

PLATE C451 NGC 3672 PA 8 NE READ FIRST

MAR 30 1977

RIGHT ASCENSION = 11. 22. 30. DECLINATION = -9. 31.

UNIVERSAL TIME OF MID EXPOSURE = 3. 16.

LONGITUDE OF SUN AT ZERO HOURS UT = 2. 14. 57. DAILY CHANGE (SECONDS) = 3570.9

MAR 30 1977

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6506.528	62.3750	67.105	-0.386	0.3	62.3753	67.4230	61.894	-0.375	-0.1	67.4229
	62.3800	67.515	0.024	-0.0	62.3800	67.4320	61.497	0.022	0.0	67.4320
	62.3720	67.885	0.394	-0.3	62.3717	67.4390	61.122	0.397	0.1	67.4391
	62.3820	77.551	10.060	-0.6	62.3734	67.4320	51.421	10.098	3.3	67.4353
	62.3860	77.821	10.330	-0.8	62.3772	67.4270	51.146	10.373	3.4	67.4304
	62.3850	78.113	10.622	-9.0	62.3760	67.4260	50.863	10.656	3.5	67.4295
	0.0087	0.009	67.491		62.3756	-0.0030	-0.003	61.519		67.4316
6532.880	62.9080	67.071	-0.410	0.2	62.9082	66.8990	61.958	-0.421	-0.0	66.8990
	62.9060	67.452	-0.029	0.0	62.9060	66.9030	61.587	-0.050	-0.0	66.9030
	62.9060	67.866	0.384	-0.2	62.9058	66.9050	61.131	0.406	0.0	66.9050
	62.9100	77.564	10.082	-6.2	62.9038	66.9040	51.418	10.118	0.4	66.9044
	62.9120	77.884	10.402	-6.4	62.9056	66.9020	51.053	10.484	0.4	66.9024
	62.9190	78.183	10.702	-6.6	62.9124	66.8960	50.678	10.858	0.4	66.8964
	0.0070	0.006	67.481		62.9070	-0.0017	-0.000	61.536		66.9017
6598.953	64.2330	67.100	-0.360	-0.0	64.2330	65.5730	61.917	-0.352	0.2	65.5732
	64.2270	67.478	0.018	0.0	64.2270	65.5780	61.590	-0.025	0.0	65.5780
	64.2290	67.836	0.376	0.0	64.2290	65.5830	61.174	0.391	-0.3	65.5827
	64.2250	77.547	10.086	0.3	64.2253	65.5910	51.421	10.144	-6.8	65.5842
	64.2290	77.911	10.450	0.3	64.2293	65.5870	51.040	10.525	-7.1	65.5799
	64.2300	78.269	10.808	0.3	64.2303	65.5840	50.659	10.906	-7.4	65.5766
	-0.0017	-0.000	67.460		64.2290	0.0093	0.007	61.565		65.5791
6678.200	65.8170	67.057	-0.382	-0.3	65.8167	63.9920	61.932	-0.354	0.5	63.9925
	65.8140	67.452	0.013	0.0	65.8140	63.9920	61.570	0.008	-0.0	63.9920
	65.8130	67.800	0.361	0.3	65.8133	63.9920	61.185	0.393	-0.6	63.9914
	65.8070	77.535	10.096	9.0	65.8160	64.0030	51.471	10.107	-15.1	63.9879
	65.8090	77.892	10.453	9.3	65.8183	64.0030	51.085	10.493	-15.6	63.9874
	65.8070	78.269	10.830	9.6	65.8166	64.0070	50.687	10.891	-16.2	63.9908
	-0.0070	-0.009	67.439		65.8158	0.0123	0.016	61.578		63.9903
6717.040	66.5980	67.041	-0.387	-0.5	66.5975	63.2090	61.971	-0.390	0.7	63.2097
	66.5930	67.447	0.019	0.0	66.5930	63.2150	61.614	-0.033	0.1	63.2151
	66.5930	67.794	0.366	0.5	66.5935	63.2190	61.197	0.384	-0.7	63.2183
	66.5750	77.525	10.097	13.5	66.5885	63.2370	51.468	10.113	-19.0	63.2180
	66.5810	77.851	10.423	13.9	66.5949	63.2360	51.116	10.465	-19.7	63.2163
	66.5820	78.211	10.783	14.4	66.5964	63.2350	50.733	10.848	-20.4	63.2146
	-0.0153	-0.014	67.428		66.5940	0.0217	0.020	61.581		63.2153
6929.468	70.8290	66.994	-0.362	-1.3	70.8277	58.9840	61.978	-0.342	1.3	58.9853
	70.8290	67.373	0.016	0.0	70.8290	58.9810	61.656	-0.020	0.1	58.9811
	70.8290	67.703	0.346	1.2	70.8302	58.9830	61.271	0.364	-1.4	58.9816
	70.7940	77.442	10.085	35.7	70.8297	59.0170	51.484	10.152	-37.9	58.9791
	70.7910	77.795	10.438	37.0	70.8280	59.0230	51.205	10.430	-38.9	58.9841
	70.7910	78.201	10.844	38.4	70.8294	59.0250	50.818	10.818	-40.4	58.9846
	-0.0370	-0.037	67.356		70.8290	0.0390	0.039	61.636		58.9826

D MID = 66.6005 YD MID = 67.7940 XR MID = 63.2110 YR MID = 61.1965

DX DIR = -0.0140+ -0.0059\*X+ -0.00001\*X\*\*2+ 0.00003\* X\*\*3  
 DX REV = 0.0197+ -0.0051\*X+ -0.00011\*X\*\*2+ 0.00000\* X\*\*3  
 YD DIR = -0.3658+ -0.0134\*X+ -0.00024\*X\*\*2+ -0.00014\* X\*\*3  
 YD REV = 0.3843+ -0.0028\*X+ -0.00021\*X\*\*2+ -0.00062\* X\*\*3  
 YH DIR = 10.4370+ -0.0247\*X+ -0.00220\*X\*\*2+ 0.00216\* X\*\*3  
 YH REV = -10.4661+ -0.0540\*X+ 0.00208\*X\*\*2+ 0.00352

WEIGHTED MEASUREMENTS

LAMDA= 6717.313 + 50.0233 \*X + 0.0293 \*X\*\*2 + 0.00146 \*X\*\*3 (ANGSTROM)

6 COMPARISON LINES

LINE	XDIR	XREV	MEANX	MEANY	XD-XMEAN ANGSTROMS	LAMBDA	MEAS-CALC	WEIGHT
6506.528	62.376	62.377	62.376	10.639	0.033	6506.490	0.038	5
6532.880	62.907	62.907	62.907	10.780	0.004	6532.947	-0.067	5
6598.953	64.229	64.229	64.229	10.857	0.010	6598.912	0.041	5
6678.200	65.816	65.818	65.817	10.861	0.059	6678.212	-0.012	5
6717.040	66.594	66.593	66.594	10.815	0.020	6717.041	-0.001	5
6929.468	70.829	70.826	70.827	10.831	0.080	6929.467	0.000	5

\*MEAN ERROR\* = 0.05074  
SIGMA = 129.8085

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
3 6548.100	64.0070	71.915	4.451	-0.4	64.0066	65.8080	57.036	-4.525	-2.5	65.8055
	64.0050	71.915	4.451	-0.4	64.0046	65.8100	57.036	-4.525	-2.5	65.8075
	64.0130	71.915	4.451	-0.4	64.0126	65.8100	57.036	-4.525	-2.5	65.8075
	0.001	10.449	67.464			0.006	-10.530	61.561		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMBDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6548.100	64.007	64.003	0.0	64.005	0.000	0.090	6587.715	39.615	1813.7	0.0	1810.5
	64.005	64.001	0.0	64.003	0.000	0.090	6587.615	39.515	1809.1	0.0	1806.0
	64.013	64.001	0.0	64.007	0.000	0.290	6587.814	39.714	1818.2	0.0	1815.1

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
51 6562.817										

PAGE 1  
// JOB  
LOG DRIVE 0000 CART SPEC 0000 CART AVAIL 0000 PHY DRIVE 0000  
V2 M12 ACTUAL 16K CONFIG 16K  
// XEQ TILTS

RIGHT ASCENSION = 11. 22. 30. DECLINATION = -9. 31.  
UNIVERSAL TIME OF MID EXPOSURE = 3. 16.  
LONGITUDE OF SUN AT ZERO HOURS UT = 2. 14. 57. DAILY CHANGE (SECONDS) = 3570.9

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6506.528	62.3750	67.105	-0.386	0.3	62.3753	67.4230	61.894	-0.375	-0.1	67.4229
	62.3800	67.515	0.024	-0.0	62.3800	67.4320	61.497	0.022	0.0	67.4320
	62.3720	67.885	0.394	-0.3	62.3717	67.4390	61.122	0.397	0.1	67.4391
	62.3820	77.551	10.060	-8.6	62.3734	67.4320	51.421	10.098	3.3	67.4353
	62.3860	77.821	10.330	-8.8	62.3772	67.4270	51.146	10.373	3.4	67.4304
	62.3850	78.113	10.622	-9.0	62.3760	67.4260	50.863	10.656	3.5	67.4295
	0.0087	0.009	67.491		62.3756	-0.0030	-0.003	61.519		67.4316
6532.880	62.9080	67.071	-0.410	0.2	62.9082	66.8990	61.958	-0.421	-0.0	66.8990
	62.9060	67.452	-0.029	0.0	62.9060	66.9030	61.587	-0.050	-0.0	66.9030
	62.9060	67.866	0.384	-0.2	62.9058	66.9050	61.131	0.406	0.0	66.9050
	62.9100	77.564	10.082	-6.2	62.9038	66.9040	51.418	10.118	0.4	66.9044
	62.9120	77.884	10.402	-6.4	62.9056	66.9020	51.053	10.484	0.4	66.9024
	62.9190	78.183	10.702	-6.6	62.9124	66.8960	50.678	10.858	0.4	66.8964
	0.0070	0.006	67.481		62.9070	-0.0017	-0.000	61.536		66.9017
6598.953	64.2330	67.100	-0.360	-0.0	64.2330	65.5730	61.917	-0.352	0.2	65.5732
	64.2270	67.478	0.018	0.0	64.2270	65.5780	61.590	-0.025	0.0	65.5780
	64.2290	67.836	0.376	0.0	64.2290	65.5830	61.174	0.391	-0.3	65.5827
	64.2250	77.547	10.086	0.3	64.2253	65.5910	51.421	10.144	-6.8	65.5842
	64.2290	77.911	10.450	0.3	64.2293	65.5870	51.040	10.525	-7.1	65.5799
	64.2300	78.269	10.808	0.3	64.2303	65.5840	50.659	10.906	-7.4	65.5766
	-0.0017	-0.000	67.460		64.2290	0.0093	0.007	61.565		65.5791
6678.200	65.8170	67.057	-0.382	-0.3	65.8167	63.9920	61.932	-0.354	0.5	63.9925
	65.8140	67.452	0.013	0.0	65.8140	63.9920	61.570	0.008	-0.0	63.9920
	65.8130	67.800	0.361	0.3	65.8133	63.9920	61.185	0.393	-0.6	63.9914
	65.8070	77.535	10.096	9.0	65.8160	64.0030	51.471	10.107	-15.1	63.9879
	65.8090	77.892	10.453	9.3	65.8183	64.0030	51.085	10.493	-15.6	63.9874
	65.8070	78.269	10.830	9.6	65.8166	64.0070	50.687	10.891	-16.2	63.9908
	-0.0070	-0.009	67.439		65.8158	0.0123	0.016	61.578		63.9903
6717.040	66.5980	67.041	-0.387	-0.5	66.5975	63.2090	61.971	-0.390	0.7	63.2097
	66.5930	67.447	0.019	0.0	66.5930	63.2150	61.614	-0.033	0.1	63.2151
	66.5930	67.794	0.366	0.5	66.5935	63.2190	61.197	0.384	-0.7	63.2183
	66.5750	77.525	10.097	13.5	66.5885	63.2370	51.468	10.113	-19.0	63.2180
	66.5810	77.851	10.423	13.9	66.5949	63.2360	51.116	10.465	-19.7	63.2163
	66.5820	78.211	10.783	14.4	66.5964	63.2350	50.733	10.848	-20.4	63.2146
	-0.0153	-0.014	67.428		66.5940	0.0217	0.020	61.581		63.2153
6929.468	70.8290	66.994	-0.362	-1.3	70.8277	58.9840	61.978	-0.342	1.3	58.9853
	70.8290	67.373	0.016	0.0	70.8290	58.9810	61.656	-0.020	0.1	58.9811
	70.8290	67.703	0.346	1.2	70.8302	58.9830	61.271	0.364	-1.4	58.9816
	70.7940	77.442	10.085	35.7	70.8297	59.0170	51.484	10.152	-37.9	58.9791
	70.7910	77.795	10.438	37.0	70.8280	59.0230	51.205	10.430	-38.9	58.9841
	70.7910	78.201	10.844	38.4	70.8294	59.0250	50.818	10.818	-40.4	58.9846
	-0.0370	-0.037	67.356		70.8290	0.0390	0.039	61.636		58.9826
D MID =	66.6005	YD MID =	67.7940	XR MID =	63.2110	YR MID =	61.1965			
DX DIR =	-0.0140+	-0.0059**X+	-0.00001**X**2+	0.00003*	X**3					
DX REV =	0.0197+	-0.0051**X+	-0.00011**X**2+	0.00000*	X**3					
YD DIR =	-0.3658+	-0.0134**X+	-0.00024**X**2+	-0.00014*	X**3					
YD REV =	0.3843+	-0.0028**X+	-0.00021**X**2+	-0.00062*	X**3					
YH DIR =	10.4370+	-0.0247**X+	-0.00220**X**2+	0.00216*	X**3					
YH REV =	-10.4661+	-0.0540**X+	0.00208**X**2+	0.00352						

