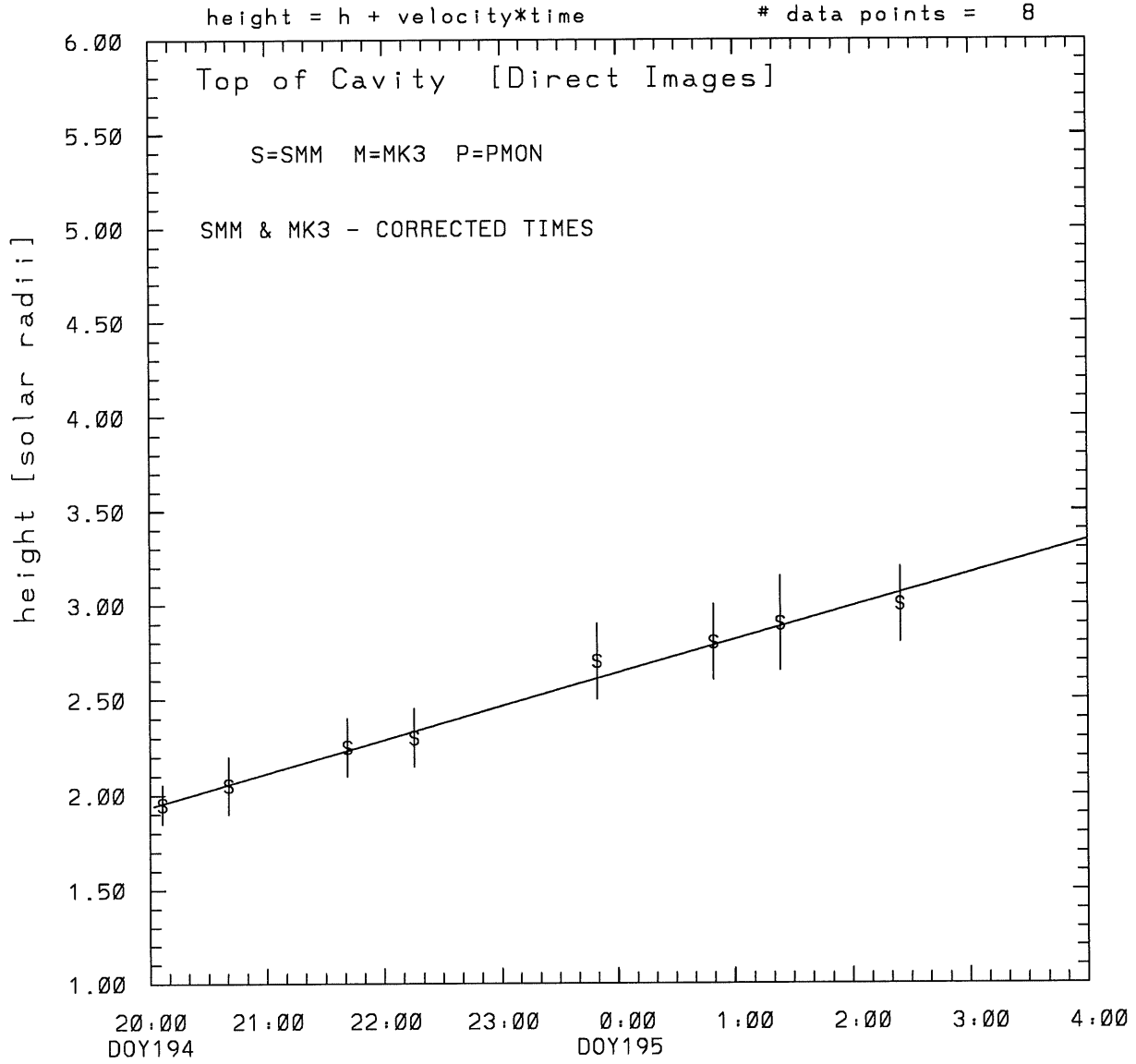
