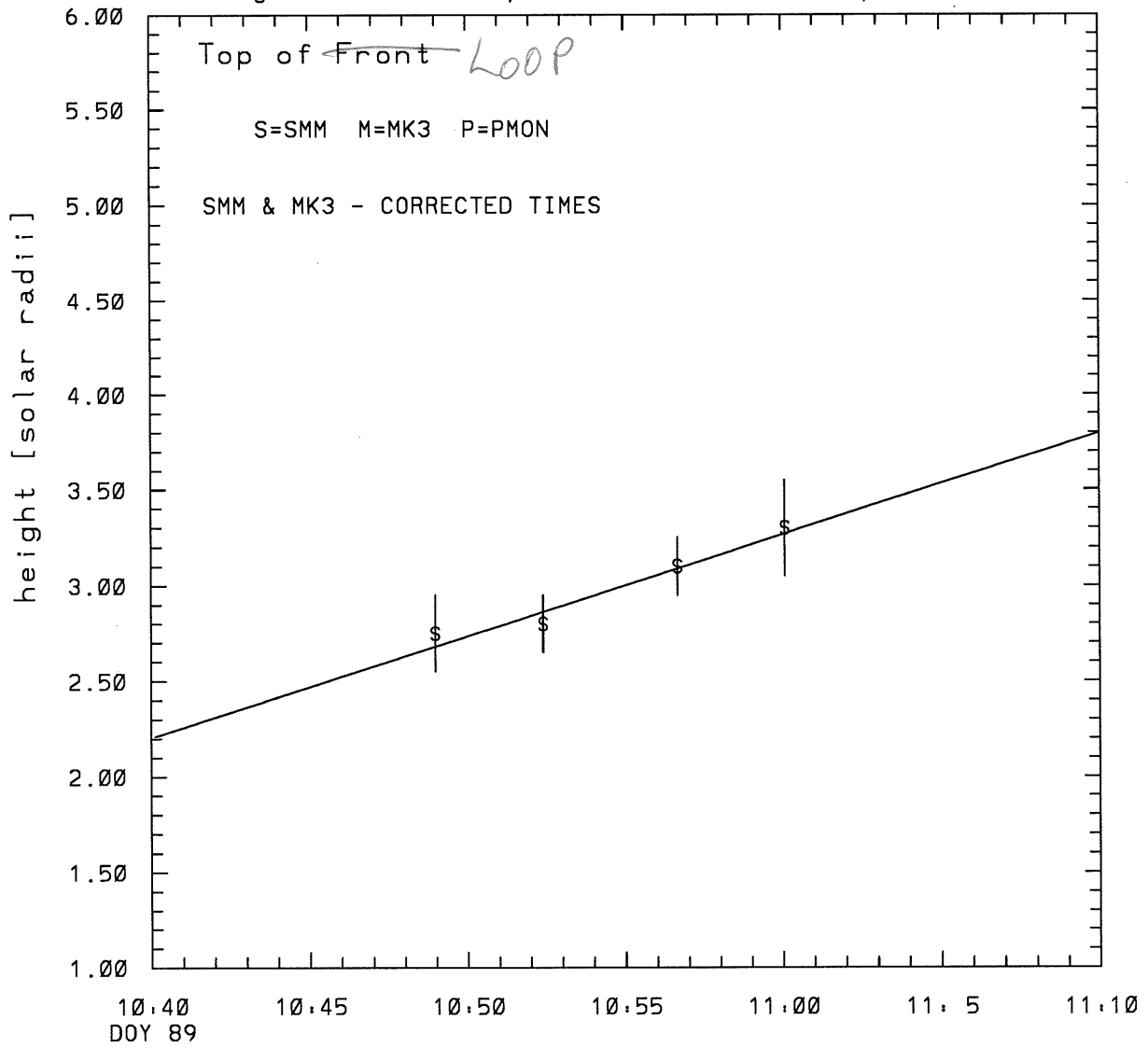


SMM C/P 1980 DOY 89 230 +/- 0 degrees

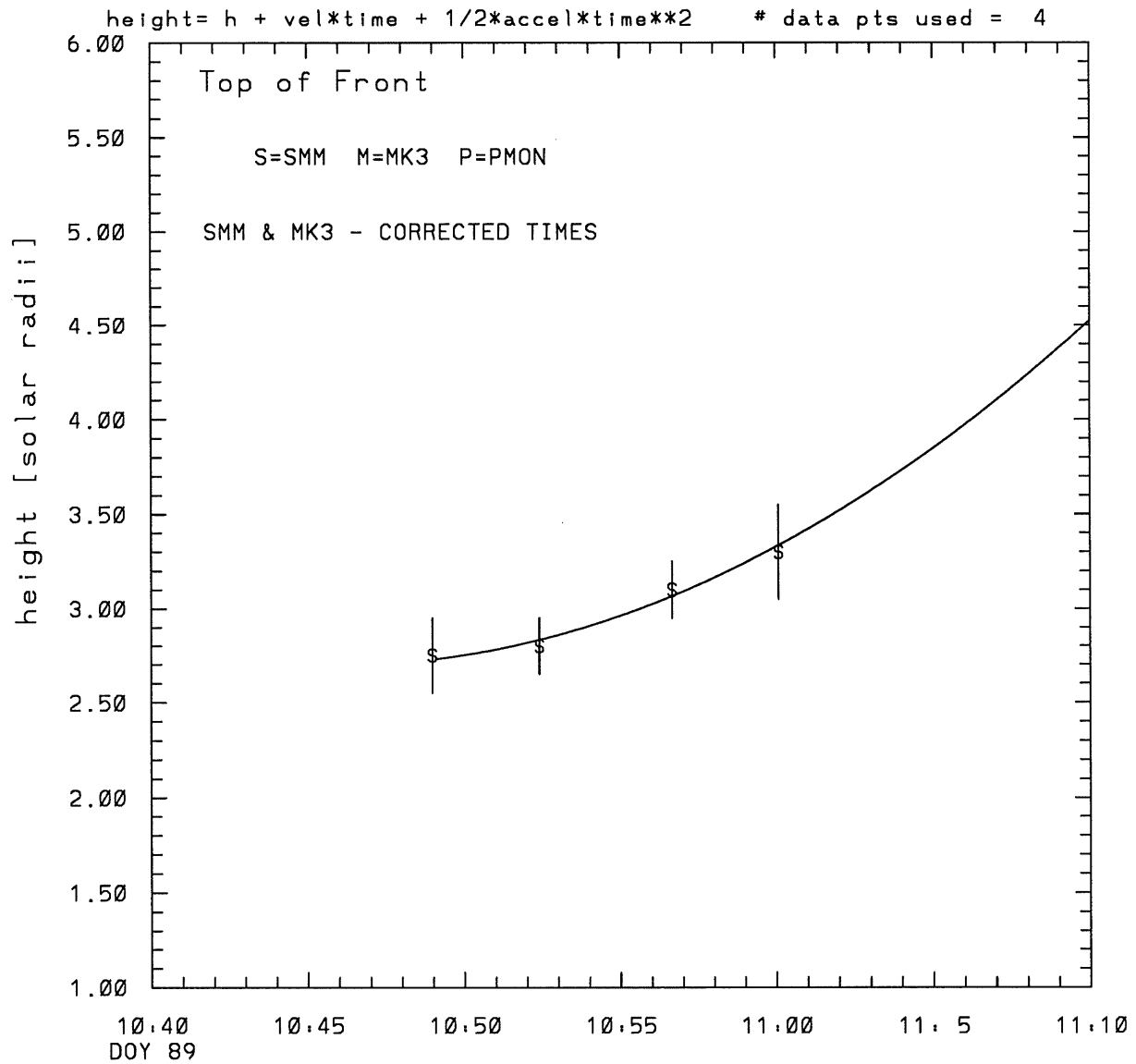
height = h + velocity*time

data pts used = 4



tstart=DOY 89 10:19 +/- 1.9 [min.]
radial velocity= 616. +/- 92. [km/sec]