WEIGHTED MEASUREMENTS

LAMDA= 6717.313 + 50.0233 \*X + 0.0293 \*X\*\*2 + 0.00146 \*X\*\*3 (ANGSTROM)

6 COMPARISON LINES

LINE	XDIR	XREV	MEANX	MEANY	XD-XMEAN ANGSTROMS	LAMDA	MEAS-CALC	WEIGHT		
6506.528	62.376	62.377	62.376	10.639	0.033	6506.490	0.038	5		
6532.880	62.907	62.907	62.907	10.780	0.004	6532.947	-0.067	5		
6598.953	64.229	64.229	64.229	10.857	0.010	6598.912	0.041	5		
6678.200	65.816	65.818	65.817	10.861	0.059	6678.212	-0.012	5		
6717.040	66.594	66.593	66.594	10.815	0.020	6717.041	-0.001	5		
6929.468	70.829	70.826	70.827	10.831	0.080	6929.467	0.000	5		
'MEAN ERROR' =	0.05074									
SIGMA =	129.8085									
LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
3 6548.100	64.0070	71.915	4.451	-0.4	64.0066	65.8080	57.036	-4.525	-2.5	65.8055
	64.0050	71.915	4.451	-0.4	64.0046	65.8100	57.036	-4.525	-2.5	65.8075
	64.0130	71.915	4.451	-0.4	64.0126	65.8100	57.036	-4.525	-2.5	65.8075
	0.001	10.449	67.464			0.006	-10.530	61.561		
LINE	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX LAMDA	DELTA L VELOCITY	Y ARCSEC		V(WRT SUN)
6548.100	64.007	64.003	0.0	64.005	0.000	0.090 6587.715	39.615	1813.7	0.0	1810.5
	64.005	64.001	0.0	64.003	0.000	0.090 6587.615	39.515	1809.1	0.0	1806.0
	64.013	64.001	0.0	64.007	0.000	0.290 6587.814	39.714	1818.2	0.0	1815.1
LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
51 6562.817	64.4160	67.200	-0.258	-0.0	64.4160	65.4030	61.775	0.208	0.2	65.4032
	64.3940	67.401	-0.057	-0.0	64.3940	65.4080	61.574	0.007	0.0	65.4080
	64.3980	67.601	0.143	0.0	64.3980	65.4170	61.372	-0.195	-0.1	65.4168
	64.3900	67.802	0.344	0.0	64.3900	65.4180	61.171	-0.396	-0.3	65.4177
	64.4020	68.005	0.547	0.1	64.4021	65.4170	60.973	-0.594	-0.4	65.4165
	64.4010	68.201	0.743	0.1	64.4011	65.4150	60.771	-0.796	-0.6	65.4144
	64.3930	68.401	0.943	0.1	64.3931	65.4140	60.575	-0.992	-0.8	65.4132
	64.3920	68.474	1.016	0.1	64.3921	65.4170	60.483	-1.084	-0.8	65.4162
	64.3850	68.474	1.016	0.1	64.3851	65.4170	60.483	-1.084	-0.8	65.4162
	64.3880	68.602	1.144	0.1	64.3881	65.4160	60.372	-1.195	-0.9	65.4151
	64.3910	68.800	1.342	0.2	64.3912	65.4270	60.172	-1.395	-1.1	65.4259
	64.3870	69.000	1.542	0.2	64.3872	65.4360	59.971	-1.596	-1.2	65.4348
	64.3980	69.400	1.942	0.2	64.3982	65.4180	59.570	-1.997	-1.5	65.4165
	64.3910	69.600	2.142	0.3	64.3913	65.4220	59.372	-2.195	-1.7	65.4203
	64.3940	69.800	2.342	0.3	64.3943	65.4180	59.172	-2.395	-1.8	65.4162
	64.3910	70.003	2.545	0.3	64.3913	65.4240	58.970	-2.597	-2.0	65.4220
	64.3900	70.206	2.748	0.3	64.3903	65.4260	58.775	-2.792	-2.1	65.4239
	64.3790	70.402	2.944	0.4	64.3794	65.4360	58.570	-2.997	-2.3	65.4337
	64.3720	70.601	3.143	0.4	64.3724	65.4450	58.371	-3.196	-2.4	65.4426
	64.3620	70.807	3.349	0.4	64.3624	65.4560	58.167	-3.400	-2.6	65.4534
	64.3560	71.005	3.547	0.4	64.3564	65.4550	57.971	-3.596	-2.8	65.4522
	64.3450	71.201	3.743	0.5	64.3455	65.4700	57.770	-3.797	-2.9	65.4671
	64.3290	71.401	3.943	0.5	64.3295	65.4850	57.572	-3.995	-3.0	65.4819
	64.3160	71.600	4.142	0.5	64.3165	65.4950	57.370	-4.197	-3.2	65.4918

64.3040	71.801	4.343	0.5	64.3045	65.5040	57.175	-4.392	-3.4	65.5006
64.3080	71.911	4.453	0.6	64.3086	65.5050	57.040	-4.527	-3.5	65.5015
64.3040	71.911	4.453	0.6	64.3046	65.5100	57.040	-4.527	-3.5	65.5065
64.3060	71.911	4.453	0.6	64.3066	65.5120	57.040	-4.527	-3.5	65.5085
64.3090	72.000	4.542	0.6	64.3096	65.5130	56.971	-4.596	-3.5	65.5095
64.3000	72.201	4.743	0.6	64.3006	65.5190	56.775	-4.792	-3.7	65.5153
64.2860	72.401	4.943	0.6	64.2866	65.5320	56.570	-4.997	-3.8	65.5282
64.2590	72.600	5.142	0.6	64.2596	65.5510	56.374	-5.193	-4.0	65.5470
64.2310	72.803	5.345	0.7	64.2317	65.5770	56.172	-5.395	-4.1	65.5729
64.2240	73.000	5.542	0.7	64.2247	65.5940	55.971	-5.596	-4.3	65.5897
64.2270	73.203	5.745	0.7	64.2277	65.5850	55.772	-5.795	-4.4	65.5806
64.2290	73.301	5.843	0.7	64.2297	65.5930	55.669	-5.898	-4.5	65.5885
64.2380	73.600	6.142	0.8	64.2388	65.5750	55.371	-6.196	-4.7	65.5702
64.2350	73.802	6.344	0.8	64.2358	65.5800	55.171	-6.396	-4.9	65.5751
64.2380	74.002	6.544	0.8	64.2388	65.5820	54.971	-6.596	-5.0	65.5769
64.2350	74.085	6.627	0.8	64.2358	65.5810	54.873	-6.694	-5.1	65.5759
64.2340	74.085	6.627	0.8	64.2348	65.5820	54.873	-6.694	-5.1	65.5769
64.2360	74.200	6.742	0.8	64.2368	65.5860	54.772	-6.795	-5.2	65.5808
64.2150	74.400	6.942	0.9	64.2159	65.5930	54.573	-6.994	-5.4	65.5876
64.2290	74.603	7.145	0.9	64.2299	65.5870	54.370	-7.197	-5.5	65.5815
64.2250	74.792	7.334	0.9	64.2259	65.5930	54.179	-7.388	-5.6	65.5873
64.2240	75.003	7.545	0.9	64.2249	65.5970	53.972	-7.595	-5.8	65.5912
64.2020	75.203	7.745	1.0	64.2030	65.5960	53.774	-7.793	-6.0	65.5900
64.1960	75.402	7.944	1.0	64.1970	65.6090	53.575	-7.992	-6.1	65.6029
64.2320	76.001	8.543	1.1	64.2331	65.5900	52.976	-8.591	-6.6	65.5834
64.2310	76.208	8.750	1.1	64.2321	65.5900	52.771	-8.796	-6.7	65.5833
64.2270	76.208	8.750	1.1	64.2281	65.5980	52.771	-8.796	-6.7	65.5913
-0.001	10.458	67.458			0.008	-10.537	61.567		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6562.817	64.416	64.405	0.0	64.411	-4.715	0.265	6607.970	45.153	2062.6	-113.2	2059.4
	64.394	64.400	0.0	64.397	-4.514	0.162	6607.300	44.483	2032.0	-108.3	2028.9
	64.398	64.392	0.0	64.395	-4.313	0.159	6607.180	44.363	2026.5	-103.5	2023.4
	64.390	64.391	0.0	64.390	-4.112	0.019	6606.960	44.143	2016.5	-98.7	2013.3
	64.402	64.392	0.0	64.397	-3.911	0.252	6607.289	44.472	2031.5	-93.9	2028.3
	64.401	64.394	0.0	64.398	-3.712	0.174	6607.318	44.501	2032.8	-89.1	2029.7
	64.393	64.395	0.0	64.394	-3.514	0.053	6607.148	44.331	2025.0	-84.3	2021.9
	64.392	64.392	0.0	64.392	-3.432	0.005	6607.050	44.233	2020.6	-82.4	2017.4
	64.385	64.392	0.0	64.389	-3.432	0.180	6606.875	44.058	2012.6	-82.4	2009.4
	64.388	64.393	0.0	64.391	-3.312	0.132	6606.978	44.160	2017.3	-79.5	2014.1
	64.391	64.382	0.0	64.387	-3.114	0.215	6606.782	43.965	2008.4	-74.7	2005.2
	64.387	64.374	0.0	64.380	-2.913	0.336	6606.462	43.645	1993.7	-69.9	1990.6
	64.398	64.392	0.0	64.395	-2.512	0.155	6607.195	44.378	2027.2	-60.3	2024.1
	64.391	64.388	0.0	64.390	-2.313	0.077	6606.925	44.108	2014.9	-55.5	2011.7
	64.394	64.392	0.0	64.393	-2.114	0.049	6607.104	44.287	2023.0	-50.7	2019.9
	64.391	64.386	0.0	64.389	-1.911	0.120	6606.884	44.067	2013.0	-45.9	2009.8
	64.390	64.385	0.0	64.387	-1.712	0.142	6606.813	43.996	2009.8	-41.1	2006.6
	64.379	64.375	0.0	64.377	-1.512	0.114	6606.294	43.477	1986.0	-36.3	1982.9
	64.372	64.366	0.0	64.369	-1.312	0.161	6605.899	43.082	1968.0	-31.5	1964.9
	64.362	64.355	0.0	64.359	-1.107	0.183	6605.379	42.562	1944.3	-26.6	1941.1
	64.356	64.356	0.0	64.356	-0.910	0.005	6605.259	42.442	1938.8	-21.8	1935.6
	64.345	64.341	0.0	64.343	-0.712	0.101	6604.615	41.798	1909.3	-17.1	1906.2
	64.329	64.326	0.0	64.328	-0.513	0.073	6603.845	41.028	1874.2	-12.3	1871.0
	64.316	64.317	0.0	64.317	-0.312	0.005	6603.276	40.459	1848.2	-7.5	1845.0
	64.304	64.308	0.0	64.306	-0.114	0.083	6602.756	39.939	1824.4	-2.7	1821.3
	64.308	64.307	0.0	64.308	0.008	0.040	6602.834	40.017	1828.0	0.2	1824.8
	64.304	64.302	0.0	64.303	0.008	0.065	6602.609	39.792	1817.7	0.2	1814.6
	64.306	64.300	0.0	64.303	0.008	0.164	6602.609	39.792	1817.7	0.2	1814.6
	64.310	64.299	0.0	64.304	0.087	0.263	6602.661	39.844	1820.1	2.1	1816.9
	64.300	64.293	0.0	64.297	0.286	0.185	6602.291	39.474	1803.2	6.8	1800.0
	64.287	64.280	0.0	64.283	0.489	0.157	6601.622	38.805	1772.6	11.7	1769.5
	64.260	64.261	0.0	64.260	0.686	0.046	6600.478	37.661	1720.4	16.4	1717.2
	64.232	64.236	0.0	64.234	0.888	0.099	6599.135	36.318	1659.0	21.3	1655.9

64.225	64.219	0.0	64.222	1.087	0.148	6598.540	35.724	1631.9	26.1	1628.7
64.228	64.228	0.0	64.228	1.288	0.005	6598.844	36.027	1645.8	30.9	1642.6
64.230	64.220	0.0	64.225	1.388	0.242	6598.697	35.880	1639.0	33.3	1635.9
64.239	64.238	0.0	64.238	1.687	0.013	6599.377	36.560	1670.1	40.5	1666.9
64.236	64.233	0.0	64.234	1.888	0.060	6599.182	36.365	1661.2	45.3	1658.0
64.239	64.232	0.0	64.235	2.088	0.181	6599.212	36.395	1662.5	50.1	1659.4
64.236	64.233	0.0	64.234	2.178	0.080	6599.164	36.347	1660.3	52.3	1657.2
64.235	64.232	0.0	64.233	2.178	0.080	6599.114	36.297	1658.1	52.3	1654.9
64.237	64.228	0.0	64.232	2.286	0.228	6599.066	36.249	1655.9	54.9	1652.7
64.216	64.221	0.0	64.218	2.486	0.124	6598.372	35.555	1624.2	59.7	1621.0
64.230	64.227	0.0	64.228	2.689	0.072	6598.876	36.059	1647.2	64.5	1644.0
64.226	64.221	0.0	64.224	2.879	0.119	6598.630	35.813	1636.0	69.1	1632.8
64.225	64.217	0.0	64.221	3.088	0.190	6598.510	35.693	1630.5	74.1	1627.3
64.203	64.218	0.0	64.211	3.287	0.387	6597.990	35.174	1606.7	78.9	1603.6
64.197	64.206	0.0	64.201	3.486	0.215	6597.521	34.704	1585.3	83.7	1582.1
64.233	64.225	0.0	64.229	4.085	0.200	6598.907	36.090	1648.6	98.0	1645.4
64.232	64.225	0.0	64.229	4.291	0.171	6598.886	36.069	1647.7	103.0	1644.5
64.228	64.217	0.0	64.223	4.291	0.271	6598.587	35.770	1634.0	103.0	1630.8

