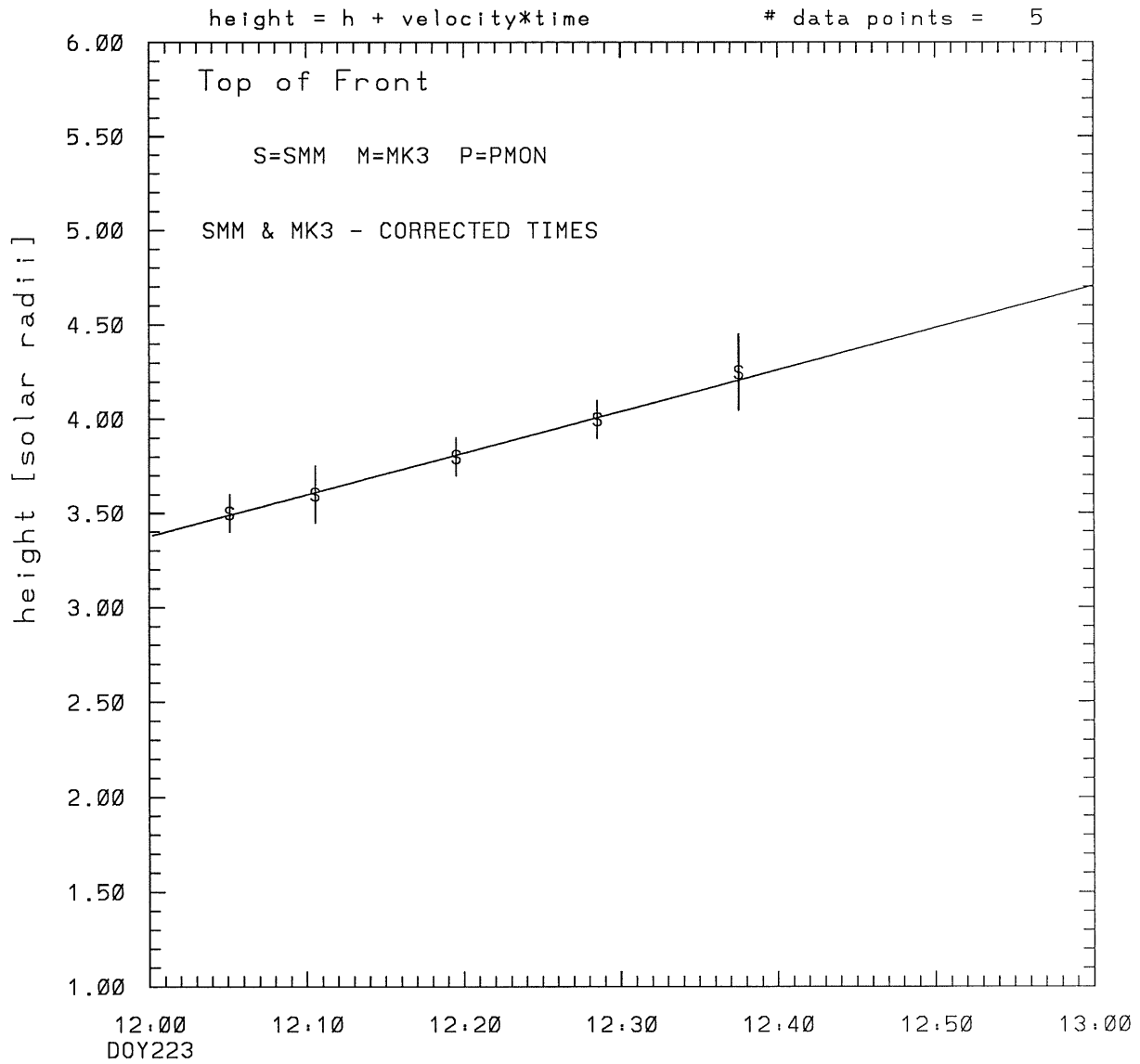
