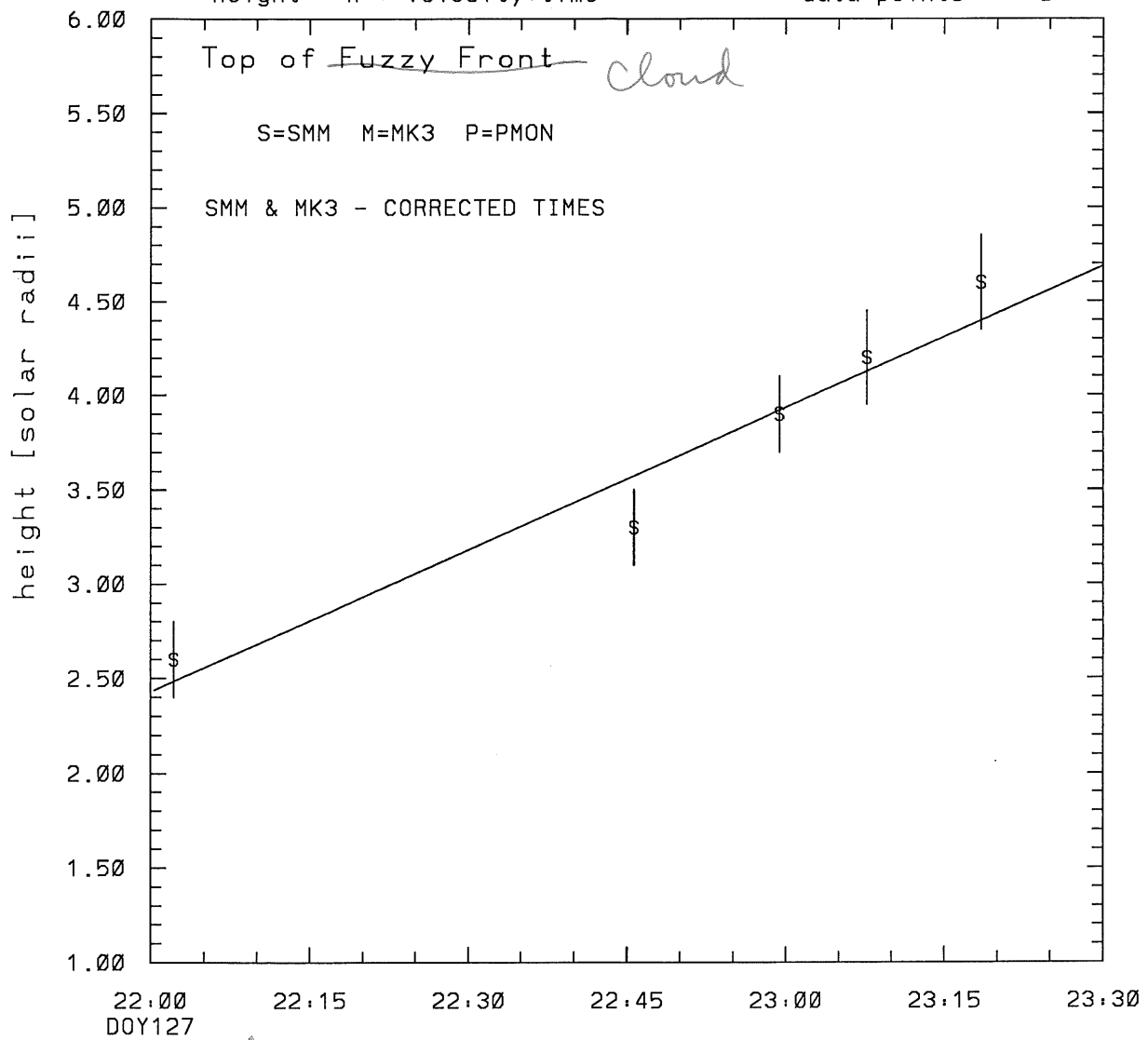


SMM C/P 1980 DOY127 190 +/- 0 degrees

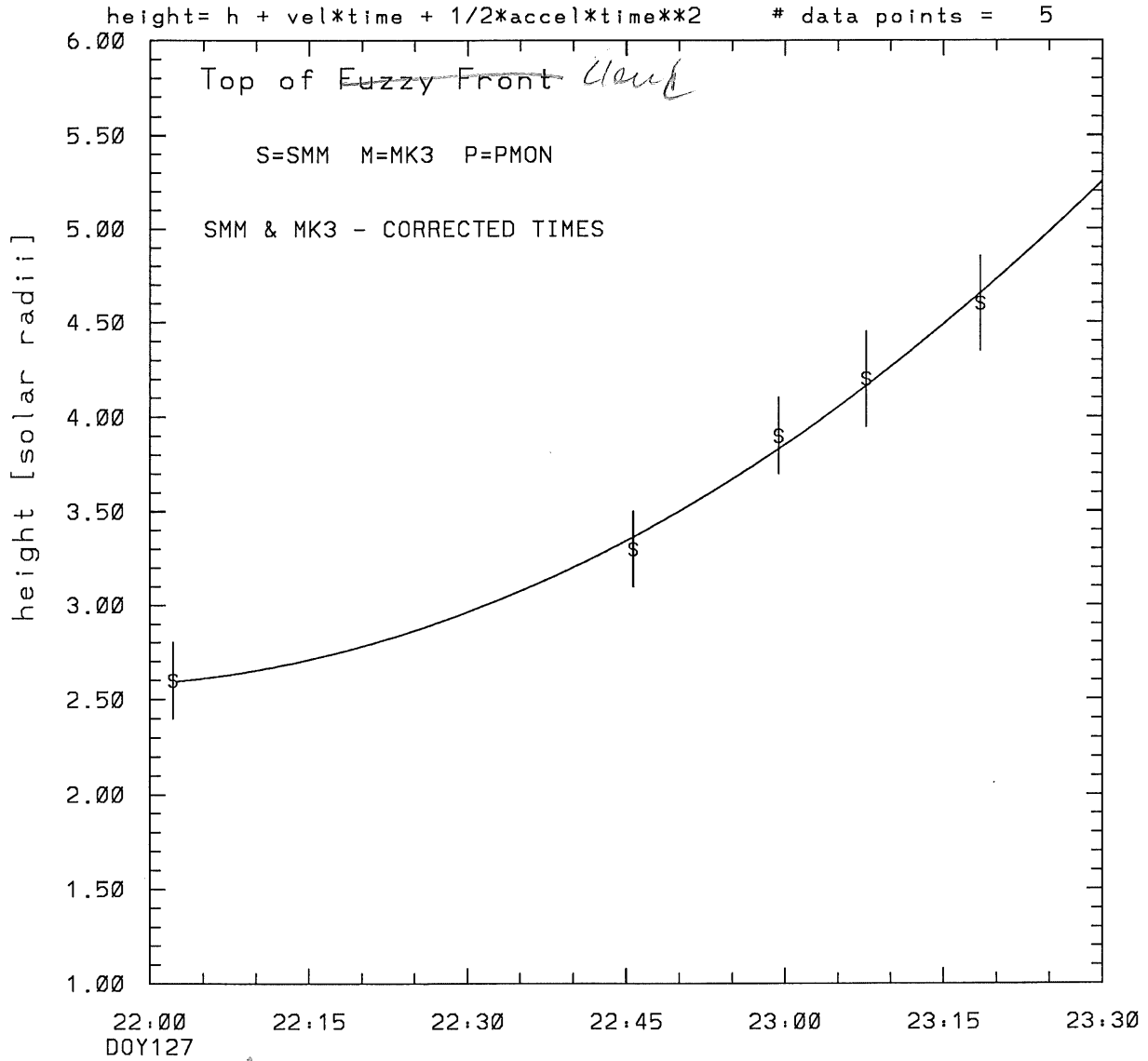
height = h + velocity*time

data points = 5



tstart=DOY127 21: 5 +/- 3.0 [min.]
radial velocity= 291. +/- 36. [km/sec]