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
42	6583.400									
	64.8230	67.801	0.349	0.1	64.8231	64.9960	61.172	-0.400	-0.4	64.9956
	64.8220	68.001	0.549	0.2	64.8222	64.9940	60.971	-0.601	-0.6	64.9934
	64.8140	68.200	0.748	0.2	64.8142	64.9930	60.771	-0.801	-0.8	64.9922
	64.8120	68.406	0.954	0.3	64.8123	65.0010	60.571	-1.001	-1.0	65.0000
	64.8050	68.472	1.020	0.3	64.8053	65.0080	60.500	-1.072	-1.0	65.0070
	64.8070	68.472	1.020	0.3	64.8073	65.0060	60.500	-1.072	-1.0	65.0050
	64.8100	68.602	1.150	0.4	64.8104	65.0140	60.368	-1.204	-1.2	65.0128
	64.7900	68.809	1.357	0.5	64.7905	65.0040	60.171	-1.401	-1.4	65.0026
	64.8030	69.400	1.948	0.7	64.8037	65.0180	59.570	-2.002	-2.0	65.0160
	64.8070	69.604	2.152	0.7	64.8077	65.0140	59.371	-2.201	-2.2	65.0118
	64.7990	69.805	2.353	0.8	64.7998	65.0170	59.172	-2.400	-2.3	65.0146
	64.8070	70.001	2.549	0.9	64.8079	65.0160	58.972	-2.600	-2.5	65.0134
	64.7960	70.204	2.752	0.9	64.7969	65.0170	58.769	-2.803	-2.7	65.0143
	64.7930	70.399	2.947	1.0	64.7940	65.0200	58.571	-3.001	-2.9	65.0171
	64.7860	70.600	3.148	1.1	64.7871	65.0270	58.377	-3.195	-3.1	65.0239
	64.7820	70.800	3.348	1.1	64.7831	65.0350	58.173	-3.399	-3.3	65.0317
	64.7700	71.001	3.549	1.2	64.7712	65.0460	57.969	-3.603	-3.5	65.0425
	64.7690	71.204	3.752	1.3	64.7703	65.0500	57.768	-3.804	-3.7	65.0463
	64.7540	71.403	3.951	1.4	64.7554	65.0630	57.572	-4.000	-3.9	65.0591
	64.7360	71.600	4.148	1.4	64.7374	65.0800	57.370	-4.202	-4.1	65.0759
	64.7290	71.800	4.348	1.5	64.7305	65.0820	57.172	-4.400	-4.3	65.0777
	64.7220	71.888	4.436	1.5	64.7235	65.0950	57.042	-4.530	-4.4	65.0906
	64.7190	71.888	4.436	1.5	64.7205	65.1000	57.042	-4.530	-4.4	65.0956
	64.7190	71.888	4.436	1.5	64.7205	65.0970	57.042	-4.530	-4.4	65.0926
	64.7220	72.000	4.548	1.6	64.7236	65.1020	56.971	-4.601	-4.5	65.0975
	64.7060	72.200	4.748	1.6	64.7076	65.1040	56.774	-4.798	-4.7	65.0993
	64.6960	72.400	4.948	1.7	64.6977	65.1190	56.574	-4.998	-4.9	65.1141
	64.6820	72.605	5.153	1.8	64.6838	65.1340	56.371	-5.201	-5.1	65.1289
	64.6520	72.800	5.348	1.8	64.6538	65.1610	56.173	-5.399	-5.3	65.1557
	64.6460	73.001	5.549	1.9	64.6479	65.1730	55.970	-5.602	-5.5	65.1675
	64.6400	73.200	5.748	2.0	64.6420	65.1790	55.772	-5.800	-5.7	65.1733
	64.6420	73.400	5.948	2.0	64.6440	65.1670	55.571	-6.001	-5.9	65.1611
	64.6590	73.600	6.148	2.1	64.6611	65.1670	55.375	-6.197	-6.0	65.1609
	64.6410	73.803	6.351	2.2	64.6432	65.1740	55.174	-6.398	-6.2	65.1677
	64.6450	74.000	6.548	2.2	64.6472	65.1710	54.971	-6.601	-6.4	65.1645
	64.6490	74.098	6.646	2.3	64.6513	65.1700	54.874	-6.698	-6.5	65.1634
	64.6440	74.098	6.646	2.3	64.6463	65.1740	54.874	-6.698	-6.5	65.1674
	64.6510	74.207	6.755	2.3	64.6533	65.1700	54.773	-6.799	-6.6	65.1634
	64.6500	74.405	6.953	2.4	64.6524	65.1700	54.571	-7.001	-6.8	65.1632
	64.6560	74.601	7.149	2.4	64.6584	65.1680	54.458	-7.114	-7.0	65.1610
	64.6490	74.600	7.148	2.4	64.6514	65.1680	54.458	-7.114	-7.0	65.1610
	64.6540	74.600	7.148	2.4	64.6564	65.1670	54.371	-7.201	-7.0	65.1600
	-0.004	10.462	67.452			0.010	-10.536	61.572		



	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6583.400	64.823	64.813	0.0	64.818	-4.103	0.255	6628.306	44.906	2044.9	-98.5	2041.8
	64.822	64.815	0.0	64.819	-3.903	0.177	6628.338	44.938	2046.4	-93.7	2043.2
	64.814	64.816	0.0	64.815	-3.703	0.050	6628.170	44.770	2038.7	-88.9	2035.6
	64.812	64.808	0.0	64.810	-3.500	0.096	6627.927	44.527	2027.6	-84.0	2024.5
	64.805	64.802	0.0	64.803	-3.432	0.095	6627.580	44.180	2011.8	-82.4	2008.7
	64.807	64.804	0.0	64.805	-3.432	0.095	6627.679	44.279	2016.4	-82.4	2013.2
	64.810	64.796	0.0	64.803	-3.301	0.367	6627.559	44.159	2010.9	-79.2	2007.7
	64.790	64.806	0.0	64.798	-3.099	0.384	6627.316	43.916	1999.8	-74.4	1996.7
	64.804	64.792	0.0	64.798	-2.503	0.280	6627.311	43.911	1999.6	-60.1	1996.4
	64.808	64.797	0.0	64.802	-2.301	0.277	6627.517	44.117	2009.0	-55.2	2005.8
	64.800	64.794	0.0	64.797	-2.102	0.149	6627.249	43.849	1996.8	-50.4	1993.6
	64.808	64.795	0.0	64.801	-1.903	0.320	6627.480	44.080	2007.3	-45.7	2004.2
	64.797	64.794	0.0	64.796	-1.700	0.067	6627.187	43.787	1994.0	-40.8	1990.8
	64.794	64.791	0.0	64.793	-1.504	0.064	6627.044	43.644	1987.4	-36.1	1984.3
	64.787	64.785	0.0	64.786	-1.306	0.061	6626.701	43.301	1971.8	-31.4	1968.7
	64.783	64.777	0.0	64.780	-1.104	0.158	6626.408	43.008	1958.5	-26.5	1955.3
	64.771	64.766	0.0	64.769	-0.902	0.130	6625.840	42.440	1932.6	-21.6	1929.5
	64.770	64.762	0.0	64.766	-0.700	0.201	6625.722	42.322	1927.2	-16.8	1924.1
	64.755	64.749	0.0	64.752	-0.502	0.148	6625.030	41.630	1895.7	-12.0	1892.6
	64.737	64.733	0.0	64.735	-0.303	0.120	6624.162	40.762	1856.2	-7.3	1853.1
	64.730	64.731	0.0	64.731	-0.104	0.008	6623.944	40.544	1846.3	-2.5	1843.2
	64.724	64.718	0.0	64.721	0.005	0.140	6623.449	40.049	1823.7	0.1	1820.6
	64.720	64.713	0.0	64.717	0.005	0.190	6623.249	39.849	1814.6	0.1	1811.5
	64.720	64.716	0.0	64.718	0.005	0.115	6623.324	39.924	1818.0	0.1	1814.9
	64.724	64.711	0.0	64.717	0.096	0.314	6623.277	39.877	1815.9	2.3	1812.8
	64.708	64.709	0.0	64.708	0.295	0.039	6622.834	39.434	1795.7	7.1	1792.6
	64.698	64.694	0.0	64.696	0.495	0.083	6622.217	38.817	1767.6	11.9	1764.5
	64.684	64.680	0.0	64.682	0.699	0.104	6621.499	38.099	1735.0	16.8	1731.8
	64.654	64.653	0.0	64.653	0.896	0.026	6620.083	36.683	1670.4	21.5	1667.3
	64.648	64.641	0.0	64.644	1.098	0.173	6619.640	36.240	1650.3	26.3	1647.2
	64.642	64.635	0.0	64.638	1.296	0.170	6619.347	35.947	1637.0	31.1	1633.8
	64.644	64.647	0.0	64.646	1.496	0.083	6619.703	36.303	1653.2	35.9	1650.0
	64.661	64.648	0.0	64.654	1.694	0.338	6620.134	36.734	1672.8	40.7	1669.6
	64.643	64.641	0.0	64.642	1.896	0.060	6619.517	36.117	1644.7	45.5	1641.5
	64.647	64.644	0.0	64.646	2.096	0.082	6619.698	36.298	1652.9	50.3	1649.8
	64.651	64.645	0.0	64.648	2.194	0.156	6619.826	36.426	1658.8	52.6	1655.6
	64.646	64.641	0.0	64.644	2.194	0.130	6619.602	36.202	1648.5	52.6	1645.4
	64.653	64.645	0.0	64.649	2.299	0.204	6619.880	36.480	1661.2	55.2	1658.0
	64.652	64.645	0.0	64.649	2.499	0.176	6619.861	36.461	1660.4	60.0	1657.2
	64.658	64.647	0.0	64.653	2.654	0.274	6620.065	36.665	1669.6	63.7	1666.5
	64.651	64.647	0.0	64.649	2.653	0.100	6619.890	36.490	1661.7	63.7	1658.5
	64.656	64.648	0.0	64.652	2.696	0.197	6620.042	36.642	1668.6	64.7	1665.5

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
3	6717.300									
	67.4080	71.853	4.436	8.0	67.4160	62.4110	57.097	-4.486	-10.2	62.4008
	67.4050	71.853	4.436	8.0	67.4130	62.4140	57.097	-4.486	-10.2	62.4038
	67.4000	71.853	4.436	8.0	67.4080	62.4200	57.097	-4.486	-10.2	62.4098
	-0.019	10.417	67.417			0.024	-10.423	61.583		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6717.300	67.416	67.408	0.0	67.412	0.000	0.207	6757.994	40.694	1816.2	0.0	1813.0
	67.413	67.405	0.0	67.409	0.000	0.207	6757.844	40.544	1809.5	0.0	1806.3
	67.408	67.399	0.0	67.403	0.000	0.232	6757.569	40.269	1797.2	0.0	1794.0

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
3	6730.600									

67.6900	71.853	4.440	8.7	67.6987	62.1270	57.097	-4.487	-10.8	62.1162
67.6880	71.853	4.440	8.7	67.6967	62.1230	57.097	-4.487	-10.8	62.1122
67.6910	71.853	4.440	8.7	67.6997	62.1250	57.097	-4.487	-10.8	62.1142
-0.020	10.410	67.413			0.025	-10.410	61.584		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6730.600	67.699	67.692	0.0	67.696	0.000	0.160	6772.201	41.601	1853.0	0.0	1849.8
	67.697	67.696	0.0	67.696	0.000	0.010	6772.251	41.651	1855.2	0.0	1852.1
	67.700	67.694	0.0	67.697	0.000	0.135	6772.276	41.676	1856.3	0.0	1853.2

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
9	6560.000									
	62.2120	71.930	4.436	-4.1	62.2079	67.6110	57.028	-4.484	1.9	67.6129
	62.9000	71.930	4.436	-4.1	62.8959	66.9220	57.028	-4.484	1.9	66.9239
	63.3150	71.930	4.436	-4.1	63.3109	66.5070	57.028	-4.484	1.9	66.5089
	63.7880	71.930	4.436	-4.1	63.7839	66.0420	57.028	-4.484	1.9	66.0439
	68.8060	71.850	4.356	-4.0	68.8020	61.0090	57.130	-4.382	1.9	61.0109
	68.9130	71.850	4.356	-4.0	68.9090	60.9010	57.130	-4.382	1.9	60.9029
	69.5080	71.850	4.356	-4.0	69.5040	60.3060	57.152	-4.360	1.9	60.3079
	69.5070	71.850	4.356	-4.0	69.5030	60.3060	57.152	-4.360	1.9	60.3079
	69.5050	71.850	4.356	-4.0	69.5010	60.3090	57.152	-4.360	1.9	60.3109
	0.010	10.321	67.494			-0.004	-10.363	61.512		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA L	VELOCITY	Y ARCSEC	V(WRT SUN)
6560.000	62.208	62.196	0.0	62.202	0.051	0.308	6497.789	-62.211	-2843.0	1.2	-2846.2
	62.896	62.884	0.0	62.890	0.051	0.283	6532.116	-27.884	-1274.3	1.2	-1277.4
	63.311	63.300	0.0	63.305	0.051	0.283	6552.813	-7.186	-328.4	1.2	-331.6
	63.784	63.764	0.0	63.774	0.051	0.483	6576.210	16.210	740.8	1.2	737.6
	68.802	68.798	0.0	68.800	-0.040	0.110	6827.562	267.562	12227.6	-1.0	12224.4
	68.909	68.906	0.0	68.907	-0.040	0.085	6832.956	272.956	12474.1	-1.0	12471.0
	69.504	69.501	0.0	69.502	-0.051	0.085	6862.828	302.828	13839.3	-1.2	13836.2
	69.503	69.501	0.0	69.502	-0.051	0.060	6862.803	302.803	13838.2	-1.2	13835.0
	69.501	69.498	0.0	69.499	-0.051	0.085	6862.678	302.678	13832.4	-1.2	13829.3