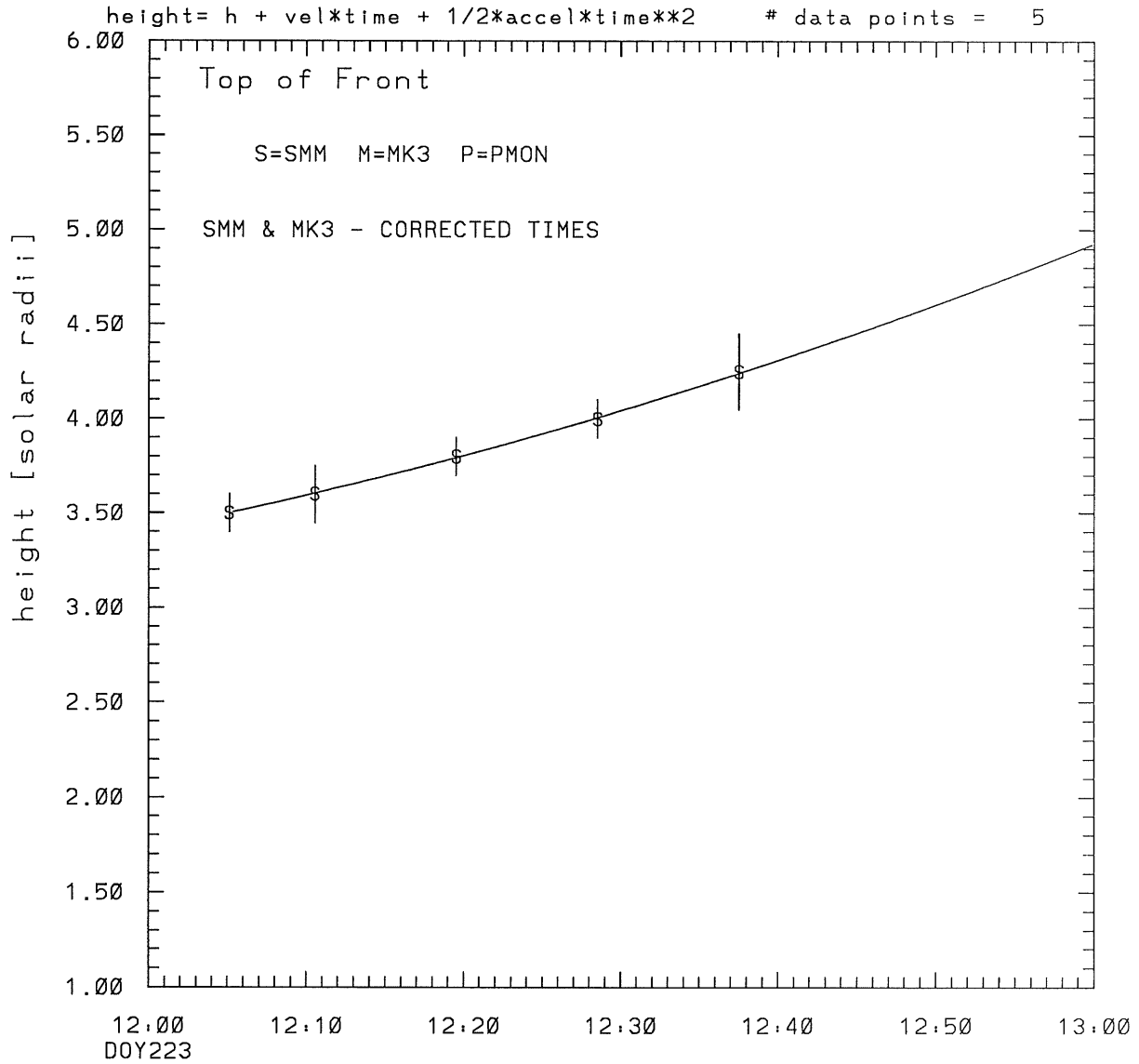


