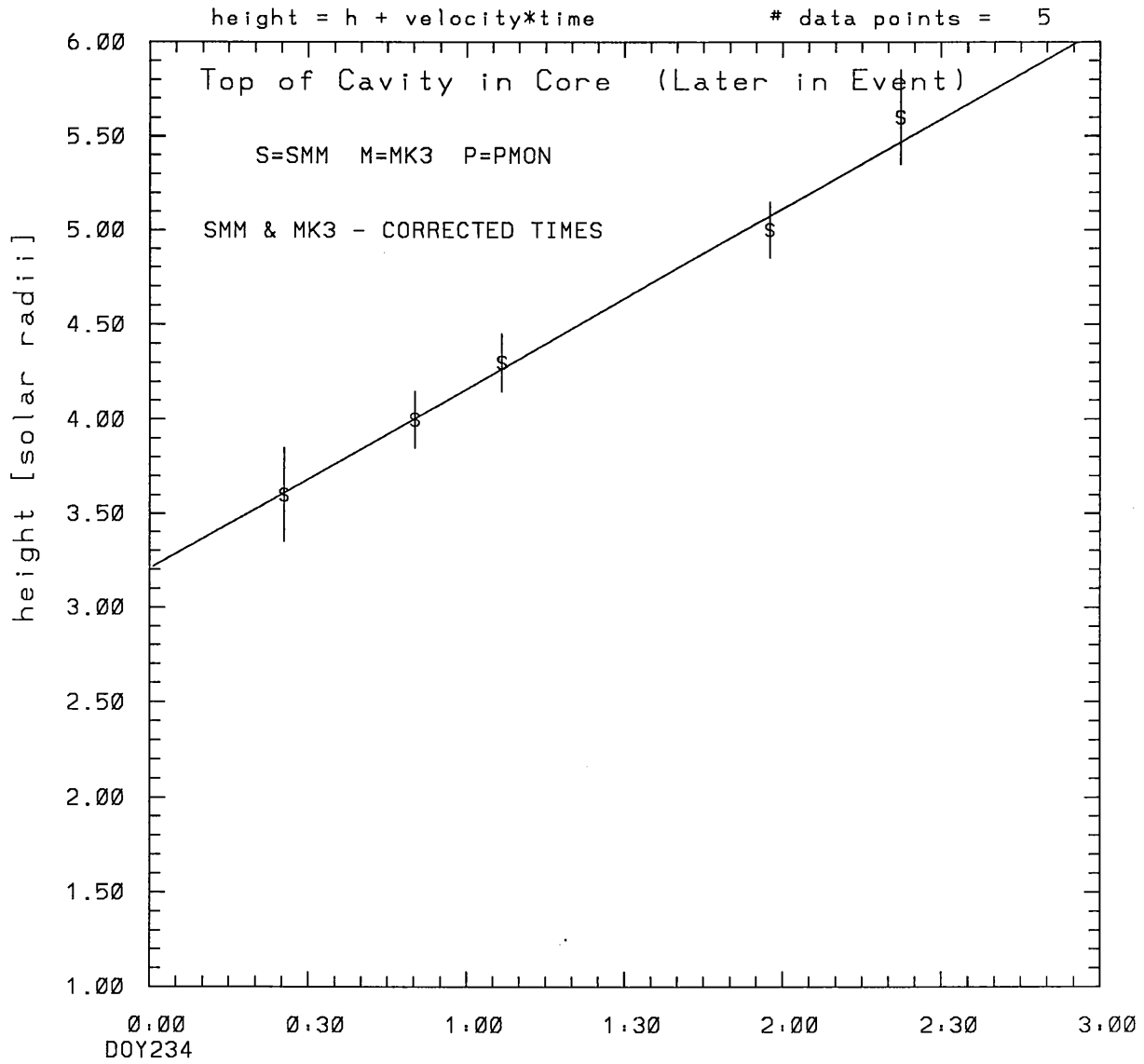
