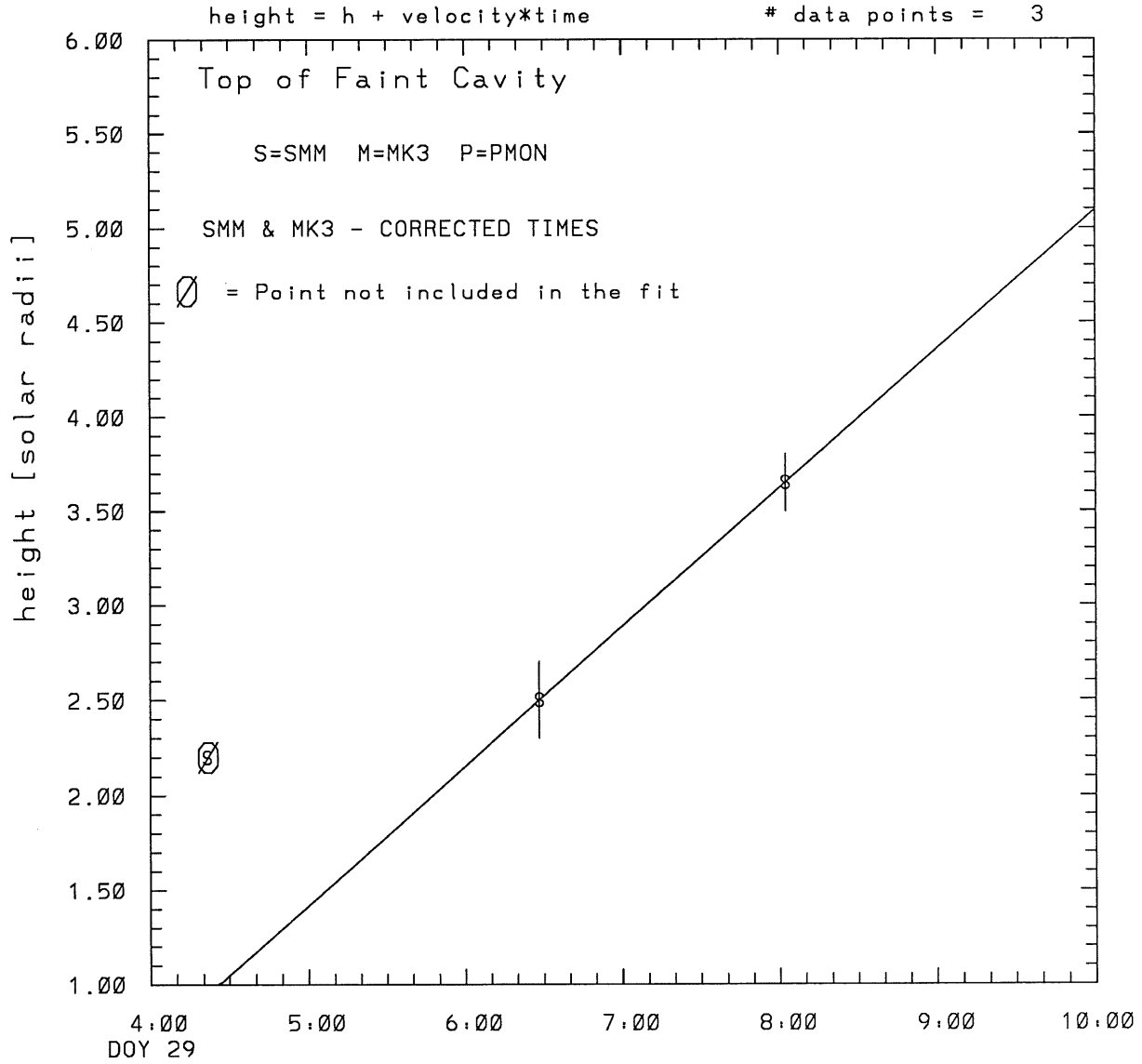


SMM C/P 1989 DOY 29 30 +/- 0 degrees



tstart=DOY 29 4.26 +/- NaN [min.]
radial velocity= 142. +/- 0. [km/sec]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	29	4:21:34	2.20	-----	30.00 +/-	----	SMM THIS POINT WASN'T USE
1989	29	6:28:24	2.50	+/- 0.20	30.0 +/-	0.5	SMM
1989	29	8: 2:15	3.65	+/- 0.15	30.0 +/-	1.0	SMM