SMM C/P 1980 DOY223 285 +/- 0 degrees



tstart=DOY223 10:13 +/- 1.4 [min.]  
radial velocity= 257. +/- 8. [km/sec]

SMM C/P 1980 DOY223 285 +/- 0 degrees

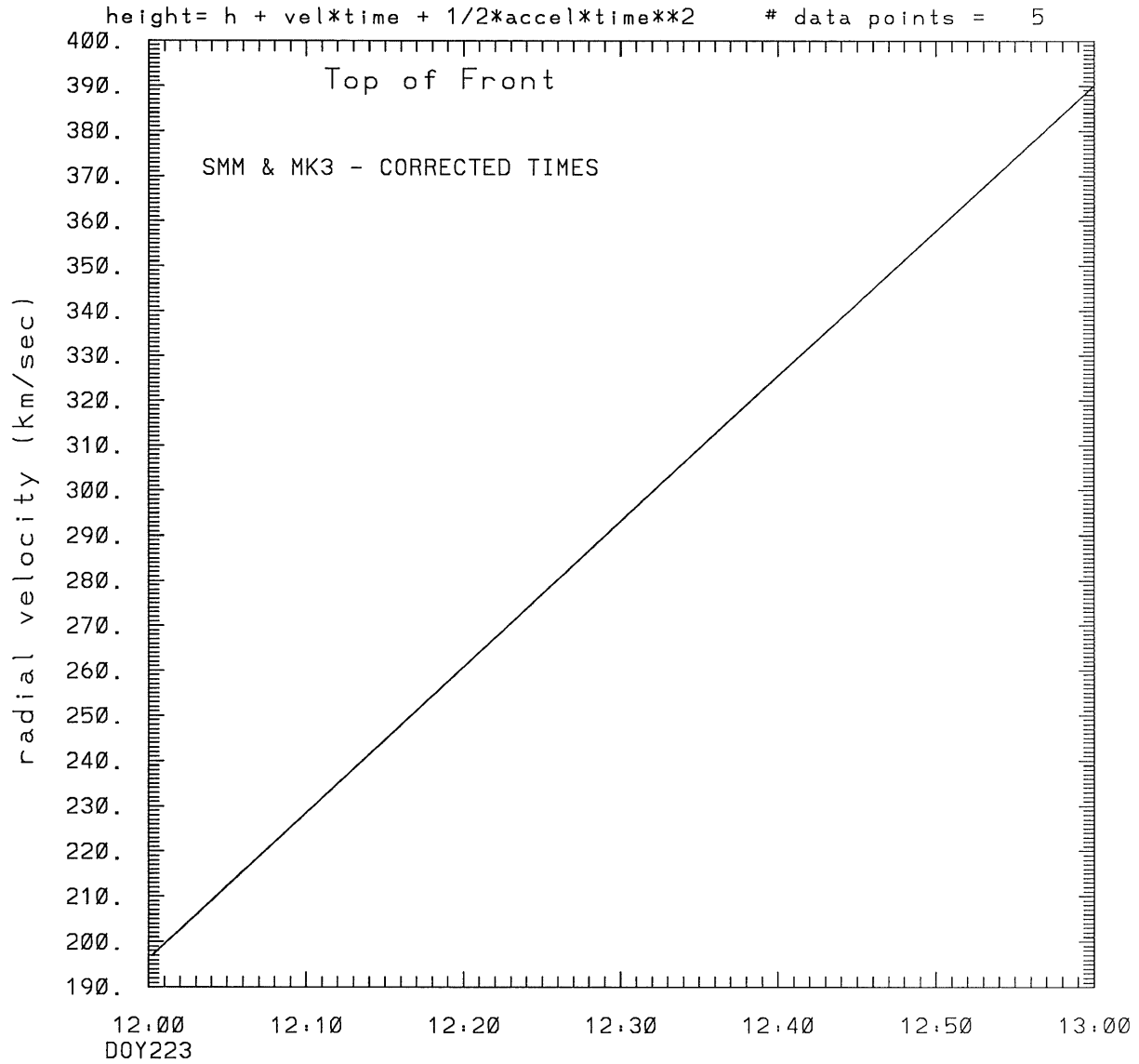


tstart=DOY223 11: 0 from derivative=0

Event begins at 2.90 Solar Radii

radial acceleration =  $0.0539 \pm 0.0124$  [km/sec\*\*2]

SMM C/P 1980 DOY223 285 +/- 0 degrees



tstart=DOY223 11: 0 from derivative=0  
Event begins at 2.90 Solar Radii  
radial acceleration=0.539E-01 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	223	12: 5: 6	3.50	+/- 0.10	285.0	+/- 1.0	SMM
1980	223	12:10:32	3.60	+/- 0.15	285.0	+/- 1.0	SMM
1980	223	12:19:32	3.80	+/- 0.10	285.0	+/- 1.0	SMM
1980	223	12:28:32	4.00	+/- 0.10	285.0	+/- 1.0	SMM
1980	223	12:37:32	4.25	+/- 0.20	285.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.107E+03 +/- 0.142E+01$  [minutes]