SMM C/P 1980 DOY127 190 +/- 0 degrees

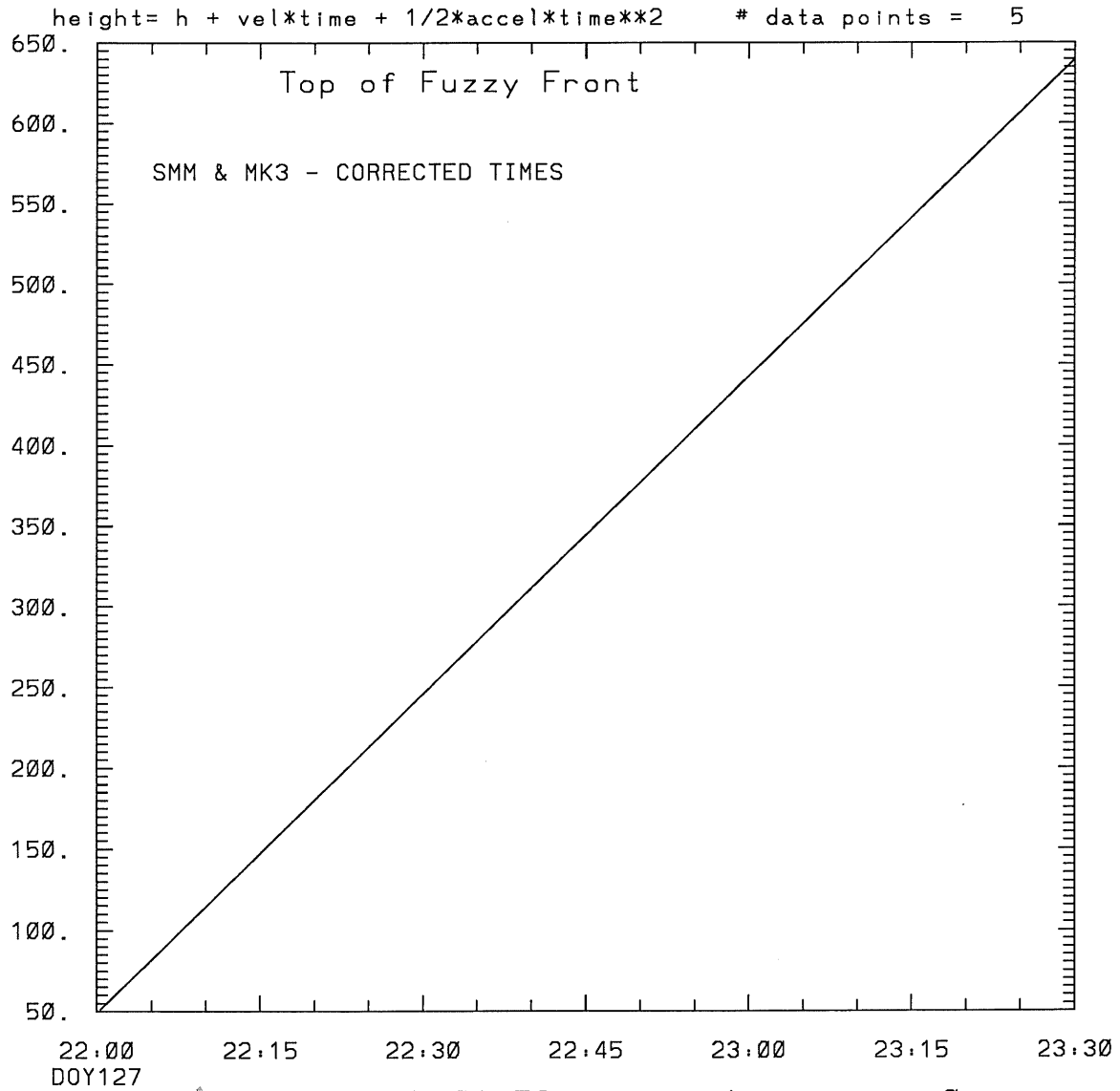


tstart=DOY127 21:53 from derivative=0

Event begins at 2.57 Solar Radii

radial acceleration = 0.1094 +/- 0.0209 [km/sec**2]

SMM C/P 1980 DOY127 190 +/- 0 degrees



tstart=DOY127 21:53 from derivative=0
Event begins at 2.57 Solar Radii
radial acceleration=0.109E+00 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	127	22: 2:12	2.60 +/- 0.20		190.0 +/- 0.5		SMM
1980	127	22:45:40	3.30 +/- 0.20		190.0 +/- 1.0		SMM
1980	127	22:59:25	3.90 +/- 0.20		190.0 +/- 1.0		SMM
1980	127	23: 7:42	4.20 +/- 0.25		190.0 +/- 1.0		SMM
1980	127	23:18:29	4.60 +/- 0.25		190.0 +/- 1.0		SMM

Structure being measured:

