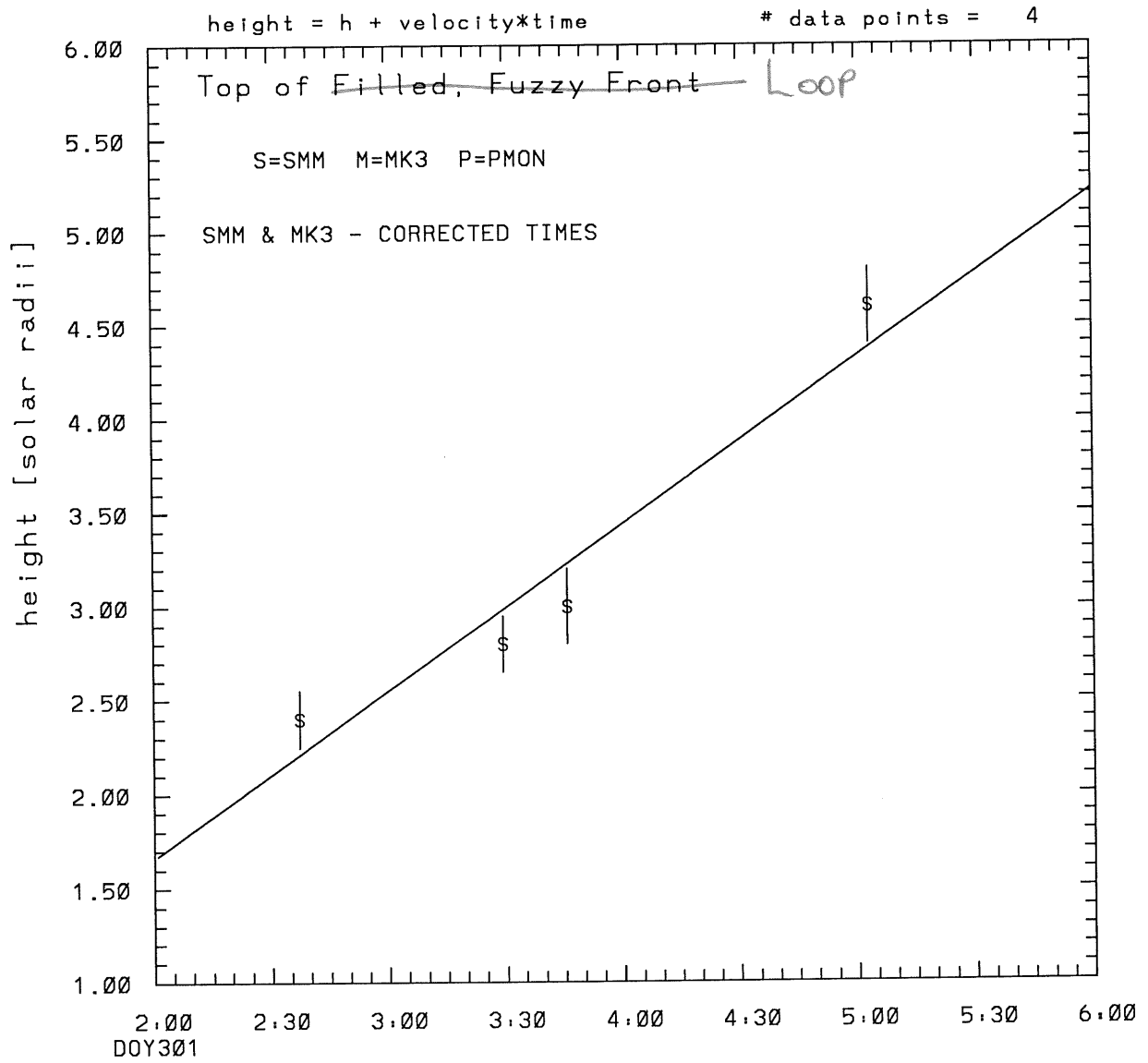
