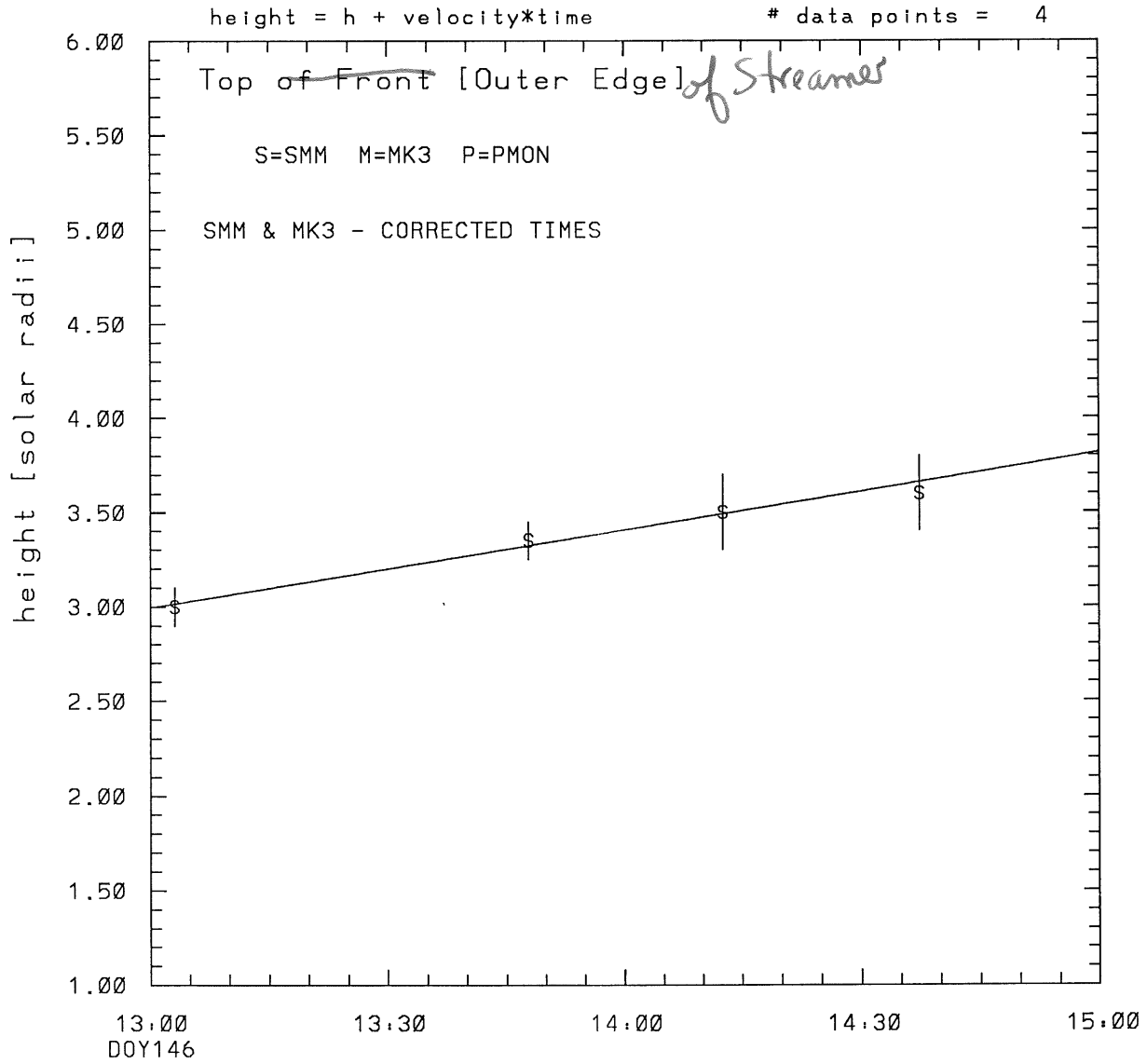
