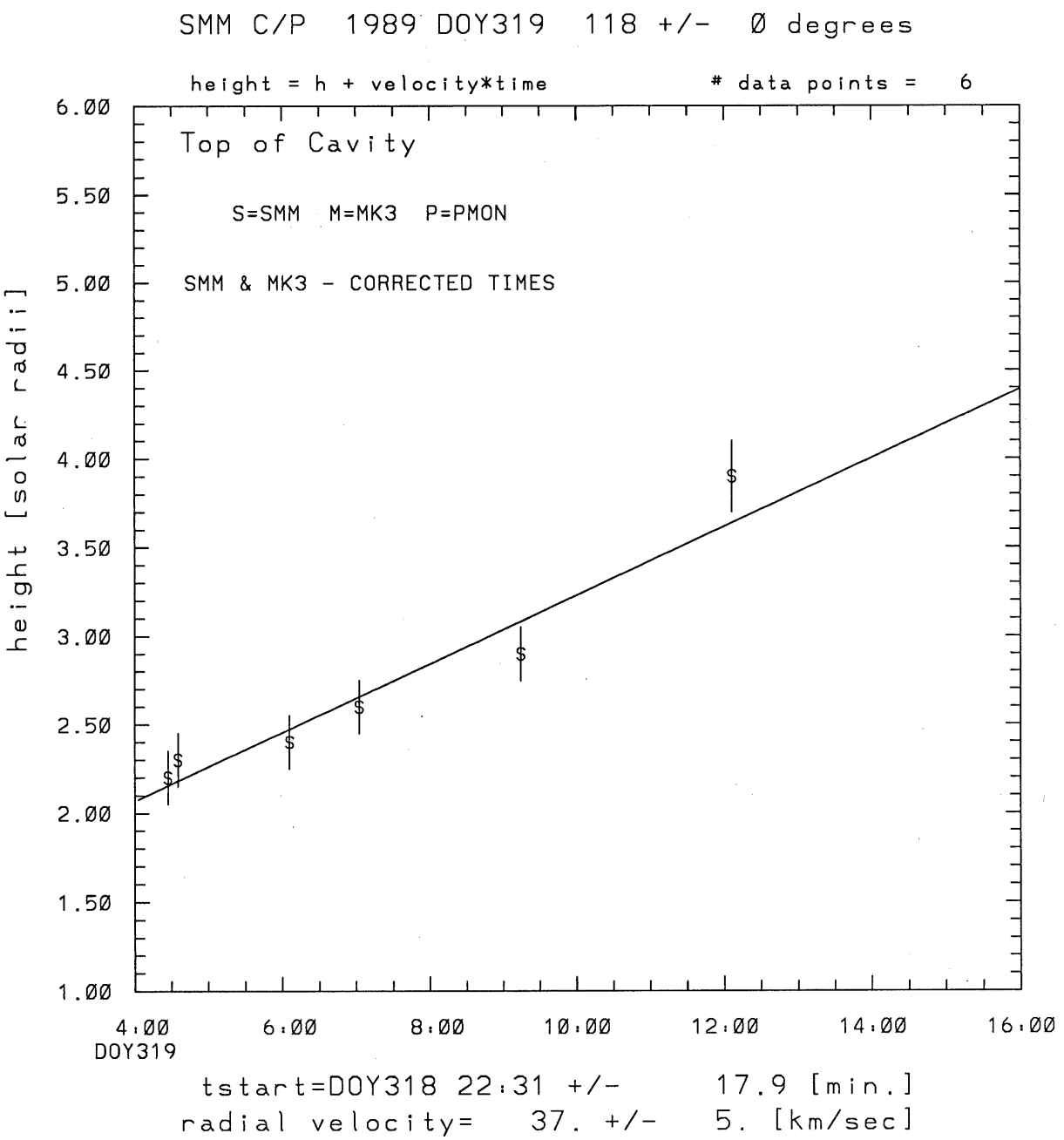