Top of Fuzzy Front

OUTPUT:

START TIME:

Event began at $t = 0 + -0.570E+02 +/- 0.299E+01$ [minutes]

In more convenient units:

Event began at DOY 127 21: 5 +/- 0.299E+01 [minutes]

Origin defined at DOY127 22: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 291. +/- 36. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.243E+01 +/- 0.168E+00$ [solar radii]
 $c(2) = 0.251E-01 +/- 0.311E-02$ [radii/min]
 $c(2) = 0.291E+03 +/- 0.361E+02$ [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 $c(1) = 0.20509E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.35851E-02$ [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) = 190. +/- 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 22: 2 = 0.000E+00 km/sec

The TOTAL velocity at 22: 2 = 291. km/sec

The TANGENTIAL velocity at 22:45 = 0.000E+00 km/sec

The TOTAL velocity at 22:45 = 291. km/sec

The TANGENTIAL velocity at 22:59 = 0.000E+00 km/sec

The TOTAL velocity at 22:59 = 291. km/sec

The TANGENTIAL velocity at 23: 7 = 0.000E+00 km/sec

The TOTAL velocity at 23: 7 = 291. km/sec

The TANGENTIAL velocity at 23:18 = 0.000E+00 km/sec

The TOTAL velocity at 23:18 = 291. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.79

Standard Deviation in start time measurement = 0.265E+02

Error in time = 0.14680E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.347E-01

Reduced Chi Squared = 0.131E+00

Chi Squared = 0.392E+00

The probability for exceeding chi square = 0.991E+00

The correlation coefficient = 0.973E+00

The probability that no LINEAR correlation exists between the variables = 0.5324E-02

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
1980	127	22: 2:12	2.60	+/- 0.20	190.0	+/- 0.5	SMM
1980	127	22:45:40	3.30	+/- 0.20	190.0	+/- 1.0	SMM
1980	127	22:59:25	3.90	+/- 0.20	190.0	+/- 1.0	SMM
1980	127	23: 7:42	4.20	+/- 0.25	190.0	+/- 1.0	SMM
1980	127	23:18:29	4.60	+/- 0.25	190.0	+/- 1.0	SMM

Structure being measured:

Top of ~~Fuzzy Front~~ *Cloud*

OUTPUT:

START TIME:

tstart=DOY127 21:53 from derivative = 0

Event begins at 2.57 Solar Radii

Origin defined at DOY127 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.109E+00 +/- 0.209E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.258E+01 +/- 0.677E-01 [solar radii]
- c(2) = 0.421E-02 +/- 0.415E-02 [radii/min]
- c(2) = 0.488E+02 +/- 0.481E+02 [km/sec]
- c(3) = 0.283E-03 +/- 0.541E-04 [radii/min**2]
- c(3) = 0.109E+00 +/- 0.209E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = 0.88052E-01 [radii] Bevington pg 154 (8-30)
- Exact error in c(1) = 0.72815E-02 [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = 0.51461E-02 [radii/min] Bevington pg 154 (8-30)
- Exact error in c(2) = 0.22851E-02 [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = 0.64738E-04 [radii/min**2] Bevington pg 154 (8-30)
- Exact error in c(3) = 0.32006E-04 [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) = 190. +/- 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 22: 2 = 0.000E+00 km/sec

The TOTAL velocity at 22: 2 = 63. km/sec

The TANGENTIAL velocity at 22:45 = 0.000E+00 km/sec

The TOTAL velocity at 22:45 = 349. km/sec

The TANGENTIAL velocity at 22:59 = 0.000E+00 km/sec

The TOTAL velocity at 22:59 = 439. km/sec

The TANGENTIAL velocity at 23: 7 = 0.000E+00 km/sec

The TOTAL velocity at 23: 7 = 493. km/sec

The TANGENTIAL velocity at 23:18 = 0.000E+00 km/sec

The TOTAL velocity at 23:18 = 564. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.79

Standard Deviation in start time measurement = 0.265E+02

Value of reduced Chi Squared returned from nllst2 = 0.457E-02

Reduced Chi Squared = 0.215E-01

Chi Squared = 0.430E-01

The probability for exceeding chi square = 0.995E+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 = 0.9908E+00

The correlation between the data and the time**2 term = 0.9851E+00

The correlation between the data and the complete equation of motion = 0.9947E+00

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