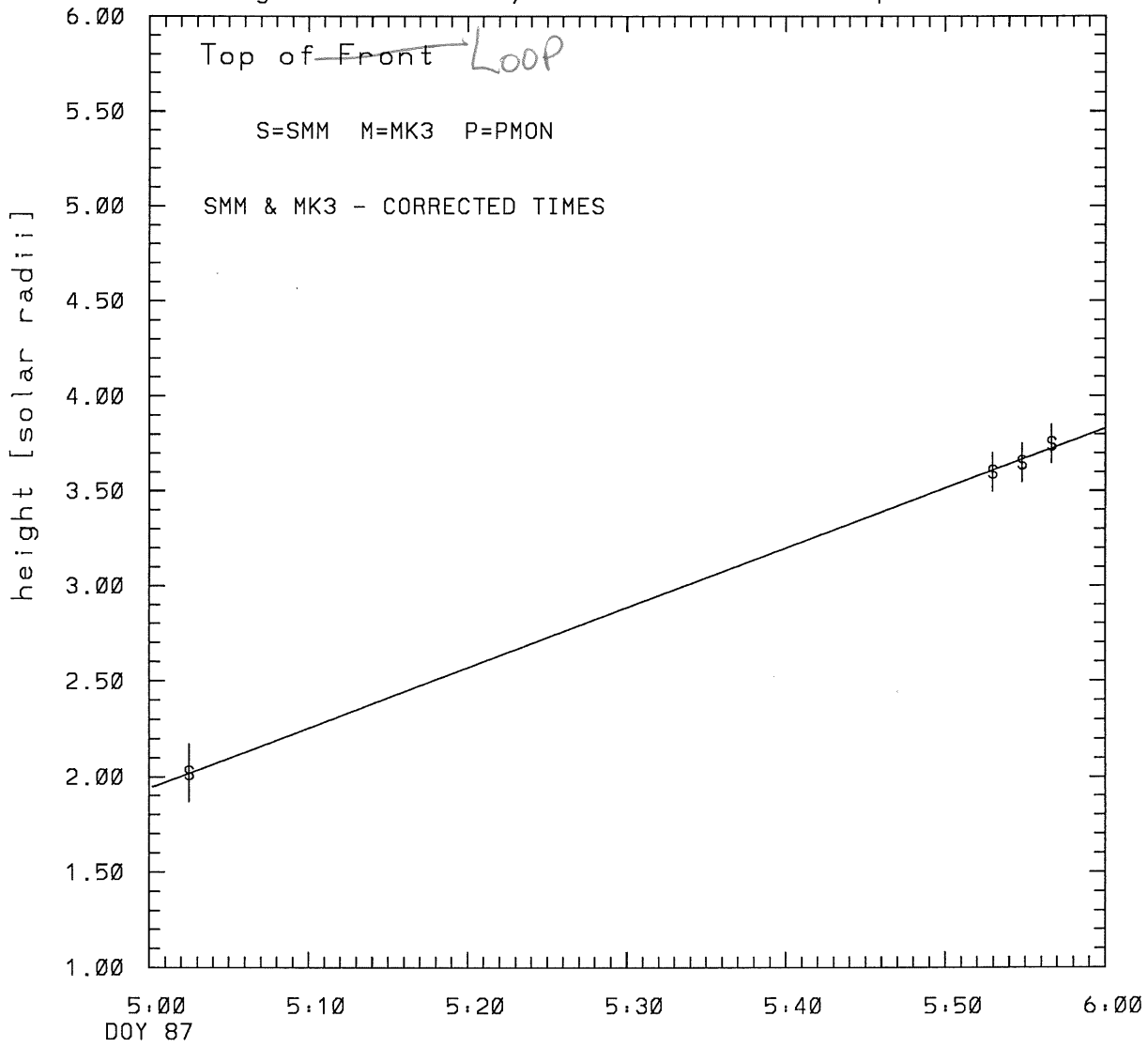


SMM C/P 1980 DOY 87 210 +/- 0 degrees

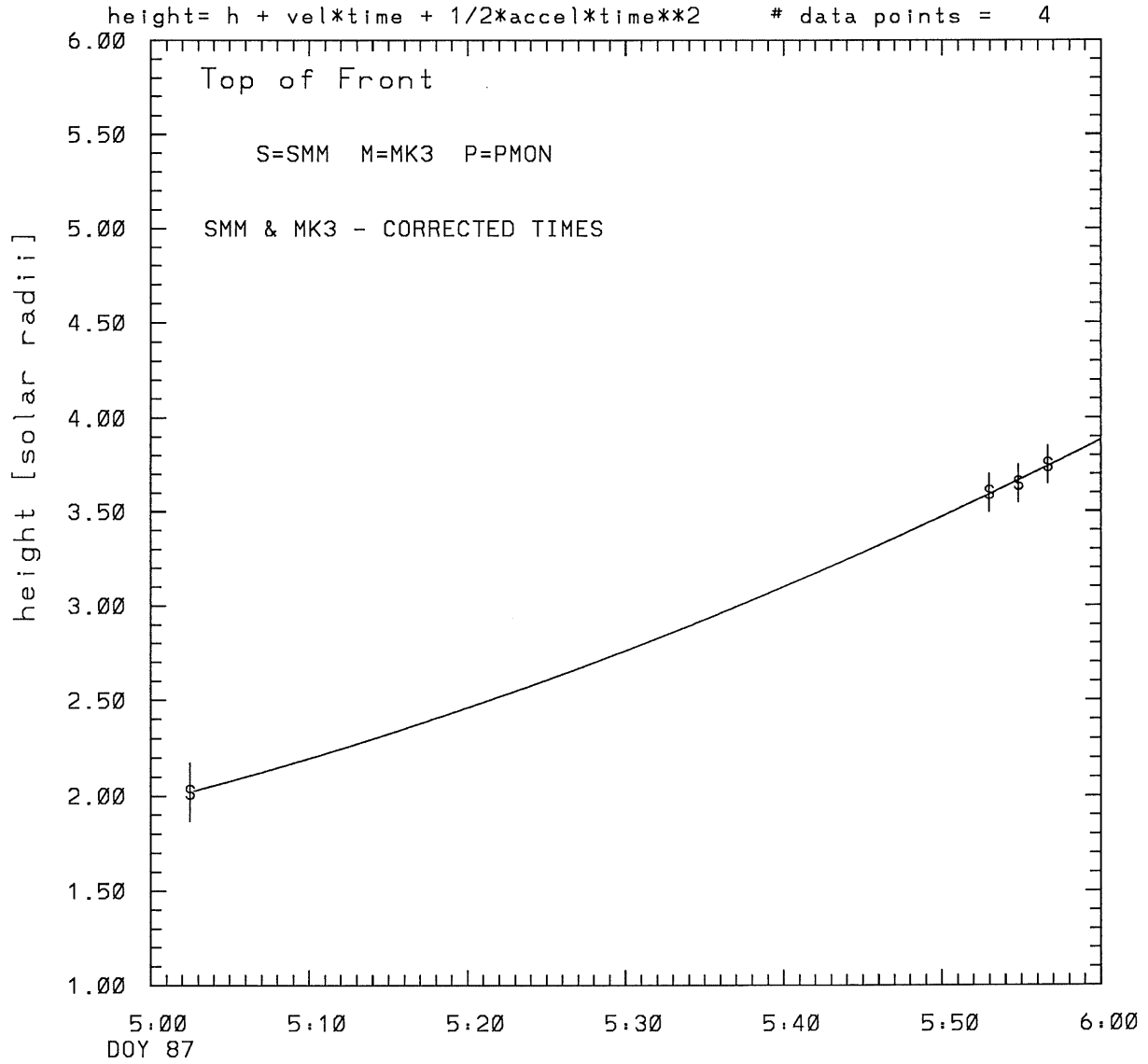
height = h + velocity*time