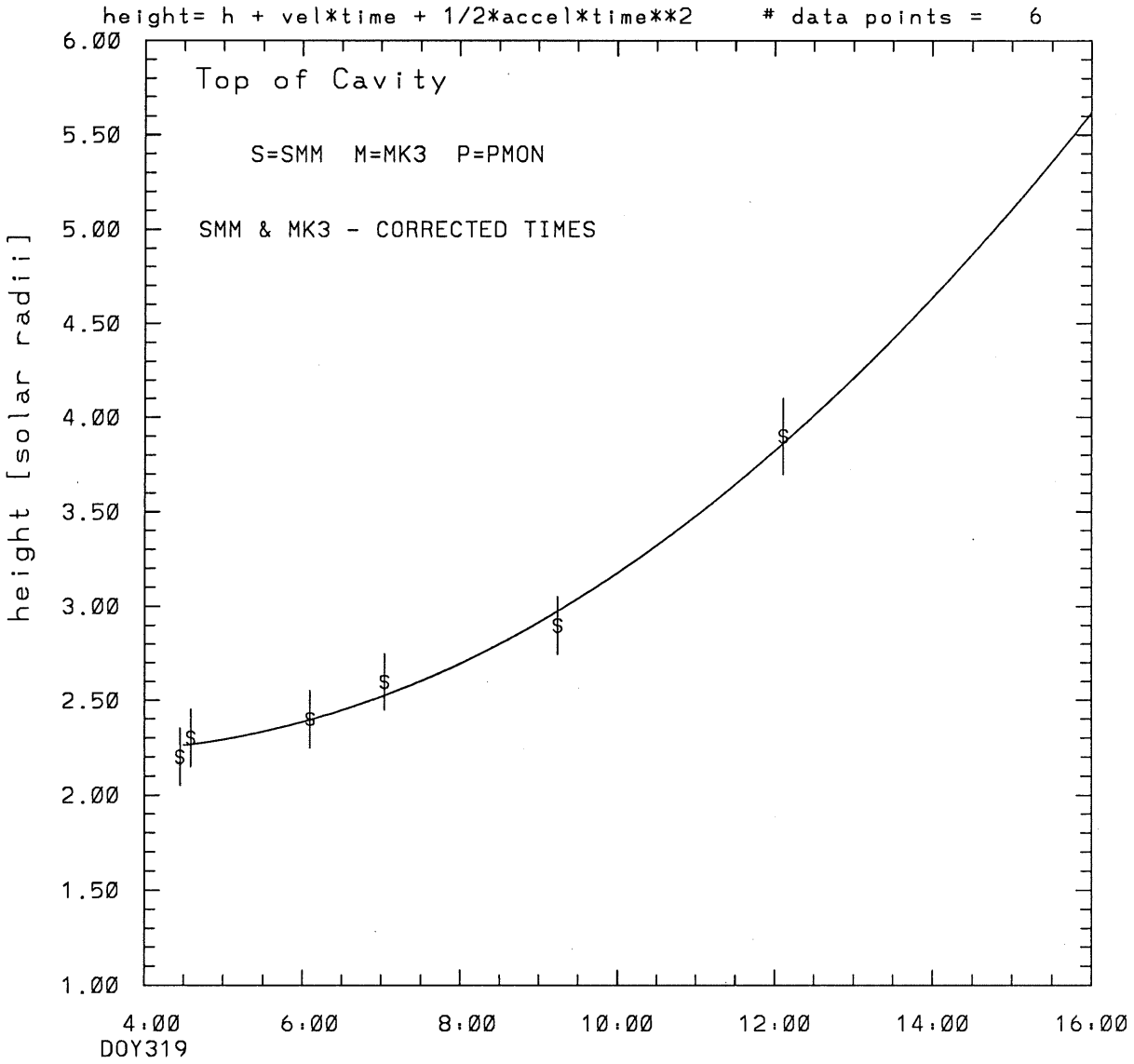

