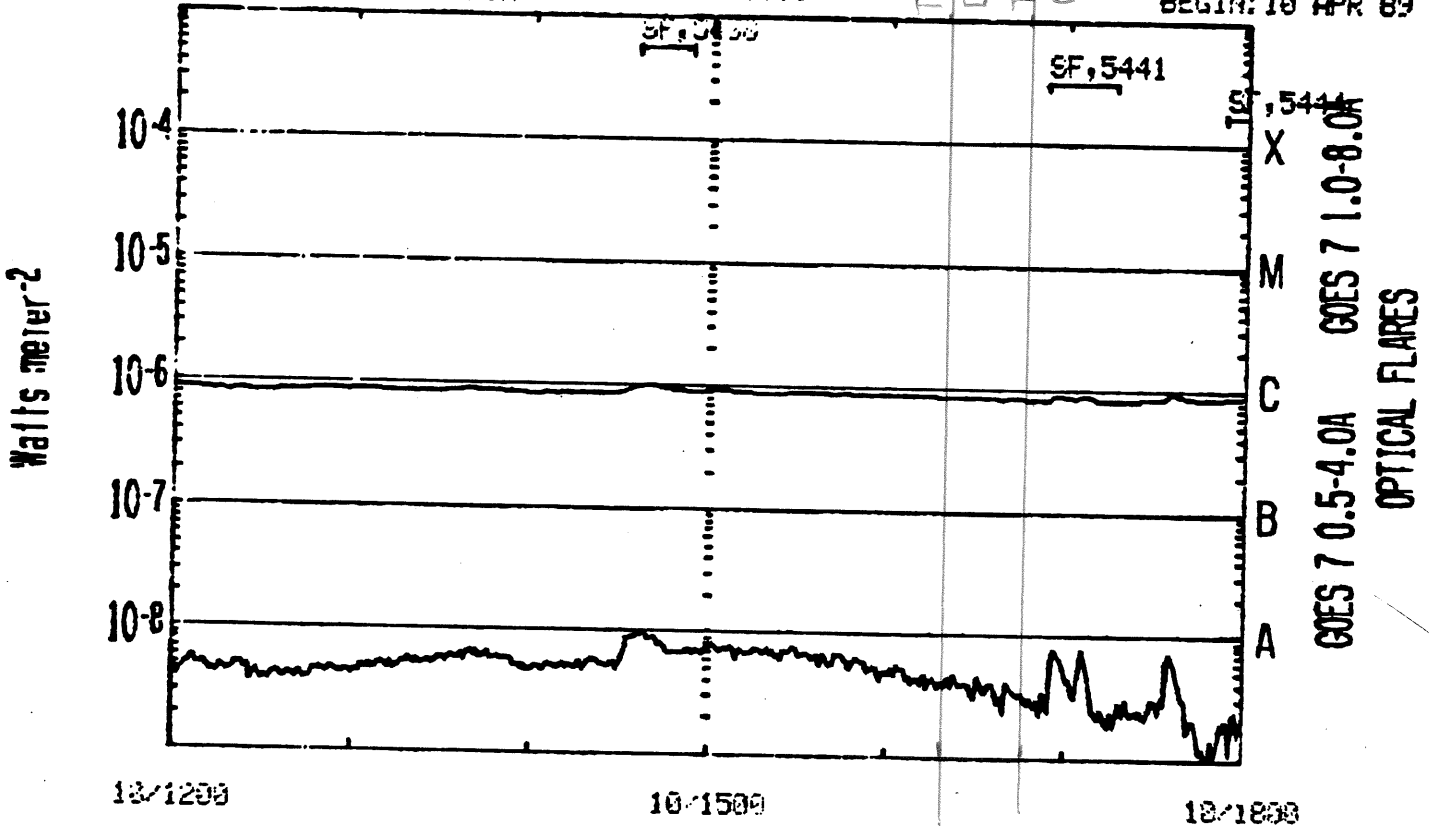
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

1989 Day 100

GOES and OPTICAL DATA TOGETHER

STOP
Ret.

