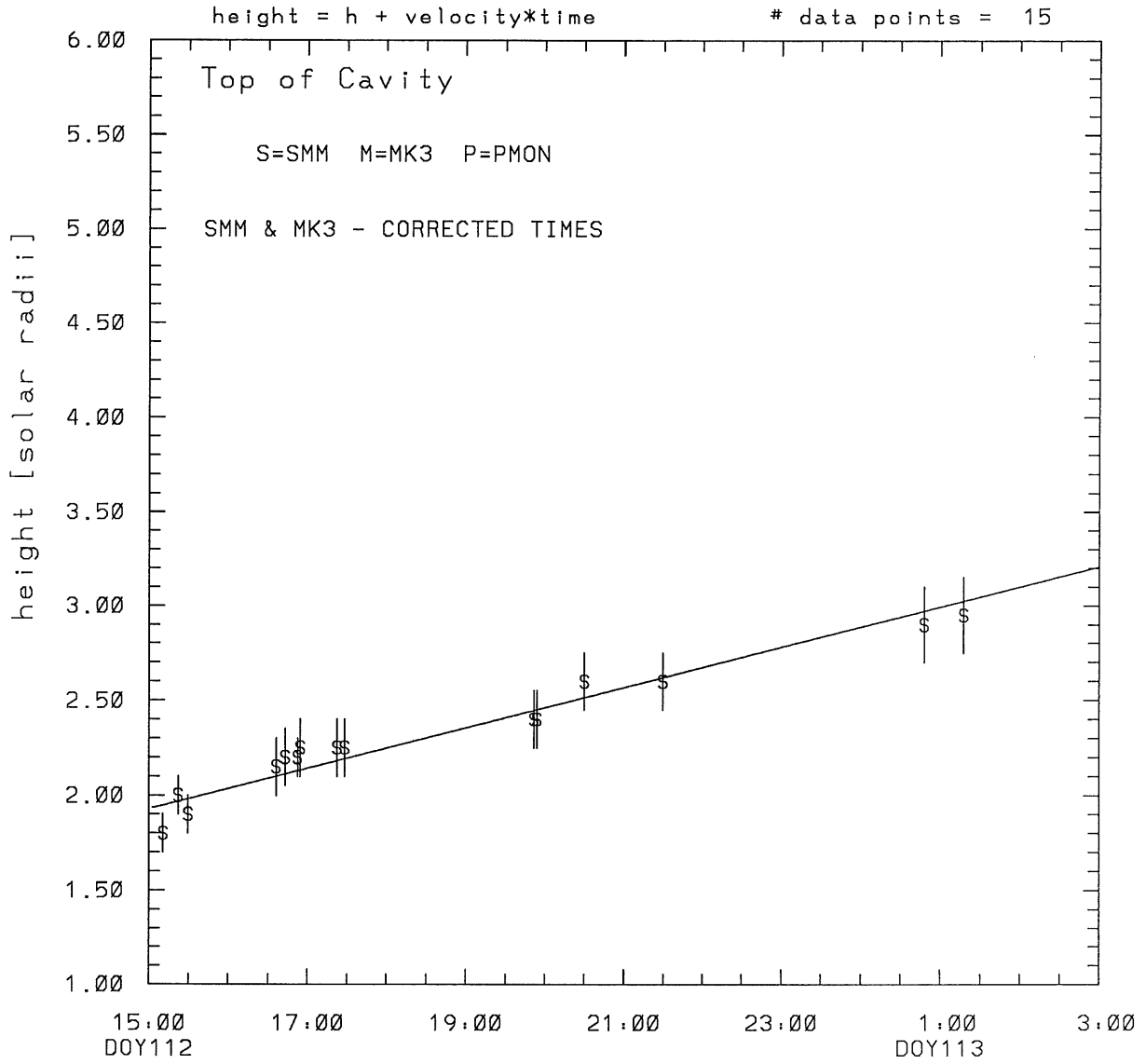