SMM C/P 1989 DOY319 118 +/- Ø degrees
height = h + velocity*time
# data points = 6
Top of Cavity
S=SMM M=MK3 P=PMON
SMM & MK3 - CORRECTED TIMES
height [solar radii]
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
4:00
DOY319
6:00
8:00
10:00
12:00
14:00
16:00
tstart=DOY318 22:31 +/- 17.9 [min.]
radial velocity= 37. +/- 5. [km/sec]

SMM C/P 1989 DOY319 118 +/- Ø degrees

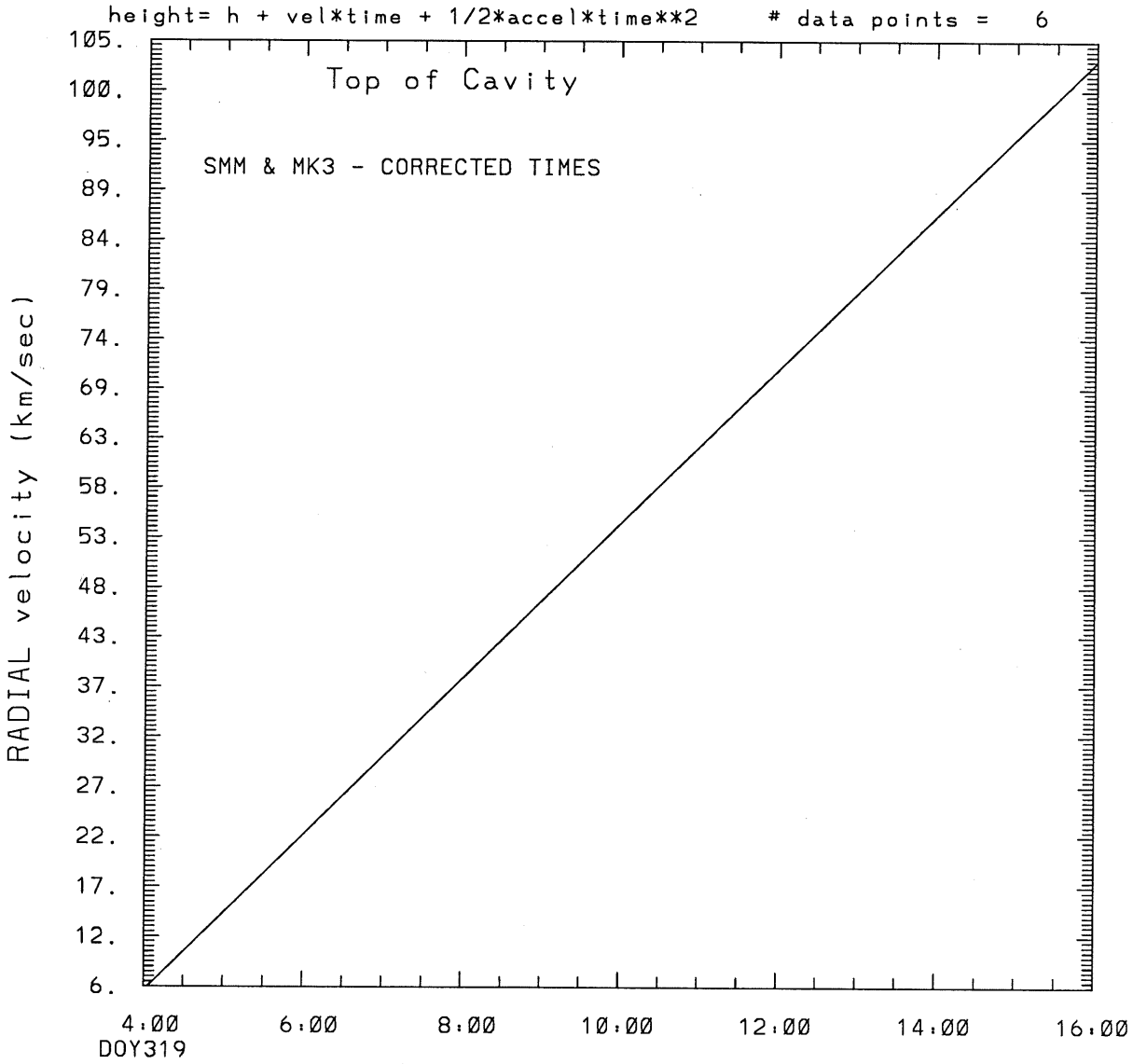


tstart=DOY319 3:17 from derivative=Ø

Event begins at 2.23 Solar Radii

radial acceleration= Ø.ØØ22 +/- Ø.ØØØ5 [km/sec**2]

