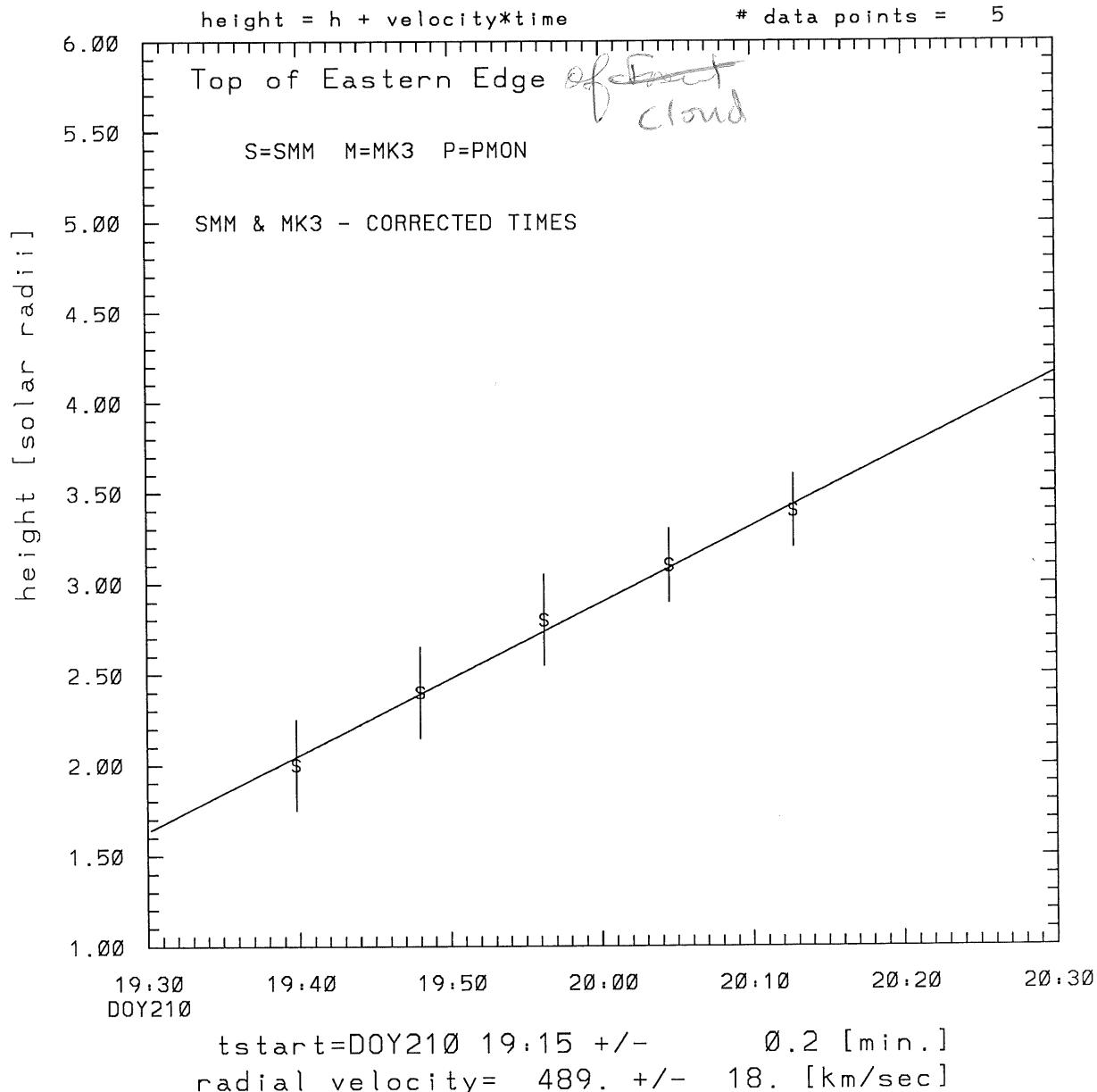
