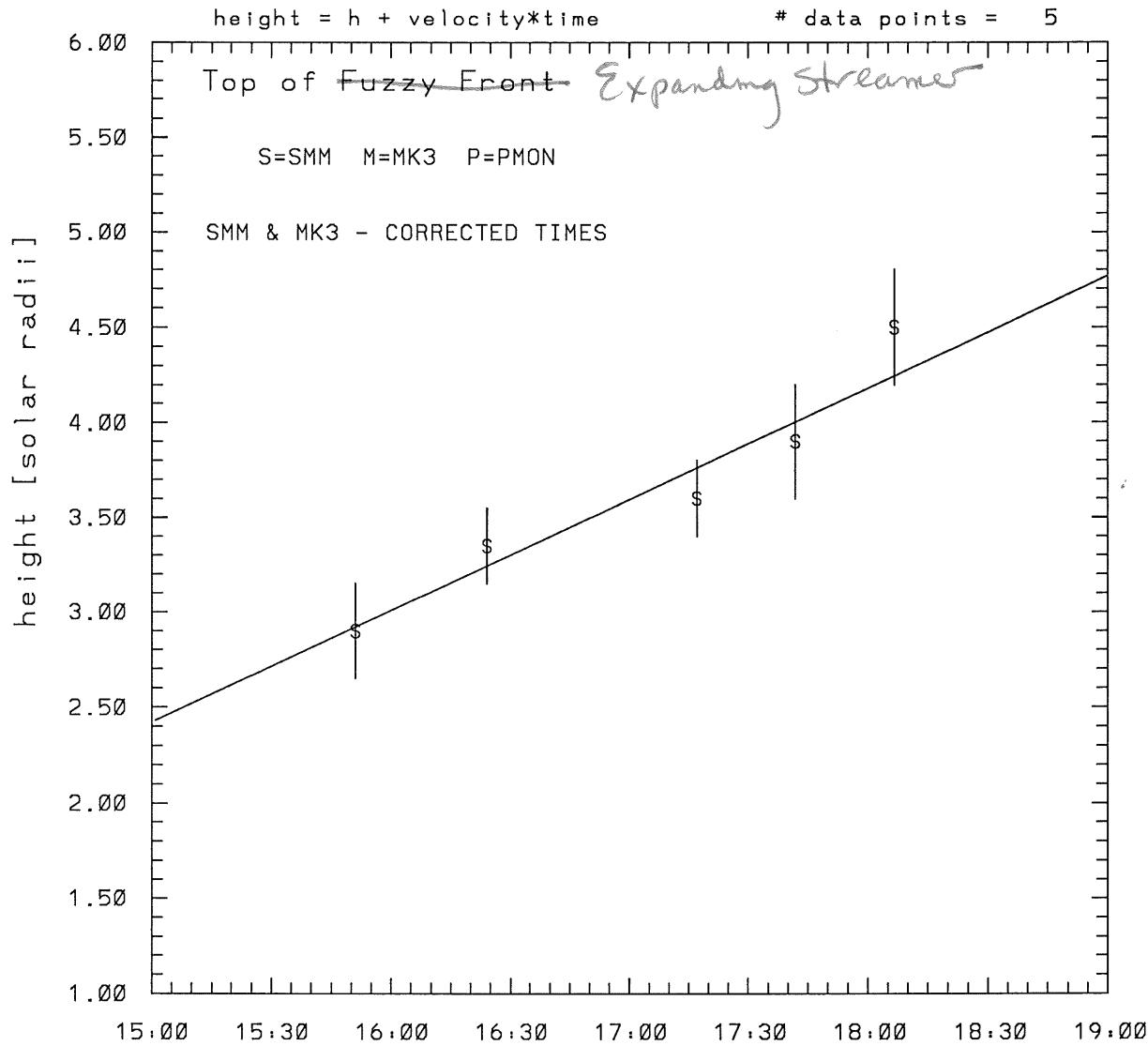
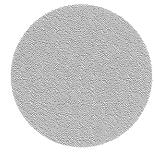