Structure being measured:
Top of Faint Cavity

OUTPUT:

START TIME:

Event began at t = 0 + 0.260E+02 +/- NaN [minutes]
In more convenient units:
Event began at DOY 29 4:26 +/- NaN [minutes]
Origin defined at DOY 29 4: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 142. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.682E+00 +/- 0.453E-19 [solar radii]
c(2) = 0.123E-01 +/- 0.212E-21 [radii/min]
c(2) = 0.142E+03 +/- 0.246E-17 [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)= 0.13171E+01 [radii] see Bevington pg. 114
error in c(2)= 0.80074E-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) = 30. +/- 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 4:21 = 0.000E+00 km/sec

The TOTAL velocity at 4:21 = 142. km/sec

The TANGENTIAL velocity at 6:28 = 0.000E+00 km/sec

The TOTAL velocity at 6:28 = 142. km/sec

The TANGENTIAL velocity at 8: 2 = 0.000E+00 km/sec
The TOTAL velocity at 8: 2 = 142. km/sec

The following info is for estimating goodness of the fit

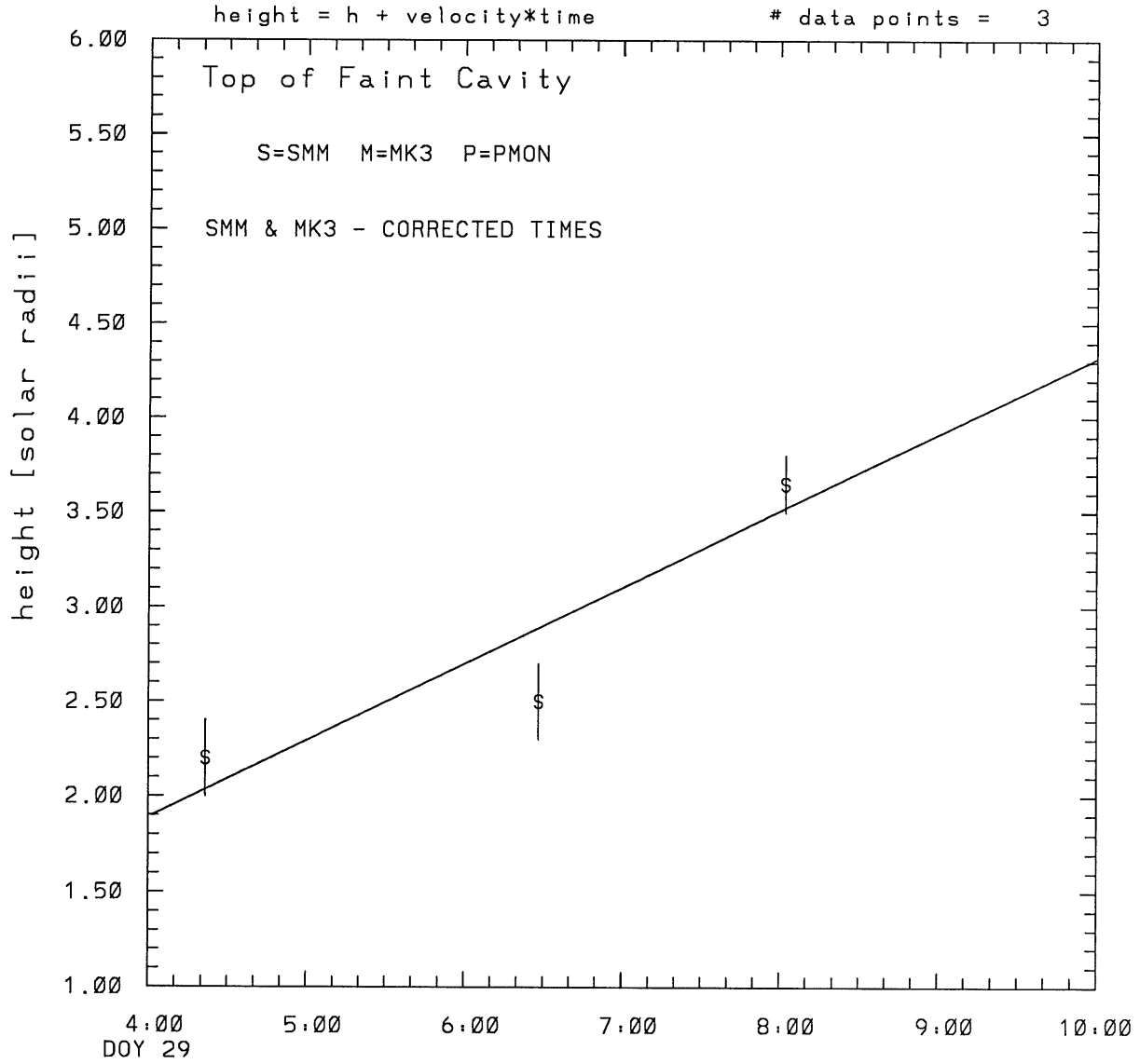
Fit is ok [ier=1]