SMM C/P 1980 DOY 89 230 +/- 0 degrees

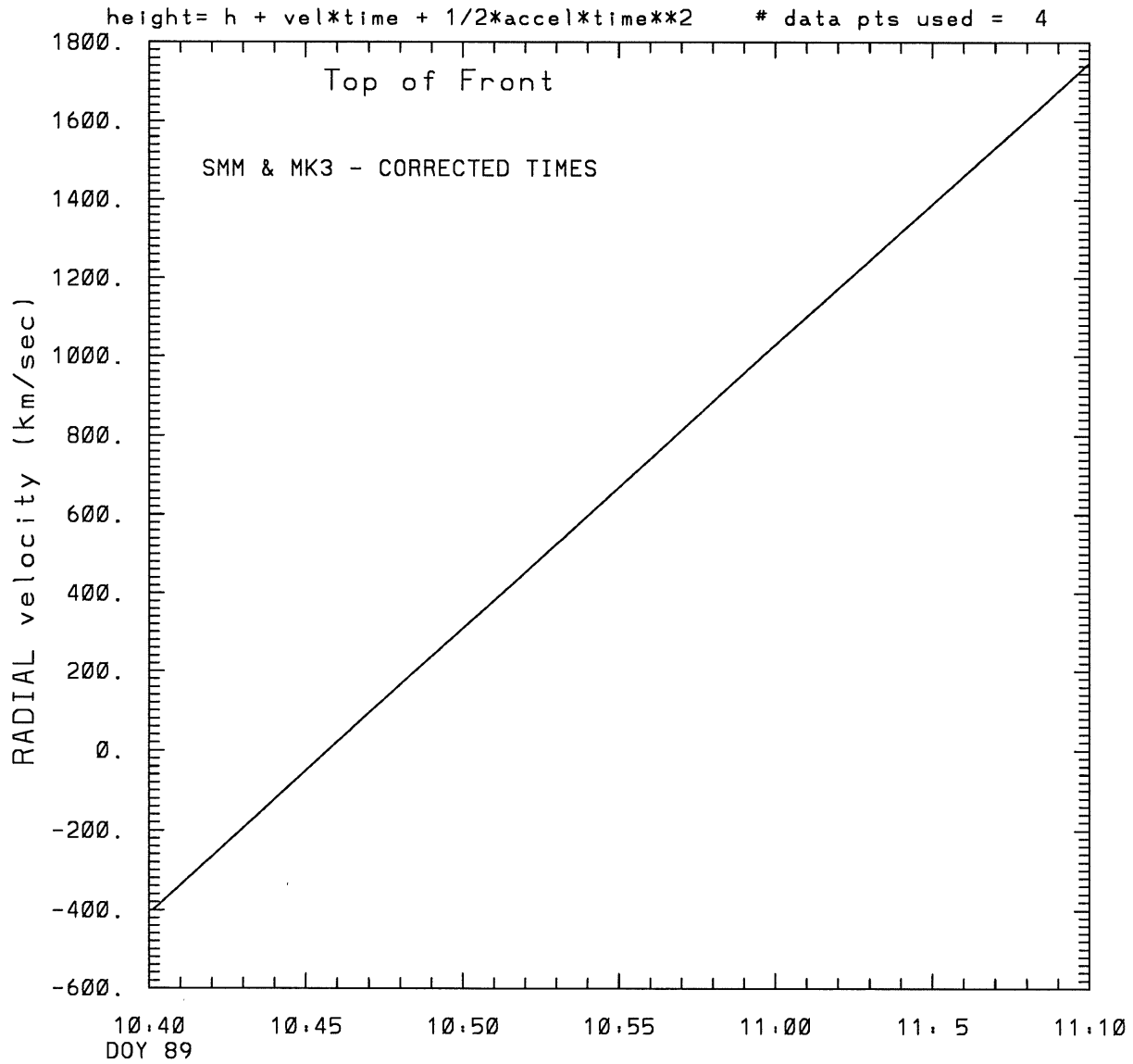


tstart=DOY 89 10:45 from derivative=0

Event begins at 2.69 Solar Radii

radial acceleration = 1.1985 ± 0.7195 [km/sec**2]