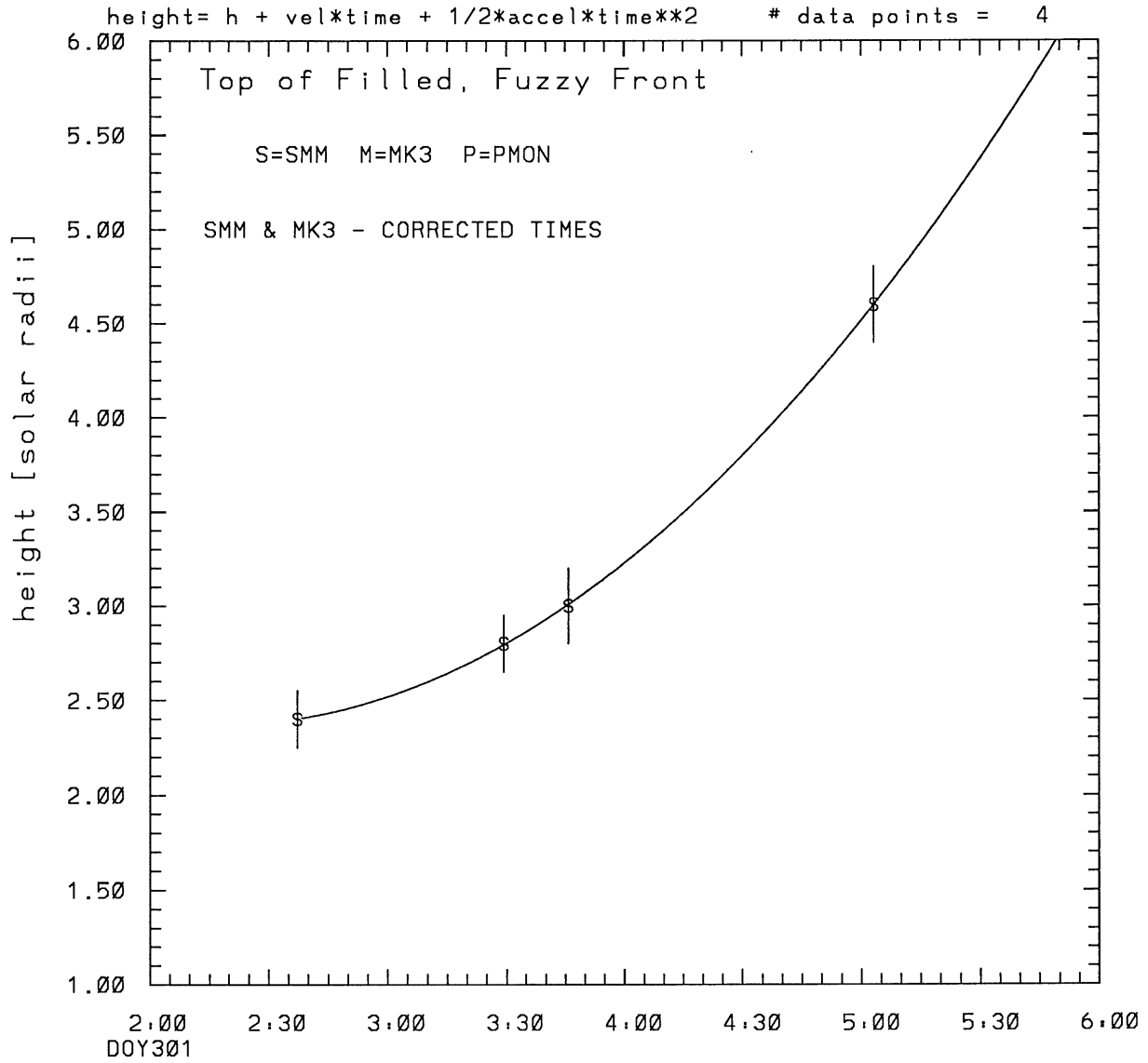