SMM C/P 1989 DOY319 118 +/- Ø degrees

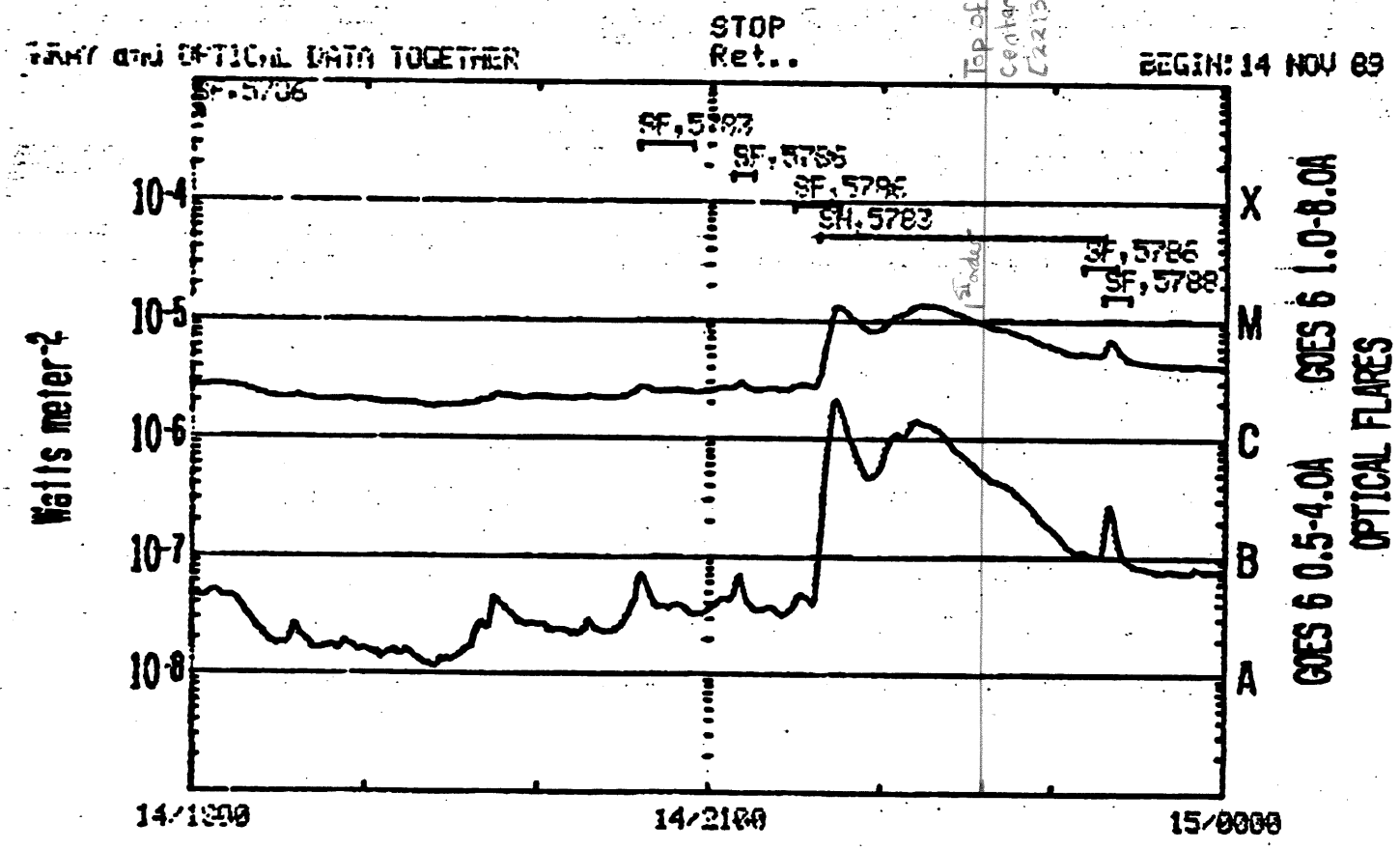


tstart=DOY319 3:17 from derivative=Ø

Event begins at 2.23 Solar Radii

radial acceleration=Ø.225E-Ø2 km/sec**2

1989 Doy 318



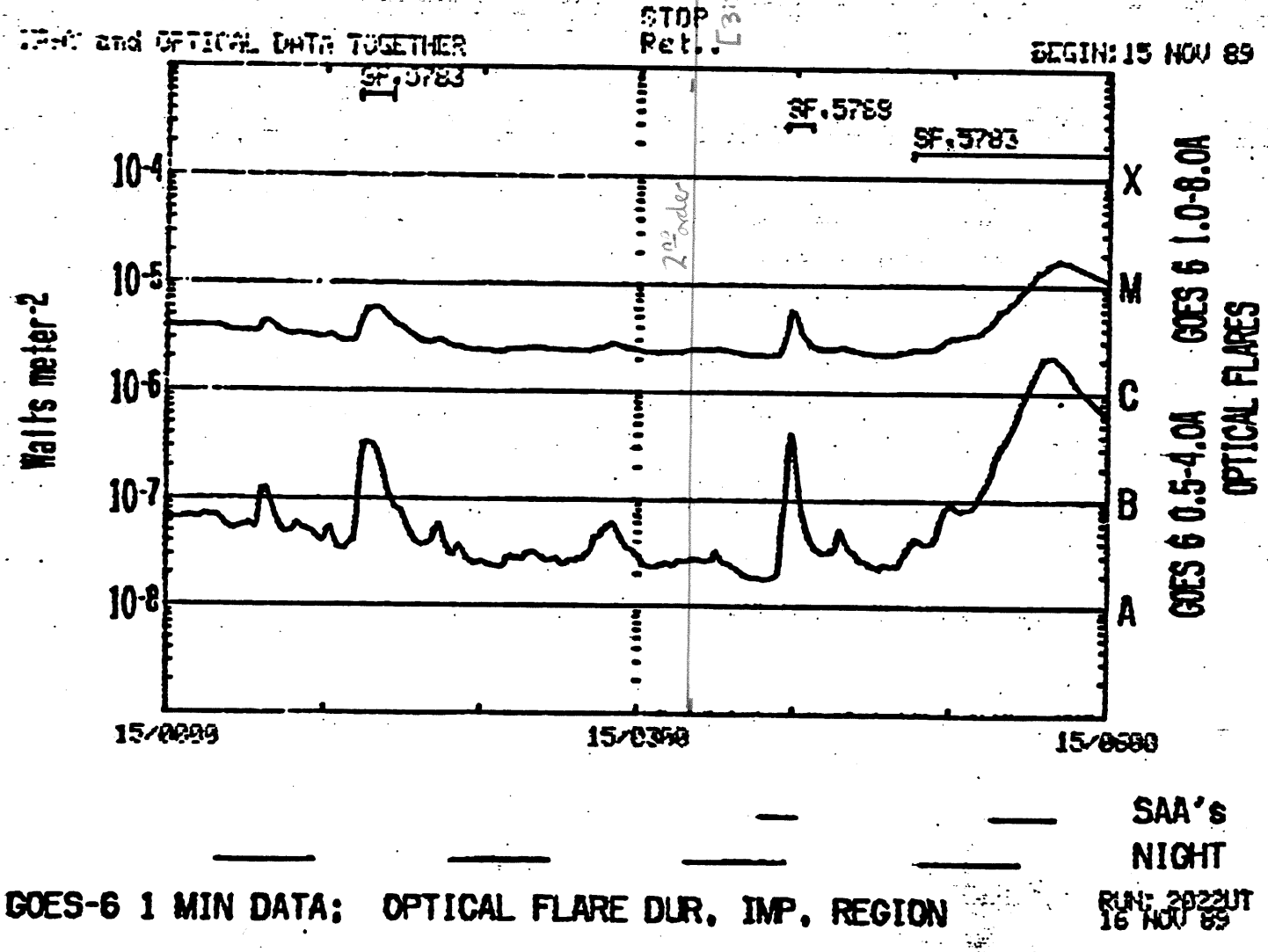
SAA's
NIGHT

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

RUN: 2030UT
16 NOV 89

See next page for 2nd order fit

1989 Doy 319



GOES-6 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

RUN: 2022UT 16 NOV 89

****
This is a 1 order run
****

****
INPUT:
****

year	doy	time	radii	error in radius	angle	error in angle	datatype
1989	319	4:26:50	2.20 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	4:35: 3	2.30 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	6: 5:53	2.40 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	7: 2:35	2.60 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	9:14:41	2.90 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	12: 6:25	3.90 +/-	0.20	118.0 +/-	1.0	SMM