BEGIN: 10 APR 89



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

SAA's
NIGHT
RHH: 1532UT
12 APR 89

Top of East Cavity, 2nd order
on next page

1989 Day 100

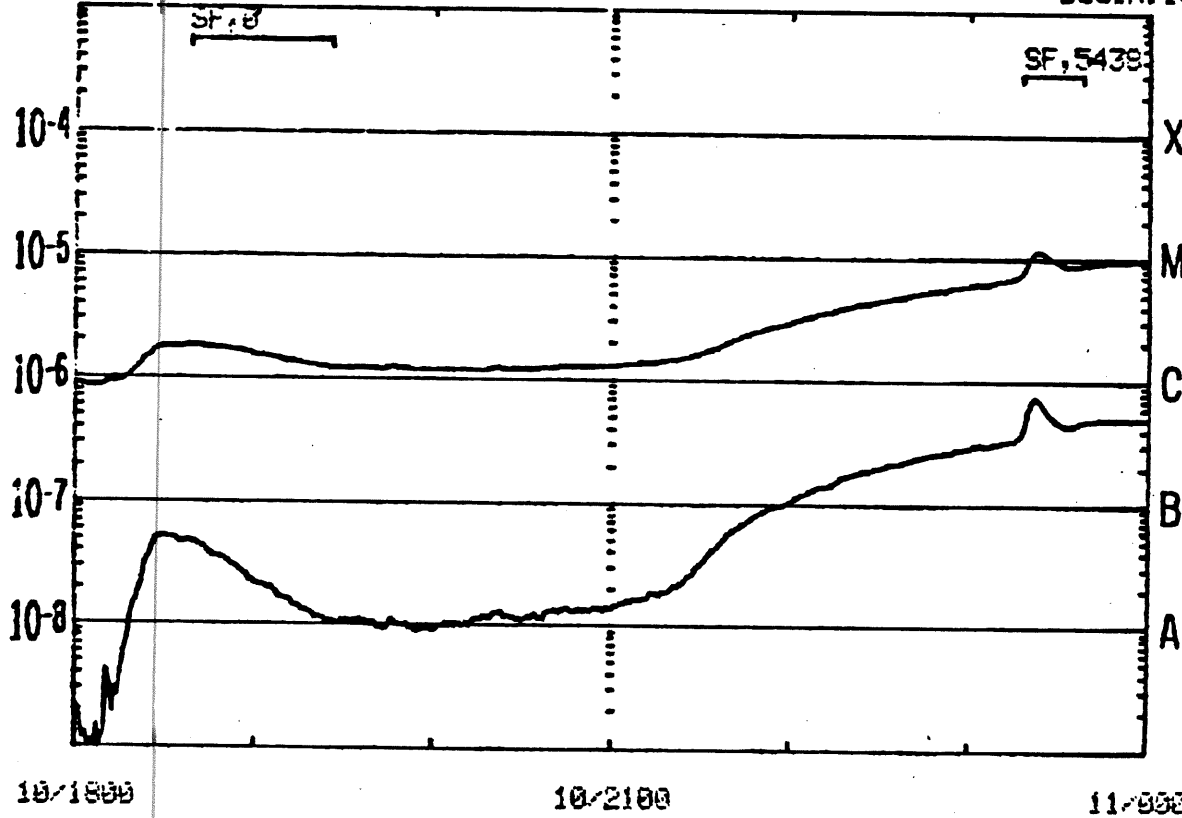
Top of East Gantry center = 115°
[18:26] 2nd order

RAY and OPTICAL DATA TOGETHER

STOP
Ret..

BEGIN: 10 APR 89

Watts meter²



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

10/1889

10/2100

11/8889

SAA's
NIGHT

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

RUN: 1536UT
12 APR 89

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	datatype
1989	100	18:17: 6	1.80	+/- 0.15		117.0	+/- 0.5	SMM
1989	100	19:17: 9	2.00	+/- 0.15		117.0	+/- 0.5	SMM
1989	100	19:41:55	2.30	+/- 0.15		117.0	+/- 0.5	SMM
1989	100	19:58:23	2.50	+/- 0.20		117.0	+/- 0.5	SMM

Structure being measured:

Top of East Cavity

OUTPUT:

START TIME:

tstart=DOY100 18:26 from derivative = 0

Event begins at 1.79 Solar Radii

Origin defined at DOY100 18: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.334E-01 +/- 0.389E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.185E+01 +/- 0.326E-01 [solar radii]
c(2) = -0.460E-02 +/- 0.130E-02 [radii/min]
c(2) = -0.534E+02 +/- 0.150E+02 [km/sec]
c(3) = 0.864E-04 +/- 0.101E-04 [radii/min**2]
c(3) = 0.334E-01 +/- 0.389E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.49288E-01 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.10886E-01 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.18779E-02 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.73125E-03 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.14088E-04 [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.61801E-05 [radii/min**] 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) = 117. +/- 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 18:17 = 0. km/sec

The TOTAL velocity at 18:17 = -19. km/sec

The TANGENTIAL velocity at 19:17 = 0. km/sec

The TOTAL velocity at 19:17 = 101. km/sec

The TANGENTIAL velocity at 19:41 = 0. km/sec

The TOTAL velocity at 19:41 = 151. km/sec

The TANGENTIAL velocity at 19:58 = 0. km/sec

The TOTAL velocity at 19:58 = 184. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.31

Standard Deviation in start time measurement = 0.384E+02

Value of reduced Chi Squared returned from nllst2 = 0.390E-03

Reduced Chi Squared = 0.268E-02

Chi Squared = 0.268E-02

The probability for exceeding chi square = 0.984E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)