VELOCITY CORRECTIONS, VS =

-3.1 VLS = -2.0

6497.8 6499.1  
6532.1 6532.8  
6552.8 6553.4  
6576.2 6577.0  
OR (no. 9 low)  
OK (no. 6 low)  
OK (no. 6 low)  
6677.7 mas  
6678.3  
0.6 low

PLATE C459 NGC 3672 PA 98 SE REA D FIRST

RIGHT ASCENSION = 11. 22. 30. DECLINATION = -9. 31.  
UNIVERSAL TIME OF MID EXPOSURE = 4. 22.  
LONGITUDE OF SUN AT ZERO HOURS UT = 4. 13. 57. DAILY CHANGE (SECONDS) = 3566.4

MAR 30 1977

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6506.528	63.8970	40.360	-0.364	0.5	63.8975	72.5560	50.484	-0.302	-0.5	72.5555
	63.8940	40.774	0.050	-0.1	63.8939	72.5590	50.205	-0.023	-0.0	72.5590
	63.8930	41.071	0.347	-0.5	63.8925	72.5620	49.831	0.351	0.5	72.5625
	63.9000	50.779	10.055	-14.2	63.8930	72.5420	40.111	10.071	15.5	72.5575
	63.9000	51.105	10.381	-14.6	63.8934	72.5460	39.731	10.451	16.1	72.5621
	63.9170	51.432	10.708	-15.1	63.9019	72.5390	39.320	10.862	16.8	72.5558
	0.0163	0.015	40.724		63.8955	-0.0167	-0.016	50.182		72.5587
6532.880	64.4350	40.326	-0.371	0.3	64.4353	72.0300	50.549	-0.350	-0.3	72.0297
	64.4290	40.707	0.010	-0.0	64.4290	72.0320	50.228	-0.029	-0.0	72.0320
	64.4290	41.005	0.308	-0.2	64.4288	72.0330	49.871	0.328	0.3	72.0333
	64.4370	50.817	10.120	-7.2	64.4297	72.0240	40.117	10.082	9.5	72.0335
	64.4370	51.169	10.472	-7.5	64.4295	72.0230	39.702	10.497	9.8	72.0328
	64.4350	51.455	10.758	-7.7	64.4273	72.0210	39.295	10.904	10.2	72.0312
	0.0053	0.007	40.697		64.4299	-0.0090	-0.010	50.199		72.0321
6598.953	65.7540	40.312	-0.340	-0.1	65.7539	70.7000	50.550	-0.334	0.0	70.7000
	65.7550	40.672	0.012	0.0	65.7550	70.7060	50.188	0.028	-0.0	70.7060
	65.7480	41.009	0.349	0.1	65.7481	70.7080	49.867	0.349	-0.0	70.7080
	65.7450	50.784	10.124	2.0	65.7478	70.7080	40.139	10.077	-1.0	70.7070
	65.7490	51.155	10.495	2.9	65.7519	70.7060	39.730	10.486	-1.0	70.7050
	65.7510	51.472	10.812	3.0	65.7540	70.7020	39.266	10.950	-1.1	70.7009
	-0.0040	-0.003	40.660		65.7518	0.0007	0.001	50.216		70.7045
6678.200	67.3360	40.296	-0.358	-0.2	67.3358	69.1190	50.553	-0.346	0.2	69.1192
	67.3320	40.685	0.030	0.0	67.3320	69.1200	50.206	0.001	-0.0	69.1200
	67.3300	41.017	0.362	0.2	67.3302	69.1210	49.895	0.312	-0.2	69.1208
	67.3300	50.739	10.084	6.0	67.3360	69.1310	40.185	10.022	-7.2	69.1238
	67.3340	51.103	10.448	6.2	67.3402	69.1270	39.732	10.475	-7.6	69.1194
	67.3300	51.415	10.760	6.4	67.3364	69.1240	39.357	10.850	-7.8	69.1162
	-0.0013	-0.006	40.654		67.3351	0.0073	0.008	50.207		69.1199
6717.040	68.1130	40.291	-0.368	-0.2	68.1128	68.3410	50.472	-0.272	0.2	68.3412
	68.1080	40.669	0.010	0.0	68.1080	68.3460	50.224	-0.024	0.0	68.3460
	68.1100	40.988	0.329	0.2	68.1102	68.3470	49.889	0.311	-0.3	68.3467
	68.1010	50.719	10.060	6.0	68.1070	68.3520	40.172	10.028	-9.1	68.3429
	68.1000	51.099	10.440	6.2	68.1062	68.3550	39.801	10.399	-9.4	68.3456
	68.1010	51.486	10.827	6.5	68.1075	68.3560	39.417	10.783	-9.8	68.3462
	-0.0097	-0.006	40.659		68.1086	0.0097	0.009	50.200		68.3448
6929.468	72.3460	40.237	-0.380	-1.0	72.3450	64.1110	50.585	-0.292	0.8	64.1118
	72.3440	40.661	0.044	0.1	72.3441	64.1120	50.309	-0.016	0.0	64.1120
	72.3390	40.955	0.338	0.9	72.3399	64.1150	49.985	0.308	-0.9	64.1141
	72.3140	50.656	10.039	27.5	72.3415	64.1420	40.248	10.045	-28.3	64.1137
	72.3140	51.023	10.406	28.5	72.3425	64.1400	39.851	10.442	-29.4	64.1106
	72.3160	51.357	10.740	29.4	72.3454	64.1440	39.516	10.777	-30.3	64.1136
	-0.0283	-0.028	40.617		72.3430	0.0293	0.029	50.293		64.1127
D MID =	68.1160	YD MID =	41.0130	XR MID =	68.3385	YR MID =	49.9080			
DX DIR =	-0.0062+	0.0001*+X	-0.00004*+X**2+	-0.00029*	X**3					
DX REV =	0.0094+	-0.0022*+X	-0.00016*+X**2+	-0.00018*	X**3					
YD DIR =	-0.3538+	0.0073*+X	0.00064*+X**2+	-0.00111*	X**3					
YD REV =	0.2918+	0.0085*+X	0.00211*+X**2+	-0.00121*	X**3					
YH DIR =	10.4258+	-0.0370*+X	-0.00178*+X**2+	0.00209*	X**3					
YH REV =	-10.4045+	-0.0533*+X	-0.00207*+X**2+	0.00272						

WEIGHTED MEASUREMENTS

LAMDA = 6717.379 + 50.1693 \*X + 0.0260 \*X\*\*2 + -0.00543 \*X\*\*3 (ANGSTROM)

LINE	XDIR	XREV	MEANX	MEANY	XD-XMEAN ANGSTROMS	LAMDA	MEAS-CALC	WEIGHT
6506.528	63.896	63.897	63.896	10.785	0.046	6506.522	0.006	5
6532.880	64.430	64.424	64.427	10.831	0.147	6532.894	-0.014	4
6598.953	65.752	65.752	65.752	10.881	0.004	6598.943	0.010	5
6678.200	67.335	67.336	67.336	10.805	0.028	6678.209	-0.009	5
6717.040	68.109	68.111	68.110	10.805	0.068	6717.036	0.004	5
6929.468	72.343	72.343	72.343	10.758	0.010	6929.468	-0.000	5

\*MEAN ERROR\* = 0.01137  
SIGMA = 136.4561

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
21 6562.817	65.8250	44.229	3.570	1.1	65.8261	70.6330	46.599	-3.617	-0.5	70.6325
	65.8260	44.474	3.815	1.2	65.8272	70.6250	46.378	-3.838	-0.5	70.6245
	65.8290	44.629	3.970	1.2	65.8302	70.6240	46.225	-3.991	-0.5	70.6234
	65.8240	44.846	4.187	1.3	65.8253	70.6340	46.047	-4.169	-0.6	70.6334
	65.8260	44.826	4.167	1.3	65.8273	70.6340	46.047	-4.169	-0.6	70.6334
	65.8310	45.219	4.560	1.4	65.8324	70.6320	45.674	-4.542	-0.6	70.6314
	65.8240	45.219	4.560	1.4	65.8254	70.6290	45.674	-4.542	-0.6	70.6284
	65.8380	45.557	4.898	1.5	65.8395	70.6070	45.303	-4.913	-0.7	70.6063
	65.8430	45.557	4.898	1.5	65.8445	70.6070	45.303	-4.913	-0.7	70.6063
	65.8300	45.629	4.970	1.5	65.8315	70.6340	45.236	-4.980	-0.7	70.6333
	65.8300	45.629	4.970	1.5	65.8315	70.6290	45.236	-4.980	-0.7	70.6283
	65.8000	45.701	5.042	1.5	65.8015	70.6570	45.161	-5.055	-0.7	70.6563
	65.8050	45.701	5.042	1.5	65.8065	70.6530	45.161	-5.055	-0.7	70.6523
	65.8300	45.835	5.176	1.6	65.8316	70.6380	45.028	-5.188	-0.7	70.6373
	65.8360	46.002	5.343	1.6	65.8376	70.6260	44.858	-5.358	-0.7	70.6253
	65.8350	46.138	5.479	1.7	65.8367	70.6300	44.725	-5.491	-0.8	70.6292
	65.8340	46.220	5.561	1.7	65.8357	70.6270	44.643	-5.573	-0.8	70.6262
	65.8290	46.333	5.674	1.7	65.8307	70.6340	44.530	-5.686	-0.8	70.6332
	65.8210	46.381	5.722	1.8	65.8228	70.6410	44.481	-5.735	-0.8	70.6402
	65.8240	46.526	5.867	1.8	65.8258	70.6360	44.337	-5.879	-0.8	70.6352
	65.8320	46.655	5.996	1.8	65.8338	70.6260	44.208	-6.008	-0.8	70.6252
	-0.003	10.476	40.659			0.001	-10.505	50.216		

LINE	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX LAMDA	DELTA L VELOCITY	Y ARCSEC	V(WRT SUN)
6562.817	65.826	65.824	0.0	65.825	-1.383	0.062	6602.598	39.780	1817.2
	65.827	65.832	0.0	65.829	-1.150	0.112	6602.825	40.008	1827.6
	65.830	65.833	0.0	65.831	-0.996	0.061	6602.927	40.110	1832.2
	65.825	65.823	0.0	65.824	-0.799	0.065	6602.554	39.737	1815.2
	65.827	65.823	0.0	65.825	-0.809	0.115	6602.604	39.787	1817.5
	65.832	65.825	0.0	65.828	-0.426	0.191	6602.783	39.966	1825.7
	65.825	65.828	0.0	65.826	-0.426	0.058	6602.683	39.866	1821.1
	65.839	65.850	0.0	65.845	-0.071	0.257	6603.586	40.769	1862.4
	65.844	65.850	0.0	65.847	-0.071	0.132	6603.711	40.894	1868.1
	65.832	65.823	0.0	65.827	-0.002	0.218	6602.713	39.896	1822.5
	65.832	65.828	0.0	65.830	-0.002	0.093	6602.838	40.021	1828.2
	65.802	65.800	0.0	65.801	0.072	0.043	6601.390	38.573	1762.0
	65.806	65.804	0.0	65.805	0.072	0.068	6601.614	38.798	1772.3



PLATE C451 NGC 3672 PA 8 NE READ FIRST

MAR 30 1977

RIGHT ASCENSION = 11. 22. 30. DECLINATION = -9. 31.  
 UNIVERSAL TIME OF MID EXPOSURE = 3. 16.  
 LONGITUDE OF SUN AT ZERO HOURS UT = 2. 14. 57. DAILY CHANGE (SECONDS) = 3570.9