Standard Deviation in the height = 0.77
Standard Deviation in start time measurement = 0.904E+02
Error in time = 0.10235E+03 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.275E-39
Reduced Chi Squared = 0.157E+01
Chi Squared = 0.157E+01
The probability for exceeding chi square = 0.100E+01

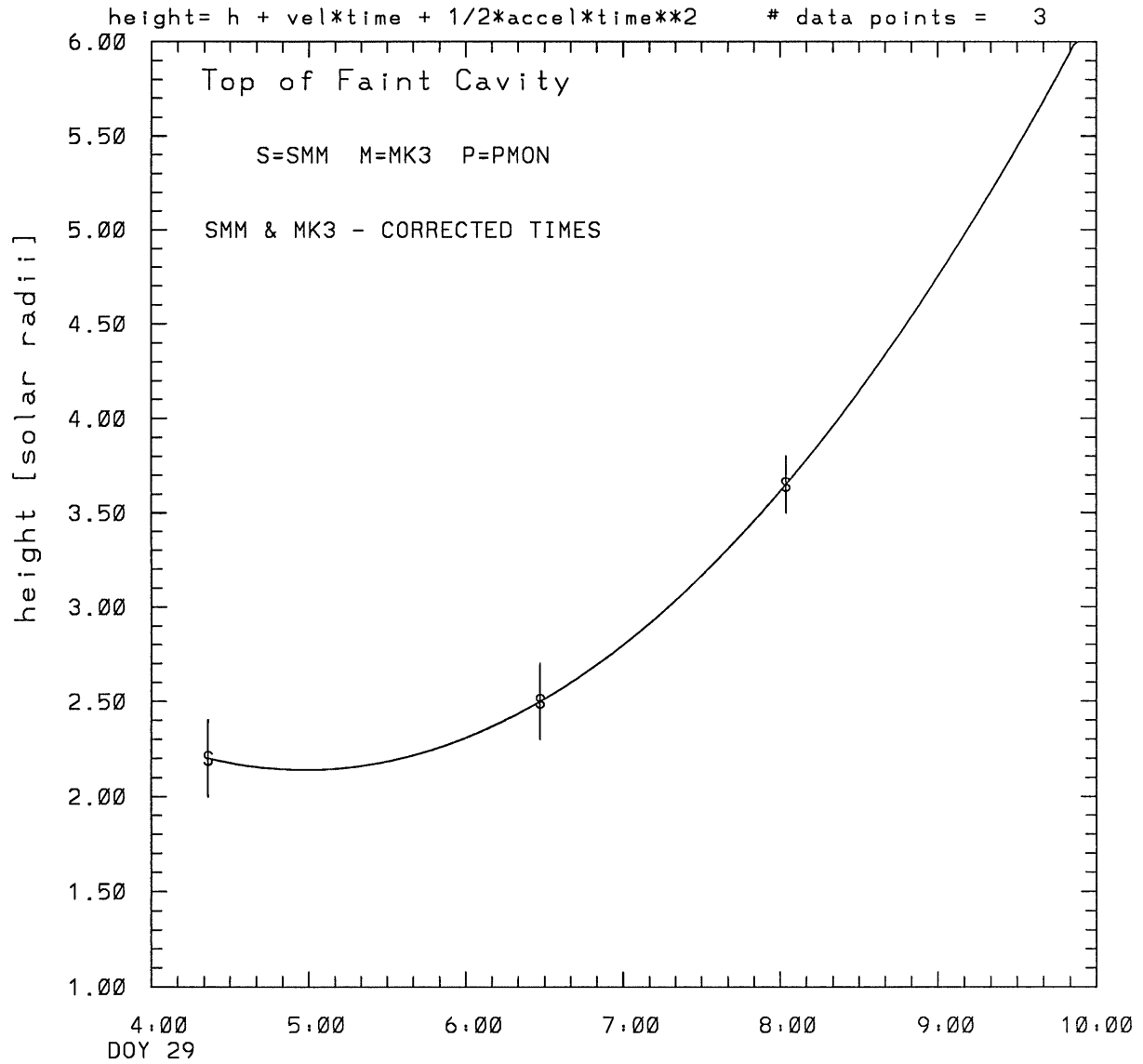
The correlation coefficient = 0.916E+00
The probability that no LINEAR correlation exists between the variables = 0.26261
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1989 DOY 29 30 +/- 0 degrees