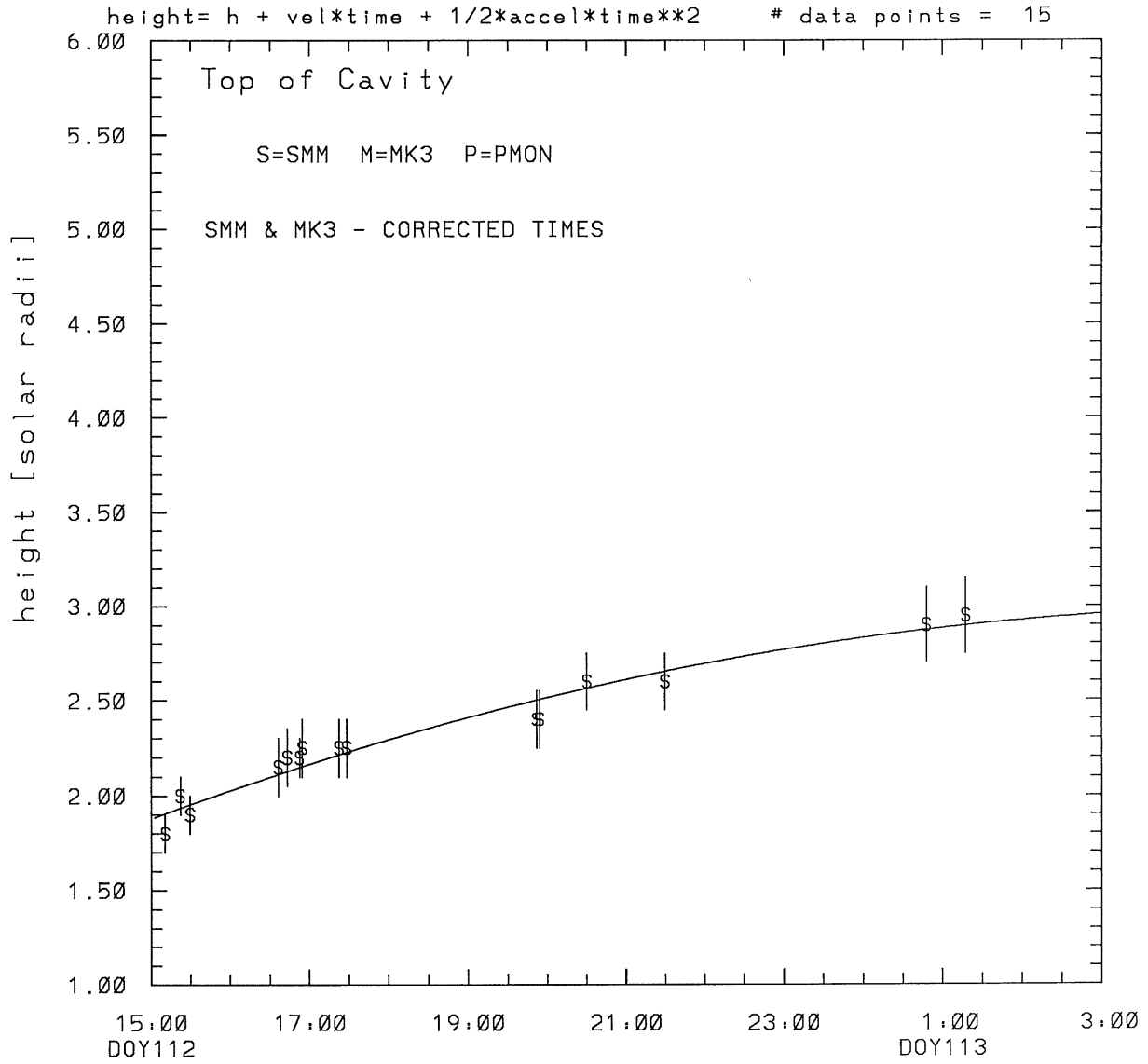