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6506.528	62.3750	67.105	-0.386	0.3	62.3753	67.4230	61.894	-0.375	-0.1	67.4229
	62.3800	67.515	0.024	-0.0	62.3800	67.4320	61.497	0.022	0.0	67.4320
	62.3720	67.885	0.394	-0.3	62.3717	67.4390	61.122	0.397	0.1	67.4391
	62.3820	77.551	10.060	-8.6	62.3734	67.4320	51.421	10.098	3.3	67.4353
	62.3860	77.821	10.330	-8.8	62.3772	67.4270	51.146	10.373	3.4	67.4304
	62.3850	78.113	10.622	-9.0	62.3760	67.4260	50.863	10.656	3.5	67.4295
	0.0087	0.009	67.491		62.3756	-0.0030	-0.003	61.519		67.4316
6532.880	62.9080	67.071	-0.410	0.2	62.9082	66.8990	61.958	-0.421	-0.0	66.8990
	62.9060	67.452	-0.029	0.0	62.9060	66.9030	61.587	-0.050	-0.0	66.9030
	62.9060	67.866	0.384	-0.2	62.9058	66.9050	61.131	0.406	0.0	66.9050
	62.9100	77.564	10.082	-6.2	62.9038	66.9040	51.418	10.118	0.4	66.9044
	62.9120	77.884	10.402	-6.4	62.9056	66.9020	51.053	10.484	0.4	66.9024
	62.9190	78.183	10.702	-6.6	62.9124	66.8960	50.678	10.858	0.4	66.8964
	0.0070	0.006	67.481		62.9070	-0.0017	-0.000	61.536		66.9017
6598.953	64.2330	67.100	-0.360	-0.0	64.2330	65.5730	61.917	-0.352	0.2	65.5732
	64.2270	67.478	0.018	0.0	64.2270	65.5780	61.590	-0.025	0.0	65.5780
	64.2290	67.836	0.376	0.0	64.2290	65.5830	61.174	0.391	-0.3	65.5827
	64.2250	77.547	10.086	0.3	64.2253	65.5910	51.421	10.144	-6.8	65.5842
	64.2290	77.911	10.450	0.3	64.2293	65.5870	51.040	10.525	-7.1	65.5799
	64.2300	78.269	10.808	0.3	64.2303	65.5840	50.659	10.906	-7.4	65.5766
	-0.0017	-0.000	67.460		64.2290	0.0093	0.007	61.565		65.5791
6678.200	65.8170	67.057	-0.382	-0.3	65.8167	63.9920	61.932	-0.354	0.5	63.9925
	65.8140	67.452	0.013	0.0	65.8140	63.9920	61.570	0.008	-0.0	63.9920
	65.8130	67.800	0.361	0.3	65.8133	63.9920	61.185	0.393	-0.6	63.9914
	65.8070	77.535	10.096	9.0	65.8160	64.0030	51.471	10.107	-15.1	63.9879
	65.8090	77.892	10.453	9.3	65.8183	64.0030	51.085	10.493	-15.6	63.9874
	65.8070	78.269	10.830	9.6	65.8166	64.0070	50.687	10.891	-16.2	63.9908
	-0.0070	-0.009	67.439		65.8158	0.0123	0.016	61.578		63.9903
6717.040	66.5980	67.041	-0.387	-0.5	66.5975	63.2090	61.971	-0.390	0.7	63.2097
	66.5930	67.447	0.019	0.0	66.5930	63.2150	61.614	-0.033	0.1	63.2151
	66.5930	67.794	0.366	0.5	66.5935	63.2190	61.197	0.384	-0.7	63.2183
	66.5750	77.525	10.097	13.5	66.5885	63.2370	51.468	10.113	-19.0	63.2180
	66.5810	77.851	10.423	13.9	66.5949	63.2360	51.116	10.465	-19.7	63.2163
	66.5820	78.211	10.783	14.4	66.5964	63.2350	50.733	10.848	-20.4	63.2146
	-0.0153	-0.014	67.420		66.5940	0.0217	0.020	61.581		63.2153
6929.468	70.8290	66.994	-0.362	-1.3	70.8277	58.9840	61.978	-0.342	1.3	58.9853
	70.8290	67.373	0.016	0.0	70.8290	58.9810	61.656	-0.020	0.1	58.9811
	70.8290	67.703	0.346	1.2	70.8302	58.9830	61.271	0.364	-1.4	58.9816
	70.7940	77.442	10.085	35.7	70.8297	59.0170	51.484	10.152	-37.9	58.9791
	70.7910	77.795	10.438	37.0	70.8280	59.0230	51.205	10.430	-38.9	58.9841
	70.7910	78.201	10.844	38.4	70.8294	59.0250	50.818	10.818	-40.4	58.9846
	-0.0370	-0.037	67.356		70.8290	0.0390	0.039	61.636		58.9826

D MID = 66.6005 YD MID = 67.7940 XR MID = 63.2110 YR MID = 61.1965

DX DIR = -0.0140+ -0.0059\*\*X+ -0.00001\*\*X\*\*2+ 0.00003\* X\*\*3  
 DX REV = 0.0197+ -0.0051\*\*X+ -0.00011\*\*X\*\*2+ 0.00000\* X\*\*3  
 YD DIR = -0.3658+ -0.0134\*\*X+ -0.00024\*\*X\*\*2+ -0.00014\* X\*\*3  
 YD REV = 0.3843+ -0.0028\*\*X+ -0.00021\*\*X\*\*2+ -0.00062\* X\*\*3  
 YH DIR = 10.4370+ -0.0247\*\*X+ -0.00220\*\*X\*\*2+ 0.00216\* X\*\*3  
 YH REV = -10.4661+ -0.0540\*\*X+ 0.00208\*\*X\*\*2+ 0.00352



WEIGHTED MEASUREMENTS

LAMDA= 6717.313 + 50.0233 \*X + 0.0293 \*\*X\*\*2 + 0.00146 \*\*X\*\*3 (ANGSTROM)

6 COMPARISON LINES

LINE	XDIR	XREV	MEANX	MEANY	XD-MEAN ANGSTROMS	LAMDA	MEAS-CALC	WEIGHT
6506.528	62.376	62.377	62.376	10.639	0.033	6506.490	0.038	5
6532.880	62.907	62.907	62.907	10.780	0.004	6532.947	-0.067	5
6598.953	64.229	64.229	64.229	10.857	0.010	6598.912	0.041	5
6678.200	65.816	65.818	65.817	10.861	0.059	6678.212	-0.012	5
6717.040	66.594	66.593	66.594	10.815	0.020	6717.041	-0.001	5
6929.468	70.829	70.826	70.827	10.831	0.080	6929.467	0.000	5

\*MEAN ERROR\* = 0.05074  
SIGMA = 129.8085

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
3 6548.100										
	64.0070	71.915	4.451	-0.4	64.0066	65.8080	57.036	-4.525	-2.5	65.8055
	64.0050	71.915	4.451	-0.4	64.0046	65.8100	57.036	-4.525	-2.5	65.8075
	64.0130	71.915	4.451	-0.4	64.0126	65.8100	57.036	-4.525	-2.5	65.8075
	0.001	10.449	67.464			0.006	-10.530	61.561		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX LAMDA	DELTA L VELOCITY	Y ARCSEC	V(WRT SUN)
6548.100									
	64.007	64.003	0.0	64.005	0.000	0.090 6587.715	39.615	1813.7	0.0 1810.5
	64.005	64.001	0.0	64.003	0.000	0.090 6587.615	39.515	1809.1	0.0 1806.0
	64.013	64.001	0.0	64.007	0.000	0.290 6587.814	39.714	1818.2	0.0 1815.1

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
51 6562.817										
	64.4160	67.200	-0.258	-0.0	64.4160	65.4030	61.775	0.208	0.2	65.4032
	64.3940	67.401	-0.057	-0.0	64.3940	65.4080	61.574	0.007	0.0	65.4080
	64.3980	67.601	0.143	0.0	64.3980	65.4170	61.372	-0.195	-0.1	65.4168
	64.3900	67.802	0.344	0.0	64.3900	65.4180	61.171	-0.396	-0.3	65.4177
	64.4020	68.005	0.547	0.1	64.4021	65.4170	60.973	-0.594	-0.4	65.4165
	64.4010	68.201	0.743	0.1	64.4011	65.4150	60.771	-0.796	-0.6	65.4144
	64.3930	68.401	0.943	0.1	64.3931	65.4140	60.575	-0.992	-0.8	65.4132
	64.3920	68.474	1.016	0.1	64.3921	65.4170	60.483	-1.084	-0.8	65.4162
	64.3850	68.474	1.016	0.1	64.3851	65.4170	60.483	-1.084	-0.8	65.4162
	64.3880	68.602	1.144	0.1	64.3881	65.4160	60.372	-1.195	-0.9	65.4151
	64.3910	68.800	1.342	0.2	64.3912	65.4270	60.172	-1.395	-1.1	65.4259
	64.3870	69.000	1.542	0.2	64.3872	65.4360	59.971	-1.596	-1.2	65.4348
	64.3980	69.400	1.942	0.2	64.3982	65.4180	59.570	-1.997	-1.5	65.4165
	64.3910	69.600	2.142	0.3	64.3913	65.4220	59.372	-2.195	-1.7	65.4203
	64.3940	69.800	2.342	0.3	64.3943	65.4180	59.172	-2.395	-1.8	65.4162
	64.3910	70.003	2.545	0.3	64.3913	65.4240	58.970	-2.597	-2.0	65.4220
	64.3900	70.206	2.748	0.3	64.3903	65.4260	58.775	-2.792	-2.1	65.4239
	64.3790	70.402	2.944	0.4	64.3794	65.4360	58.570	-2.997	-2.3	65.4337
	64.3720	70.601	3.143	0.4	64.3724	65.4450	58.371	-3.196	-2.4	65.4426
	64.3620	70.807	3.349	0.4	64.3624	65.4560	58.167	-3.400	-2.6	65.4534
	64.3560	71.005	3.547	0.4	64.3564	65.4550	57.971	-3.596	-2.8	65.4522
	64.3450	71.201	3.743	0.5	64.3455	65.4700	57.770	-3.797	-2.9	65.4671
	64.3290	71.401	3.943	0.5	64.3295	65.4850	57.572	-3.995	-3.0	65.4819
	64.3160	71.600	4.142	0.5	64.3165	65.4950	57.370	-4.197	-3.2	65.4918

64.3040	71.801	4.343	0.5	64.3045	65.5040	57.175	-4.392	-3.4	65.5006
64.3080	71.911	4.453	0.6	64.3086	65.5050	57.040	-4.527	-3.5	65.5015
64.3040	71.911	4.453	0.6	64.3046	65.5100	57.040	-4.527	-3.5	65.5065
64.3060	71.911	4.453	0.6	64.3066	65.5120	57.040	-4.527	-3.5	65.5085
64.3090	72.000	4.542	0.6	64.3096	65.5130	56.971	-4.596	-3.5	65.5095
64.3000	72.201	4.743	0.6	64.3006	65.5190	56.775	-4.792	-3.7	65.5153
64.2860	72.401	4.943	0.6	64.2866	65.5320	56.570	-4.997	-3.8	65.5282
64.2590	72.600	5.142	0.6	64.2596	65.5510	56.374	-5.193	-4.0	65.5470
64.2310	72.803	5.345	0.7	64.2317	65.5770	56.172	-5.395	-4.1	65.5729
64.2240	73.000	5.542	0.7	64.2247	65.5940	55.971	-5.596	-4.3	65.5897
64.2270	73.203	5.745	0.7	64.2277	65.5850	55.772	-5.795	-4.4	65.5806
64.2290	73.301	5.843	0.7	64.2297	65.5930	55.669	-5.898	-4.5	65.5885
64.2380	73.600	6.142	0.8	64.2388	65.5750	55.371	-6.196	-4.7	65.5702
64.2350	73.802	6.344	0.8	64.2358	65.5800	55.171	-6.396	-4.9	65.5751
64.2380	74.002	6.544	0.8	64.2388	65.5820	54.971	-6.596	-5.0	65.5769
64.2350	74.005	6.627	0.8	64.2358	65.5810	54.873	-6.694	-5.1	65.5759
64.2340	74.085	6.627	0.8	64.2348	65.5820	54.873	-6.694	-5.1	65.5769
64.2360	74.200	6.742	0.8	64.2368	65.5860	54.772	-6.795	-5.2	65.5808
64.2150	74.400	6.942	0.9	64.2159	65.5930	54.573	-6.994	-5.4	65.5876
64.2290	74.603	7.145	0.9	64.2299	65.5870	54.370	-7.197	-5.5	65.5815
64.2250	74.792	7.334	0.9	64.2259	65.5930	54.179	-7.388	-5.6	65.5873
64.2240	75.003	7.545	0.9	64.2249	65.5970	53.972	-7.595	-5.8	65.5912
64.2020	75.203	7.745	1.0	64.2030	65.5960	53.774	-7.793	-6.0	65.5900
64.1960	75.402	7.944	1.0	64.1970	65.6090	53.575	-7.992	-6.1	65.6029
64.2320	76.001	8.543	1.1	64.2331	65.5900	52.976	-8.591	-6.6	65.5834
64.2310	76.208	8.750	1.1	64.2321	65.5900	52.771	-8.796	-6.7	65.5833
64.2270	76.208	8.750	1.1	64.2281	65.5980	52.771	-8.796	-6.7	65.5913
-0.001	10.458	67.458			0.008	-10.537	61.567		

