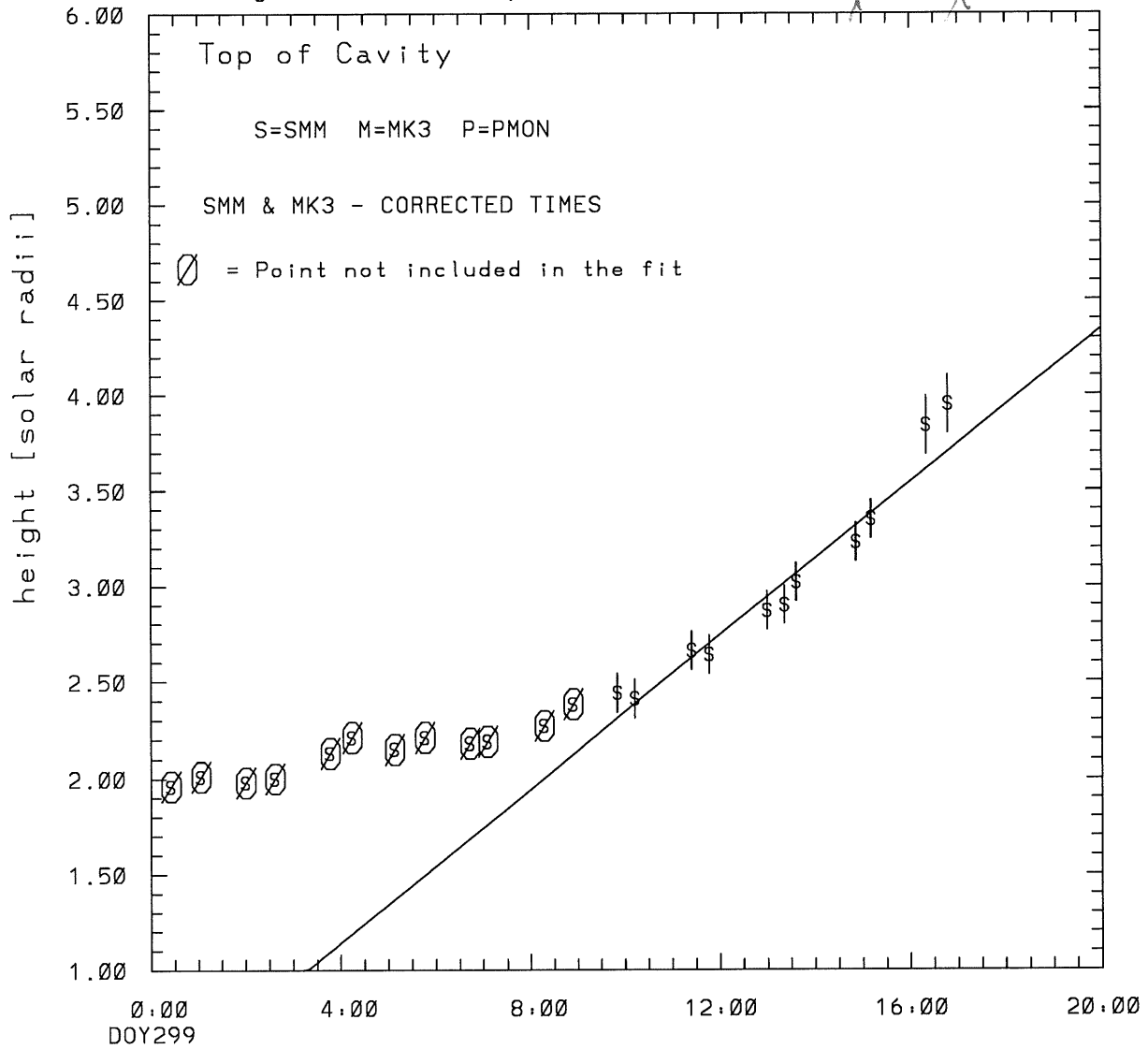


SMM C/P 1986 DOY299 94 +/- 0 degrees

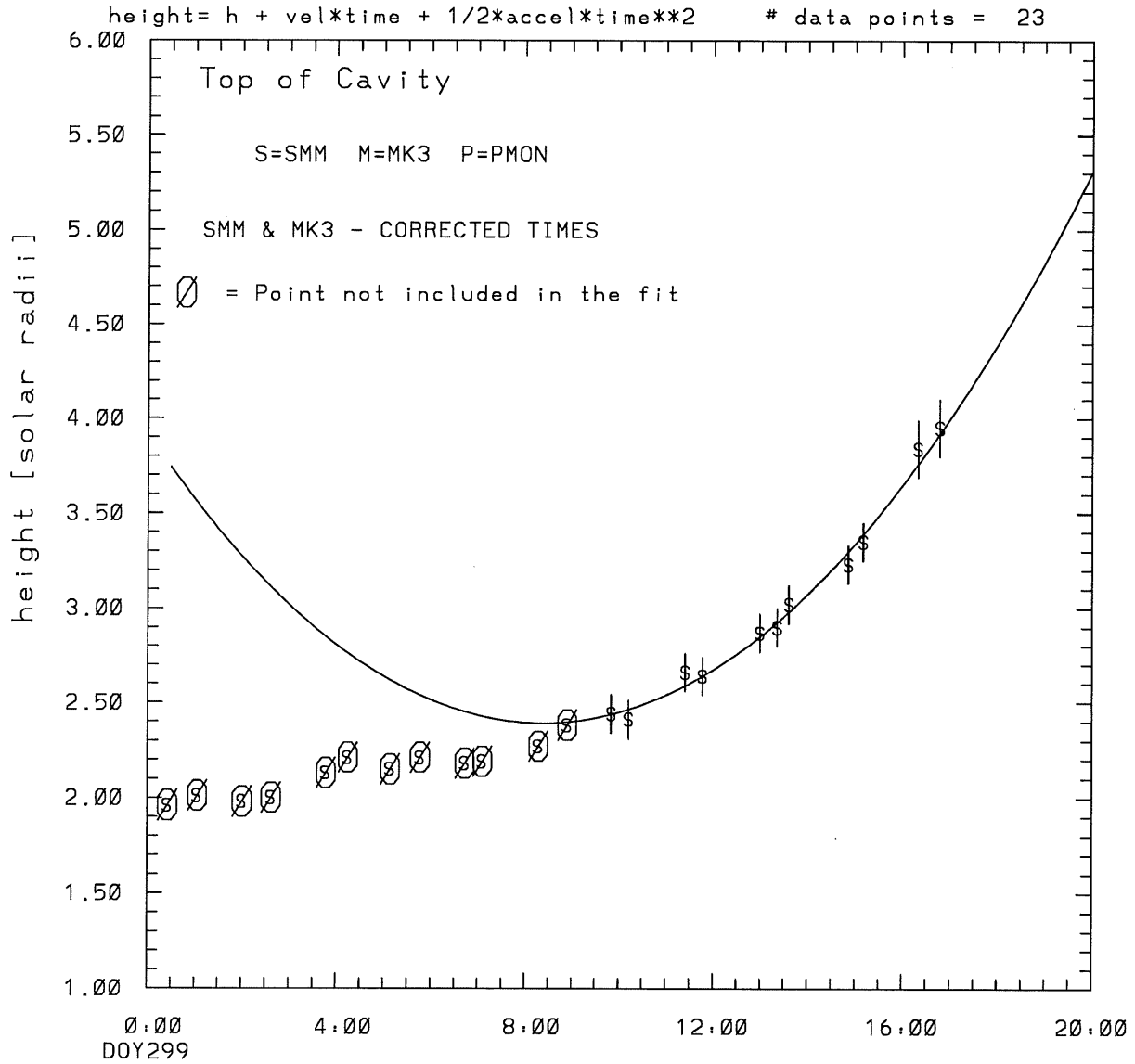
height = h + velocity*time

data points = ~~23~~ ^{Used 11}



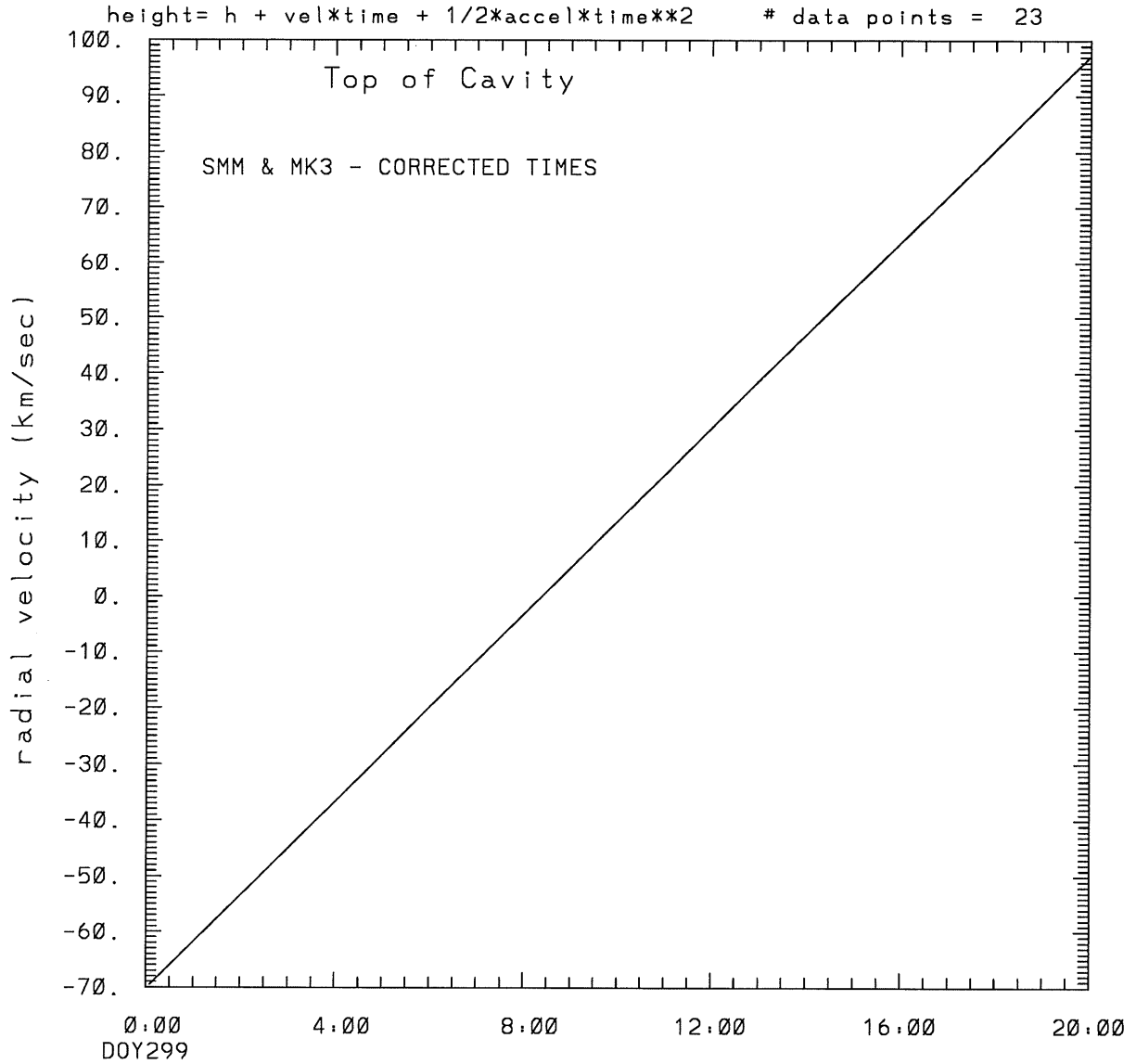
tstart=DOY299 3:18 +/- 11.1 [min.]
radial velocity= 39. +/- 2. [km/sec]

SMM C/P 1986 DOY299 94 +/- 0 degrees



tstart=DOY299 8:23 from derivative=Ø
Event begins at 2.39 Solar Radii
radial acceleration = 0.0023 +/- 0.0003 [km/sec**2]

SMM C/P 1986 DOY299 94 +/- 0 degrees



tstart=DOY299 8:23 from derivative=0
Event begins at 2.39 Solar Radii
radial acceleration=0.233E-02 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	error in angle	datatype
1986	299	0:24:23	1.96	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	1: 2:23	2.01	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	1:59:23	1.98	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	2:36:23	2.00	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	3:45:42	2.13	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	4:13:27	2.21	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	5: 7:23	2.15	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	5:45:23	2.21	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	6:42:23	2.18	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	7: 4:27	2.19	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	8:16:23	2.27	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	8:53:23	2.38	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	9:50:23	2.44	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	10:12:27	2.41	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	11:24:23	2.66	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	11:46:27	2.64	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	12:59:23	2.87	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	13:21:27	2.90	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	13:36:23	3.02	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	14:51:23	3.23	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	15:10:23	3.35	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	16:19:42	3.84	+/- 0.15	94.0 +/- 1.0	SMM
1986	299	16:47:27	3.95	+/- 0.15	94.0 +/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + 0.198E+03 +/- 0.111E+02$ [minutes]
In more convenient units:
Event began at DOY 299 3:18 +/- 0.111E+02 [minutes]