tstart=DOY 29 1:50 +/- 22.3 [min.]
radial velocity= 78. +/- 21. [km/sec]

SMM C/P 1989 DOY 29 30 +/- 0 degrees

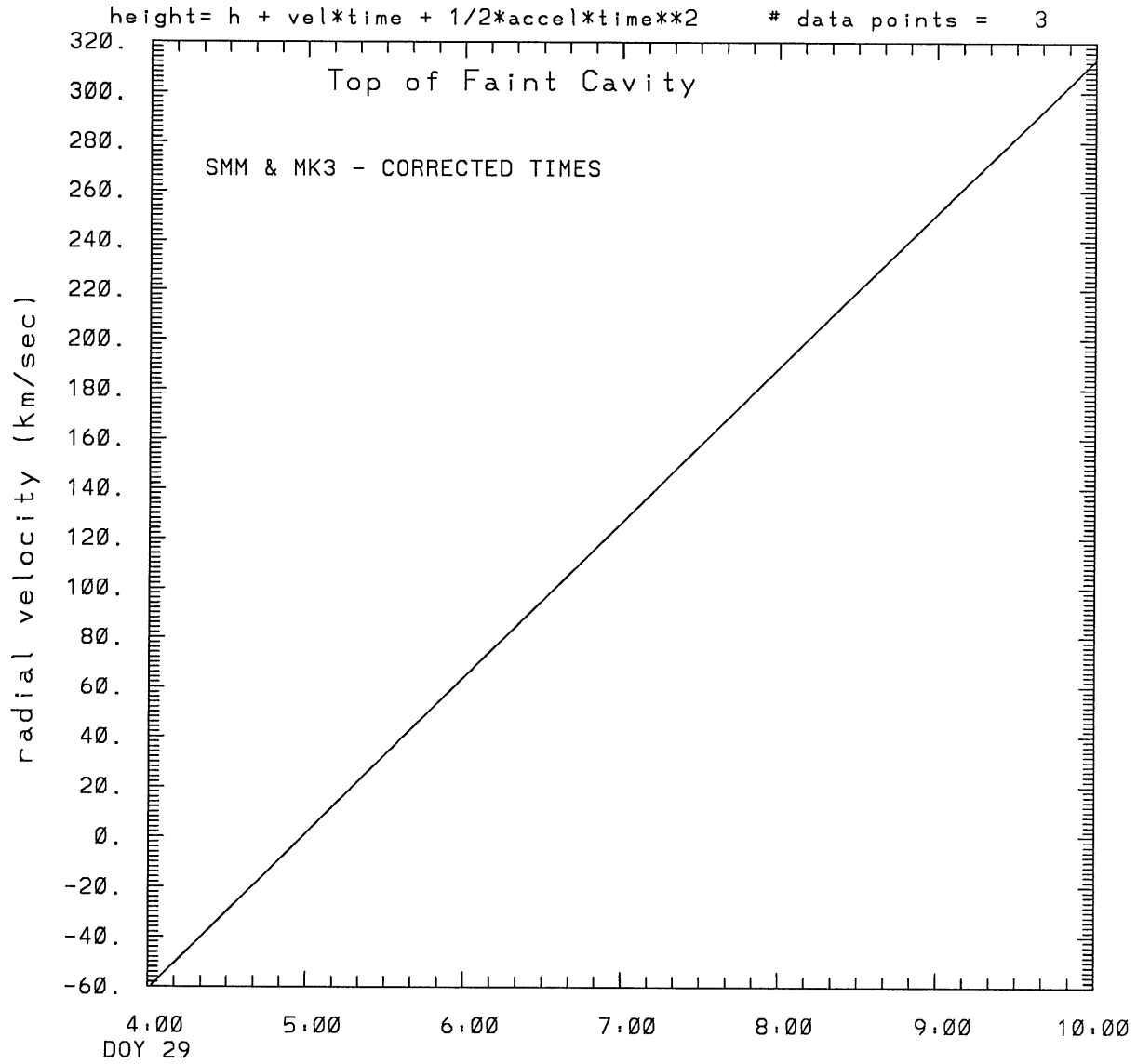


tstart=DOY 29 4.58 from derivative=0

Event begins at 2.14 Solar Radii

radial acceleration = 0.0173 ± 0.0000 [km/sec**2]

SMM C/P 1989 DOY 29 30 +/- 0 degrees



tstart=DOY 29 4:58 from derivative=0
Event begins at 2.14 Solar Radii
radial acceleration=0.173E-01 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	radius	angle	error in angle	error in angle	datatype
1989	29	4:21:34	2.20 +/-	0.20	30.0 +/-	0.5		SMM
1989	29	6:28:24	2.50 +/-	0.20	30.0 +/-	0.5		SMM
1989	29	8: 2:15	3.65 +/-	0.15	30.0 +/-	1.0		SMM

Structure being measured:
Top of Faint Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.132E+03 +/- 0.223E+02 [minutes]
In more convenient units:
Event began at DOY 29 1:50 +/- 0.223E+02 [minutes]

Origin defined at DOY 29 4: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 78. +/- 21. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.189E+01 +/- 0.334E+00 [solar radii]
c(2) = 0.675E-02 +/- 0.182E-02 [radii/min]
c(2) = 0.783E+02 +/- 0.211E+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)= 0.46468E+00 [radii] see Bevington pg. 114
error in c(2)= 0.28249E-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) = 30. +/- 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 4:21 = 0.000E+00 km/sec
The TOTAL velocity at 4:21 = 78. km/sec

The TANGENTIAL velocity at 6:28 = 0.000E+00 km/sec