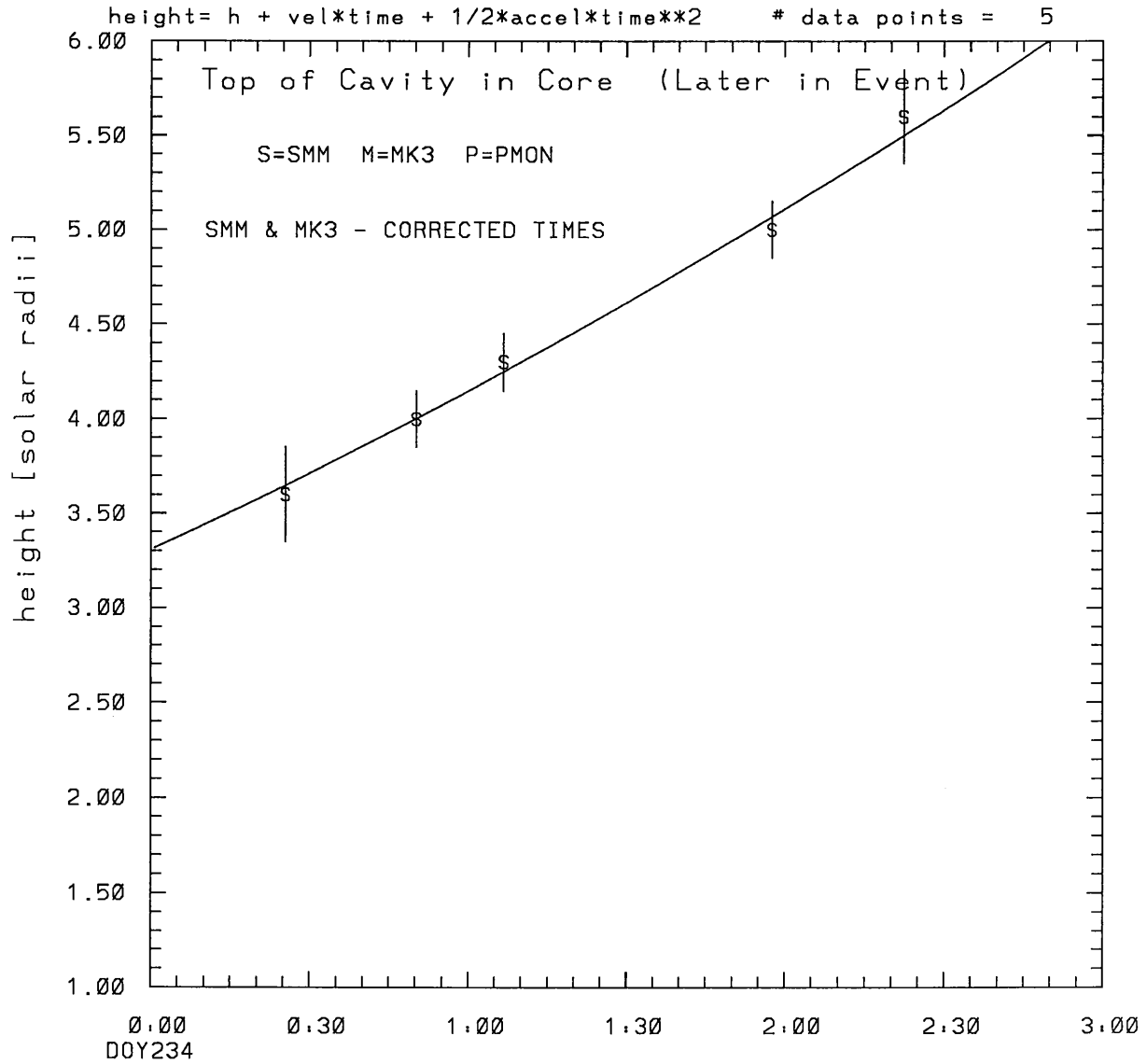