SMM C/P 1980 DOY112 50 +/- 0 degrees



tstart=DOY112 6:19 +/- 6.4 [min.]
radial velocity= 21. +/- 2. [km/sec]

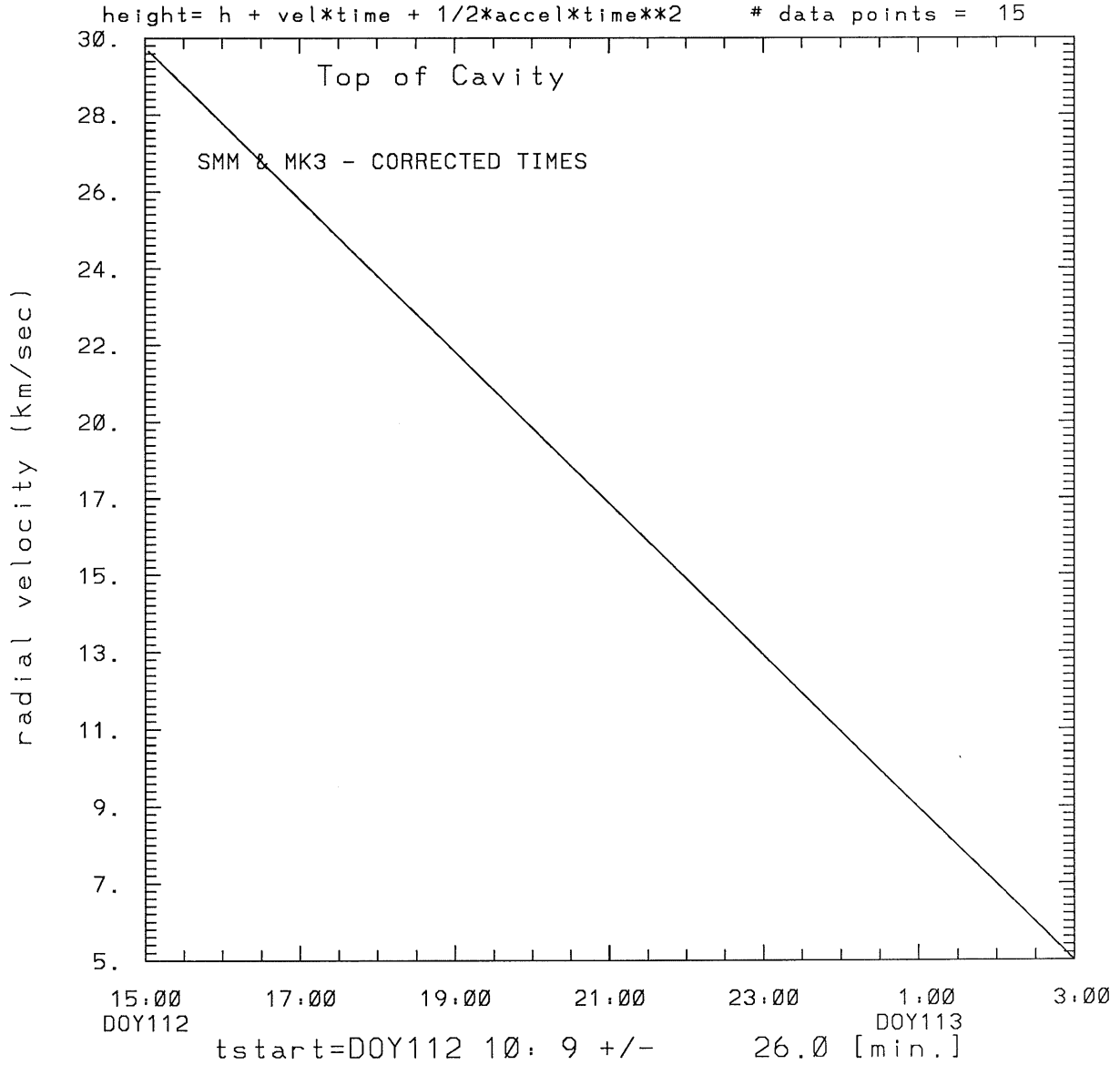
SMM C/P 1980 DOY112 50 +/- 0 degrees



tstart=DOY112 10: 9 +/- 26.0 [min.]

radial acceleration = -0.0006 ± 0.0003 [km/sec**2]

SMM C/P 1980 DOY112 50 +/- 0 degrees



radial acceleration = $-.573E-03$ km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	112	15:10:33	1.80	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	15:21:56	2.00	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	15:29:37	1.90	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	16:36:11	2.15	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	16:42:57	2.20	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	16:52:26	2.20	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	16:54:35	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	17:22:34	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	17:28: 8	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	19:51:55	2.40	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	19:54: 4	2.40	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	20:30: 4	2.60	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	21:29:38	2.60	+/- 0.15	50.0	+/- 0.5	SMM
1980	113	0:47:55	2.90	+/- 0.20	50.0	+/- 0.5	SMM
1980	113	1:17:28	2.95	+/- 0.20	50.0	+/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.523E+03 +/- 0.641E+01$ [minutes]
In more convenient units:
Event began at DOY 112 6:19 +/- 0.641E+01 [minutes]