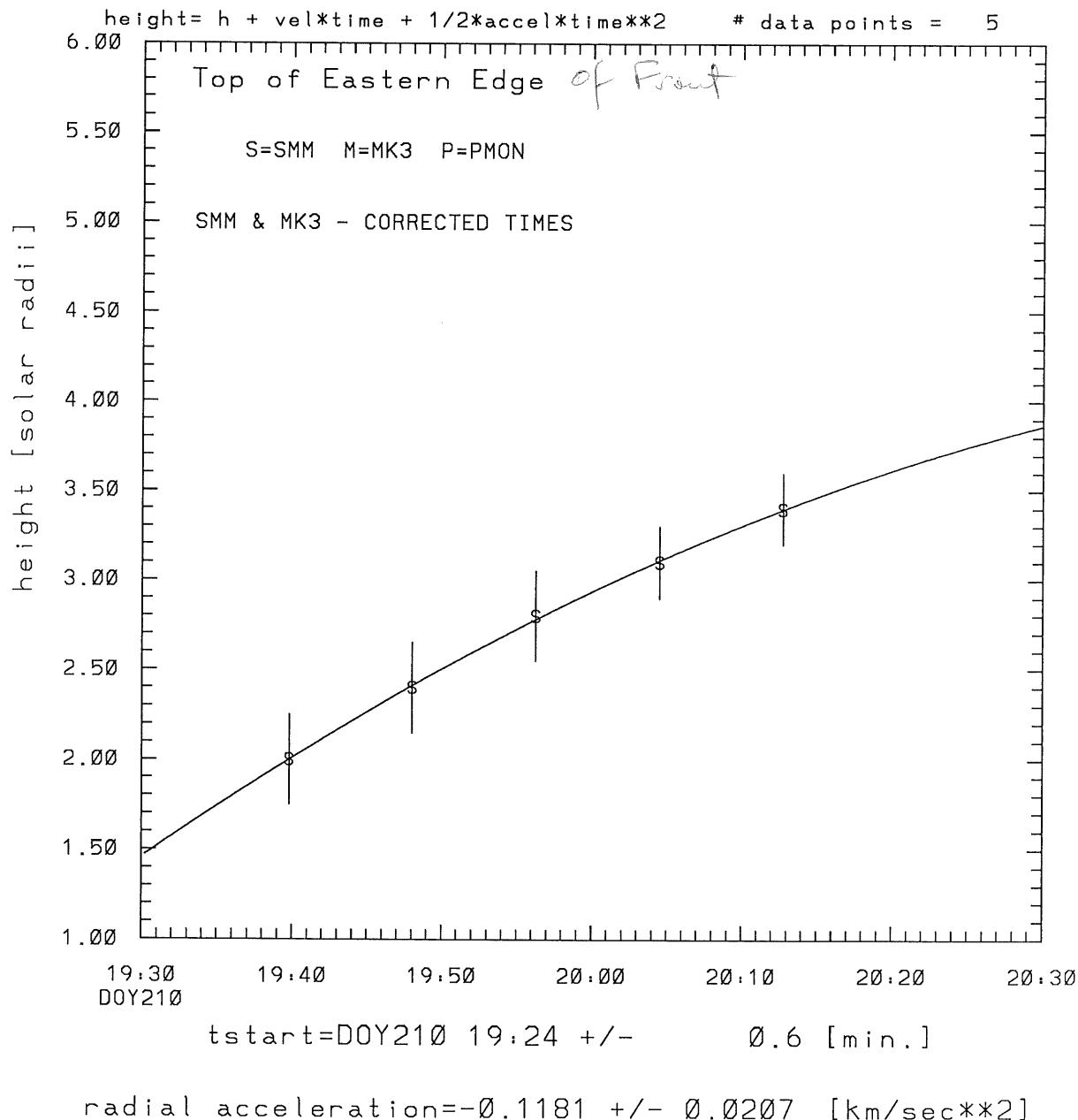


