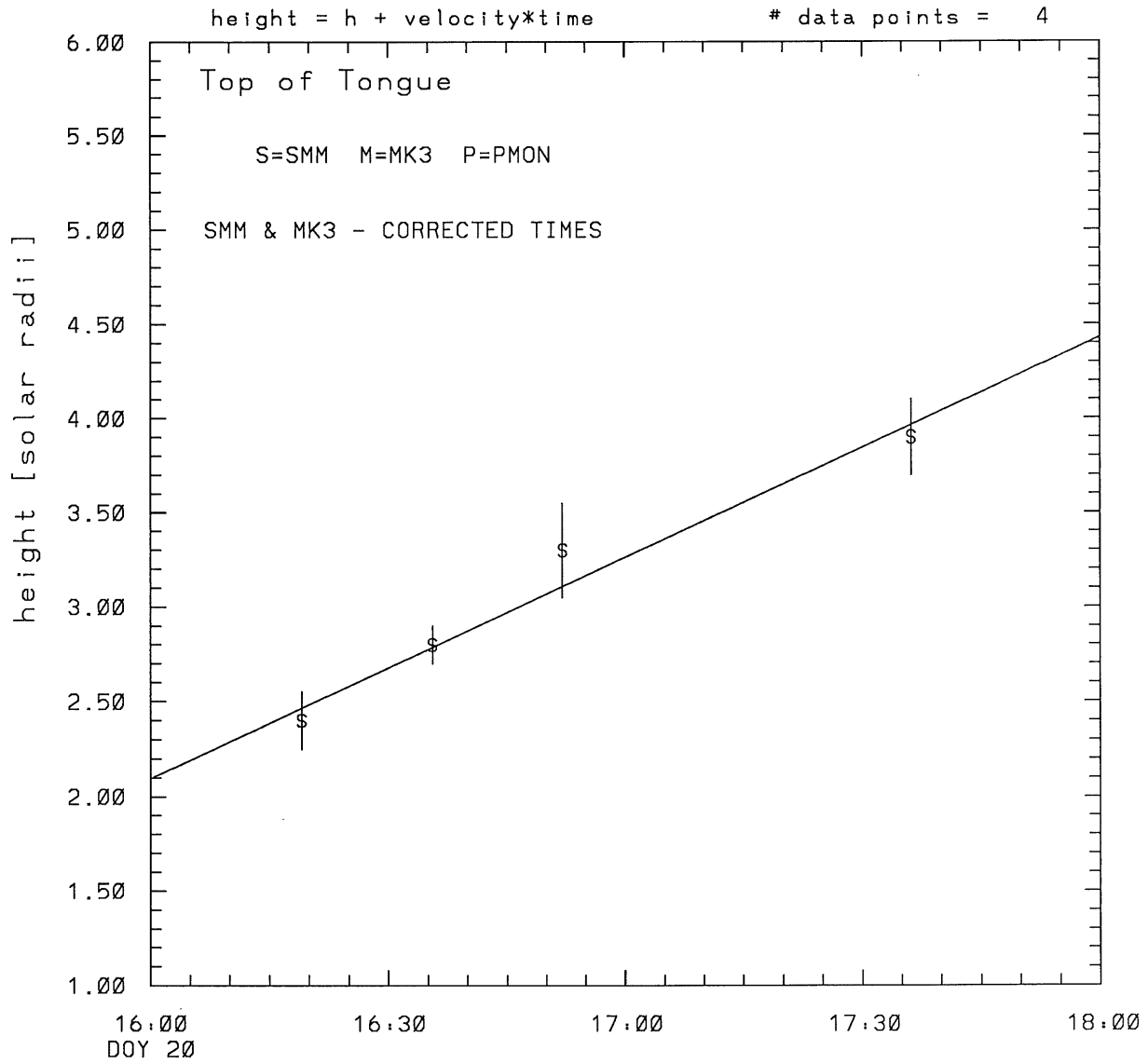