****
Structure being measured:
Top of Cavity
****

****
OUTPUT:
****

START TIME:

Event began at t = 0 + -0.331E+03 +/- 0.179E+02 [minutes]
In more convenient units:
Event began at DOY 318 22:31 +/- 0.179E+02 [minutes]

Origin defined at DOY319 4: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 37. +/- 5. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.207E+01 +/- 0.917E-01 [solar radii]
c(2) = 0.323E-02 +/- 0.406E-03 [radii/min]
c(2) = 0.374E+02 +/- 0.471E+01 [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)= 0.11402E+00 [radii] see Bevington pg. 114
error in c(2)= 0.44907E-03 [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) = 118. +/- 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 4:26 = 37. km/sec

The RADIAL velocity at 4:35 = 37. km/sec

The RADIAL velocity at 6: 5 =   37. km/sec

The RADIAL velocity at 7: 2 =   37. km/sec

The RADIAL velocity at 9:14 =   37. km/sec

The RADIAL velocity at 12: 6 =   37. km/sec

****
The following info is for estimating goodness of the fit
****

Fit is ok [ier=1]

Standard Deviation in the height = 0.63
Standard Deviation in start time measurement =   0.162E+03
Error in time =   0.11060E+03 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.210E-01
Reduced Chi Squared = 0.160E+00
Chi Squared = 0.641E+00
The probability for exceeding chi square = 0.999E+00

The correlation coefficient =   0.970E+00
The probability that no LINEAR correlation exists between the variables =   0.1353
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	319	4:26:50	2.20 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	4:35: 3	2.30 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	6: 5:53	2.40 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	7: 2:35	2.60 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	9:14:41	2.90 +/-	0.15	118.0 +/-	0.5	SMM
1989	319	12: 6:25	3.90 +/-	0.20	118.0 +/-	1.0	SMM

****
Structure being measured:
Top of Cavity
****

****
OUTPUT:
****

START TIME:

tstart=DOY319 3:17 from derivative = 0
Event begins at 2.23 Solar Radii
Origin defined at DOY319 4: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.225E-02 +/- 0.507E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.224E+01 +/- 0.574E-01 [solar radii]
c(2) = 0.510E-03 +/- 0.641E-03 [radii/min]
c(2) = 0.591E+01 +/- 0.744E+01 [km/sec]
c(3) = 0.581E-05 +/- 0.131E-05 [radii/min**2]
c(3) = 0.225E-02 +/- 0.507E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.67070E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.23770E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.73073E-03 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.24081E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.14138E-05 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.41884E-06 [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) = 118. +/- 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 4:26 = 10. km/sec

```
The RADIAL velocity at  4:35 =   11. km/sec

The RADIAL velocity at  6: 5 =   23. km/sec

The RADIAL velocity at  7: 2 =   31. km/sec

The RADIAL velocity at  9:14 =   48. km/sec

The RADIAL velocity at 12: 6 =   71. km/sec


**********************************************************
 The following info is for estimating goodness of the fit
**********************************************************

 Fit is ok [ier=1]

 Standard Deviation in the height =  0.63
 Standard Deviation in start time measurement =    0.162E+03
 Value of reduced Chi Squared returned from nllst2 = 0.444E-02
 Reduced Chi Squared = 0.215E-01
 Chi Squared = 0.644E-01
 The probability for exceeding chi square = 0.100E+01

 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  =   0.8751E+00
 The correlation between the data and the time**2 term =   0.8585E+00
 The correlation between the data and the complete equation of motion=0.9870E+00
 SEE BEVINGTON "Data Reduction and Error Analysis" [1969]
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