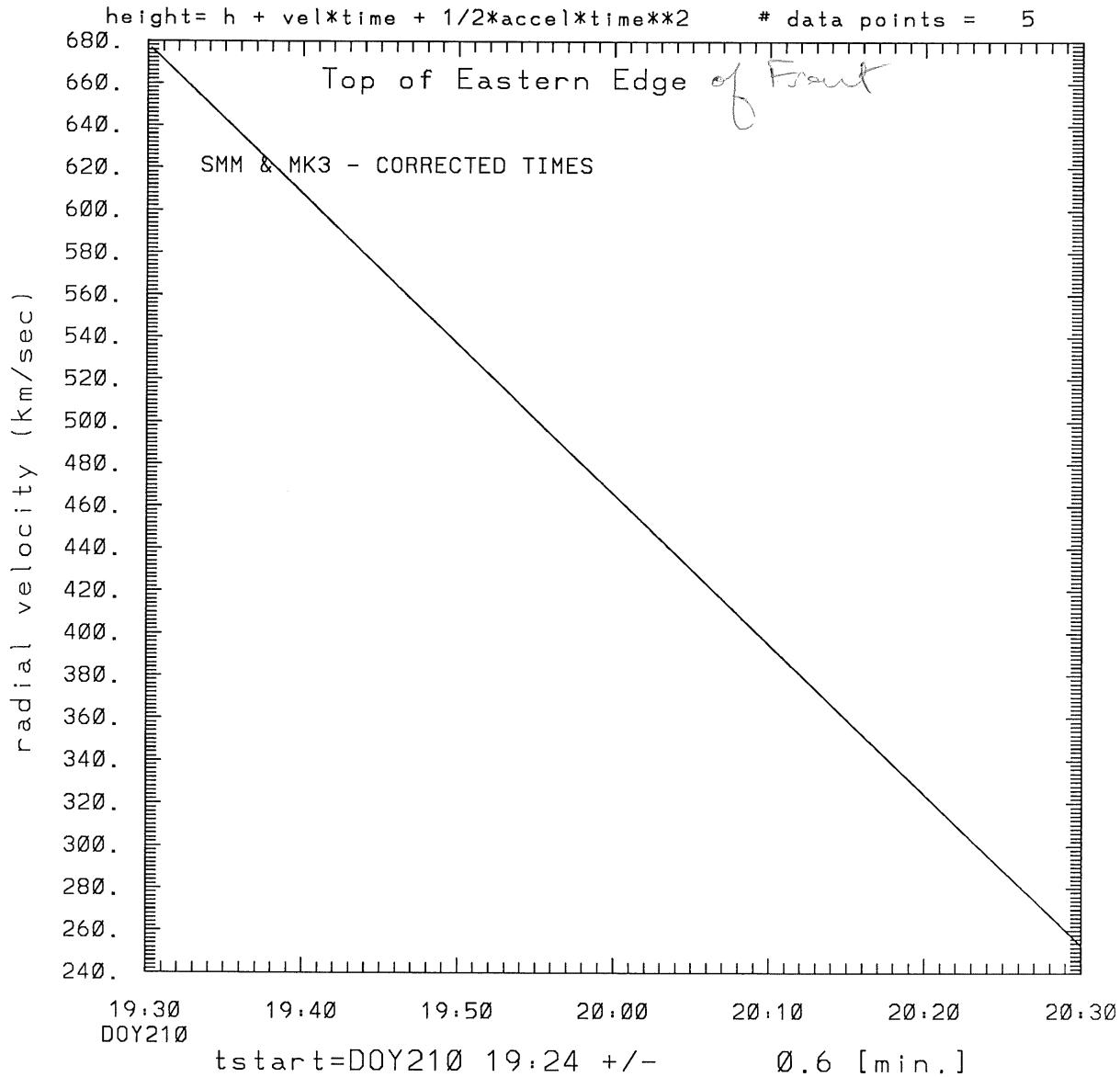
SMM C/P 1989 DOY210 162 +/- 0 degrees



SMM C/P 1989 DOY210 162 +/- 0 degrees



SMM C/P 1989 DOY210 162 +/- 0 degrees



radial acceleration=-.118E+00 km/sec**2

SAA, and OPTICAL DATA TOGETHER

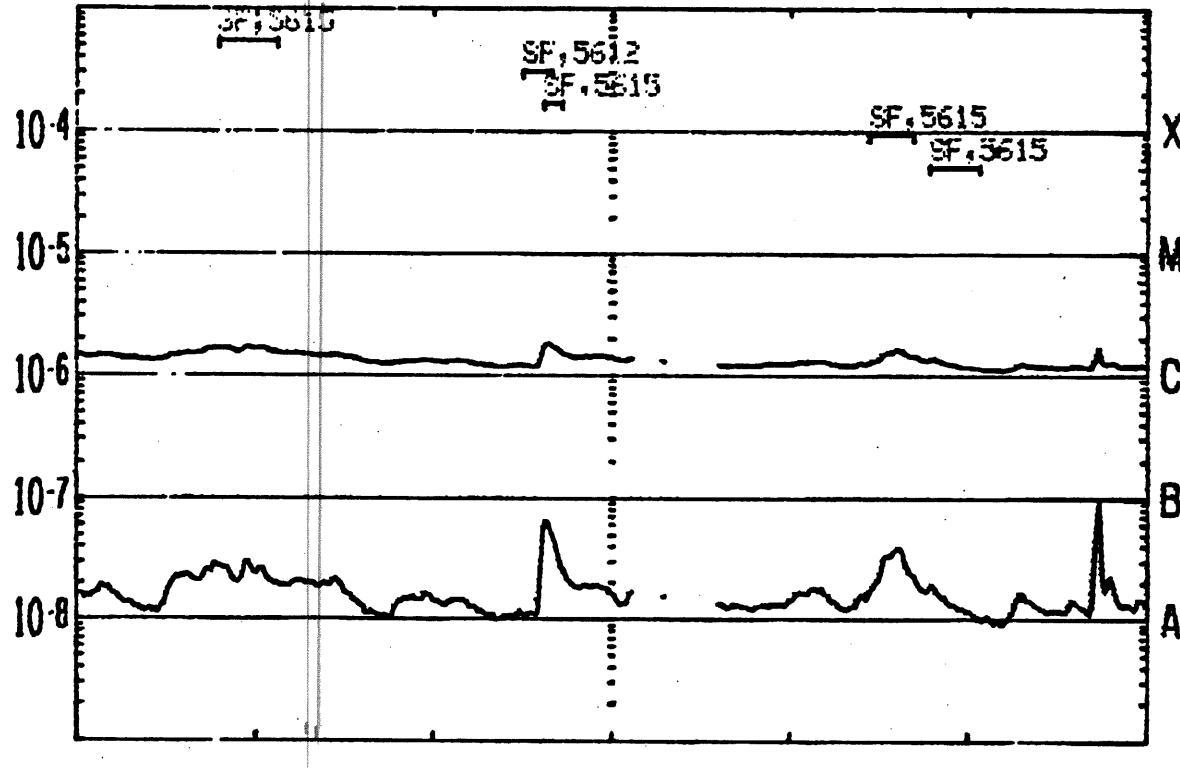
Top of EASTERN Edge, measured @ 162°
[SF, 5615] 1st order
[SF, 5615] 2nd order

1989 Day 210

STOP
Ret.

BEGIN: 29 JUL 89

Watts meter⁻²



GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

RUN: 1828UT
2 AUG 89

SAA'S
NIGHT

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	210	19:39:46	2.00	+/- 0.25	162.0	+/- 0.5	SMM
1989	210	19:48: 1	2.40	+/- 0.25	162.0	+/- 0.5	SMM
1989	210	19:56:15	2.80	+/- 0.25	162.0	+/- 0.5	SMM
1989	210	20: 4:30	3.10	+/- 0.20	162.0	+/- 1.0	SMM
1989	210	20:12:44	3.40	+/- 0.20	162.0	+/- 1.0	SMM

Structure being measured:

Top of Eastern Edge of front cloud

OUTPUT:

START TIME:

Event began at t = 0 + -0.150E+02 +/- 0.206E+00 [minutes]

In more convenient units:

Event began at DOY 210 19:15 +/- 0.206E+00 [minutes]