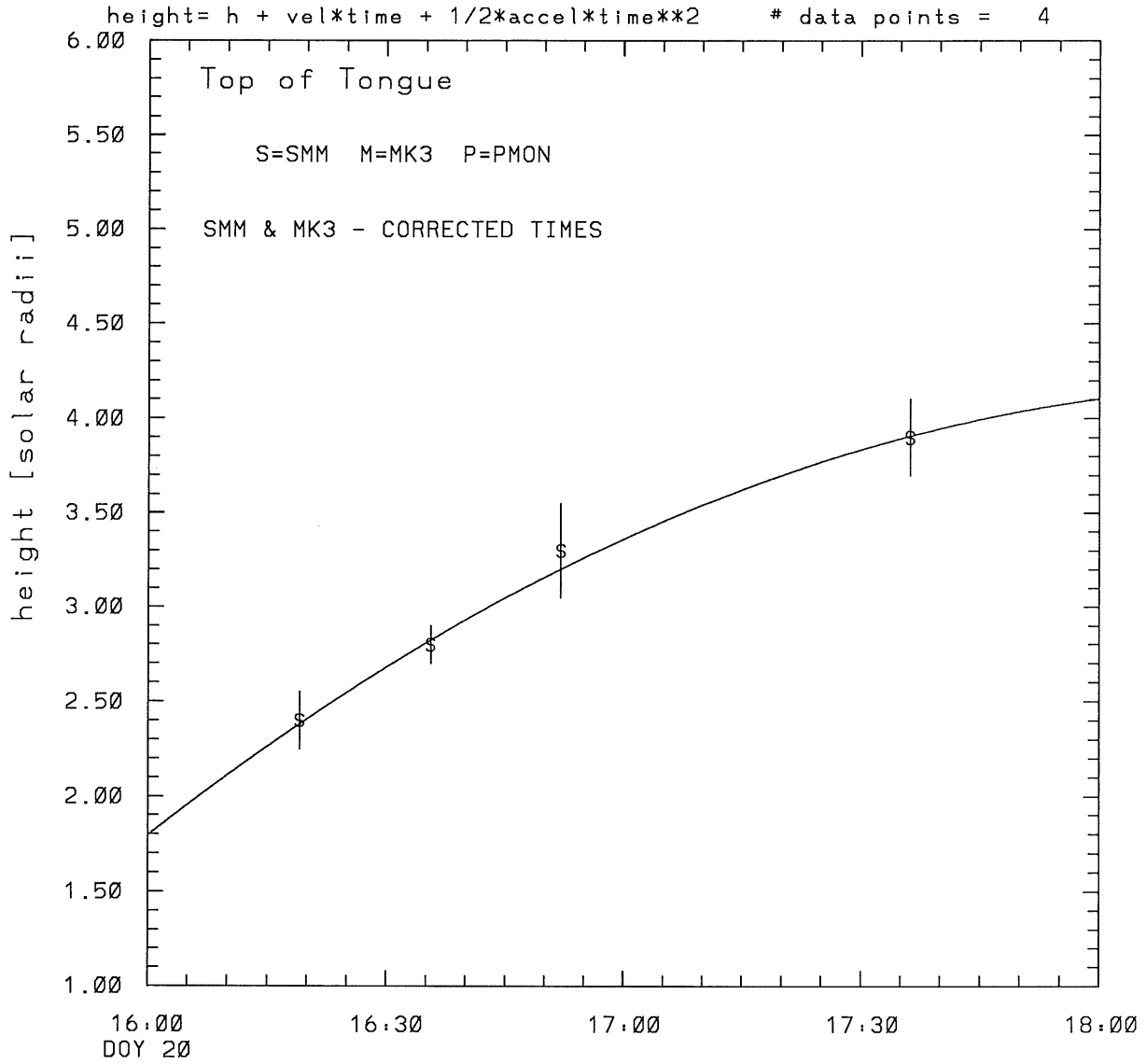


