

## No. 77 SELENODETIC MEASURES ON YERKES LUNAR PHOTOGRAPH NO. 1269

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### ABSTRACT

Details are given of the measures and reductions for 1868 points on Yerkes lunar photograph No. 1269. The catalog lists the uncorrected photographic coordinates, the refraction-free photographic coordinates, and the standard direction-cosines of 1464 points on the disk. Also given are the uncorrected coordinates and the refraction-free photographic rectangular and polar coordinates of 404 points on the bright limb.

#### 1. *The Photograph*

The plate Yerkes 1269 is a rather overexposed high-resolution photograph obtained by E. Moore using the 40-in. refractor of the Yerkes Observatory at 01<sup>h</sup>53<sup>m</sup> UT on 1 August 1960. The phase was first quarter with the morning terminator through the crater Eratosthenes.

#### 2. *The Measures and Reductions*

All measures were made by the author in precisely the same manner and with the same equipment as those on Yerkes 1170; the reductions were also made in the same manner and the results are published with the same format. Reference should therefore be made to *Comm. LPL* Nos. 60 and 61 for details of procedure and notation. The measures on 1269 relate to 1464 points on the disk and 404 points on the bright limb. The programs were written by Mr. R. E. Hill and Mrs. P. Bates, who were also responsible for the control of the computations.

#### 3. *The Internal Precision of the Measures*

The standard errors of the listed coordinates  $x$  and  $y$  are estimated from  $\delta x$  and  $\delta y$ , which are the semidifferences between the forward and reverse

means. To obtain a representative sample, every tenth point in the final list was used. The standard errors of  $x$  and  $y$  are each about 5 microns.

#### 4. *The External Precision of the Measures*

It is now well known that the internal precision bears little relation to the real precision of the measures. The discrepancy originates in the seeing distortions that are not reflected in the internal dispersion. The external precision can be roughly estimated from the residuals in the least squares adjustment of the photographic positions to the selenodetic control. The details of this adjustment are given in Section 8 of *Comm.* No. 60.

Fifty-three points were taken from the Breslau triangulation (Schrutka-Rechtenstamm 1958) to determine the plate constants  $p$ ,  $q$ ,  $h$ , and  $k$ . The residuals in the horizontal and vertical plate coordinates  $u'$  and  $v'$  are given in Table 1. The standard differences between the Breslau and plate positions are 0.00022 and 0.00026 in units of the moon's radius. Almost all this dispersion must come from the measures on 1269. Hence, the standard errors in the  $x''$  and  $y''$  coordinates are about 0.00020, that is, about 20 microns. This is four times greater than the standard error obtained from the internal dispersion.

TABLE I  
LEAST SQUARES FIT TO SELENODETTIC CONTROLS

POINT		RESIDUALS*		POINT		RESIDUALS*	
Blagg and Müller	Consol. Catalog	$u'$	$v'$	Blagg and Müller	Consol. Catalog	$u'$	$v'$
4004	42697	+25	-20	4108	44339	-15	+35
3845	42559	+12	-16	4488	44761	-13	-1
3791	42359	-4	+49	4158	44229	-34	-34
3780	41365	-3	-4	3683	43100	-12	-10
3570	40370	-41	-16	3680	43029	-8	-6
3741	41268	+20	+13	4286	45057	+4	-1
3550	41229	+11	-7	553	12094	+1	+2
3606	41142	-30	-27	573	13113	+32	-8
3648	42061	-7	-22	622	13421	+26	+54
3651	42074	-35	-41	391	15645A	-13	+17
3609	41028	+1	-2	458	14732A	-20	-11
3607	41025	-12	+8	409	14853	-13	+31
561	12066	+8	+16	4690	49106	-19	-3
835	11012	-32	-40	4312	46135	-35	+32
834	10093	+9	-32	216	17152	+38	-9
857	10002	+11	-9	182	16313	+6	+38
865	10016	+16	-3	3004	31231	+6	-22
819	12122	+25	+17	2856	31290	+14	-23
629	11486	+14	-3	2963	30114	+6	-16
895	10470	+19	-9	2918	31161	-12	+16
932	11606	+44	+46	2933	30095	-2	-24
965	11718	+17	-25	2950A	30043	-1	+4
4098	43418	-28	+18	2935	31043	-23	-26
4109	43483	-25	+13	1212	20141	+23	-11
4083A	44443	+2	+38	1215	20155	+29	-26
4083B	44494	+10	+42	1214	20115	+10	-15
				1145	20497	-5	+32

\*Residuals are stated in units of  $10^{-5}r$ .