	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX LAMDA	DELTA L VELOCITY	Y ARCSEC	V(WRT SUN)
6562.817									
	64.416	64.405	0.0	64.411	-4.715	0.265 6607.970	45.153	2062.6	-113.2 2059.4
	64.394	64.400	0.0	64.397	-4.514	0.162 6607.300	44.483	2032.0	-108.3 2028.9
	64.398	64.392	0.0	64.395	-4.313	0.159 6607.180	44.363	2026.5	-103.5 2023.4
	64.390	64.391	0.0	64.390	-4.112	0.019 6606.960	44.143	2016.5	-98.7 2013.3
	64.402	64.392	0.0	64.397	-3.911	0.252 6607.289	44.472	2031.5	-93.9 2028.3
	64.401	64.394	0.0	64.398	-3.712	0.174 6607.318	44.501	2032.8	-89.1 2029.7
	64.393	64.395	0.0	64.394	-3.514	0.053 6607.148	44.331	2025.0	-84.3 2021.9
	64.392	64.392	0.0	64.392	-3.432	0.005 6607.050	44.233	2020.6	-82.4 2017.4
	64.385	64.392	0.0	64.389	-3.432	0.180 6606.875	44.058	2012.6	-82.4 2009.4
	64.388	64.393	0.0	64.391	-3.312	0.132 6606.978	44.160	2017.3	-79.5 2014.1
	64.391	64.382	0.0	64.387	-3.114	0.215 6606.782	43.965	2008.4	-74.7 2005.2
	64.387	64.374	0.0	64.380	-2.913	0.336 6606.462	43.645	1993.7	-69.9 1990.6
	64.398	64.392	0.0	64.395	-2.512	0.155 6607.195	44.378	2027.2	-60.3 2024.1
	64.391	64.388	0.0	64.390	-2.313	0.077 6606.925	44.108	2014.9	-55.5 2011.7
	64.394	64.392	0.0	64.393	-2.114	0.049 6607.104	44.287	2023.0	-50.7 2019.9
	64.391	64.386	0.0	64.389	-1.911	0.120 6606.884	44.067	2013.0	-45.9 2009.0
	64.390	64.385	0.0	64.387	-1.712	0.142 6606.813	43.996	2009.8	-41.1 2006.6
	64.379	64.375	0.0	64.377	-1.512	0.114 6606.294	43.477	1986.0	-36.3 1982.9
	64.372	64.366	0.0	64.369	-1.312	0.161 6605.899	43.082	1968.0	-31.5 1964.9
	64.362	64.355	0.0	64.359	-1.107	0.183 6605.379	42.562	1944.3	-26.6 1941.1
	64.356	64.356	0.0	64.356	-0.910	0.005 6605.259	42.442	1938.8	-21.8 1935.6
	64.345	64.341	0.0	64.343	-0.712	0.101 6604.615	41.798	1909.3	-17.1 1906.2
	64.329	64.326	0.0	64.328	-0.513	0.073 6603.845	41.028	1874.2	-12.3 1871.0
	64.316	64.317	0.0	64.317	-0.312	0.005 6603.276	40.459	1848.2	-7.5 1845.0
	64.304	64.308	0.0	64.306	-0.114	0.083 6602.756	39.939	1824.4	-2.7 1821.3
	64.308	64.307	0.0	64.308	0.008	0.040 6602.834	40.017	1828.0	0.2 1824.8
	64.304	64.302	0.0	64.303	0.008	0.065 6602.609	39.792	1817.7	0.2 1814.6
	64.306	64.300	0.0	64.303	0.008	0.164 6602.609	39.792	1817.7	0.2 1814.6
	64.310	64.299	0.0	64.304	0.087	0.263 6602.661	39.844	1820.1	2.1 1816.9
	64.300	64.293	0.0	64.297	0.286	0.185 6602.291	39.474	1803.2	6.8 1800.0
	64.287	64.280	0.0	64.283	0.488	0.157 6601.622	38.805	1772.6	11.7 1769.5
	64.260	64.261	0.0	64.260	0.686	0.046 6600.478	37.661	1720.4	16.4 1717.2
	64.232	64.236	0.0	64.234	0.888	0.099 6599.135	36.318	1659.0	21.3 1655.9

64.225	64.219	0.0	64.222	1.087	0.148	6598.540	35.724	1631.9	26.1	1628.7
64.228	64.228	0.0	64.228	1.288	0.005	6598.844	36.027	1645.8	30.9	1642.6
64.230	64.220	0.0	64.225	1.388	0.242	6598.697	35.880	1639.0	33.3	1635.9
64.239	64.238	0.0	64.238	1.687	0.013	6599.377	36.560	1670.1	40.5	1666.9
64.236	64.233	0.0	64.234	1.888	0.060	6599.182	36.365	1661.2	45.3	1658.0
64.239	64.232	0.0	64.235	2.088	0.181	6599.212	36.395	1662.5	50.1	1659.4
64.236	64.233	0.0	64.234	2.178	0.080	6599.164	36.347	1660.3	52.3	1657.2
64.235	64.232	0.0	64.233	2.178	0.080	6599.114	36.297	1658.1	52.3	1654.9
64.237	64.228	0.0	64.232	2.286	0.228	6599.066	36.249	1655.9	54.9	1652.7
64.216	64.221	0.0	64.218	2.486	0.124	6598.372	35.555	1624.2	59.7	1621.0
64.230	64.227	0.0	64.228	2.689	0.072	6598.876	36.059	1647.2	64.5	1644.0
64.226	64.221	0.0	64.224	2.879	0.119	6598.630	35.813	1636.0	69.1	1632.8
64.225	64.217	0.0	64.221	3.088	0.190	6598.510	35.693	1630.5	74.1	1627.3
64.203	64.218	0.0	64.211	3.287	0.387	6597.990	35.174	1606.7	78.9	1603.6
64.197	64.206	0.0	64.201	3.486	0.215	6597.521	34.704	1585.3	83.7	1582.1
64.233	64.225	0.0	64.229	4.085	0.200	6598.907	36.090	1648.6	98.0	1645.4
64.232	64.225	0.0	64.229	4.291	0.171	6598.886	36.069	1647.7	103.0	1644.5
64.228	64.217	0.0	64.223	4.291	0.271	6598.587	35.770	1634.0	103.0	1630.8
LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
42 6583.400										
64.8230	67.801	0.349	0.1	64.8231	64.9960	61.172	-0.400	-0.4	64.9956	
64.8220	68.001	0.549	0.2	64.8222	64.9940	60.971	-0.601	-0.6	64.9934	
64.8140	68.200	0.748	0.2	64.8142	64.9930	60.771	-0.801	-0.8	64.9922	
64.8120	68.406	0.954	0.3	64.8123	65.0010	60.571	-1.001	-1.0	65.0000	
64.8050	68.472	1.020	0.3	64.8053	65.0080	60.500	-1.072	-1.0	65.0070	
64.8070	68.472	1.020	0.3	64.8073	65.0060	60.500	-1.072	-1.0	65.0050	
64.8100	68.602	1.150	0.4	64.8104	65.0140	60.368	-1.204	-1.2	65.0128	
64.7900	68.809	1.357	0.5	64.7905	65.0040	60.171	-1.401	-1.4	65.0026	
64.8030	69.400	1.948	0.7	64.8037	65.0180	59.570	-2.002	-2.0	65.0160	
64.8070	69.604	2.152	0.7	64.8077	65.0140	59.371	-2.201	-2.2	65.0118	
64.7990	69.805	2.353	0.8	64.7998	65.0170	59.172	-2.400	-2.3	65.0146	
64.8070	70.001	2.549	0.9	64.8079	65.0160	58.972	-2.600	-2.5	65.0134	
64.7960	70.204	2.752	0.9	64.7969	65.0170	58.769	-2.803	-2.7	65.0143	
64.7930	70.399	2.947	1.0	64.7940	65.0200	58.571	-3.001	-2.9	65.0171	
64.7860	70.600	3.148	1.1	64.7871	65.0270	58.377	-3.195	-3.1	65.0239	
64.7820	70.800	3.348	1.1	64.7831	65.0350	58.173	-3.399	-3.3	65.0317	
64.7700	71.001	3.549	1.2	64.7712	65.0460	57.969	-3.603	-3.5	65.0425	
64.7690	71.204	3.752	1.3	64.7703	65.0500	57.768	-3.804	-3.7	65.0463	
64.7540	71.403	3.951	1.4	64.7554	65.0630	57.572	-4.000	-3.9	65.0591	
64.7360	71.600	4.148	1.4	64.7374	65.0800	57.370	-4.202	-4.1	65.0759	
64.7290	71.800	4.348	1.5	64.7305	65.0820	57.172	-4.400	-4.3	65.0777	
64.7220	71.888	4.436	1.5	64.7235	65.0950	57.042	-4.530	-4.4	65.0906	
64.7190	71.888	4.436	1.5	64.7205	65.1000	57.042	-4.530	-4.4	65.0956	
64.7190	71.888	4.436	1.5	64.7205	65.0970	57.042	-4.530	-4.4	65.0926	
64.7220	72.000	4.548	1.6	64.7236	65.1020	56.971	-4.601	-4.5	65.0975	
64.7060	72.200	4.748	1.6	64.7076	65.1040	56.774	-4.798	-4.7	65.0993	
64.6960	72.400	4.948	1.7	64.6977	65.1190	56.574	-4.998	-4.9	65.1141	
64.6820	72.605	5.153	1.8	64.6838	65.1340	56.371	-5.201	-5.1	65.1289	
64.6520	72.800	5.348	1.8	64.6538	65.1610	56.173	-5.399	-5.3	65.1557	
64.6460	73.001	5.549	1.9	64.6479	65.1730	55.970	-5.602	-5.5	65.1675	
64.6400	73.200	5.748	2.0	64.6420	65.1790	55.772	-5.800	-5.7	65.1733	
64.6420	73.400	5.948	2.0	64.6440	65.1670	55.571	-6.001	-5.9	65.1611	
64.6590	73.600	6.148	2.1	64.6611	65.1670	55.375	-6.197	-6.0	65.1609	
64.6410	73.803	6.351	2.2	64.6432	65.1740	55.174	-6.398	-6.2	65.1677	
64.6450	74.000	6.548	2.2	64.6472	65.1710	54.971	-6.601	-6.4	65.1645	
64.6490	74.098	6.646	2.3	64.6513	65.1700	54.874	-6.698	-6.5	65.1634	
64.6440	74.098	6.646	2.3	64.6463	65.1740	54.874	-6.698	-6.5	65.1674	
64.6510	74.207	6.755	2.3	64.6533	65.1700	54.773	-6.799	-6.6	65.1634	
64.6500	74.405	6.953	2.4	64.6524	65.1700	54.571	-7.001	-6.8	65.1632	
64.6560	74.601	7.149	2.4	64.6584	65.1680	54.458	-7.114	-7.0	65.1610	
64.6490	74.600	7.148	2.4	64.6514	65.1680	54.458	-7.114	-7.0	65.1610	
64.6540	74.600	7.148	2.4	64.6564	65.1670	54.371	-7.201	-7.0	65.1600	
-0.004	10.462	67.452			0.010	-10.536	61.572			