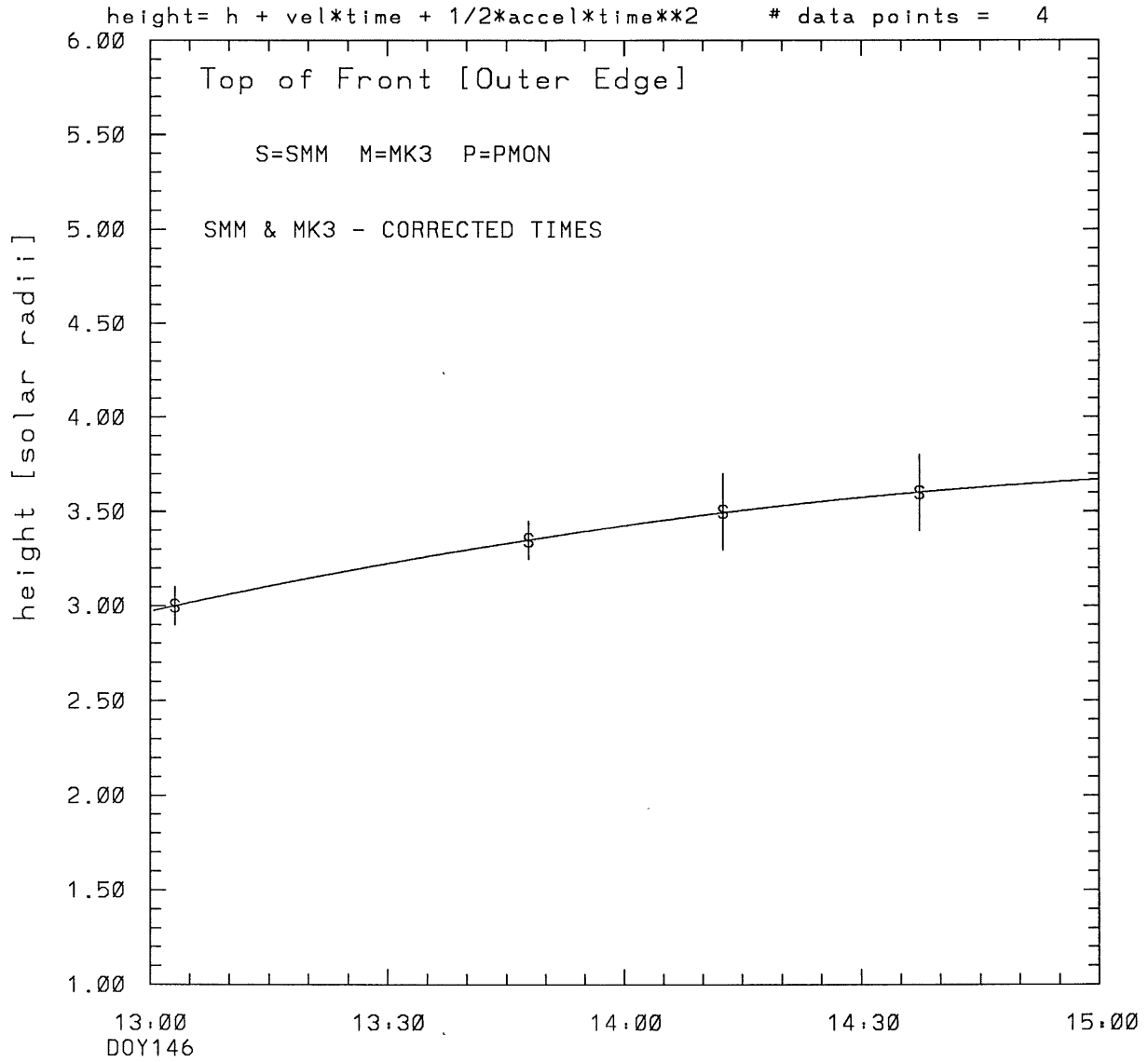