Origin defined at DOY112 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 21. +/- 2. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.193E+01 +/- 0.307E-01 [solar radii]
c(2) = 0.178E-02 +/- 0.138E-03 [radii/min]
c(2) = 0.206E+02 +/- 0.160E+01 [km/sec]
c(3) = 0.000E+00 +/- 0.000E+00 [radii/min**2]

$$c(3) = 0.000E+00 \pm 0.000E+00 \text{ [km/sec**2]}$$

The computed ERRORS in coefficients [BEVINGTON] are:

$$\text{error in } c(1) = 0.33135E-01 \text{ [radii] see Bevington pg. 114}$$

$$\text{error in } c(2) = 0.11484E-03 \text{ [radii/min] see Bevington pg. 114}$$

ANGULAR INFORMATION:

$$\text{ANGULAR VELOCITY} = 0.0000E+00 \pm 0.0000E+00 \text{ [radians/sec]}$$

The computed ANGULAR coefficients and errors FROM NLLST2 are:

$$a(1) = 50. \pm 0. \text{ [degrees]}$$

$$a(2) = 0.000E+00 \pm 0.000E+00 \text{ [degrees/min]}$$

$$a(2) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec]}$$

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [degrees/min**2]}$$

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec**2]}$$

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 15:10 = 0.000E+00 km/sec

The TOTAL velocity at 15:10 = 21. km/sec

The TANGENTIAL velocity at 15:21 = 0.000E+00 km/sec

The TOTAL velocity at 15:21 = 21. km/sec

The TANGENTIAL velocity at 15:29 = 0.000E+00 km/sec

The TOTAL velocity at 15:29 = 21. km/sec

The TANGENTIAL velocity at 16:36 = 0.000E+00 km/sec

The TOTAL velocity at 16:36 = 21. km/sec

The TANGENTIAL velocity at 16:42 = 0.000E+00 km/sec

The TOTAL velocity at 16:42 = 21. km/sec

The TANGENTIAL velocity at 16:52 = 0.000E+00 km/sec

The TOTAL velocity at 16:52 = 21. km/sec

The TANGENTIAL velocity at 16:54 = 0.000E+00 km/sec

The TOTAL velocity at 16:54 = 21. km/sec

The TANGENTIAL velocity at 17:22 = 0.000E+00 km/sec

The TOTAL velocity at 17:22 = 21. km/sec

The TANGENTIAL velocity at 17:28 = 0.000E+00 km/sec

The TOTAL velocity at 17:28 = 21. km/sec

The TANGENTIAL velocity at 19:51 = 0.000E+00 km/sec

The TOTAL velocity at 19:51 = 21. km/sec

The TANGENTIAL velocity at 19:54 = 0.000E+00 km/sec

The TOTAL velocity at 19:54 = 21. km/sec

The TANGENTIAL velocity at 20:30 = 0.000E+00 km/sec
The TOTAL velocity at 20:30 = 21. km/sec

The TANGENTIAL velocity at 21:29 = 0.000E+00 km/sec
The TOTAL velocity at 21:29 = 21. km/sec

The TANGENTIAL velocity at 0:47 = 0.000E+00 km/sec
The TOTAL velocity at 0:47 = 21. km/sec

The TANGENTIAL velocity at 1:17 = 0.000E+00 km/sec
The TOTAL velocity at 1:17 = 21. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.33
Standard Deviation in start time measurement = 0.187E+03
Error in time = 0.16929E+03 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.720E-02
Reduced Chi Squared = 0.455E-01
Chi Squared = 0.591E+00
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.973E+00
The probability that no LINEAR correlation exists between the variables = 0.1181E-08
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
1980	112	15:10:33	1.80	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	15:21:56	2.00	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	15:29:37	1.90	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	16:36:11	2.15	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	16:42:57	2.20	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	16:52:26	2.20	+/- 0.10	50.0	+/- 0.5	SMM
1980	112	16:54:35	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	17:22:34	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	17:28: 8	2.25	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	19:51:55	2.40	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	19:54: 4	2.40	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	20:30: 4	2.60	+/- 0.15	50.0	+/- 0.5	SMM
1980	112	21:29:38	2.60	+/- 0.15	50.0	+/- 0.5	SMM
1980	113	0:47:55	2.90	+/- 0.20	50.0	+/- 0.5	SMM
1980	113	1:17:28	2.95	+/- 0.20	50.0	+/- 0.5	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.293E+03 +/- 0.260E+02$ [minutes]
In more convenient units:
Event began at DOY 112 10: 9 +/- 0.260E+02 [minutes]