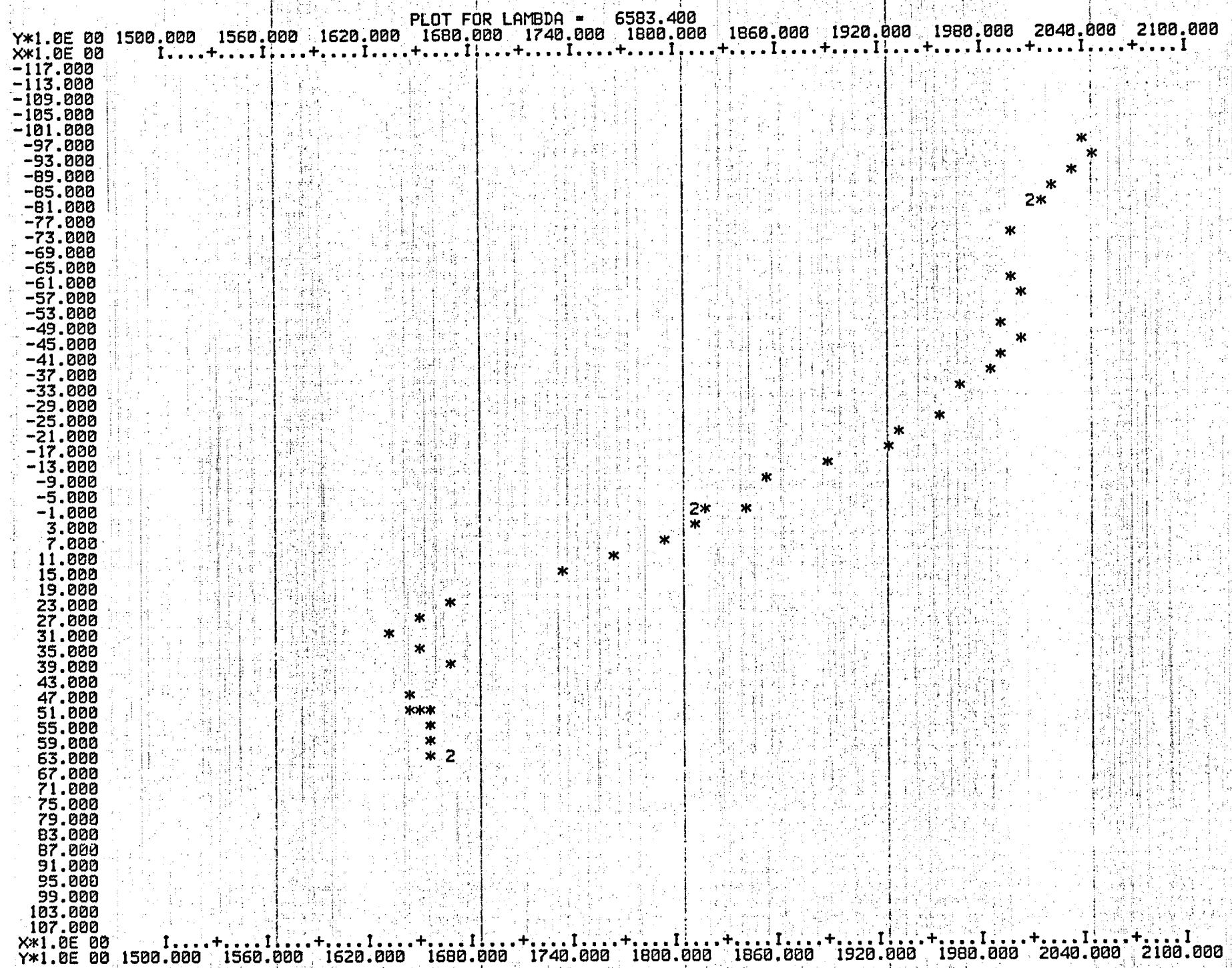
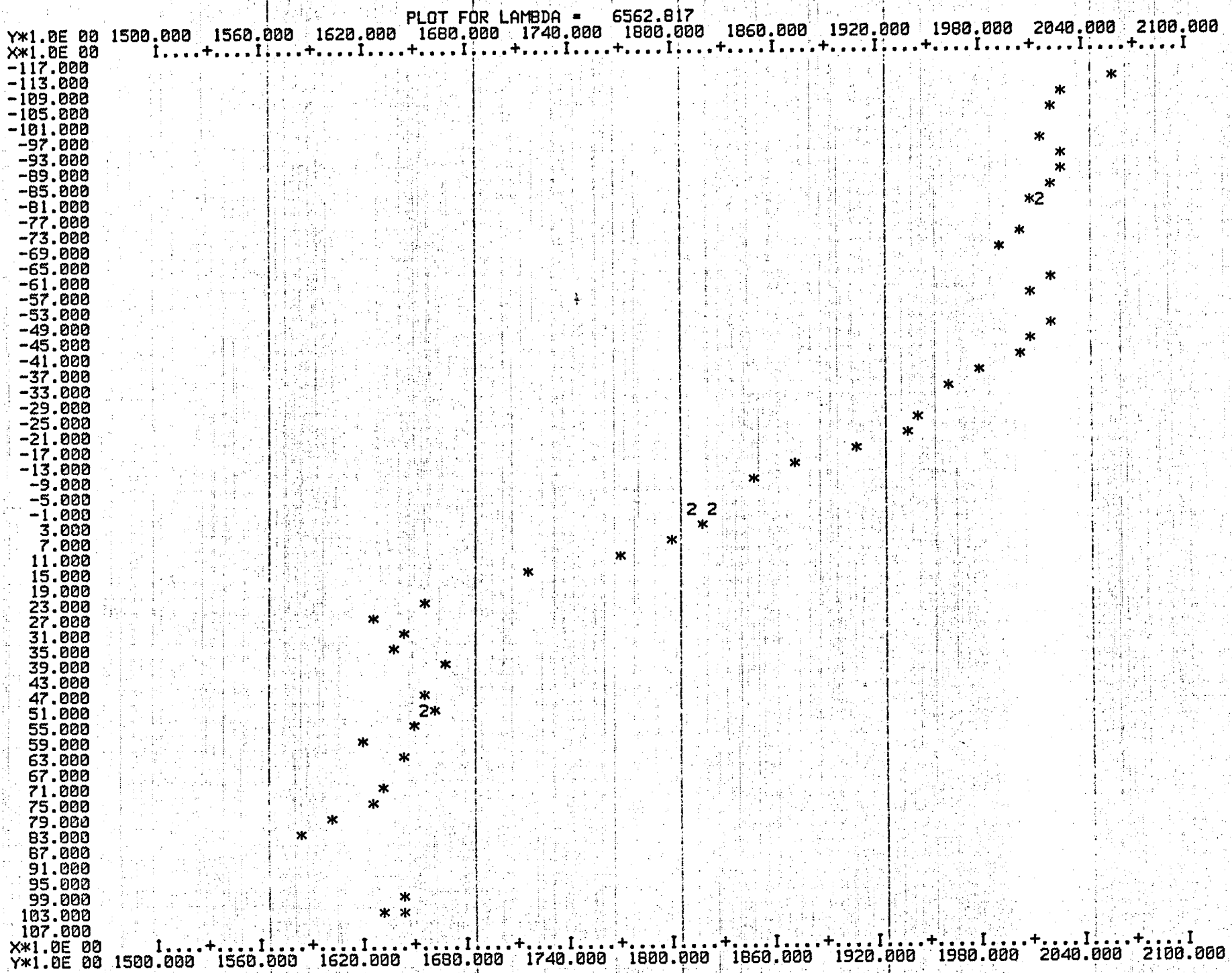
6583.400	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA	L	VELOCITY	Y	ARCSEC	V(WRT SUN)
	64.823	64.813	0.0	64.818	-4.103	0.255	6628.306	44.906	2044.9	-98.5			2041.8
	64.822	64.815	0.0	64.819	-3.903	0.177	6628.338	44.938	2046.4	-93.7			2043.2
	64.814	64.816	0.0	64.815	-3.703	0.050	6628.170	44.770	2038.7	-88.9			2035.6
	64.812	64.808	0.0	64.810	-3.500	0.096	6627.927	44.527	2027.6	-84.0			2024.5
	64.805	64.802	0.0	64.803	-3.432	0.095	6627.580	44.180	2011.8	-82.4			2008.7
	64.807	64.804	0.0	64.805	-3.432	0.095	6627.679	44.279	2016.4	-82.4			2013.2
	64.810	64.796	0.0	64.803	-3.301	0.367	6627.559	44.159	2010.9	-79.2			2007.7
	64.790	64.806	0.0	64.798	-3.099	0.384	6627.316	43.916	1999.8	-74.4			1996.7
	64.804	64.792	0.0	64.798	-2.503	0.280	6627.311	43.911	1999.6	-60.1			1996.4
	64.808	64.797	0.0	64.802	-2.301	0.277	6627.517	44.117	2009.0	-55.2			2005.8
	64.800	64.794	0.0	64.797	-2.102	0.149	6627.249	43.849	1996.8	-50.4			1993.6
	64.808	64.795	0.0	64.801	-1.903	0.320	6627.480	44.080	2007.3	-45.7			2004.2
	64.797	64.794	0.0	64.796	-1.700	0.067	6627.187	43.787	1994.0	-40.8			1990.8
	64.794	64.791	0.0	64.793	-1.504	0.064	6627.044	43.644	1987.4	-36.1			1984.3
	64.787	64.785	0.0	64.786	-1.306	0.061	6626.701	43.301	1971.8	-31.4			1968.7
	64.783	64.777	0.0	64.780	-1.104	0.158	6626.408	43.008	1958.5	-26.5			1955.3
	64.771	64.766	0.0	64.769	-0.902	0.130	6625.840	42.440	1932.6	-21.6			1929.5
	64.770	64.762	0.0	64.766	-0.700	0.201	6625.722	42.322	1927.2	-16.8			1924.1
	64.755	64.749	0.0	64.752	-0.502	0.148	6625.030	41.630	1895.7	-12.0			1892.6
	64.737	64.733	0.0	64.735	-0.303	0.120	6624.162	40.762	1856.2	-7.3			1853.1
	64.730	64.731	0.0	64.731	-0.104	0.008	6623.944	40.544	1846.3	-2.5			1843.2
	64.724	64.718	0.0	64.721	0.005	0.140	6623.449	40.049	1823.7	0.1			1820.6
	64.720	64.713	0.0	64.717	0.005	0.190	6623.249	39.849	1814.6	0.1			1811.5
	64.720	64.716	0.0	64.718	0.005	0.115	6623.324	39.924	1818.0	0.1			1814.9
	64.724	64.711	0.0	64.717	0.096	0.314	6623.277	39.877	1815.9	2.3			1812.8
	64.708	64.709	0.0	64.708	0.295	0.039	6622.834	39.434	1795.7	7.1			1792.6
	64.698	64.694	0.0	64.696	0.495	0.083	6622.217	38.817	1767.6	11.9			1764.5
	64.684	64.680	0.0	64.682	0.699	0.104	6621.499	38.099	1735.0	16.8			1731.8
	64.654	64.653	0.0	64.653	0.896	0.026	6620.083	36.683	1670.4	21.5			1667.3
	64.648	64.641	0.0	64.644	1.098	0.173	6619.640	36.240	1650.3	26.3			1647.2
	64.642	64.635	0.0	64.638	1.296	0.170	6619.347	35.947	1637.0	31.1			1633.8
	64.644	64.647	0.0	64.646	1.496	0.083	6619.703	36.303	1653.2	35.9			1650.0
	64.661	64.648	0.0	64.654	1.694	0.338	6620.134	36.734	1672.8	40.7			1669.6
	64.643	64.641	0.0	64.642	1.896	0.060	6619.517	36.117	1644.7	45.5			1641.5
	64.647	64.644	0.0	64.646	2.096	0.082	6619.698	36.298	1652.9	50.3			1649.8
	64.651	64.645	0.0	64.648	2.194	0.156	6619.826	36.426	1658.8	52.6			1655.6
	64.646	64.641	0.0	64.644	2.194	0.130	6619.602	36.202	1648.5	52.6			1645.4
	64.653	64.645	0.0	64.649	2.299	0.204	6619.880	36.480	1661.2	55.2			1658.0
	64.652	64.645	0.0	64.649	2.499	0.176	6619.861	36.461	1660.4	60.0			1657.2
	64.658	64.647	0.0	64.653	2.654	0.274	6620.065	36.665	1669.6	63.7			1666.5
	64.651	64.647	0.0	64.649	2.653	0.100	6619.890	36.490	1661.7	63.7			1658.5
	64.656	64.648	0.0	64.652	2.696	0.197	6620.042	36.642	1668.6	64.7			1665.5
LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE			
3 6717.300													
	67.4080	71.853	4.436	8.0	67.4160	62.4110	57.097	-4.486	-10.2	62.4008			
	67.4050	71.853	4.436	8.0	67.4130	62.4140	57.097	-4.486	-10.2	62.4038			
	67.4000	71.853	4.436	8.0	67.4080	62.4200	57.097	-4.486	-10.2	62.4098			
	-0.019	10.417	67.417			0.024	-10.423	61.583					
	XDIR	XREV	CURV	MEANX	MEANY	XD-MEANX	LAMDA	DELTA	L	VELOCITY	Y	ARCSEC	V(WRT SUN)
6717.300													
	67.416	67.408	0.0	67.412	0.000	0.207	6757.994	40.694	1816.2	0.0			1813.0
	67.413	67.405	0.0	67.409	0.000	0.207	6757.844	40.544	1809.5	0.0			1806.3
	67.408	67.399	0.0	67.403	0.000	0.232	6757.569	40.269	1797.2	0.0			1794.0
LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE			
3 6730.600													

VELOCITY CORRECTIONS, VS = -3.1 VLS = -2.0

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PLOT FOR LAMBDA = 6548.100
Y*1.0E 00 1500.000 1560.000 1620.000 1680.000 1740.000 1800.000 1860.000 1920.000 1980.000 2040.000 2100.000
X*1.0E 00 1....+....1....+....1....+....1....+....1....+....1....+....1....+....1....+....1
-117.000
-113.000
-109.000
-105.000
-101.000
-97.000
-93.000
-89.000
-85.000
-81.000
-77.000
-73.000
-69.000
-65.000
-61.000
-57.000
-53.000
-49.000
-45.000
-41.000
-37.000
-33.000
-29.000
-25.000
-21.000
-17.000
-13.000
-9.000
-5.000
-1.000
3.000
7.000
11.000
15.000
19.000
23.000
27.000
31.000
35.000
39.000
43.000
47.000
51.000
55.000
59.000
63.000
67.000
71.000
75.000
79.000
83.000
87.000
91.000
95.000
99.000
103.000
107.000
***
X*1.0E 00 1....+....1....+....1....+....1....+....1....+....1....+....1....+....1
Y*1.0E 00 1500.000 1560.000 1620.000 1680.000 1740.000 1800.000 1860.000 1920.000 1980.000 2040.000 2100.000

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[illegible]

PLATE C459 NGC 3672 PA 98 SE REA D FIRST

MAR 30 1977

RIGHT ASCENSION = 11. 22. 30. DECLINATION = -9. 31.  
UNIVERSAL TIME OF MID EXPOSURE = 4. 22.  
LONGITUDE OF SUN AT ZERO HOURS UT = 4. 13. 57. DAILY CHANGE (SECONDS) = 3566.4