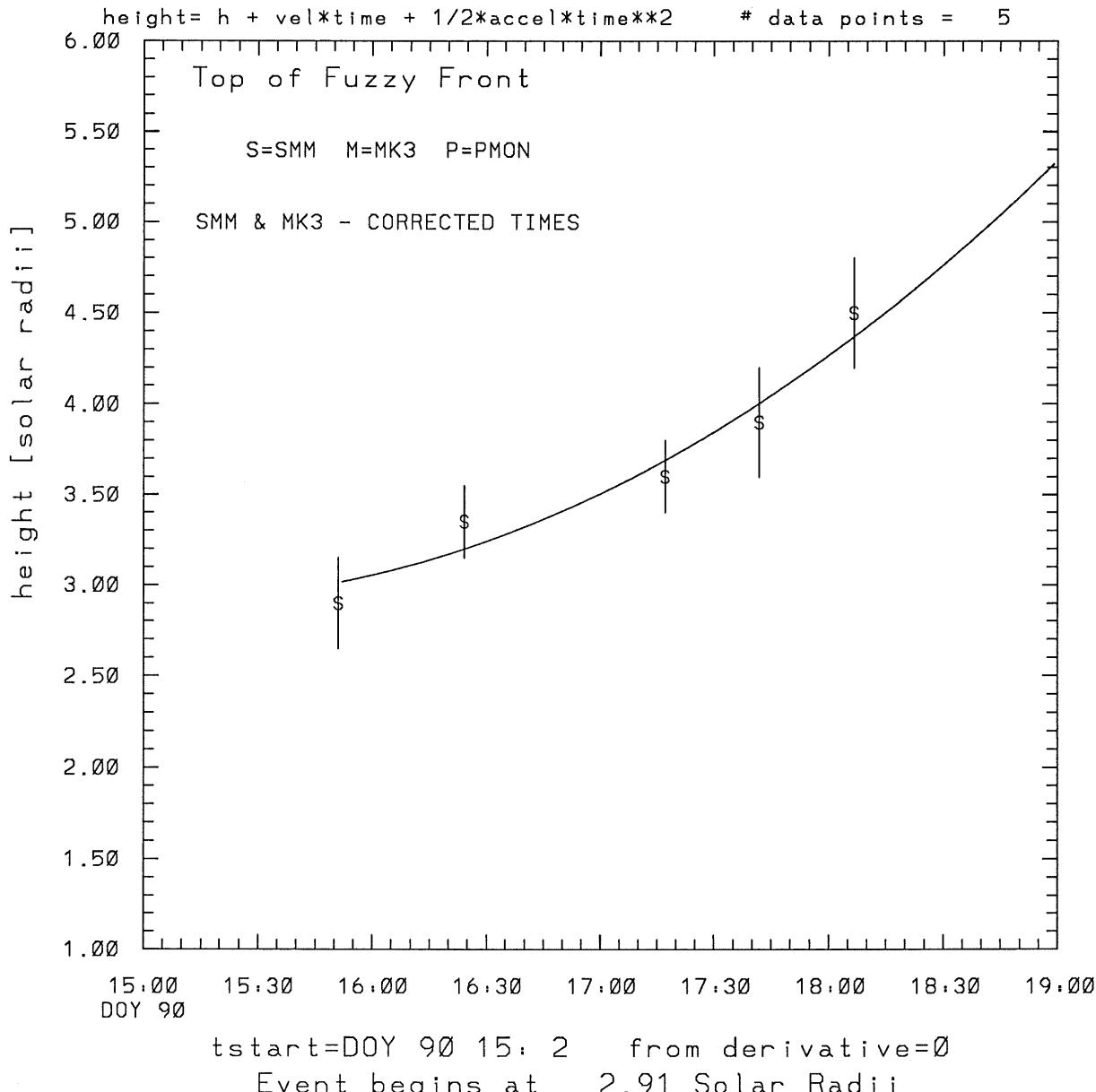
SMM C/P 1988 DOY 90 280 +/- 0 degrees



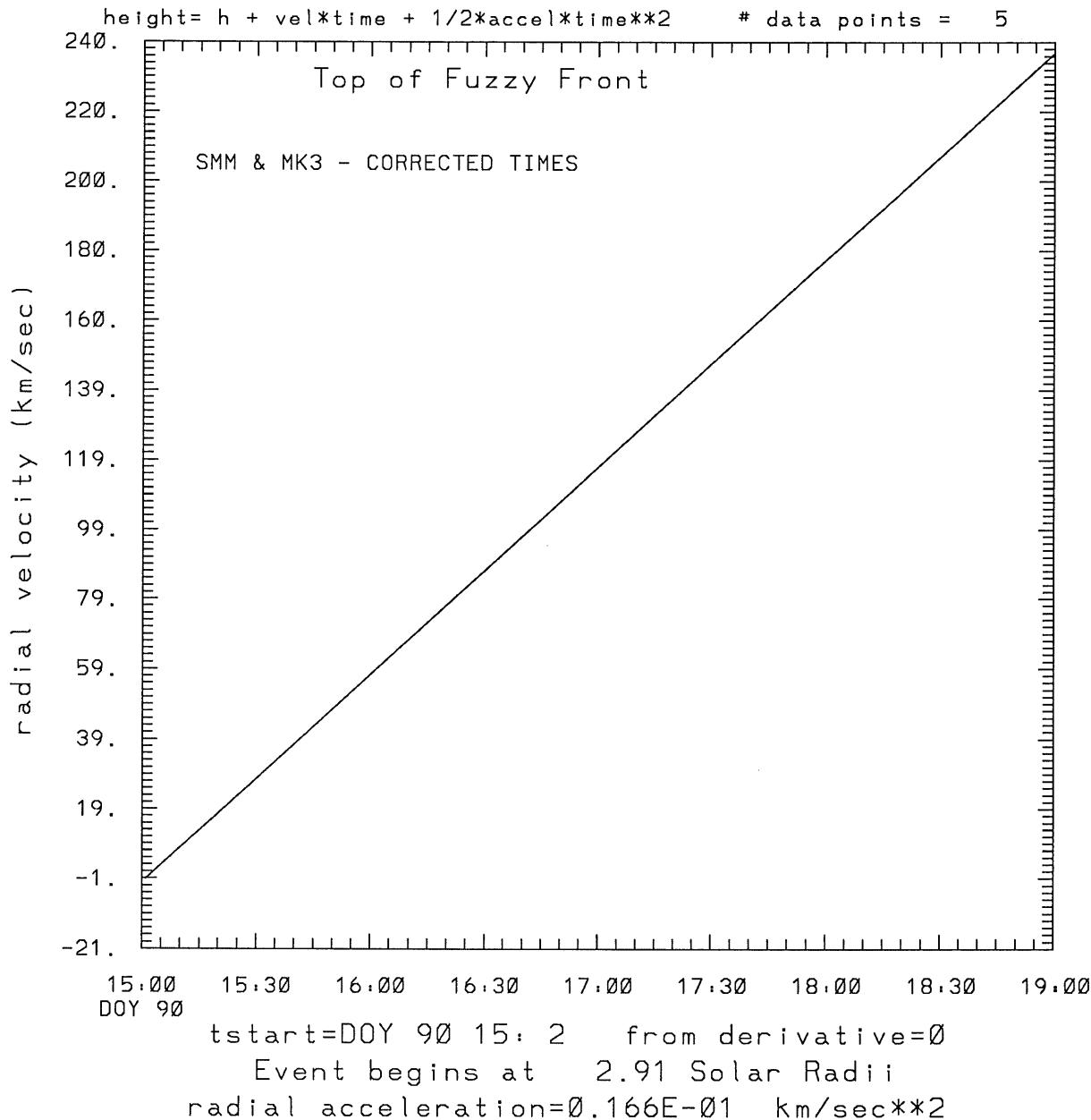
tstart=DOY 90 12:35 +/- 6.8 [min.]  
radial velocity= 113. +/- 18. [km/sec]



SMM C/P 1988 DOY 90 280 +/- 0 degrees



SMM C/P 1988 DOY 90 280 +/- 0 degrees



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This is a 1 order run

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\*\*\*\*\*

INPUT:

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year	doy	time	radii	radius	error in radii	angle	error in angle	datatype
1988	90	15:51: 8	2.90	+/- 0.25	280.0	+/- 0.5	SMM	
1988	90	16:24: 9	3.35	+/- 0.20	280.0	+/- 1.0	SMM	
1988	90	17:17: 4	3.60	+/- 0.20	280.0	+/- 1.0	SMM	
1988	90	17:41:52	3.90	+/- 0.30	280.0	+/- 1.0	SMM	
1988	90	18: 6:37	4.50	+/- 0.30	280.0	+/- 1.0	SMM	