The TOTAL velocity at 6:28 = 78. km/sec

The TANGENTIAL velocity at 8: 2 = 0.000E+00 km/sec
The TOTAL velocity at 8: 2 = 78. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.77
Standard Deviation in start time measurement = 0.904E+02
Error in time = 0.65541E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.826E-01
Reduced Chi Squared = 0.380E+00
Chi Squared = 0.380E+00
The probability for exceeding chi square = 0.774E+00

The correlation coefficient = 0.916E+00
The probability that no LINEAR correlation exists between the variables = 0.26261
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	29	4:21:34	2.20 +/-	0.20	30.0 +/-	0.5	SMM
1989	29	6:28:24	2.50 +/-	0.20	30.0 +/-	0.5	SMM
1989	29	8: 2:15	3.65 +/-	0.15	30.0 +/-	1.0	SMM

Structure being measured:
Top of Faint Cavity

OUTPUT:

START TIME:

tstart=DOY 29 4:58 from derivative = 0
Event begins at 2.14 Solar Radii
Origin defined at DOY 29 4: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.173E-01 +/- 0.419E-07 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.229E+01 +/- 0.150E-05 [solar radii]
c(2) = -0.525E-02 +/- 0.297E-07 [radii/min]
c(2) = -0.609E+02 +/- 0.344E-03 [km/sec]
c(3) = 0.448E-04 +/- 0.108E-09 [radii/min**2]
c(3) = 0.173E-01 +/- 0.419E-07 [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) = 30. +/- 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 4:21 = 0.000E+00 km/sec
The TOTAL velocity at 4:21 = -38. km/sec

The TANGENTIAL velocity at 6:28 = 0.000E+00 km/sec
The TOTAL velocity at 6:28 = 93. km/sec