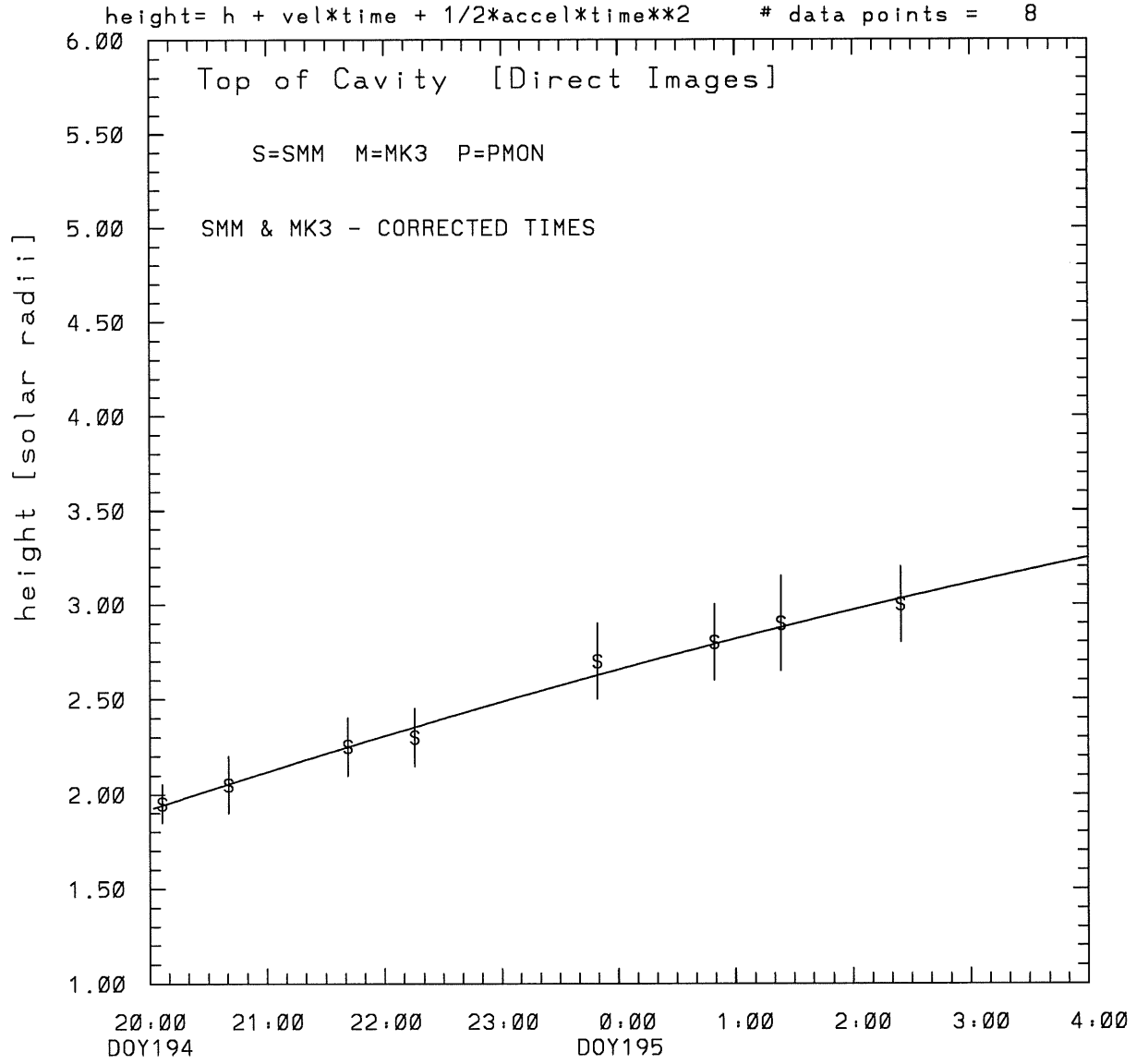