### 5. Data for the Reduction of Yerkes 1269

LIBRATIONS:

$$\begin{aligned} l' &= -6^{\circ}45, \\ b' &= -4^{\circ}92, \\ C' &= 17^{\circ}35. \end{aligned}$$

GEODETIC:

$$\begin{aligned} \rho &= 0.99852, \\ \phi &= +42^{\circ}57, \\ \phi' &= +42^{\circ}38, \\ L &= 5^{\text{h}}54^{\text{m}}13^{\text{s}}64 \text{ W.} \end{aligned}$$

SEMIDIAMETER:

$$\begin{aligned} \pi &= 58'55, \\ s &= 957''20, \\ \sin s' &= 0.004681. \end{aligned}$$

ATMOSPHERIC:

$$\begin{aligned} b &= 28.37 \text{ in.}, \\ F &= 75^{\circ}\text{F.} \end{aligned}$$

REFRACTION:

$$\begin{aligned} \sin ZD' &= +0.865824, \\ \cos ZD' &= +0.500349, \\ \sin Q' &= +0.366814, \\ \cos Q' &= +0.930294, \\ 1/\kappa &= 0.99899, \\ 1/\kappa' &= 0.99975. \end{aligned}$$

LEAST SQUARES FIT:

$$\begin{aligned} p &= +0.010 \ 3205, \\ q &= -0.003 \ 8987, \\ \mu &= +0.011 \ 0323. \end{aligned}$$

PROFILE:

$$\begin{aligned} h &= +0.0134 \text{ mm}, \\ k &= +0.0008 \text{ mm}, \\ r &= 90.6520 \text{ mm}. \end{aligned}$$

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### REFERENCE

Schrutka-Rechtenstamm, G. 1958, "Neureduktion der 150 Mondpunkte der Breslauer Messungen von J. Franz," *Sitz. Österr. Akad. Wiss. Math.-Naturw. Kl., Abt. II*, 167 Bd.