\*\*\*\*\*

Structure being measured:

Top of Fuzzy Front Streamer

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\*\*\*\*\*

OUTPUT:

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START TIME:

Event began at t = 0 + -0.145E+03 +/- 0.685E+01 [minutes]

In more convenient units:

Event began at DOY 90 12:35 +/- 0.685E+01 [minutes]

Origin defined at DOY 90 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 113. +/- 18. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.242E+01 +/- 0.194E+00 [solar radii]

c(2) = 0.977E-02 +/- 0.156E-02 [radii/min]

c(2) = 0.113E+03 +/- 0.181E+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)= 0.23327E+00 [radii] see Bevington pg. 114

error in c(2)= 0.17434E-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) = 280. +/- 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 15:51 = 0. km/sec

The TOTAL velocity at 15:51 = 113. km/sec

The TANGENTIAL velocity at 16:24 = 0. km/sec

The TOTAL velocity at 16:24 = 113. km/sec

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

The TOTAL velocity at 17:17 = 113. km/sec

The TANGENTIAL velocity at 17:41 = 0. km/sec

The TOTAL velocity at 17:41 = 113. km/sec

The TANGENTIAL velocity at 18: 6 = 0. km/sec

The TOTAL velocity at 18: 6 = 113. km/sec

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The following info is for estimating goodness of the fit

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Fit is ok [ier=1]

Standard Deviation in the height = 0.60

Standard Deviation in start time measurement = 0.498E+02

Error in time = 0.34442E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.252E-01

Reduced Chi Squared = 0.156E+00

Chi Squared = 0.468E+00

The probability for exceeding chi square = 0.995E+00

The correlation coefficient = 0.962E+00

The probability that no LINEAR correlation exists between the variables = 0.8906E-02

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

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This is a 2 order run

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\*\*\*\*\*

INPUT:

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year	doy	time	radii	radius	error in radii	angle	error in angle	datatype
1988	90	15:51: 8	2.90	+/- 0.25	280.0	+/- 0.5	SMM	
1988	90	16:24: 9	3.35	+/- 0.20	280.0	+/- 1.0	SMM	
1988	90	17:17: 4	3.60	+/- 0.20	280.0	+/- 1.0	SMM	
1988	90	17:41:52	3.90	+/- 0.30	280.0	+/- 1.0	SMM	
1988	90	18: 6:37	4.50	+/- 0.30	280.0	+/- 1.0	SMM	

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Structure being measured:

Top of Fuzzy Front

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OUTPUT:

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START TIME:

tstart=DOY 90 15: 2 from derivative = 0

Event begins at 2.91 Solar Radii

Origin defined at DOY 90 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.166E-01 +/- 0.157E-01 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.291E+01 +/- 0.502E+00 [solar radii]  
c(2) = -0.210E-03 +/- 0.956E-02 [radii/min]  
c(2) = -0.244E+01 +/- 0.111E+03 [km/sec]  
c(3) = 0.430E-04 +/- 0.406E-04 [radii/min\*\*2]  
c(3) = 0.166E-01 +/- 0.157E-01 [km/sec\*\*2]

/

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.59422E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.24434E+00 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.11495E-01 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.47577E-02 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.48189E-04 [radii/min\*\*2] Bevington pg 154 (8-30)

Exact error in c(3) = 0.20482E-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) = 280. +/- 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 15:51 = 0. km/sec

The TOTAL velocity at 15:51 = 49. km/sec

The TANGENTIAL velocity at 16:24 = 0. km/sec

The TOTAL velocity at 16:24 = 81. km/sec

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

The TOTAL velocity at 17:17 = 134. km/sec

The TANGENTIAL velocity at 17:41 = 0. km/sec

The TOTAL velocity at 17:41 = 159. km/sec

The TANGENTIAL velocity at 18: 6 = 0. km/sec

The TOTAL velocity at 18: 6 = 184. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.60

Standard Deviation in start time measurement = 0.498E+02

Value of reduced Chi Squared returned from nllst2 = 0.244E-01

Reduced Chi Squared = 0.106E+00

Chi Squared = 0.212E+00

The probability for exceeding chi square = 0.976E+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 = 0.8852E+00

The correlation between the data and the  $t^{**2}$  term = 0.8930E+00

The correlation between the data and the complete equation of motion = 0.9376E+00

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