Origin defined at DOY299 0: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 39. +/- 2. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.339E+00 +/- 0.137E+00 [solar radii]
c(2) = 0.334E-02 +/- 0.175E-03 [radii/min]
c(2) = 0.387E+02 +/- 0.203E+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)= 0.31097E+00 [radii] see Bevington pg. 114
error in c(2)= 0.51303E-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) = 94. +/- 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 0:24 = 0.000E+00 km/sec

The TOTAL velocity at 0:24 = 39. km/sec

The TANGENTIAL velocity at 1: 2 = 0.000E+00 km/sec

The TOTAL velocity at 1: 2 = 39. km/sec

The TANGENTIAL velocity at 1:59 = 0.000E+00 km/sec

The TOTAL velocity at 1:59 = 39. km/sec

The TANGENTIAL velocity at 2:36 = 0.000E+00 km/sec

The TOTAL velocity at 2:36 = 39. km/sec

The TANGENTIAL velocity at 3:45 = 0.000E+00 km/sec

The TOTAL velocity at 3:45 = 39. km/sec

The TANGENTIAL velocity at 4:13 = 0.000E+00 km/sec

The TOTAL velocity at 4:13 = 39. km/sec

The TANGENTIAL velocity at 5: 7 = 0.000E+00 km/sec

The TOTAL velocity at 5: 7 = 39. km/sec

The TANGENTIAL velocity at 5:45 = 0.000E+00 km/sec

The TOTAL velocity at 5:45 = 39. km/sec

The TANGENTIAL velocity at 6:42 = 0.000E+00 km/sec

The TOTAL velocity at 6:42 = 39. km/sec

The TANGENTIAL velocity at 7: 4 = 0.000E+00 km/sec

The TOTAL velocity at 7: 4 = 39. km/sec

The TANGENTIAL velocity at 8:16 = 0.000E+00 km/sec

The TOTAL velocity at 8:16 = 39. km/sec

The TANGENTIAL velocity at 8:53 = 0.000E+00 km/sec

The TOTAL velocity at 8:53 = 39. km/sec

The TANGENTIAL velocity at 9:50 = 0.000E+00 km/sec

The TOTAL velocity at 9:50 = 39. km/sec

The TANGENTIAL velocity at 10:12 = 0.000E+00 km/sec

The TOTAL velocity at 10:12 = 39. km/sec

The TANGENTIAL velocity at 11:24 = 0.000E+00 km/sec

The TOTAL velocity at 11:24 = 39. km/sec

The TANGENTIAL velocity at 11:46 = 0.000E+00 km/sec

The TOTAL velocity at 11:46 = 39. km/sec

The TANGENTIAL velocity at 12:59 = 0.000E+00 km/sec

The TOTAL velocity at 12:59 = 39. km/sec

The TANGENTIAL velocity at 13:21 = 0.000E+00 km/sec

The TOTAL velocity at 13:21 = 39. km/sec

The TANGENTIAL velocity at 13:36 = 0.000E+00 km/sec

The TOTAL velocity at 13:36 = 39. km/sec

The TANGENTIAL velocity at 14:51 = 0.000E+00 km/sec

The TOTAL velocity at 14:51 = 39. km/sec

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

The TOTAL velocity at 15:10 = 39. km/sec

The TANGENTIAL velocity at 16:19 = 0.000E+00 km/sec

The TOTAL velocity at 16:19 = 39. km/sec

The TANGENTIAL velocity at 16:47 = 0.000E+00 km/sec

The TOTAL velocity at 16:47 = 39. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58

Standard Deviation in start time measurement = 0.299E+03

Error in time = 0.10088E+04 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.107E-01
Reduced Chi Squared = 0.218E+01
Chi Squared = 0.457E+02
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.917E+00
The probability that no LINEAR correlation exists between the variables = 0.5831E-09
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	error in angle	datatype
1986	299	0:24:23	1.96	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	1: 2:23	2.01	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	1:59:23	1.98	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	2:36:23	2.00	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	3:45:42	2.13	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	4:13:27	2.21	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	5: 7:23	2.15	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	5:45:23	2.21	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	6:42:23	2.18	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	7: 4:27	2.19	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	8:16:23	2.27	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	8:53:23	2.38	----	94.00 +/- ----	SMM THIS POINT WASN'T USED IN THE FIT.
1986	299	9:50:23	2.44	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	10:12:27	2.41	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	11:24:23	2.66	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	11:46:27	2.64	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	12:59:23	2.87	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	13:21:27	2.90	+/- 0.10	94.0 +/- 0.5	SMM
1986	299	13:36:23	3.02	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	14:51:23	3.23	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	15:10:23	3.35	+/- 0.10	94.0 +/- 1.0	SMM
1986	299	16:19:42	3.84	+/- 0.15	94.0 +/- 1.0	SMM
1986	299	16:47:27	3.95	+/- 0.15	94.0 +/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