Origin defined at DOY112 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.573E-03 +/- 0.255E-03$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.188E+01 +/- 0.348E-01$ [solar radii]
c(2) = $0.256E-02 +/- 0.371E-03$ [radii/min]
c(2) = $0.297E+02 +/- 0.430E+01$ [km/sec]
c(3) = $-0.148E-05 +/- 0.658E-06$ [radii/min**2]

$$c(3) = -0.573E-03 \pm 0.255E-03 \text{ [km/sec**2]}$$

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in $c(1) = 0.42206E-01$ [radii] Bevington pg 154 (8-30)
- Exact error in $c(1) = 0.99090E-02$ [radii] Bevington pg 154 (8-28)
- Approximate error in $c(2) = 0.37488E-03$ [radii/min] Bevington pg 154 (8-30)
- Exact error in $c(2) = 0.83969E-04$ [radii/min] Bevington pg 154 (8-28)
- Approximate error in $c(3) = 0.59117E-06$ [radii/min**] Bevington pg 154 (8-30)
- Exact error in $c(3) = 0.12216E-06$ [radii/min**] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

$$\text{ANGULAR ACCELERATION} = 0.0000E+00 \pm 0.0000E+00 \text{ [radians/sec**2]}$$

The computed ANGULAR coefficients and errors FROM NLLST2 are:

- $a(1) = 50. \pm 0.$ [degrees]
- $a(2) = 0.000E+00 \pm 0.000E+00$ [degrees/min]
- $a(2) = 0.000E+00 \pm 0.000E+00$ [rad/sec]
- $a(3) = 0.000E+00 \pm 0.000E+00$ [degrees/min**2]
- $a(3) = 0.000E+00 \pm 0.000E+00$ [rad/sec**2]

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 15:10 = 0.000E+00 km/sec
The TOTAL velocity at 15:10 = 29. km/sec

The TANGENTIAL velocity at 15:21 = 0.000E+00 km/sec
The TOTAL velocity at 15:21 = 29. km/sec

The TANGENTIAL velocity at 15:29 = 0.000E+00 km/sec
The TOTAL velocity at 15:29 = 29. km/sec

The TANGENTIAL velocity at 16:36 = 0.000E+00 km/sec
The TOTAL velocity at 16:36 = 26. km/sec

The TANGENTIAL velocity at 16:42 = 0.000E+00 km/sec
The TOTAL velocity at 16:42 = 26. km/sec

The TANGENTIAL velocity at 16:52 = 0.000E+00 km/sec
The TOTAL velocity at 16:52 = 26. km/sec

The TANGENTIAL velocity at 16:54 = 0.000E+00 km/sec
The TOTAL velocity at 16:54 = 26. km/sec

The TANGENTIAL velocity at 17:22 = 0.000E+00 km/sec
The TOTAL velocity at 17:22 = 25. km/sec

The TANGENTIAL velocity at 17:28 = 0.000E+00 km/sec
The TOTAL velocity at 17:28 = 25. km/sec

The TANGENTIAL velocity at 19:51 = 0.000E+00 km/sec

The TOTAL velocity at 19:51 = 20. km/sec

The TANGENTIAL velocity at 19:54 = 0.000E+00 km/sec

The TOTAL velocity at 19:54 = 20. km/sec

The TANGENTIAL velocity at 20:30 = 0.000E+00 km/sec

The TOTAL velocity at 20:30 = 18. km/sec

The TANGENTIAL velocity at 21:29 = 0.000E+00 km/sec

The TOTAL velocity at 21:29 = 16. km/sec

The TANGENTIAL velocity at 0:47 = 0.000E+00 km/sec

The TOTAL velocity at 0:47 = 10. km/sec

The TANGENTIAL velocity at 1:17 = 0.000E+00 km/sec

The TOTAL velocity at 1:17 = 9. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.33

Standard Deviation in start time measurement = 0.187E+03

Value of reduced Chi Squared returned from nllst2 = 0.558E-02

Reduced Chi Squared = 0.404E-01

Chi Squared = 0.485E+00

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 = 0.8823E+00

The correlation between the data and the time**2 term = 0.7058E+00

The correlation between the data and the complete equation of motion = 0.9451E+00

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