**THE CATALOG**

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1000271	121.5820	118.4951	-0.0025	0.0043	6.8 9.9	1540
1000442	120.7940	120.2615	0.0025	0.0027	1.0 1.8	1541
1002262	123.2145	119.0368	0.0021	0.0017	9.9 9.9	1542
1002700	121.4220	123.0723	-0.0021	0.0051	6.2 2.0	1543
1002773	121.9576	123.5041	0.0046	0.0068	1.3 3.8	1544
1003056	124.3490	117.8586	0.0091	0.0012	4.8 1.4	1545
1003099	124.6399	118.2805	0.0032	0.0033	2.9 8.1	1546
1004537	123.7395	122.5314	0.0033	0.0024	2.5 6.0	1547
1004579	124.0727	122.7638	0.0028	0.0032	3.9 9.9	1548
1004947	122.7595	125.9771	0.0028	0.0012	7.3 5.5	1549
1008470	128.0311	122.0913	0.0024	0.0053	1.2 7.1	1550
1008742	126.8965	124.8158	0.0028	0.0032	3.8 4.4	1551
1009311	128.5705	121.3706	-0.0045	0.0073	2.6 3.5	1552
1009419	128.0657	122.9499	0.0004	0.0012	1.5 2.2	1553
1009946	127.1060	127.0719	-0.0065	0.0064	1.6 4.5	1554
1010089	119.3183	126.0737	0.0026	-0.0028	3.0 3.5	1555
1010292	119.0800	127.2967	-0.0015	0.0002	5.7 9.9	1556
1010586	118.0391	130.1254	0.0001	0.0000	5.5 1.9	1557
1010671	117.8444	130.5005	0.0035	0.0009	3.3 1.9	1558
1010707	116.8560	131.7249	0.0042	0.0003	0.9 2.9	1559
1010746	117.2120	131.7163	0.0024	-0.0004	2.6 9.9	1560
1011537	118.5037	130.3184	0.0035	0.0040	2.7 2.7	1561
1012491	120.3170	129.3754	0.0032	0.0038	8.9 9.9	1562
1013529	120.0859	131.0357	0.0018	-0.0018	1.8 3.0	1563
1014536	121.1460	130.9677	0.0034	0.0005	2.2 2.0	1564
1014615	120.6423	131.7467	0.0074	0.0022	2.2 4.1	1565
1015315	122.3817	129.4317	-0.0008	0.0045	1.5 3.2	1566
1015426	122.1903	130.3497	0.0039	0.0030	2.9 1.7	1567
1016163	124.2265	127.8654	0.0034	-0.0014	3.2 4.7	1568
1017281	125.0862	128.8616	0.0070	-0.0026	3.8 1.2	1569
1017332	124.3670	129.7292	0.0017	0.0016	4.5 1.0	1570
1017958	122.7041	135.3279	0.0037	0.0029	5.1 9.9	1571
1018369	125.2595	130.5633	0.0084	0.0020	1.6 1.6	1572
1018383	125.6310	130.0946	0.0027	0.0017	5.3 8.7	1573
1019190	127.1287	128.4548	-0.0030	0.0080	1.8 9.9	1574
1019569	125.5953	132.5248	-0.0010	-0.0035	1.6 1.6	1575
1021449	116.0377	138.1657	0.0066	0.0037	1.4 1.1	1576
1027992	120.4744	143.3637	0.0011	0.0036	2.4 1.7	1577
1029925	121.4860	143.9202	0.0002	0.0051	2.9 2.7	1578
1033629	114.2424	148.7154	-0.0042	0.0122	2.0 1.9	1579
1033801	113.7239	149.5355	0.0001	0.0054	3.8 6.7	1580
1035222	117.2666	145.1751	0.0029	0.0023	3.8 8.1	1581
1037337	118.6572	146.9683	-0.0041	0.0020	3.0 5.1	1582
1038715	118.2994	150.2638	-0.0099	0.0002	4.8 7.8	1583
1039265	120.9908	146.5548	0.0015	0.0075	2.2 4.8	1584
1044350	113.5465	153.9474	0.0071	0.0055	2.5 5.4	1585
1044624	112.2722	156.6311	0.0010	0.0031	4.0 6.1	1586
1047031	116.8407	152.2171	-0.0092	0.0109	9.9 2.7	1587
1047646	115.0098	157.6108	-0.0025	0.0081	4.0 1.1	1588
1048170	117.7945	153.3288	-0.0024	-0.0008	2.9 2.7	1589
1053144	110.0747	160.4909	0.0113	0.0044	2.8 2.1	1590
1056066	113.1478	160.6331	-0.0005	0.0000	0.6 0.6	1591
1057130	113.6049	161.1552	0.0046	0.0002	3.0 7.1	1592
1058184	114.7528	161.7700	-0.0015	0.0029	2.2 9.0	1593
1064690	106.8786	172.4244	-0.0033	-0.0041	4.6 4.4	1594
1065422	107.6807	171.1280	-0.0040	-0.0046	2.1 1.3	1595
1065753	106.9598	173.5526	-0.0041	-0.0028	2.7 5.4	1596
1065830	106.5054	174.0216	0.0063	-0.0001	1.0 1.4	1597
1065954	106.2935	175.1770	0.0003	-0.0055	8.2 2.6	1598
1069564	111.0837	173.0674	-0.0029	-0.0004	2.2 7.5	1599
1070900	98.2252	181.0153	0.0021	-0.0003	4.0 2.7	1600
1075008	105.3517	176.1787	0.0026	0.0023	1.6 8.1	1601
1076568	105.0413	180.2355	-0.0032	-0.0012	0.6 4.8	1602
1079791	107.3603	182.0051	0.0020	-0.0022	1.7 3.8	1603
1087228	103.0526	185.4811	-0.0033	-0.0075	0.5 2.2	1604
1087839	100.8114	189.6956	-0.0073	-0.0010	2.5 3.3	1605
1095066	98.6316	190.3640	0.0032	-0.0080	1.1 2.7	1606
1100161	130.3530	120.0321	0.0037	0.0049	1.7 9.9	1607
1100572	129.4118	123.6527	0.0001	0.0039	7.1 6.3	1608
1100641	128.8932	124.3405	-0.0033	0.0019	4.7 9.9	1609
1100900	127.7894	126.7443	-0.0013	0.0051	2.5 1.7	1610
1101127	130.7626	120.7515	0.0009	0.0005	2.3 1.9	1611
1101299	131.0417	121.8540	-0.0022	0.0035	4.5 5.1	1612