SMM C/P 1989 DOY 20 293 +/- 0 degrees



tstart=DOY 20 15: 4 +/- 2.3 [min.]
radial velocity= 226. +/- 20. [km/sec]

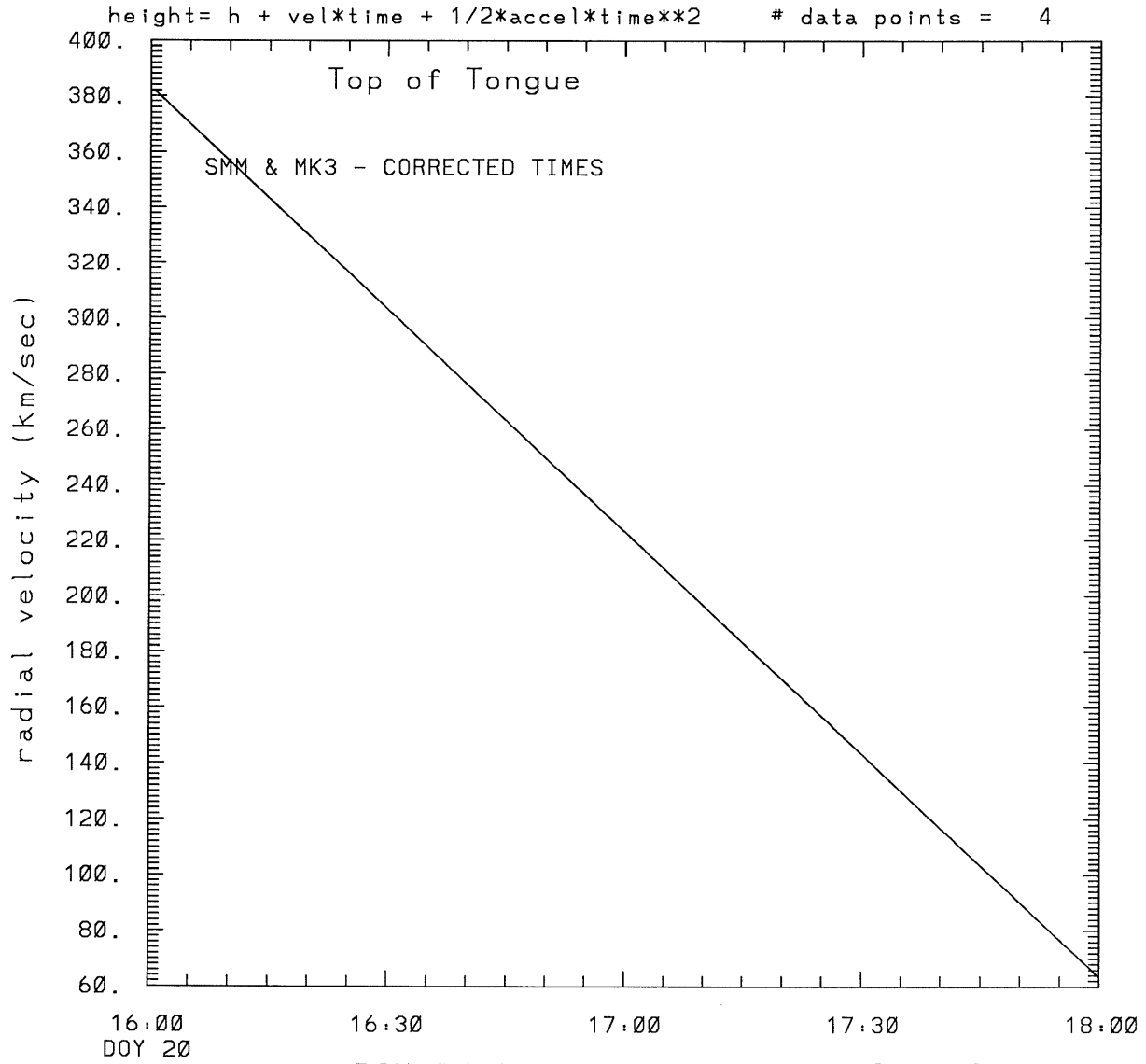
SMM C/P 1989 DOY 20 293 +/- 0 degrees



tstart=DOY 20 15:38 +/- 5.6 [min.]