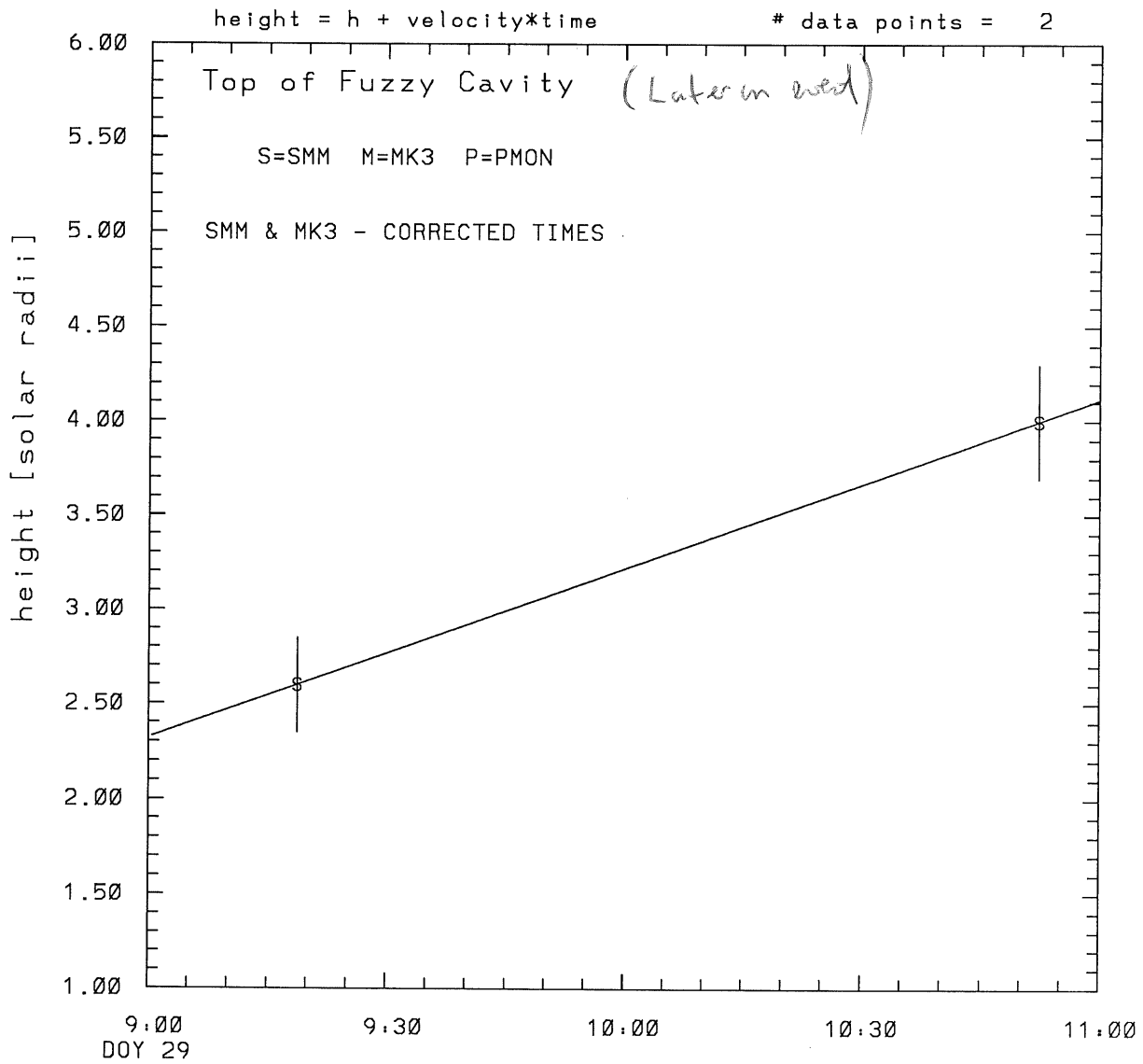
The TANGENTIAL velocity at 8: 2 = 0.000E+00 km/sec
The TOTAL velocity at 8: 2 = 191. km/sec

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!