SMM C/P 1989 DOY234 292 +/- 0 degrees



tstart=DOY233 21:43 +/- 2.0 [min.]
radial velocity= 184. +/- 9. [km/sec]

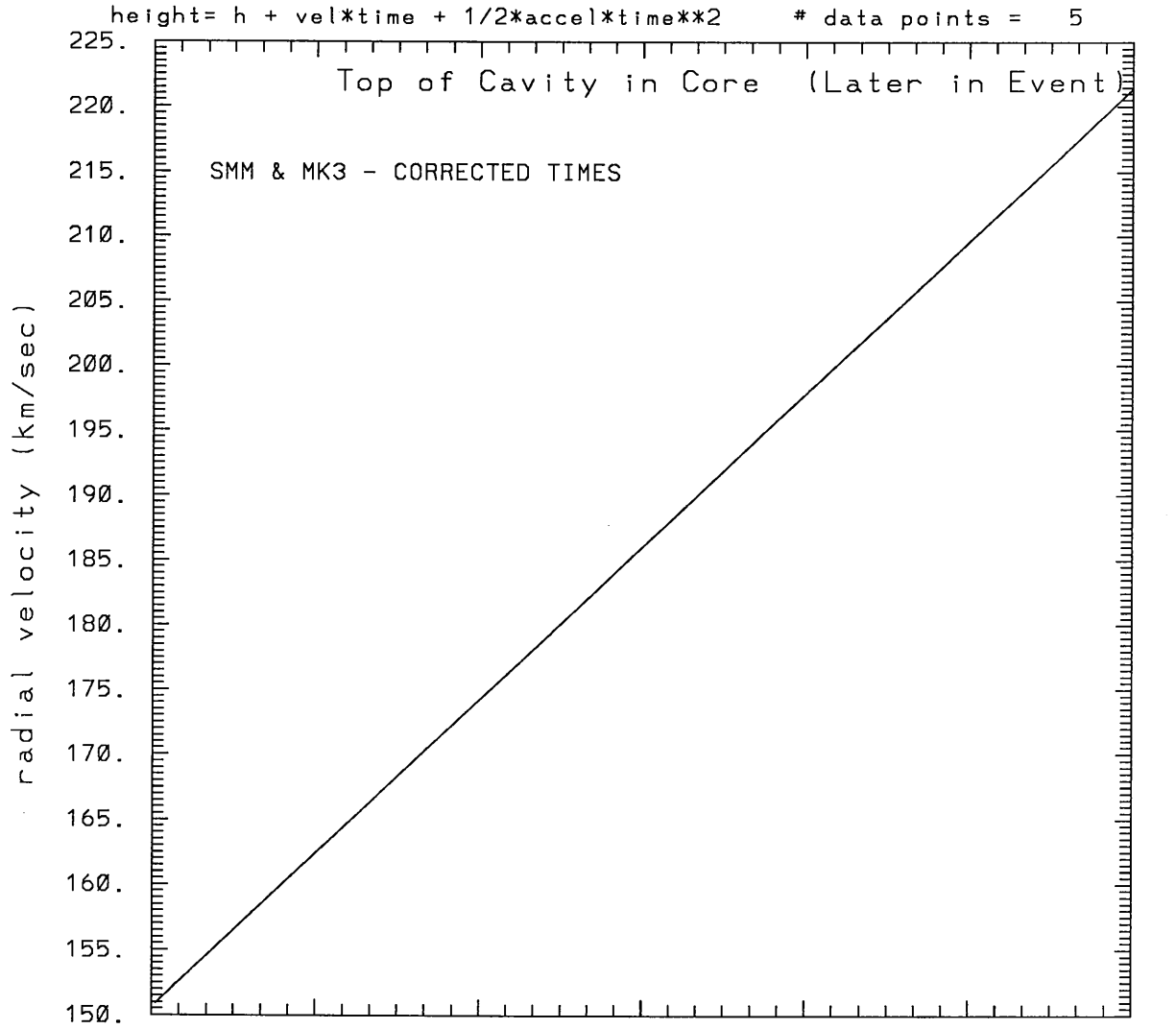
SMM C/P 1989 DOY234 292 +/- 0 degrees



tstart=DOY233 19:22 +/- 219.9 [min.]

radial acceleration = 0.0066 +/- 0.0118 [km/sec**2]