radial acceleration = -0.0444 ± 0.0181 [km/sec**2]

SMM C/P 1989 DOY 20 293 +/- 0 degrees

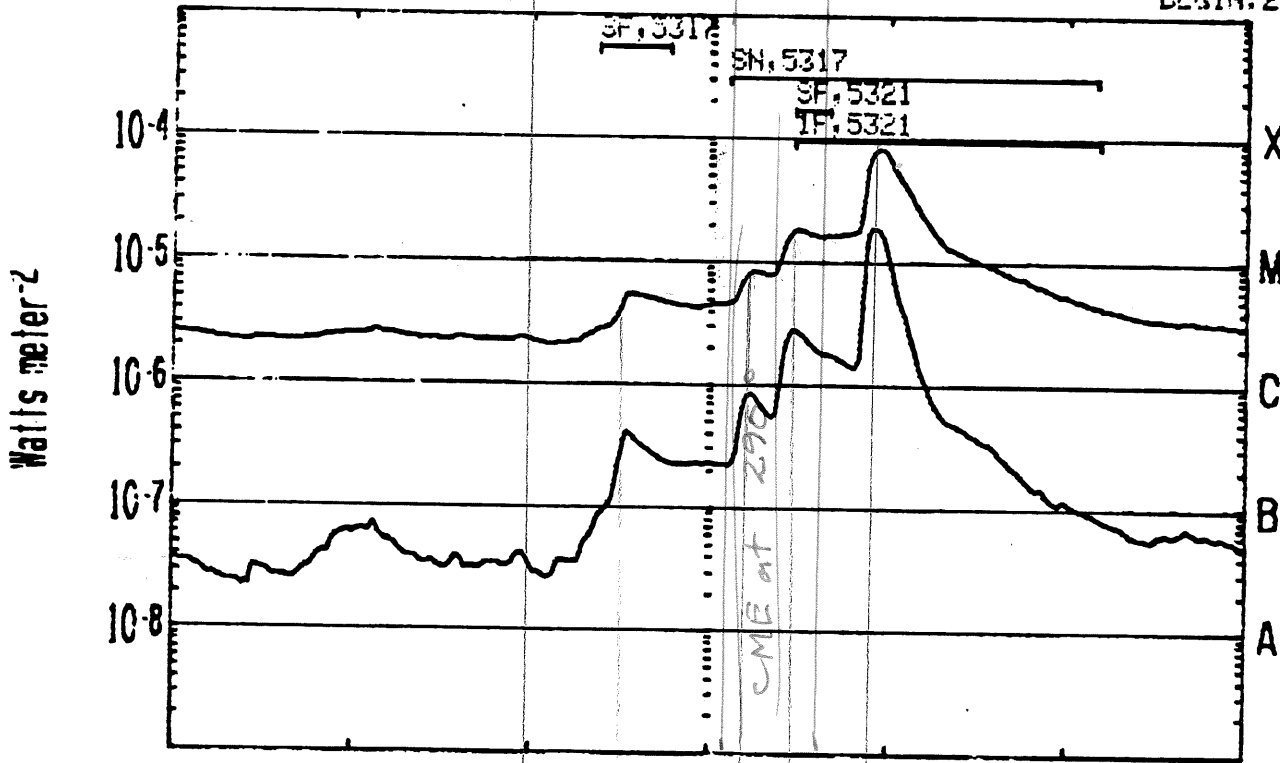


DOY 20 tstart=DOY 20 15:38 +/- 5.6 [min.]

radial acceleration=-.444E-01 km/sec**2

KRBY and OPTICAL DATA TOGETHER

BEGIN: 20 JAN 89



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

20/1200

20/1500

20/1800

MAX @14:35

MAX @15:15

MAX @15:30

MAX @15:55

SAA's NIGHT

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

RUN: 1557UT
26 JAN 89

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in	angle	error in	datatype
1989	20	16:19: 2	2.40	+/- 0.15	293.0	+/- 0.5	SMM	
1989	20	16:35:35	2.80	+/- 0.10	293.0	+/- 0.5	SMM	
1989	20	16:52: 6	3.30	+/- 0.25	293.0	+/- 0.5	SMM	
1989	20	17:36:10	3.90	+/- 0.20	293.0	+/- 0.5	SMM	