SMM C/P 1987 DOY146 253 +/- 0 degrees



tstart=DOY146 8: 9 +/- 7.7 [min.]
radial velocity= 79. +/- 6. [km/sec]

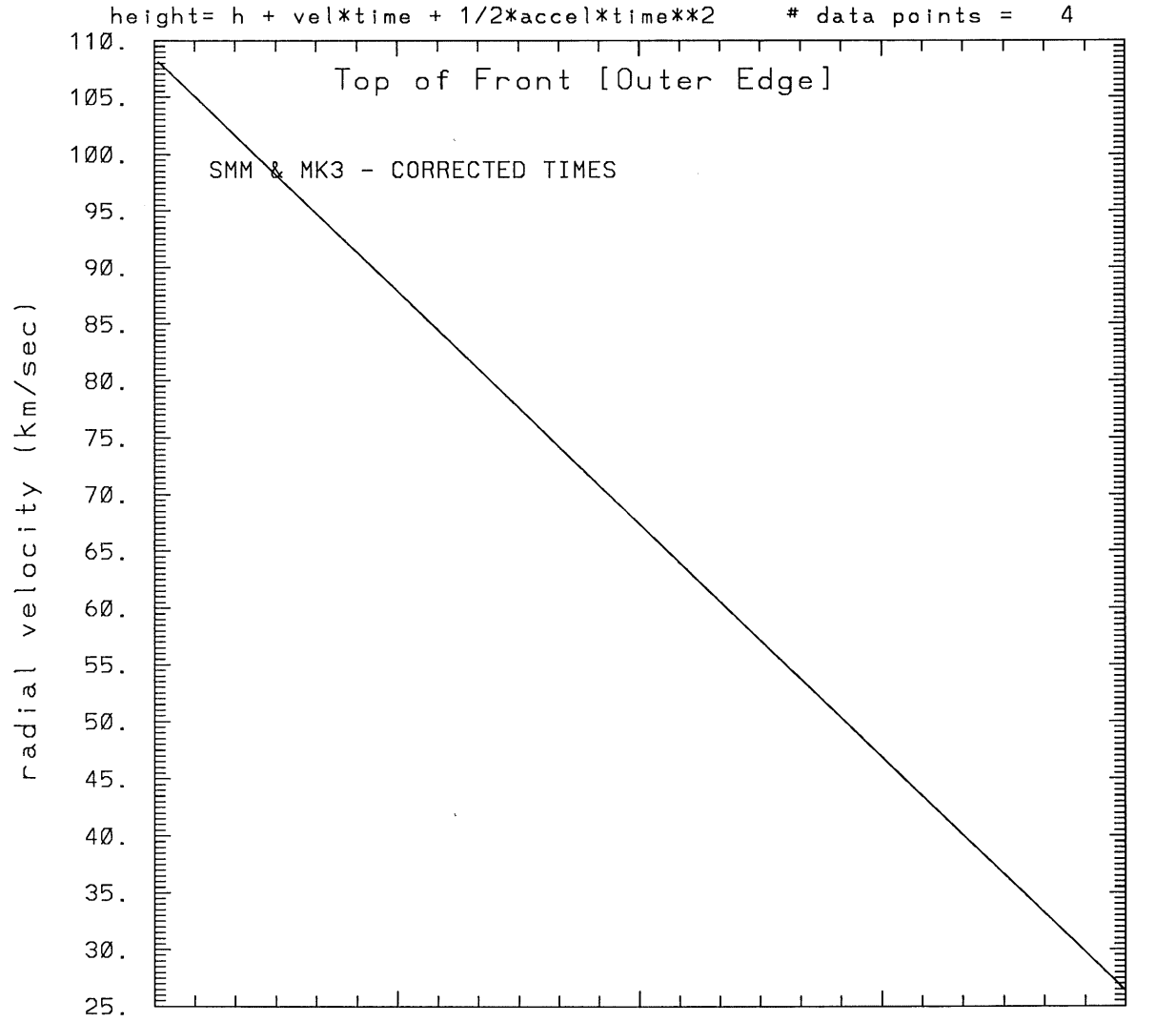
SMM C/P 1987 DOY146 253 +/- 0 degrees



tstart=DOY146 10:37 +/- 3.3 [min.]

radial acceleration = -0.0114 ± 0.0006 [km/sec**2]

SMM C/P 1987 DOY146 253 +/- 0 degrees



13:00
DOY146

13:30

14:00

14:30

15:00

tstart=DOY146 10:37 +/- 3.3 [min.]