SMM C/P 1989 DOY 29 2 +/- 0 degrees



tstart=DOY 29 7.32 +/- 0.0 [min.]
radial velocity= 174. +/- 0. [km/sec]

1989 July 29

Top of Fuzzy Cavity
[7:32] 1st order only

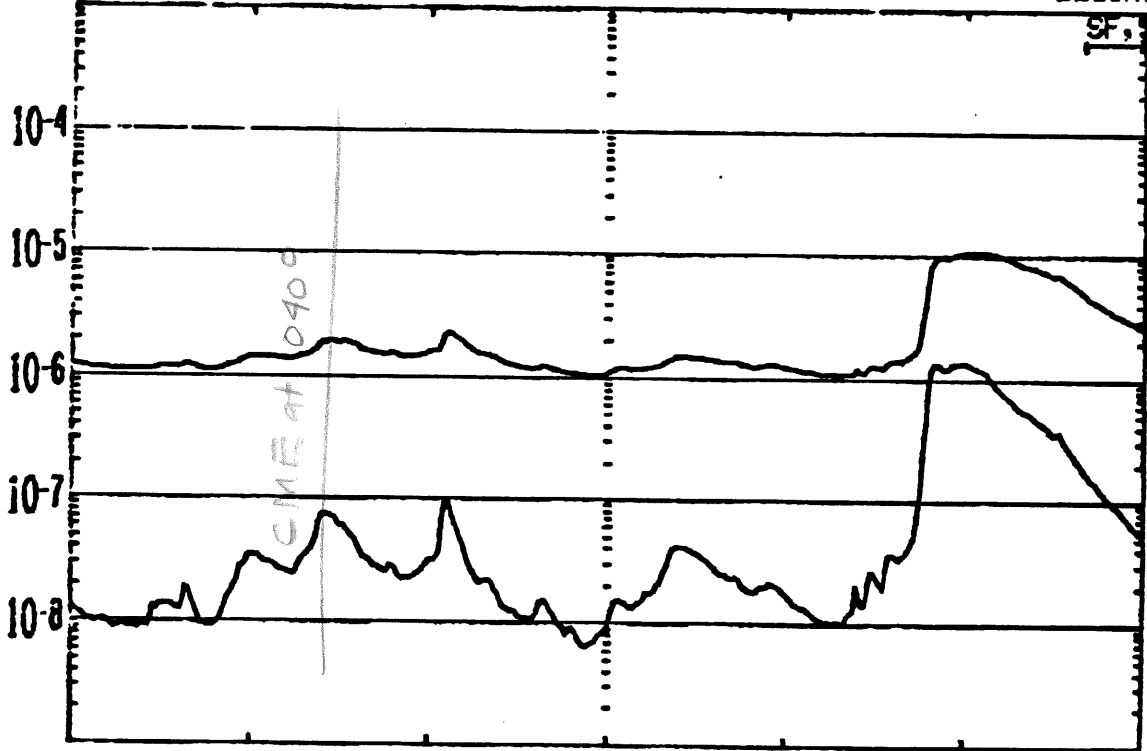
ARRAY AND OPTICAL DATA TOGETHER

STOP

BEGIN: 29 JAN 89

SF, 330 318 W 11

Watts meter²



X
M
C
B
A
GOES 7 0.5-4.0A GOES 7 1.0-8.0A
OPTICAL FLARES

29/0630

29/0900

29/1200

SAA's
NIGHT

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

RUN: 2211UT
3 FEB 89

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	29	9:18:45	2.60	+/- 0.25	2.0	+/- 0.5	SMM
1989	29	10:52:18	4.00	+/- 0.30	2.0	+/- 0.5	SMM

Structure being measured:
Top of Fuzzy Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.882E+02 +/- 0.000E+00$ [minutes]
In more convenient units:
Event began at DOY 29 7:32 +/- 0.000E+00 [minutes]

Origin defined at DOY 29 9: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 174. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.232E+01 +/- 0.269E-06$ [solar radii]
 $c(2) = 0.150E-01 +/- 0.366E-08$ [radii/min]
 $c(2) = 0.174E+03 +/- 0.425E-04$ [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:

$a(1) = 2. +/- 0.$ [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 9:18 = 0. km/sec

The TOTAL velocity at 9:18 = 174. km/sec

The TANGENTIAL velocity at 10:52 = 0. km/sec

The TOTAL velocity at 10:52 = 174. 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!