SMM C/P 1980 DOY 89 230 +/- 0 degrees



tstart=DOY 89 10:45 from derivative=0
Event begins at 2.69 Solar Radii
radial acceleration=0.120E+01 km/sec**2

This is a 1 order run

*add 4 seconds
to all times*

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1980	89	10:48:59	2.75 +/-	0.20	230.0 +/-	0.5	SMM
1980	89	10:52:24	2.80 +/-	0.15	230.0 +/-	0.5	SMM
1980	89	10:56:40	3.10 +/-	0.15	230.0 +/-	1.0	SMM
1980	89	11: 0: 5	3.30 +/-	0.25	230.0 +/-	1.0	SMM

Structure being measured:
Top of Front

OUTPUT:

START TIME:

Event began at t = 0 + -0.227E+02 +/- 0.190E+01 [minutes]
In more convenient units:
Event began at DOY 89 10:19 +/- 0.190E+01 [minutes]
Origin defined at DOY 89 10:40

RADIAL INFORMATION:

RADIAL VELOCITY = 616. +/- 92. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.220E+01 +/- 0.116E+00 [solar radii]
c(2) = 0.531E-01 +/- 0.794E-02 [radii/min]
c(2) = 0.616E+03 +/- 0.921E+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)= 0.12542E+00 [radii] see Bevington pg. 114
error in c(2)= 0.82900E-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) = 230. +/- 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 RADIAL velocity at 10:48 = 616. km/sec

The RADIAL velocity at 10:52 = 616. km/sec

The RADIAL velocity at 10:56 = 616. km/sec

The RADIAL velocity at 11: 0 = 616. 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 = 0.420E+01
Error in time = 0.18569E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.320E-02
Reduced Chi Squared = 0.828E-02
Chi Squared = 0.166E-01
The probability for exceeding chi square = 0.997E+00

The correlation coefficient = 0.977E+00
The probability that no LINEAR correlation exists between the variables = 0.22661
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

add 04 seconds to all times

year	doy	time	radii	radius	error in angle	error in angle	datatype
1980	89	10:48:59	2.75 +/-	0.20	230.0 +/-	0.5	SMM
1980	89	10:52:24	2.80 +/-	0.15	230.0 +/-	0.5	SMM
1980	89	10:56:40	3.10 +/-	0.15	230.0 +/-	1.0	SMM
1980	89	11: 0: 5	3.30 +/-	0.25	230.0 +/-	1.0	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

tstart=DOY 89 10:45 from derivative = 0

Event begins at 2.69 Solar Radii

Origin defined at DOY 89 10:40

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.120E+01 +/- 0.719E+00 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.279E+01 +/- 0.366E+00 [solar radii]
c(2) = -0.353E-01 +/- 0.534E-01 [radii/min]
c(2) = -0.410E+03 +/- 0.620E+03 [km/sec]
c(3) = 0.310E-02 +/- 0.186E-02 [radii/min**2]
c(3) = 0.120E+01 +/- 0.719E+00 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.47763E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.22060E+00 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.70088E-01 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.33925E-01 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.23975E-02 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.11938E-02 [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) = 230. +/- 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 RADIAL velocity at 10:48 = 236. km/sec

The RADIAL velocity at 10:52 = 482. km/sec

The RADIAL velocity at 10:56 = 789. km/sec

The RADIAL velocity at 11: 0 = 1035. 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 = 0.420E+01

Value of reduced Chi Squared returned from nllst2 = 0.201E-02

Reduced Chi Squared = 0.110E-01

Chi Squared = 0.110E-01

The probability for exceeding chi square = 0.964E+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 = 0.8240E+00

The correlation between the data and the time**2 term = 0.8292E+00

The correlation between the data and the complete equation of motion=0.9771E+00

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