SMM C/P 1986 DOY194 85 +/- 0 degrees



tstart=DOY194 14:42 +/- 1.8 [min.]
radial velocity= 34. +/- 1. [km/sec]

SMM C/P 1986 DOY194 85 +/- 0 degrees

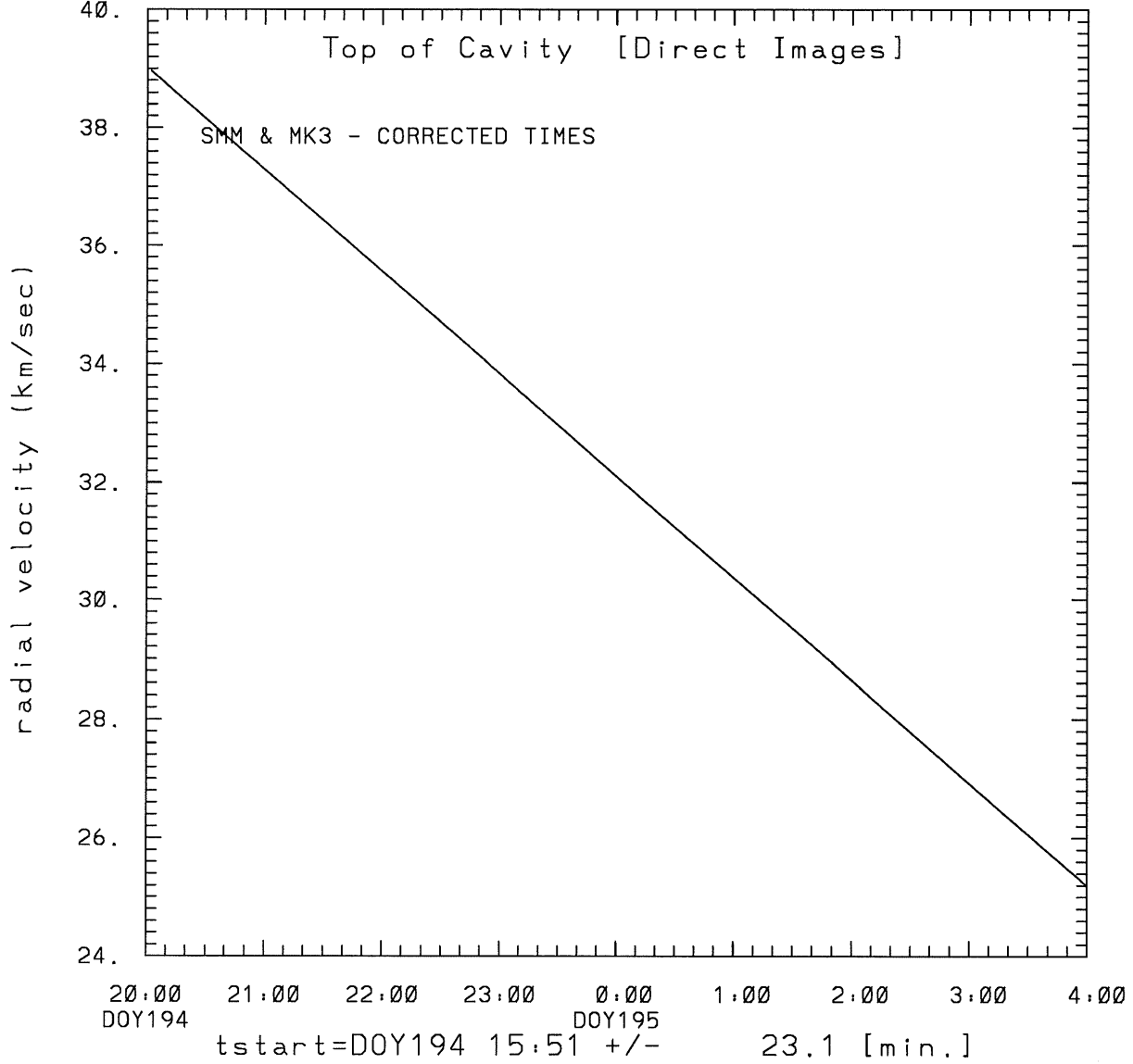


tstart=DOY194 15:51 +/- 23.1 [min.]

radial acceleration = -0.0005 ± 0.0004 [km/sec**2]

SMM C/P 1986 DOY194 85 +/- 0 degrees

height= h + vel*time + 1/2*accel*time**2 # data points = 8



radial acceleration=-.480E-03 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	error in	datatype
					angle	angle	
1986	194	20: 6:20	1.95	+/- 0.10	85.0	+/- 0.5	SMM
1986	194	20:40:24	2.05	+/- 0.15	85.0	+/- 0.5	SMM
1986	194	21:41:20	2.25	+/- 0.15	85.0	+/- 0.5	SMM
1986	194	22:15:24	2.30	+/- 0.15	85.0	+/- 0.5	SMM
1986	194	23:49:24	2.70	+/- 0.20	85.0	+/- 0.5	SMM
1986	195	0:49:20	2.80	+/- 0.20	85.0	+/- 0.5	SMM
1986	195	1:23:24	2.90	+/- 0.25	85.0	+/- 0.5	SMM
1986	195	2:24:20	3.00	+/- 0.20	85.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity [Direct Images]

OUTPUT:

START TIME:

Event began at $t = 0 + -0.320E+03 +/- 0.180E+01$ [minutes]
In more convenient units:
Event began at DOY 194 14:42 +/- 0.180E+01 [minutes]

Origin defined at DOY194 20: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 34. +/- 1. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.194E+01 +/- 0.184E-01$ [solar radii]
 $c(2) = 0.293E-02 +/- 0.104E-03$ [radii/min]
 $c(2) = 0.340E+02 +/- 0.121E+01$ [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 $c(1) = 0.30435E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.13300E-03$ [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) = 85. +/- 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 20: 6 = 0.000E+00 km/sec