SMM C/P 1989 DOY234 292 +/- 0 degrees

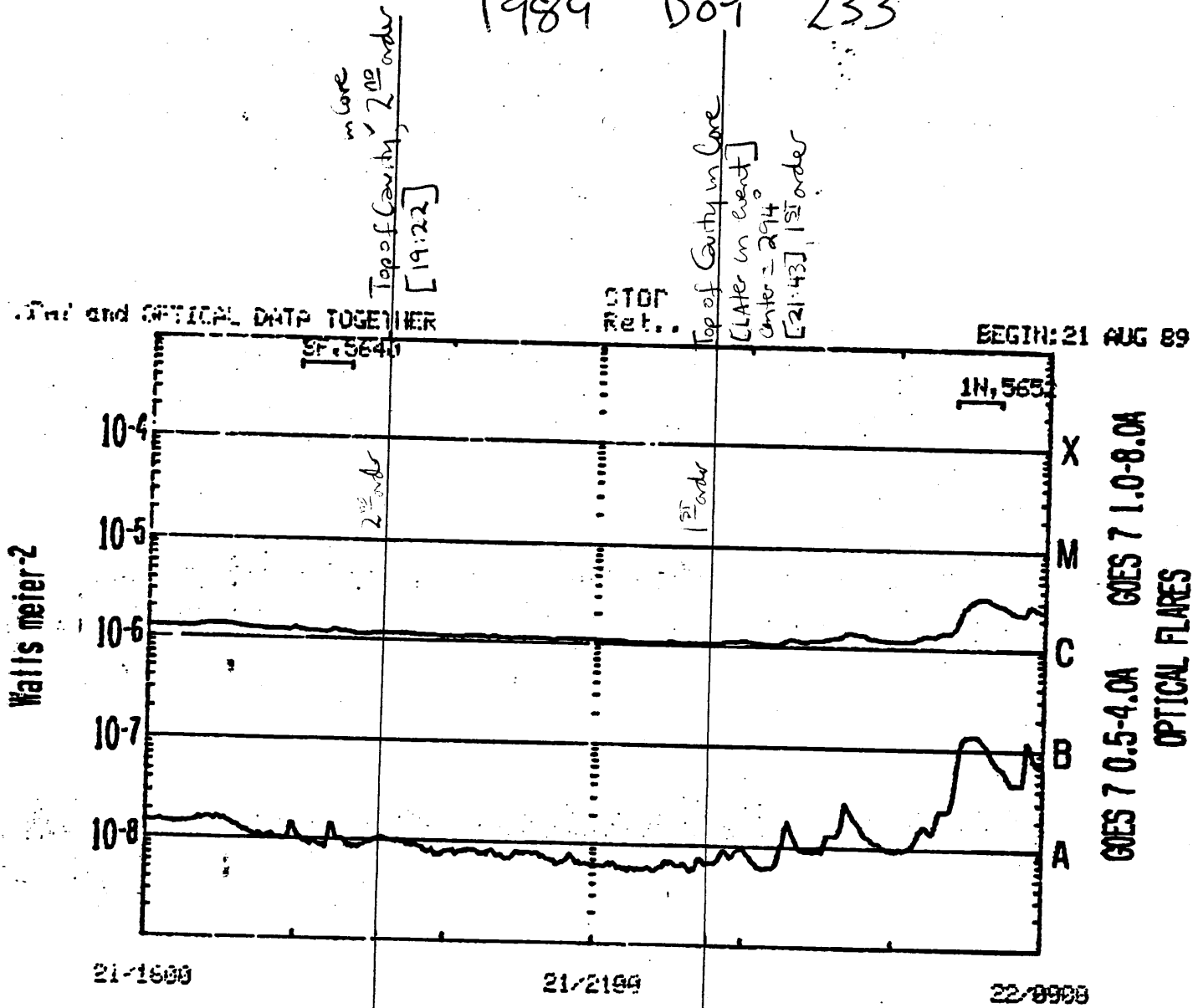


DOY234

tstart=DOY233 19:22 +/- 219.9 [min.]

radial acceleration=0.655E-02 km/sec**2

1989 D01 233



GOES-7 1 MIN DATA; OPTICAL FLARE DUR, IMP, REGION

SAA's
NIGHT
RUN: 1342UT
28 AUG 89

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	234	0:25:25	3.60	+/- 0.25	292.0	+/- 1.0	SMM
1989	234	0:50:10	4.00	+/- 0.15	292.0	+/- 1.0	SMM
1989	234	1: 6:41	4.30	+/- 0.15	292.0	+/- 1.0	SMM
1989	234	1:57:35	5.00	+/- 0.15	292.0	+/- 1.0	SMM
1989	234	2:22:21	5.60	+/- 0.25	292.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity in Core (Later in Event)