tstart=DOY299 8:23 from derivative = 0
Event begins at 2.39 Solar Radii
Origin defined at DOY299 0: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.233E-02 +/- 0.252E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.391E+01 +/- 0.392E+00 [solar radii]
c(2) = -0.605E-02 +/- 0.102E-02 [radii/min]
c(2) = -0.702E+02 +/- 0.118E+02 [km/sec]
c(3) = 0.601E-05 +/- 0.652E-06 [radii/min**2]
c(3) = 0.233E-02 +/- 0.252E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.44763E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.21130E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.19894E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.62512E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.18584E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.46551E-07 [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) = 94. +/- 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 0:24 = 0.000E+00 km/sec
The TOTAL velocity at 0:24 = -67. km/sec

The TANGENTIAL velocity at 1: 2 = 0.000E+00 km/sec
The TOTAL velocity at 1: 2 = -61. km/sec

The TANGENTIAL velocity at 1:59 = 0.000E+00 km/sec
The TOTAL velocity at 1:59 = -54. km/sec

The TANGENTIAL velocity at 2:36 = 0.000E+00 km/sec
The TOTAL velocity at 2:36 = -48. km/sec

The TANGENTIAL velocity at 3:45 = 0.000E+00 km/sec
The TOTAL velocity at 3:45 = -39. km/sec

The TANGENTIAL velocity at 4:13 = 0.000E+00 km/sec
The TOTAL velocity at 4:13 = -35. km/sec

The TANGENTIAL velocity at 5: 7 = 0.000E+00 km/sec
The TOTAL velocity at 5: 7 = -27. km/sec

The TANGENTIAL velocity at 5:45 = 0.000E+00 km/sec

The TOTAL velocity at 5:45 = -22. km/sec

The TANGENTIAL velocity at 6:42 = 0.000E+00 km/sec

The TOTAL velocity at 6:42 = -14. km/sec

The TANGENTIAL velocity at 7: 4 = 0.000E+00 km/sec

The TOTAL velocity at 7: 4 = -11. km/sec

The TANGENTIAL velocity at 8:16 = 0.000E+00 km/sec

The TOTAL velocity at 8:16 = -1. km/sec

The TANGENTIAL velocity at 8:53 = 0.000E+00 km/sec

The TOTAL velocity at 8:53 = 4. km/sec

The TANGENTIAL velocity at 9:50 = 0.000E+00 km/sec

The TOTAL velocity at 9:50 = 12. km/sec

The TANGENTIAL velocity at 10:12 = 0.000E+00 km/sec

The TOTAL velocity at 10:12 = 15. km/sec

The TANGENTIAL velocity at 11:24 = 0.000E+00 km/sec

The TOTAL velocity at 11:24 = 25. km/sec

The TANGENTIAL velocity at 11:46 = 0.000E+00 km/sec

The TOTAL velocity at 11:46 = 28. km/sec

The TANGENTIAL velocity at 12:59 = 0.000E+00 km/sec

The TOTAL velocity at 12:59 = 39. km/sec

The TANGENTIAL velocity at 13:21 = 0.000E+00 km/sec

The TOTAL velocity at 13:21 = 42. km/sec

The TANGENTIAL velocity at 13:36 = 0.000E+00 km/sec

The TOTAL velocity at 13:36 = 44. km/sec

The TANGENTIAL velocity at 14:51 = 0.000E+00 km/sec

The TOTAL velocity at 14:51 = 54. km/sec

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

The TOTAL velocity at 15:10 = 57. km/sec

The TANGENTIAL velocity at 16:19 = 0.000E+00 km/sec

The TOTAL velocity at 16:19 = 66. km/sec

The TANGENTIAL velocity at 16:47 = 0.000E+00 km/sec

The TOTAL velocity at 16:47 = 70. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58
Standard Deviation in start time measurement = 0.299E+03
Value of reduced Chi Squared returned from nllst2 = 0.222E-02
Reduced Chi Squared = 0.134E+01
Chi Squared = 0.268E+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 = 0.8479E+00

The correlation between the data and the time² term = 0.9617E+00

The correlation between the data and the complete equation of motion = 0.5655E+00

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