## POSITIONS ON THE DISK

1b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1000271	10.8779	9.6425	0.00720	0.02076	0.99976	1540
1000442	10.6248	11.5620	0.00448	0.04194	0.99911	1541
1002262	12.5975	9.6973	0.02625	0.02157	0.99942	1542
1002700	12.0267	14.0804	0.02018	0.07001	0.99734	1543
1002773	12.6631	14.3423	0.02726	0.07300	0.99696	1544
1003056	13.3502	8.2436	0.03457	0.00563	0.99939	1545
1003099	13.7492	8.5656	0.03900	0.00924	0.99920	1546
1004537	14.0951	12.9013	0.04303	0.05723	0.99743	1547
1004579	14.4808	13.0294	0.04732	0.05870	0.99715	1548
1004947	14.1357	16.4870	0.04383	0.09703	0.99432	1549
1008470	18.0853	11.2567	0.08736	0.03971	0.99538	1550
1008742	17.7724	14.1943	0.08408	0.07219	0.99384	1551
1009311	18.3975	10.4114	0.09081	0.03042	0.99540	1552
1009419	18.3628	12.0707	0.09051	0.04877	0.99470	1553
1009946	18.6152	16.2997	0.09373	0.09574	0.99098	1554
1010089	10.8632	17.5599	0.00769	0.10853	0.99406	1555
1010292	10.9827	18.8014	0.00920	0.12237	0.99244	1556
1010586	10.7893	21.8123	0.00760	0.15595	0.98774	1557
1010671	10.7093	22.2277	0.00680	0.16059	0.98700	1558
1010707	10.1098	23.6842	0.00049	0.17682	0.98424	1559
1010746	10.4487	23.5746	0.00421	0.17563	0.98445	1560
1011537	11.2897	21.8652	0.01315	0.15660	0.98757	1561
1012491	12.7603	20.4438	0.02917	0.14092	0.98959	1562
1013529	13.0110	22.1029	0.03228	0.15949	0.98667	1563
1014536	14.0082	21.7357	0.04328	0.15553	0.98688	1564
1014615	13.7468	22.6267	0.04056	0.16546	0.98538	1565
1015315	14.7562	19.9098	0.05125	0.13525	0.98948	1566
1015426	14.8338	20.8452	0.05228	0.14571	0.98795	1567
1016163	16.0797	17.8813	0.06565	0.11286	0.99144	1568
1017281	17.1875	18.5924	0.07811	0.12099	0.98958	1569
1017332	16.7446	19.6298	0.07334	0.13247	0.98847	1570
1017958	16.7428	25.4761	0.07459	0.19790	0.97738	1571
1018369	17.8378	20.1761	0.08564	0.13877	0.98661	1572
1018383	18.0607	19.6205	0.08803	0.13262	0.98725	1573
1019190	19.0304	17.6203	0.09855	0.11052	0.98898	1574
1019569	18.7179	21.9627	0.09582	0.15892	0.98263	1575
1021449	11.1575	30.0981	0.01387	0.24905	0.96839	1576
1027992	16.8909	33.8226	0.07900	0.29209	0.95312	1577
1029925	18.0193	34.0685	0.09171	0.29511	0.95105	1578
1033629	12.4373	40.7332	0.03256	0.37001	0.92846	1579
1033801	12.1734	41.6679	0.03013	0.38066	0.92422	1580
1035222	14.3301	36.4745	0.05156	0.32174	0.94542	1581
1037337	16.1738	37.7993	0.07272	0.33715	0.93864	1582
1038715	16.7682	41.0636	0.08100	0.37455	0.92366	1583
1039265	18.2939	36.7378	0.09593	0.32550	0.94066	1584
1044350	13.2585	45.9522	0.04469	0.43005	0.90170	1585
1044624	12.8000	48.8905	0.04153	0.46391	0.88491	1586
1047031	15.9251	43.3535	0.07286	0.40064	0.91334	1587
1047646	15.7039	49.0510	0.07404	0.46630	0.88152	1588
1048170	17.1561	44.1487	0.08709	0.41003	0.90791	1589
1053144	11.7908	53.2204	0.03353	0.51406	0.85710	1590
1056066	14.7782	52.4816	0.06625	0.50597	0.86000	1591
1057130	15.3651	52.8524	0.07310	0.51042	0.85681	1592
1058184	16.6408	53.1155	0.08760	0.51376	0.85345	1593
1064690	12.1210	65.5825	0.04943	0.66021	0.74945	1594
1065422	12.5214	64.1100	0.05216	0.64265	0.76438	1595
1065753	12.5199	66.6420	0.05520	0.67303	0.73755	1596
1065830	12.2176	67.2215	0.05256	0.67995	0.73137	1597
1065954	12.3431	68.3906	0.05550	0.69411	0.71773	1598
1069564	16.3364	65.0018	0.09600	0.65420	0.75020	1599
1070900	6.2670	76.2912	0.00013	0.79019	0.61286	1600
1075008	11.7249	69.6201	0.05027	0.70890	0.70352	1601
1076568	12.5814	73.6015	0.06595	0.75790	0.64903	1602
1079791	15.3087	74.6392	0.09849	0.77153	0.62853	1603
1087228	12.1667	79.2018	0.07196	0.82820	0.55580	1604
1087839	11.2166	83.8845	0.07331	0.88937	0.45127	1605
1095066	9.3164	85.1468	0.05585	0.90600	0.41957	1606
1100161	19.7261	8.6193	0.10562	0.01090	0.99435	1607
1100572	19.8536	12.3618	0.10720	0.05230	0.99286	1608
1100641	19.5519	13.1695	0.10388	0.06118	0.99271	1609
1100900	19.1773	15.7907	0.09995	0.09020	0.99090	1610
1101127	20.3235	9.1930	0.11231	0.01736	0.99352	1611
1101299	20.9048	10.1715	0.11886	0.02830	0.99251	1612