SMM C/P 1988 DOY301 140 +/- 0 degrees



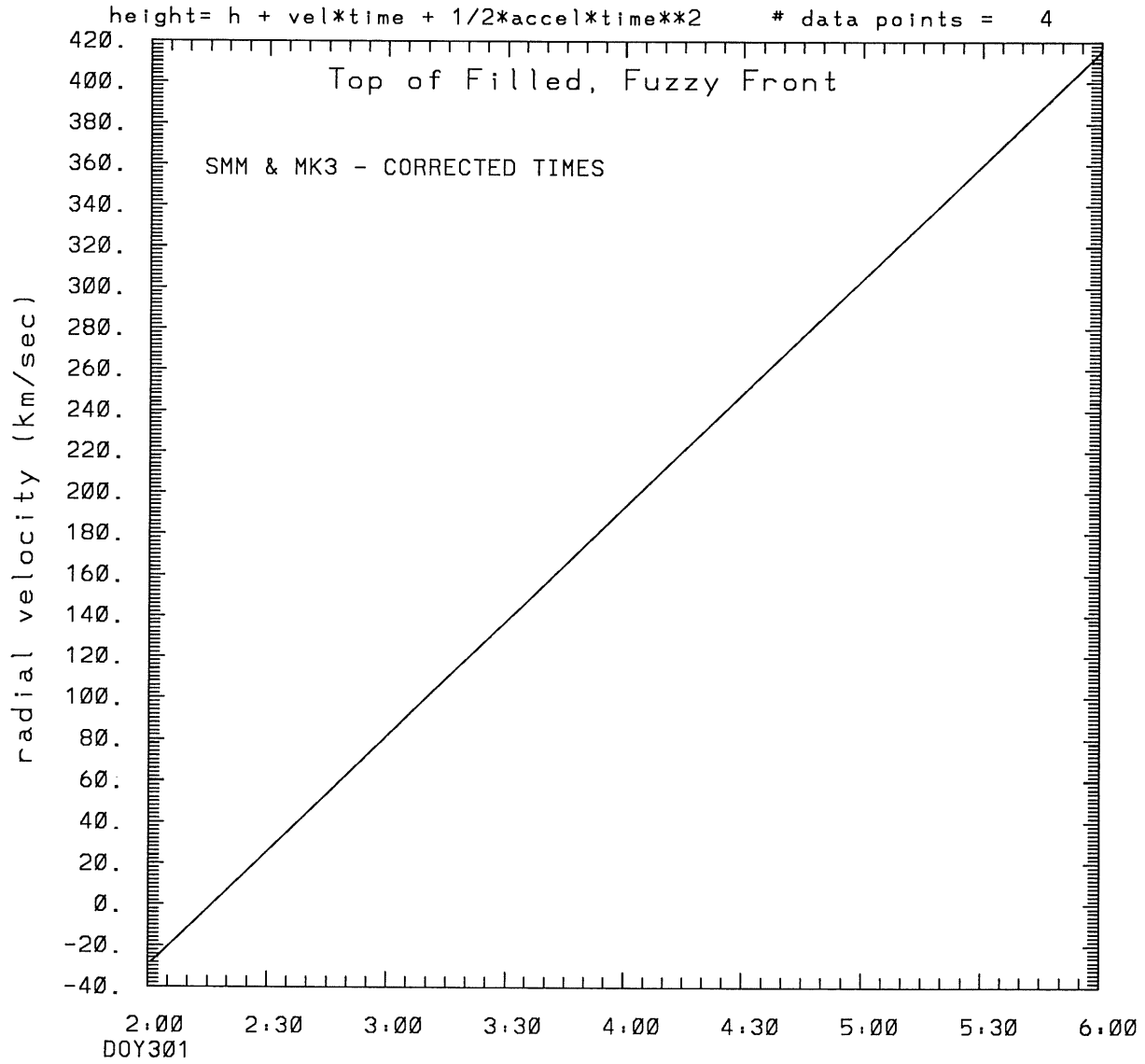
tstart=DOY301 1:17 +/- 5.9 [min.]  
radial velocity= 172. +/- 27. [km/sec]

SMM C/P 1988 DOY301 140 +/- 0 degrees



tstart=DOY301 2:16 from derivative=0  
Event begins at 2.37 Solar Radii  
radial acceleration = 0.0309 +/- 0.0006 [km/sec\*\*2]