OUTPUT:

START TIME:

Event began at $t = 0 + -0.139E+03 +/- 0.195E+01$ [minutes]
In more convenient units:
Event began at DOY 233 21:43 +/- 0.195E+01 [minutes]

Origin defined at DOY234 0: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 184. +/- 9. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.321E+01 +/- 0.708E-01$ [solar radii]
 $c(2) = 0.159E-01 +/- 0.812E-03$ [radii/min]
 $c(2) = 0.184E+03 +/- 0.941E+01$ [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 $c(1) = 0.84902E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.92970E-03$ [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) = 292. +/- 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 0:25 = 0. km/sec

The TOTAL velocity at 0:25 = 184. km/sec

The TANGENTIAL velocity at 0:50 = 0. km/sec

The TOTAL velocity at 0:50 = 184. km/sec

The TANGENTIAL velocity at 1: 6 = 0. km/sec

The TOTAL velocity at 1: 6 = 184. km/sec

The TANGENTIAL velocity at 1:57 = 0. km/sec

The TOTAL velocity at 1:57 = 184. km/sec

The TANGENTIAL velocity at 2:22 = 0. km/sec

The TOTAL velocity at 2:22 = 184. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.80

Standard Deviation in start time measurement = 0.432E+02

Error in time = 0.97970E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.438E-02

Reduced Chi Squared = 0.376E-01

Chi Squared = 0.113E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.996E+00

The probability that no LINEAR correlation exists between the variables = 0.2867E-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
1989	234	0:25:25	3.60 +/- 0.25	3.60 +/- 0.25	292.0 +/- 1.0	292.0 +/- 1.0	SMM
1989	234	0:50:10	4.00 +/- 0.15	4.00 +/- 0.15	292.0 +/- 1.0	292.0 +/- 1.0	SMM
1989	234	1: 6:41	4.30 +/- 0.15	4.30 +/- 0.15	292.0 +/- 1.0	292.0 +/- 1.0	SMM
1989	234	1:57:35	5.00 +/- 0.15	5.00 +/- 0.15	292.0 +/- 1.0	292.0 +/- 1.0	SMM
1989	234	2:22:21	5.60 +/- 0.25	5.60 +/- 0.25	292.0 +/- 1.0	292.0 +/- 1.0	SMM

Structure being measured:

Top of Cavity in Core (Later in Event)

OUTPUT:

START TIME:

Event began at $t = 0 + -0.280E+03 +/- 0.220E+03$ [minutes]

In more convenient units:

Event began at DOY 233 19:22 +/- 0.220E+03 [minutes]

Origin defined at DOY234 0: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.655E-02 +/- 0.118E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.331E+01 +/- 0.199E+00$ [solar radii]
 $c(2) = 0.130E-01 +/- 0.532E-02$ [radii/min]
 $c(2) = 0.151E+03 +/- 0.617E+02$ [km/sec]
 $c(3) = 0.169E-04 +/- 0.306E-04$ [radii/min**2]
 $c(3) = 0.655E-02 +/- 0.118E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.20903E+00$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.77863E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.60001E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.21816E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.34632E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.12995E-04$ [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) = 292. +/- 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 0:25 = 0. km/sec

The TOTAL velocity at 0:25 = 161. km/sec

The TANGENTIAL velocity at 0:50 = 0. km/sec

The TOTAL velocity at 0:50 = 170. km/sec

The TANGENTIAL velocity at 1: 6 = 0. km/sec

The TOTAL velocity at 1: 6 = 177. km/sec

The TANGENTIAL velocity at 1:57 = 0. km/sec

The TOTAL velocity at 1:57 = 197. km/sec

The TANGENTIAL velocity at 2:22 = 0. km/sec

The TOTAL velocity at 2:22 = 207. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.80

Standard Deviation in start time measurement = 0.432E+02

Value of reduced Chi Squared returned from nllst2 = 0.530E-02

Reduced Chi Squared = 0.399E-01

Chi Squared = 0.798E-01

The probability for exceeding chi square = 0.995E+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 = 0.8395E+00

The correlation between the data and the time**2 term = 0.8392E+00

The correlation between the data and the complete equation of motion = 0.9900E+00

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