Structure being measured:

Top of Tongue

OUTPUT:

START TIME:

Event began at $t = 0 + -0.562E+02 +/- 0.226E+01$ [minutes]

In more convenient units:

Event began at DOY 20 15: 4 +/- 0.226E+01 [minutes]

Origin defined at DOY 20 16: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 226. +/- 20. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.209E+01 +/- 0.812E-01 [solar radii]
c(2) = 0.195E-01 +/- 0.171E-02 [radii/min]
c(2) = 0.226E+03 +/- 0.199E+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)= 0.15317E+00 [radii] see Bevington pg. 114

error in c(2)= 0.26277E-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) = 293. +/- 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 16:19 = 0. km/sec

The TOTAL velocity at 16:19 = 226. km/sec

The TANGENTIAL velocity at 16:35 = 0. km/sec

The TOTAL velocity at 16:35 = 226. km/sec

The TANGENTIAL velocity at 16:52 = 0. km/sec

The TOTAL velocity at 16:52 = 226. km/sec

The TANGENTIAL velocity at 17:36 = 0. km/sec

The TOTAL velocity at 17:36 = 226. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65

Standard Deviation in start time measurement = 0.287E+02

Error in time = 0.10974E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.647E-02

Reduced Chi Squared = 0.663E-01

Chi Squared = 0.133E+00

The probability for exceeding chi square = 0.994E+00

The correlation coefficient = 0.982E+00

The probability that no LINEAR correlation exists between the variables = 0.1756E-01

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

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	error in angle	datatype
1989	20	16:19: 2	2.40	+/- 0.15	293.0 +/- 0.5	SMM
1989	20	16:35:35	2.80	+/- 0.10	293.0 +/- 0.5	SMM
1989	20	16:52: 6	3.30	+/- 0.25	293.0 +/- 0.5	SMM
1989	20	17:36:10	3.90	+/- 0.20	293.0 +/- 0.5	SMM

Structure being measured:
Top of Tongue

OUTPUT:

START TIME:

Event began at $t = 0 + -0.223E+02 +/- 0.557E+01$ [minutes]
In more convenient units:
Event began at DOY 20 15:38 +/- 0.557E+01 [minutes]

Origin defined at DOY 20 16: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.444E-01 +/- 0.181E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.179E+01 +/- 0.132E+00$ [solar radii]
 $c(2) = 0.330E-01 +/- 0.564E-02$ [radii/min]
 $c(2) = 0.383E+03 +/- 0.654E+02$ [km/sec]
 $c(3) = -0.115E-03 +/- 0.468E-04$ [radii/min**2]
 $c(3) = -0.444E-01 +/- 0.181E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.24143E+00$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.65327E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.99634E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.31681E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.82233E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.26201E-04$ [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) = 293. +/- 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 16:19 = 0. km/sec

The TOTAL velocity at 16:19 = 332. km/sec

The TANGENTIAL velocity at 16:35 = 0. km/sec

The TOTAL velocity at 16:35 = 288. km/sec

The TANGENTIAL velocity at 16:52 = 0. km/sec

The TOTAL velocity at 16:52 = 244. km/sec

The TANGENTIAL velocity at 17:36 = 0. km/sec

The TOTAL velocity at 17:36 = 127. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65
Standard Deviation in start time measurement = 0.287E+02
Value of reduced Chi Squared returned from nllst2 = 0.242E-02
Reduced Chi Squared = 0.304E-01
Chi Squared = 0.304E-01
The probability for exceeding chi square = 0.961E+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 = 0.8737E+00

The correlation between the data and the time**2 term = 0.8371E+00

The correlation between the data and the complete equation of motion = 0.9777E+00

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