radial acceleration=-.114E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1987	146	13: 3: 5	3.00	+/- 0.10	253.0	+/- 1.0	SMM
1987	146	13:47:50	3.35	+/- 0.10	253.0	+/- 1.0	SMM
1987	146	14:12:34	3.50	+/- 0.20	253.0	+/- 1.0	SMM
1987	146	14:37:19	3.60	+/- 0.20	253.0	+/- 1.0	SMM

Structure being measured:

Top of Front [Outer Edge]

OUTPUT:

START TIME:

Event began at $t = 0 + -0.291E+03 +/- 0.769E+01$ [minutes]

In more convenient units:

Event began at DOY 146 8: 9 +/- 0.769E+01 [minutes]

Origin defined at DOY146 13: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 79. +/- 6. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.299E+01 +/- 0.251E-01$ [solar radii]
 $c(2) = 0.684E-02 +/- 0.513E-03$ [radii/min]
 $c(2) = 0.794E+02 +/- 0.595E+01$ [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 $c(1) = 0.45758E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.70120E-03$ [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) = 253. +/- 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 13: 3 = 0.000E+00 km/sec

The TOTAL velocity at 13: 3 = 79. km/sec

The TANGENTIAL velocity at 13:47 = 0.000E+00 km/sec

The TOTAL velocity at 13:47 = 79. km/sec

The TANGENTIAL velocity at 14:12 = 0.000E+00 km/sec

The TOTAL velocity at 14:12 = 79. km/sec

The TANGENTIAL velocity at 14:37 = 0.000E+00 km/sec

The TOTAL velocity at 14:37 = 79. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.26

Standard Deviation in start time measurement = 0.348E+02

Error in time = 0.10086E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.105E-02

Reduced Chi Squared = 0.833E-02

Chi Squared = 0.167E-01

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.991E+00

The probability that no LINEAR correlation exists between the variables = 0.9047E-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
1987	146	13: 3: 5	3.00	+/- 0.10	253.0	+/- 1.0	SMM
1987	146	13:47:50	3.35	+/- 0.10	253.0	+/- 1.0	SMM
1987	146	14:12:34	3.50	+/- 0.20	253.0	+/- 1.0	SMM
1987	146	14:37:19	3.60	+/- 0.20	253.0	+/- 1.0	SMM

Structure being measured:

Top of Front [Outer Edge]

OUTPUT:

START TIME:

Event began at $t = 0 + -0.145E+03 +/- 0.328E+01$ [minutes]

In more convenient units:

Event began at DOY 146 10:37 +/- 0.328E+01 [minutes]

Origin defined at DOY146 13: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.114E-01 +/- 0.565E-03$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.297E+01 +/- 0.244E-02$ [solar radii]
 $c(2) = 0.935E-02 +/- 0.132E-03$ [radii/min]
 $c(2) = 0.108E+03 +/- 0.153E+01$ [km/sec]
 $c(3) = -0.295E-04 +/- 0.146E-05$ [radii/min**2]
 $c(3) = -0.114E-01 +/- 0.565E-03$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.64881E-02$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.26885E-03$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.30276E-03$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.53074E-04$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.29771E-05$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.64604E-06$ [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) = 253. +/- 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 13: 3 = 0.000E+00 km/sec

The TOTAL velocity at 13: 3 = 106. km/sec

The TANGENTIAL velocity at 13:47 = 0.000E+00 km/sec

The TOTAL velocity at 13:47 = 76. km/sec

The TANGENTIAL velocity at 14:12 = 0.000E+00 km/sec

The TOTAL velocity at 14:12 = 59. km/sec

The TANGENTIAL velocity at 14:37 = 0.000E+00 km/sec

The TOTAL velocity at 14:37 = 42. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.26
Standard Deviation in start time measurement = 0.348E+02
Value of reduced Chi Squared returned from nllst2 = 0.770E-05
Reduced Chi Squared = 0.108E-03
Chi Squared = 0.108E-03
The probability for exceeding chi square = 0.998E+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 = 0.1035E+01

The correlation between the data and the time**2 term = 0.8795E+00

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

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