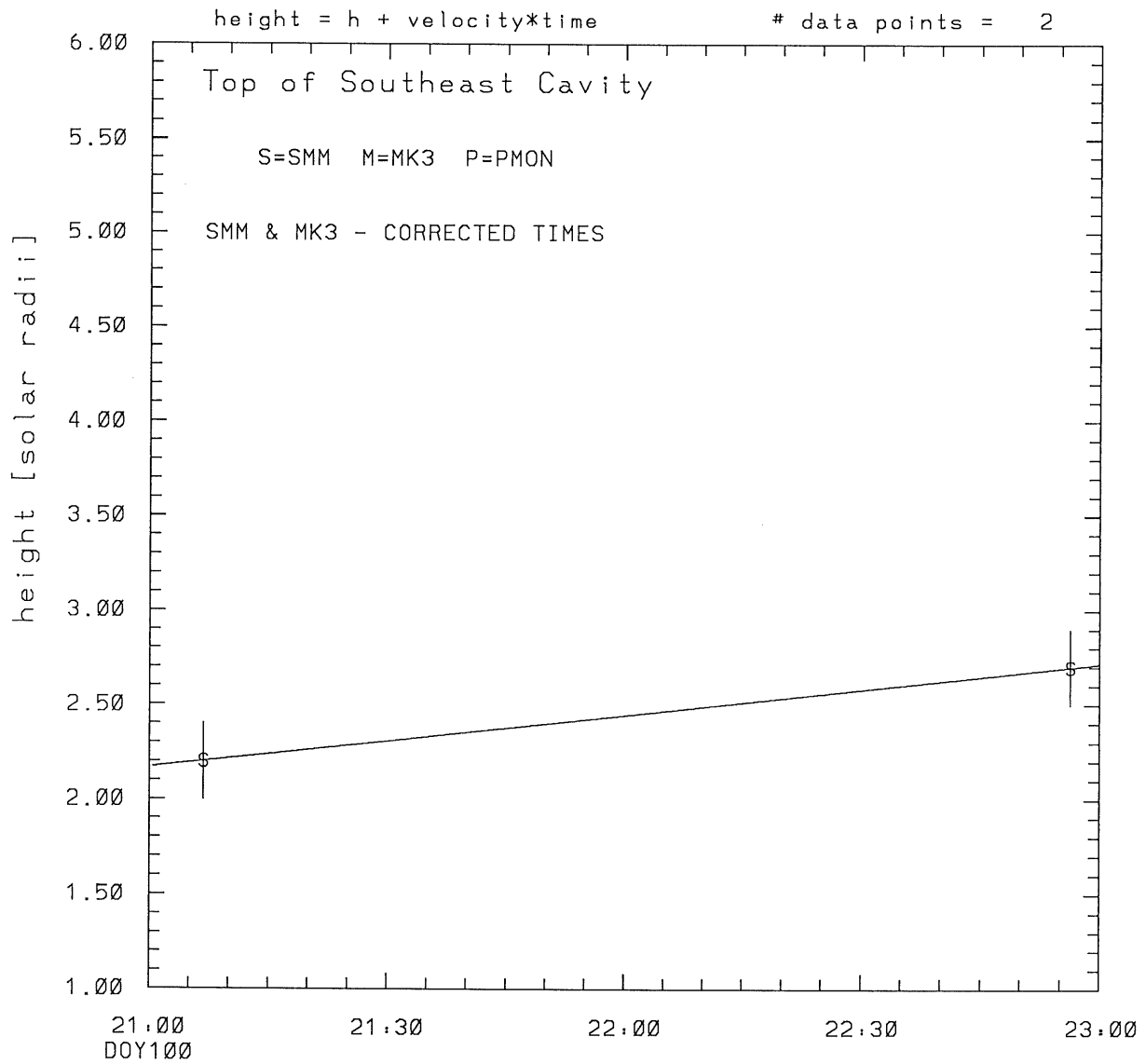
The correlation between the data and the term linear in time = 0.9377E+00

The correlation between the data and the time**2 term = 0.9560E+00

The correlation between the data and the complete equation of motion = 0.9983E+00

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

SMM C/P 1989 DOY100 145 +/- 0 degrees



tstart=DOY100 16:44 +/- 0.0 [min.]
radial velocity= 53. +/- 0. [km/sec]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	error in	datatype
1989	100	21: 6:48	2.20	+/- 0.20	145.0	+/- 0.5	SMM	
1989	100	22:56:21	2.70	+/- 0.20	145.0	+/- 0.5	SMM	

Structure being measured:

Top of Southeast Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.256E+03 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 100 16:44 +/- 0.000E+00 [minutes]

Origin defined at DOY100 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 53. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.217E+01 +/- 0.567E-06$ [solar radii]

$c(2) = 0.456E-02 +/- 0.688E-08$ [radii/min]

$c(2) = 0.529E+02 +/- 0.798E-04$ [km/sec]

$c(3) = 0.000E+00 +/- 0.000E+00$ [radii/min**2]

$c(3) = 0.000E+00 +/- 0.000E+00$ [km/sec**2]

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 +/- 0.0000E+00[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

$a(1) = 145. +/- 0.$ [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 21: 6 = 0. km/sec

The TOTAL velocity at 21: 6 = 53. km/sec

The TANGENTIAL velocity at 22:56 = 0. km/sec

The TOTAL velocity at 22:56 = 53. 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!