SMM C/P 1988 DOY301 140 +/- 0 degrees



DOY301  
tstart=DOY301 2:16 from derivative=0  
Event begins at 2.37 Solar Radii  
radial acceleration=0.309E-01 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	day	time	radii	error in radius	error in angle	datatype
1988	301	2:37:15	2.40	+/- 0.15	140.0 +/- 0.5	SMM
1988	301	3:29:20	2.80	+/- 0.15	140.0 +/- 0.5	SMM
1988	301	3:45:50	3.00	+/- 0.20	140.0 +/- 1.0	SMM
1988	301	5: 3:13	4.60	+/- 0.20	140.0 +/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Filled, Fuzzy Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.446E+02 +/- 0.591E+01$  [minutes]

In more convenient units:

Event began at DOY 301 1:17 +/- 0.591E+01 [minutes]

Origin defined at DOY301 2: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 172. +/- 27. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.166E+01 +/- 0.245E+00 [solar radii]  
c(2) = 0.148E-01 +/- 0.233E-02 [radii/min]  
c(2) = 0.172E+03 +/- 0.270E+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)= 0.32599E+00 [radii] see Bevington pg. 114

error in c(2)= 0.28021E-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) = 140. +/- 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 2:37 = 0. km/sec

The TOTAL velocity at 2:37 = 172. km/sec

The TANGENTIAL velocity at 3:29 = 0. km/sec

The TOTAL velocity at 3:29 = 172. km/sec

The TANGENTIAL velocity at 3:45 = 0. km/sec

The TOTAL velocity at 3:45 = 172. km/sec

The TANGENTIAL velocity at 5: 3 = 0. km/sec

The TOTAL velocity at 5: 3 = 172. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.97

Standard Deviation in start time measurement = 0.523E+02

Error in time = 0.27991E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.542E-01

Reduced Chi Squared = 0.231E+00

Chi Squared = 0.462E+00

The probability for exceeding chi square = 0.947E+00

The correlation coefficient = 0.970E+00

The probability that no LINEAR correlation exists between the variables = 0.3022E-01

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
1988	301	2:37:15	2.40	+/- 0.15	140.0	+/- 0.5	SMM
1988	301	3:29:20	2.80	+/- 0.15	140.0	+/- 0.5	SMM
1988	301	3:45:50	3.00	+/- 0.20	140.0	+/- 1.0	SMM
1988	301	5: 3:13	4.60	+/- 0.20	140.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Filled, Fuzzy Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY301 2:16 from derivative = 0

Event begins at 2.37 Solar Radii

Origin defined at DOY301 2: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.309E-01 +/- 0.561E-03 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.239E+01 +/- 0.152E-01 [solar radii]  
c(2) = -0.257E-02 +/- 0.324E-03 [radii/min]  
c(2) = -0.298E+02 +/- 0.376E+01 [km/sec]  
c(3) = 0.800E-04 +/- 0.145E-05 [radii/min\*\*2]  
c(3) = 0.309E-01 +/- 0.561E-03 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.24940E-01 [radii] Bevington pg 154 (8-30)  
Exact error in c(1) = 0.69217E-02 [radii] Bevington pg 154 (8-28)  
Approximate error in c(2) = 0.50397E-03 [radii/min] Bevington pg 154 (8-30)  
Exact error in c(2) = 0.21756E-03 [radii/min] Bevington pg 154 (8-28)  
Approximate error in c(3) = 0.21800E-05 [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in c(3) = 0.98458E-06 [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) = 140. +/- 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 2:37 = 0. km/sec

The TOTAL velocity at 2:37 = 39. km/sec

The TANGENTIAL velocity at 3:29 = 0. km/sec

The TOTAL velocity at 3:29 = 136. km/sec

The TANGENTIAL velocity at 3:45 = 0. km/sec

The TOTAL velocity at 3:45 = 167. km/sec

The TANGENTIAL velocity at 5:3 = 0. km/sec

The TOTAL velocity at 5:3 = 310. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.97

Standard Deviation in start time measurement = 0.523E+02

Value of reduced Chi Squared returned from nllst2 = 0.535E-04

Reduced Chi Squared = 0.333E-03

Chi Squared = 0.333E-03

The probability for exceeding chi square = 0.994E+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 = 0.9460E+00

The correlation between the data and the time\*\*2 term = 0.9431E+00

The correlation between the data and the complete equation of motion = 0.1000E+01

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