data points = 4



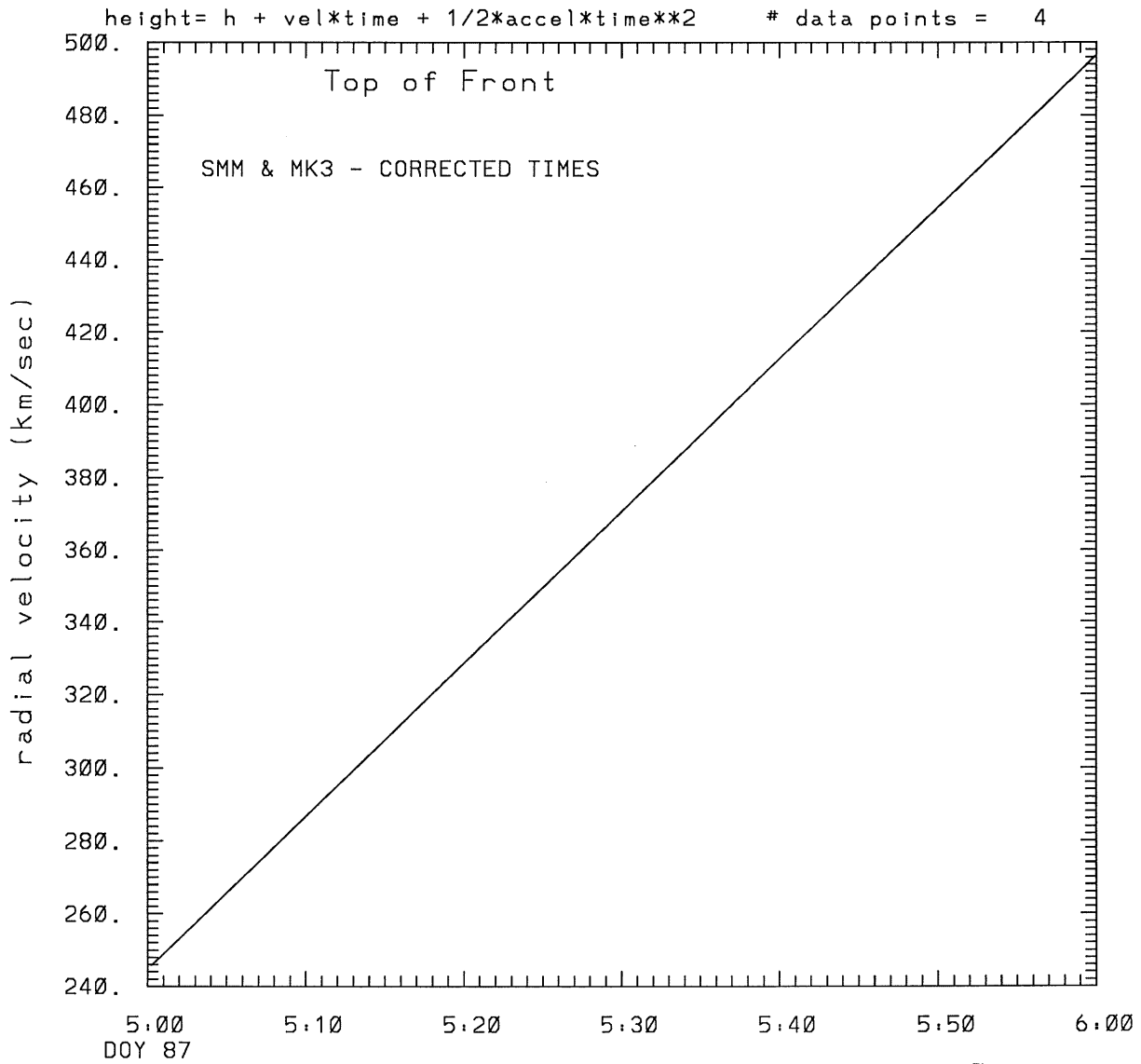
tstart=DOY 87 4.32 +/- 0.1 [min.]
radial velocity= 366. +/- 6. [km/sec]

SMM C/P 1980 DOY 87 210 +/- 0 degrees



tstart=DOY 87 4.2 from derivative=0
Event begins at 1.35 Solar Radii
radial acceleration = 0.0699 ± 0.0395 [km/sec**2]