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6506.528	63.8970	40.360	-0.364	0.5	63.8975	72.5560	50.484	-0.302	-0.5	72.5555
	63.8940	40.774	0.050	-0.1	63.8939	72.5590	50.205	-0.023	-0.0	72.5590
	63.8930	41.071	0.347	-0.5	63.8925	72.5620	49.831	0.351	0.5	72.5625
	63.9080	50.779	10.055	-14.2	63.8938	72.5420	40.111	10.071	15.5	72.5575
	63.9080	51.105	10.381	-14.6	63.8934	72.5460	39.731	10.451	16.1	72.5621
	63.9170	51.432	10.708	-15.1	63.9019	72.5390	39.320	10.862	16.8	72.5558
	0.0163	0.015	40.724		63.8955	-0.0167	-0.016	50.182		72.5587
6532.880	64.4350	40.326	-0.371	0.3	64.4353	72.0300	50.549	-0.350	-0.3	72.0297
	64.4290	40.707	0.010	-0.0	64.4290	72.0320	50.228	-0.029	-0.0	72.0320
	64.4290	41.005	0.308	-0.2	64.4288	72.0330	49.871	0.328	0.3	72.0333
	64.4370	50.817	10.120	-7.2	64.4297	72.0240	40.117	10.082	9.5	72.0335
	64.4370	51.169	10.472	-7.5	64.4295	72.0230	39.702	10.497	9.8	72.0328
	64.4350	51.455	10.758	-7.7	64.4273	72.0210	39.295	10.904	10.2	72.0312
	0.0053	0.007	40.697		64.4299	-0.0090	-0.010	50.199		72.0321
6598.953	65.7540	40.312	-0.348	-0.1	65.7539	70.7000	50.550	-0.334	0.0	70.7000
	65.7550	40.672	0.012	0.0	65.7550	70.7060	50.188	0.028	-0.0	70.7060
	65.7480	41.009	0.349	0.1	65.7481	70.7080	49.867	0.349	-0.0	70.7080
	65.7450	50.784	10.124	2.8	65.7478	70.7080	40.139	10.077	-1.0	70.7070
	65.7490	51.155	10.495	2.9	65.7519	70.7060	39.730	10.486	-1.0	70.7050
	65.7510	51.472	10.812	3.0	65.7540	70.7020	39.266	10.950	-1.1	70.7009
	-0.0040	-0.003	40.660		65.7518	0.0007	0.001	50.216		70.7045
6678.200	67.3360	40.296	-0.358	-0.2	67.3358	69.1190	50.553	-0.346	0.2	69.1192
	67.3320	40.685	0.030	0.0	67.3320	69.1200	50.206	0.001	-0.0	69.1200
	67.3300	41.017	0.362	0.2	67.3302	69.1210	49.895	0.312	-0.2	69.1208
	67.3300	50.739	10.084	6.0	67.3360	69.1310	40.185	10.022	-7.2	69.1238
	67.3340	51.103	10.448	6.2	67.3402	69.1270	39.732	10.475	-7.6	69.1194
	67.3300	51.415	10.760	6.4	67.3364	69.1240	39.357	10.850	-7.8	69.1162
	-0.0013	-0.006	40.654		67.3351	0.0073	0.008	50.207		69.1199
6717.040	68.1130	40.291	-0.368	-0.2	68.1128	68.3410	50.472	-0.272	0.2	68.3412
	68.1080	40.669	0.010	0.0	68.1080	68.3460	50.224	-0.024	0.0	68.3460
	68.1100	40.988	0.329	0.2	68.1102	68.3470	49.889	0.311	-0.3	68.3467
	68.1010	50.719	10.060	6.0	68.1070	68.3520	40.172	10.028	-9.1	68.3429
	68.1000	51.099	10.440	6.2	68.1062	68.3550	39.801	10.399	-9.4	68.3456
	68.1010	51.486	10.827	6.5	68.1075	68.3560	39.417	10.783	-9.8	68.3462
	-0.0097	-0.006	40.659		68.1086	0.0097	0.009	50.200		68.3448
6929.468	72.3460	40.237	-0.380	-1.0	72.3450	64.1110	50.585	-0.292	0.8	64.1118
	72.3440	40.661	0.044	0.1	72.3441	64.1120	50.309	-0.016	0.0	64.1120
	72.3390	40.955	0.338	0.9	72.3399	64.1150	49.985	0.308	-0.9	64.1141
	72.3140	50.656	10.039	27.5	72.3415	64.1420	40.248	10.045	-28.3	64.1137
	72.3140	51.023	10.406	28.5	72.3425	64.1400	39.851	10.442	-29.4	64.1106
	72.3160	51.357	10.740	29.4	72.3454	64.1440	39.516	10.777	-30.3	64.1136
	-0.0283	-0.028	40.617		72.3430	0.0293	0.029	50.293		64.1127

D MID = 68.1160 YD MID = 41.0130 XR MID = 68.3385 YR MID = 49.9080

DX DIR = -0.0062+ 0.0001\*+ -0.00004\*+ -0.00029\* \*\*3  
DX REV = 0.0094+ -0.0022\*+ -0.00016\*+ -0.00018\* \*\*3  
YD DIR = -0.3538+ 0.0073\*+ 0.00064\*+ -0.00111\* \*\*3  
YD REV = 0.2918+ 0.0085\*+ 0.00211\*+ -0.00121\* \*\*3  
YH DIR = 10.4258+ -0.0370\*+ -0.00178\*+ 0.00209\* \*\*3  
YH REV = -10.4045+ -0.0533\*+ -0.00207\*+ 0.00272

WEIGHTED MEASUREMENTS

LAMDA= 6717.379 + 50.1683 \*X + 0.0260 \*\*\*2 + -0.00543 \*\*\*3 (ANGSTROM)

6 COMPARISON LINES

LINE	XDIR	XREV	MEANX	MEANY	XD-XMEAN ANGSTROMS	LAMDA	MEAS-CALC	WEIGHT
6506.528	63.896	63.897	63.896	10.785	0.046	6506.522	0.006	5
6532.880	64.430	64.424	64.427	10.831	0.147	6532.894	-0.014	4
6598.953	65.752	65.752	65.752	10.881	0.004	6598.943	0.010	5
6678.200	67.335	67.336	67.336	10.805	0.028	6678.209	-0.009	5
6717.040	68.109	68.111	68.110	10.805	0.068	6717.036	0.004	5
6929.468	72.343	72.343	72.343	10.758	0.010	6929.468	-0.000	5

\*MEAN ERROR\* = 0.01137  
SIGMA = 136.4561

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
21 6562.817										
65.8250	44.229	3.570	1.1		65.8261	70.6330	46.599	-3.617	-0.5	70.6325
65.8260	44.474	3.815	1.2		65.8272	70.6250	46.378	-3.838	-0.5	70.6245
65.8290	44.629	3.970	1.2		65.8302	70.6240	46.225	-3.991	-0.5	70.6234
65.8240	44.846	4.187	1.3		65.8253	70.6340	46.047	-4.169	-0.6	70.6334
65.8260	44.826	4.167	1.3		65.8273	70.6340	46.047	-4.169	-0.6	70.6334
65.8310	45.219	4.560	1.4		65.8324	70.6320	45.674	-4.542	-0.6	70.6314
65.8240	45.219	4.560	1.4		65.8254	70.6290	45.674	-4.542	-0.6	70.6284
65.8380	45.557	4.898	1.5		65.8395	70.6070	45.303	-4.913	-0.7	70.6063
65.8430	45.557	4.898	1.5		65.8445	70.6070	45.303	-4.913	-0.7	70.6063
65.8300	45.629	4.970	1.5		65.8315	70.6340	45.236	-4.980	-0.7	70.6333
65.8300	45.629	4.970	1.5		65.8315	70.6290	45.236	-4.980	-0.7	70.6283
65.8000	45.701	5.042	1.5		65.8015	70.6570	45.161	-5.055	-0.7	70.6563
65.8050	45.701	5.042	1.5		65.8065	70.6530	45.161	-5.055	-0.7	70.6523
65.8300	45.835	5.176	1.6		65.8316	70.6380	45.028	-5.188	-0.7	70.6373
65.8360	46.002	5.343	1.6		65.8376	70.6260	44.858	-5.358	-0.7	70.6253
65.8350	46.138	5.479	1.7		65.8367	70.6300	44.725	-5.491	-0.8	70.6292
65.8340	46.220	5.561	1.7		65.8357	70.6270	44.643	-5.573	-0.8	70.6262
65.8290	46.333	5.674	1.7		65.8307	70.6340	44.530	-5.686	-0.8	70.6332
65.8210	46.381	5.722	1.8		65.8228	70.6410	44.481	-5.735	-0.8	70.6402
65.8240	46.526	5.867	1.8		65.8258	70.6360	44.337	-5.879	-0.8	70.6352
65.8320	46.655	5.996	1.8		65.8338	70.6260	44.208	-6.008	-0.8	70.6252
-0.003	10.476	40.659				0.001	-10.505	50.216		

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6562.817										
65.826	65.824	0.0	65.825	-1.383	0.062	6602.598	39.780	1817.2	-33.2	1813.0
65.827	65.832	0.0	65.829	-1.150	0.112	6602.825	40.008	1827.6	-27.6	1823.4
65.830	65.833	0.0	65.831	-0.996	0.061	6602.927	40.110	1832.2	-23.9	1828.1
65.825	65.823	0.0	65.824	-0.799	0.065	6602.554	39.737	1815.2	-19.2	1811.0
65.827	65.823	0.0	65.825	-0.809	0.115	6602.604	39.787	1817.5	-19.4	1813.3
65.832	65.825	0.0	65.828	-0.426	0.191	6602.783	39.966	1825.7	-10.2	1821.5
65.825	65.828	0.0	65.826	-0.426	0.058	6602.683	39.866	1821.1	-10.2	1816.9
65.839	65.850	0.0	65.845	-0.071	0.257	6603.586	40.769	1862.4	-1.7	1858.2
65.844	65.850	0.0	65.847	-0.071	0.132	6603.711	40.894	1868.1	-1.7	1863.9
65.832	65.823	0.0	65.827	-0.002	0.218	6602.713	39.896	1822.5	-0.8	1818.3
65.832	65.828	0.0	65.830	-0.002	0.093	6602.838	40.021	1828.2	-0.8	1824.0
65.802	65.800	0.0	65.801	0.072	0.043	6601.390	38.573	1762.0	1.7	1757.8
65.806	65.804	0.0	65.805	0.072	0.068	6601.614	38.798	1772.3	1.7	1768.1

65.832	65.819	0.0	65.825	0.205	0.319	6602.615	39.798	1818.0	4.9	1813.8
65.838	65.831	0.0	65.834	0.374	0.170	6603.067	40.250	1838.6	9.0	1834.5
65.837	65.827	0.0	65.832	0.508	0.245	6602.943	40.126	1833.0	12.2	1828.8
65.836	65.830	0.0	65.833	0.590	0.146	6602.994	40.177	1835.3	14.2	1831.2
65.831	65.823	0.0	65.827	0.703	0.196	6602.696	39.879	1821.7	16.9	1817.5
65.823	65.816	0.0	65.819	0.752	0.171	6602.322	39.504	1804.6	18.0	1800.4
65.826	65.821	0.0	65.823	0.896	0.122	6602.523	39.706	1813.8	21.5	1809.6
65.834	65.831	0.0	65.832	1.025	0.072	6602.974	40.157	1834.4	24.6	1830.2

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
9 6583.400										
	66.2410	45.203	4.548	2.0	66.2430	70.2140	45.684	-4.531	-1.6	70.2124
	66.2440	45.203	4.548	2.0	66.2460	70.2140	45.684	-4.531	-1.6	70.2124
	66.2500	45.595	4.940	2.2	66.2522	70.2020	45.285	-4.930	-1.7	70.2003
	66.2530	45.595	4.940	2.2	66.2552	70.2020	45.285	-4.930	-1.7	70.2003
	66.2270	45.684	5.029	2.2	66.2292	70.2360	45.184	-5.031	-1.7	70.2343
	66.2210	45.684	5.029	2.2	66.2232	70.2390	45.184	-5.031	-1.7	70.2373
	66.2440	45.890	5.235	2.3	66.2463	70.2170	44.936	-5.279	-1.8	70.2152
	66.2420	46.196	5.541	2.5	66.2445	70.2110	44.673	-5.542	-1.9	70.2091
	66.2350	46.473	5.818	2.6	66.2376	70.2210	44.398	-5.817	-2.0	70.2190
	-0.005	10.475	40.655			0.004	-10.494	50.215		

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6583.400										
66.243	66.244	0.0	66.243	-0.443	0.016	6623.518	40.118	1826.9	-10.6	1822.7
66.246	66.244	0.0	66.245	-0.443	0.059	6623.593	40.193	1830.3	-10.6	1826.1
66.252	66.256	0.0	66.254	-0.048	0.090	6624.051	40.651	1851.2	-1.2	1847.0
66.255	66.256	0.0	66.256	-0.048	0.015	6624.126	40.726	1854.6	-1.2	1850.4
66.229	66.222	0.0	66.226	0.047	0.185	6622.628	39.228	1786.3	1.1	1782.2
66.223	66.219	0.0	66.221	0.047	0.110	6622.402	39.002	1776.1	1.1	1771.9
66.246	66.241	0.0	66.244	0.274	0.135	6623.532	40.132	1827.5	6.6	1823.4
66.244	66.247	0.0	66.246	0.558	0.064	6623.638	40.238	1832.3	13.4	1828.2
66.238	66.237	0.0	66.237	0.834	0.012	6623.218	39.818	1813.2	20.0	1809.1

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6 6717.300										
	68.9290	45.545	4.880	3.0	68.9320	67.5160	45.327	-4.868	-5.2	67.5107
	68.9270	45.545	4.880	3.0	68.9300	67.5180	45.319	-4.876	-5.3	67.5127
	68.9290	45.545	4.880	3.0	68.9320	67.5140	45.319	-4.876	-5.3	67.5087
	68.9140	45.610	4.945	3.0	68.9170	67.5580	45.225	-4.970	-5.4	67.5526
	68.9000	45.646	4.981	3.0	68.9030	67.5490	45.225	-4.970	-5.4	67.5436
	68.8940	45.662	4.997	3.0	68.8970	67.5480	45.225	-4.970	-5.4	67.5426
	-0.006	10.396	40.665			0.011	-10.364	50.195		

LINE	X (MM)	Y (MM)	Y-Y0	GRAD	XDIRECT	X (MM)	Y (MM)	Y-Y0	GRAD	XREVERSE
6717.300										
68.932	68.945	0.0	68.939	-0.044	0.337	6758.624	41.324	1844.3	-1.0	1840.2
68.930	68.943	0.0	68.937	-0.040	0.337	6758.524	41.224	1839.8	-1.0	1835.7
68.932	68.947	0.0	68.940	-0.040	0.387	6758.675	41.375	1846.6	-1.0	1842.4
68.917	68.903	0.0	68.910	0.039	0.339	6757.198	39.898	1780.6	0.9	1776.5
68.903	68.912	0.0	68.908	0.058	0.238	6757.073	39.773	1775.0	1.4	1770.9
68.897	68.913	0.0	68.905	0.065	0.413	6756.947	39.647	1769.5	1.6	1765.3

VELOCITY CORRECTIONS. VS = -4.2 VLS = -2.0





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PLOT FOR LAMBDA = 6717.300
Y*1.0E 00 1700.000 1720.000 1740.000 1760.000 1780.000 1800.000 1820.000 1840.000 1860.000 1880.000 1900.000
X*1.0E 00 I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I
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XX1.0E 00 I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....+....I.....
Y*1.0E 00 1700.000 1720.000 1740.000 1760.000 1780.000 1800.000 1820.000 1840.000 1860.000 1880.000 1900.000
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