The TOTAL velocity at 20: 6 = 34. km/sec

The TANGENTIAL velocity at 20:40 = 0.000E+00 km/sec

The TOTAL velocity at 20:40 = 34. km/sec

The TANGENTIAL velocity at 21:41 = 0.000E+00 km/sec

The TOTAL velocity at 21:41 = 34. km/sec

The TANGENTIAL velocity at 22:15 = 0.000E+00 km/sec

The TOTAL velocity at 22:15 = 34. km/sec

The TANGENTIAL velocity at 23:49 = 0.000E+00 km/sec

The TOTAL velocity at 23:49 = 34. km/sec

The TANGENTIAL velocity at 0:49 = 0.000E+00 km/sec

The TOTAL velocity at 0:49 = 34. km/sec

The TANGENTIAL velocity at 1:23 = 0.000E+00 km/sec

The TOTAL velocity at 1:23 = 34. km/sec

The TANGENTIAL velocity at 2:24 = 0.000E+00 km/sec

The TOTAL velocity at 2:24 = 34. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.40

Standard Deviation in start time measurement = 0.129E+03

Error in time = 0.40709E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.135E-02

Reduced Chi Squared = 0.136E-01

Chi Squared = 0.816E-01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = $0.994E+00$

The probability that no LINEAR correlation exists between the variables = $0.5206E-06$
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	error in		error in		datatype
			radii	radius	angle	angle	
1986	194	20: 6:20	1.95 +/-	0.10	85.0 +/-	0.5	SMM
1986	194	20:40:24	2.05 +/-	0.15	85.0 +/-	0.5	SMM
1986	194	21:41:20	2.25 +/-	0.15	85.0 +/-	0.5	SMM
1986	194	22:15:24	2.30 +/-	0.15	85.0 +/-	0.5	SMM
1986	194	23:49:24	2.70 +/-	0.20	85.0 +/-	0.5	SMM
1986	195	0:49:20	2.80 +/-	0.20	85.0 +/-	0.5	SMM
1986	195	1:23:24	2.90 +/-	0.25	85.0 +/-	0.5	SMM
1986	195	2:24:20	3.00 +/-	0.20	85.0 +/-	1.0	SMM

Structure being measured:

Top of Cavity [Direct Images]

OUTPUT:

START TIME:

Event began at $t = 0 + -0.251E+03 +/- 0.231E+02$ [minutes]

In more convenient units:

Event began at DOY 194 15:51 +/- 0.231E+02 [minutes]

Origin defined at DOY194 20: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.480E-03 +/- 0.375E-03$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.192E+01 +/- 0.215E-01$ [solar radii]
c(2) = $0.336E-02 +/- 0.354E-03$ [radii/min]
c(2) = $0.390E+02 +/- 0.411E+01$ [km/sec]
c(3) = $-0.124E-05 +/- 0.970E-06$ [radii/min**2]
c(3) = $-0.480E-03 +/- 0.375E-03$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.36908E-01$ [radii] Bevington pg 154 (8-30)

Exact error in c(1) = $0.27240E-02$ [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = $0.48367E-03$ [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.38366E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.12202E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.11378E-06 [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) = 85. +/- 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 20: 6 = 0.000E+00 km/sec
The TOTAL velocity at 20: 6 = 39. km/sec

The TANGENTIAL velocity at 20:40 = 0.000E+00 km/sec
The TOTAL velocity at 20:40 = 38. km/sec

The TANGENTIAL velocity at 21:41 = 0.000E+00 km/sec
The TOTAL velocity at 21:41 = 36. km/sec

The TANGENTIAL velocity at 22:15 = 0.000E+00 km/sec
The TOTAL velocity at 22:15 = 35. km/sec

The TANGENTIAL velocity at 23:49 = 0.000E+00 km/sec
The TOTAL velocity at 23:49 = 32. km/sec

The TANGENTIAL velocity at 0:49 = 0.000E+00 km/sec
The TOTAL velocity at 0:49 = 31. km/sec

The TANGENTIAL velocity at 1:23 = 0.000E+00 km/sec
The TOTAL velocity at 1:23 = 30. km/sec

The TANGENTIAL velocity at 2:24 = 0.000E+00 km/sec
The TOTAL velocity at 2:24 = 28. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.40

Standard Deviation in start time measurement = 0.129E+03

Value of reduced Chi Squared returned from nllst2 = 0.123E-02

Reduced Chi Squared = 0.985E-02

Chi Squared = 0.492E-01

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 = 0.1074E+01

The correlation between the data and the time**2 term = 0.9310E+00

The correlation between the data and the complete equation of motion = 0.9908E+00

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