In more convenient units:

Event began at DOY 223 10:13 +/- 0.142E+01 [minutes]

Origin defined at DOY223 12: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 257. +/- 8. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.338E+01 +/- 0.144E-01 [solar radii]  
c(2) = 0.221E-01 +/- 0.687E-03 [radii/min]  
c(2) = 0.257E+03 +/- 0.796E+01 [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)= 0.23868E-01 [radii] see Bevington pg. 114

error in c(2)= 0.10193E-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) = 285. +/- 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 12: 5 = 0.000E+00 km/sec

The TOTAL velocity at 12: 5 = 257. km/sec

The TANGENTIAL velocity at 12:10 = 0.000E+00 km/sec

The TOTAL velocity at 12:10 = 257. km/sec

The TANGENTIAL velocity at 12:19 = 0.000E+00 km/sec

The TOTAL velocity at 12:19 = 257. km/sec

The TANGENTIAL velocity at 12:28 = 0.000E+00 km/sec

The TOTAL velocity at 12:28 = 257. km/sec

The TANGENTIAL velocity at 12:37 = 0.000E+00 km/sec

The TOTAL velocity at 12:37 = 257. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.30

Standard Deviation in start time measurement = 0.118E+02

Error in time = 0.20967E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.255E-03

Reduced Chi Squared = 0.327E-02

Chi Squared = 0.982E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.1095E-03

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

\*\*\*\*\*

This is a 2 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	223	12: 5: 6	3.50 +/- 0.10	285.0 +/- 1.0			SMM
1980	223	12:10:32	3.60 +/- 0.15	285.0 +/- 1.0			SMM
1980	223	12:19:32	3.80 +/- 0.10	285.0 +/- 1.0			SMM
1980	223	12:28:32	4.00 +/- 0.10	285.0 +/- 1.0			SMM
1980	223	12:37:32	4.25 +/- 0.20	285.0 +/- 1.0			SMM

\*\*\*\*\*

Structure being measured:

Top of Front

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY223 11: 0 from derivative = 0

Event begins at 2.90 Solar Radii

Origin defined at DOY223 12: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.539E-01 +/- 0.124E-01 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.341E+01 +/- 0.996E-02 [solar radii]  
c(2) = 0.169E-01 +/- 0.124E-02 [radii/min]  
c(2) = 0.196E+03 +/- 0.144E+02 [km/sec]  
c(3) = 0.139E-03 +/- 0.321E-04 [radii/min\*\*2]  
c(3) = 0.539E-01 +/- 0.124E-01 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.14410E-01 [radii] Bevington pg 154 (8-30)  
Exact error in c(1) = 0.23993E-02 [radii] Bevington pg 154 (8-28)  
Approximate error in c(2) = 0.16595E-02 [radii/min] Bevington pg 154 (8-30)  
Exact error in c(2) = 0.54381E-03 [radii/min] Bevington pg 154 (8-28)  
Approximate error in c(3) = 0.38239E-04 [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in c(3) = 0.15204E-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) = 285. +/- 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 12: 5 = 0.000E+00 km/sec

The TOTAL velocity at 12: 5 = 213. km/sec

The TANGENTIAL velocity at 12:10 = 0.000E+00 km/sec

The TOTAL velocity at 12:10 = 230. km/sec

The TANGENTIAL velocity at 12:19 = 0.000E+00 km/sec

The TOTAL velocity at 12:19 = 259. km/sec

The TANGENTIAL velocity at 12:28 = 0.000E+00 km/sec

The TOTAL velocity at 12:28 = 288. km/sec

The TANGENTIAL velocity at 12:37 = 0.000E+00 km/sec

The TOTAL velocity at 12:37 = 318. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.30

Standard Deviation in start time measurement = 0.118E+02

Value of reduced Chi Squared returned from nllst2 = 0.466E-04

Reduced Chi Squared = 0.337E-03

Chi Squared = 0.675E-03

The probability for exceeding chi square = 0.100E+01

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 = 0.8994E+00

The correlation between the data and the time\*\*2 term = 0.8024E+00

The correlation between the data and the complete equation of motion = 0.9987E+00

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