SMM C/P 1980 DOY 87 210 +/- 0 degrees



tstart=DOY 87 4: 2 from derivative=0
Event begins at 1.35 Solar Radii
radial acceleration=0.699E-01 km/sec**2

This is a 1 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	87	5: 2:30	2.02 +/- 0.15	210.0 +/- 0.5			SMM
1980	87	5:52:59	3.60 +/- 0.10	210.0 +/- 1.0			SMM
1980	87	5:54:49	3.65 +/- 0.10	210.0 +/- 1.0			SMM
1980	87	5:56:40	3.75 +/- 0.10	210.0 +/- 1.0			SMM

Structure being measured:
Top of Front Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.298E+02 +/- 0.110E+00$ [minutes]
In more convenient units:
Event began at DOY 87 4:32 +/- 0.110E+00 [minutes]

Origin defined at DOY 87 5: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 366. +/- 6. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.194E+01 +/- 0.284E-01$ [solar radii]
 $c(2) = 0.315E-01 +/- 0.555E-03$ [radii/min]
 $c(2) = 0.366E+03 +/- 0.644E+01$ [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 $c(1) = 0.23278E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.48994E-03$ [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) = 210. +/- 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 5: 2 = 0.000E+00 km/sec

The TOTAL velocity at 5: 2 = 366. km/sec

The TANGENTIAL velocity at 5:52 = 0.000E+00 km/sec

The TOTAL velocity at 5:52 = 366. km/sec

The TANGENTIAL velocity at 5:54 = 0.000E+00 km/sec

The TOTAL velocity at 5:54 = 366. km/sec

The TANGENTIAL velocity at 5:56 = 0.000E+00 km/sec

The TOTAL velocity at 5:56 = 366. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.83

Standard Deviation in start time measurement = 0.227E+02

Error in time = 0.99737E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.381E-03

Reduced Chi Squared = 0.174E-02

Chi Squared = 0.348E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.100E+01

The probability that no LINEAR correlation exists between the variables = 0.2409E-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	87	5: 2:30	2.02 +/- 0.15		210.0 +/- 0.5		SMM
1980	87	5:52:59	3.60 +/- 0.10		210.0 +/- 1.0		SMM
1980	87	5:54:49	3.65 +/- 0.10		210.0 +/- 1.0		SMM
1980	87	5:56:40	3.75 +/- 0.10		210.0 +/- 1.0		SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

tstart=DOY 87 4: 2 from derivative = 0

Event begins at 1.35 Solar Radii

Origin defined at DOY 87 5: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.699E-01 +/- 0.395E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.197E+01 +/- 0.268E-01 [solar radii]
c(2) = 0.211E-01 +/- 0.592E-02 [radii/min]
c(2) = 0.245E+03 +/- 0.686E+02 [km/sec]
c(3) = 0.181E-03 +/- 0.102E-03 [radii/min**2]
c(3) = 0.699E-01 +/- 0.395E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.29279E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.81628E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.83207E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.34131E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.14442E-03 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.59240E-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) = 210. +/- 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 5: 2 = 0.000E+00 km/sec

The TOTAL velocity at 5: 2 = 255. km/sec

The TANGENTIAL velocity at 5:52 = 0.000E+00 km/sec

The TOTAL velocity at 5:52 = 467. km/sec

The TANGENTIAL velocity at 5:54 = 0.000E+00 km/sec

The TOTAL velocity at 5:54 = 475. km/sec

The TANGENTIAL velocity at 5:56 = 0.000E+00 km/sec

The TOTAL velocity at 5:56 = 482. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.83

Standard Deviation in start time measurement = 0.227E+02

Value of reduced Chi Squared returned from nllst2 = 0.224E-03

Reduced Chi Squared = 0.115E-02

Chi Squared = 0.115E-02

The probability for exceeding chi square = 0.988E+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 = 0.8237E+00

The correlation between the data and the time**2 term = 0.8256E+00

The correlation between the data and the complete equation of motion = 0.9997E+00

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