Origin defined at DOY210 19:30

RADIAL INFORMATION:

RADIAL VELOCITY = 489. +/- 18. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.163E+01 +/- 0.470E-01 [solar radii]
c(2) = 0.421E-01 +/- 0.152E-02 [radii/min]
c(2) = 0.489E+03 +/- 0.177E+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)= 0.53559E-01 [radii] see Bevington pg. 114

error in c(2)= 0.18646E-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) = 162. +/- 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 19:39 = 0. km/sec

The TOTAL velocity at 19:39 = 489. km/sec

The TANGENTIAL velocity at 19:48 = 0. km/sec

The TOTAL velocity at 19:48 = 489. km/sec

The TANGENTIAL velocity at 19:56 = 0. km/sec

The TOTAL velocity at 19:56 = 489. km/sec

The TANGENTIAL velocity at 20: 4 = 0. km/sec

The TOTAL velocity at 20: 4 = 489. km/sec

The TANGENTIAL velocity at 20:12 = 0. km/sec

The TOTAL velocity at 20:12 = 489. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.55

Standard Deviation in start time measurement = 0.117E+02

Error in time = 0.19980E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.159E-02

Reduced Chi Squared = 0.656E-02

Chi Squared = 0.197E-01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.997E+00

The probability that no LINEAR correlation exists between the variables = 0.1817E-03

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

This is a 2 order run

INPUT:

year	doy	time	error in radii	radius	error in angle	angle	datatype
1989	210	19:39:46	2.00 +/- 0.25	162.0 +/- 0.5	SMM		
1989	210	19:48: 1	2.40 +/- 0.25	162.0 +/- 0.5	SMM		
1989	210	19:56:15	2.80 +/- 0.25	162.0 +/- 0.5	SMM		
1989	210	20: 4:30	3.10 +/- 0.20	162.0 +/- 1.0	SMM		
1989	210	20:12:44	3.40 +/- 0.20	162.0 +/- 1.0	SMM		

Structure being measured:

Top of Eastern Edge of ~~front~~ cloud

OUTPUT:

START TIME:

Event began at $t = 0 + -0.750E+01 +/- 0.591E+00$ [minutes]

In more convenient units:

Event began at DOY 210 19:24 +/- 0.591E+00 [minutes]

Origin defined at DOY210 19:30

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.118E+00 +/- 0.207E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.146E+01 +/- 0.346E-01$ [solar radii]
c(2) = $0.585E-01 +/- 0.291E-02$ [radii/min]
c(2) = $0.678E+03 +/- 0.338E+02$ [km/sec]
c(3) = $-0.305E-03 +/- 0.535E-04$ [radii/min**2]
c(3) = $-0.118E+00 +/- 0.207E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.42153E-01$ [radii] Bevington pg 154 (8-30)

Exact error in c(1) = $0.99499E-02$ [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = $0.36298E-02$ [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = $0.12082E-02$ [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = $0.67975E-04$ [radii/min**2] Bevington pg 154 (8-30)

Exact error in c(3) = $0.23104E-04$ [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) = 162. +/- 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 19:39 = 0. km/sec

The TOTAL velocity at 19:39 = 609. km/sec

The TANGENTIAL velocity at 19:48 = 0. km/sec

The TOTAL velocity at 19:48 = 551. km/sec

The TANGENTIAL velocity at 19:56 = 0. km/sec

The TOTAL velocity at 19:56 = 492. km/sec

The TANGENTIAL velocity at 20: 4 = 0. km/sec

The TOTAL velocity at 20: 4 = 434. km/sec

The TANGENTIAL velocity at 20:12 = 0. km/sec

The TOTAL velocity at 20:12 = 375. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.55

Standard Deviation in start time measurement = 0.117E+02

Value of reduced Chi Squared returned from nllst2 = 0.179E-03

Reduced Chi Squared = 0.894E-03

Chi Squared = 0.179E-02

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 = 0.1020E+01

The correlation between the data and the time **2 term = 0.1011E+01

The correlation between the data and the complete equation of motion = 0.9999E+00

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