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1101408	129.7886	123.3245	-0.0045	0.0071	4.0 4.1	1613
1101533	129.9070	123.8524	-0.0034	0.0012	5.7 9.9	1614
1102233	131.5103	121.4529	-0.0023	0.0053	6.7 2.1	1615
1104147	133.4751	121.4842	0.0015	-0.0004	2.2 2.2	1616
1104267	133.4398	122.4267	-0.0015	0.0059	1.1 3.6	1617
1104970	131.8124	127.8448	-0.0052	0.0036	1.9 4.1	1618
1105015	134.3714	120.5726	0.0039	-0.0040	2.2 3.7	1619
1105355	134.0087	123.2642	0.0010	0.0005	4.3 2.6	1620
1105749	132.7059	127.0316	0.0012	0.0036	2.9 6.2	1621
1106487	134.7875	124.6270	-0.0014	0.0012	6.7 5.1	1622
1107113	135.9021	121.7725	0.0002	0.0018	1.5 3.0	1623
1109776	136.5348	127.7511	-0.0023	0.0094	2.5 1.0	1624
1111602	126.6821	133.1564	0.0020	0.0016	2.9 2.0	1625
1112024	129.3111	128.4446	0.0006	0.0043	0.8 1.9	1626
1112423	128.2380	131.7850	0.0034	-0.0009	0.8 1.9	1627
1113433	129.2062	132.0431	-0.0028	0.0023	1.1 4.0	1628
1114344	130.3956	131.5280	0.0041	0.0031	3.0 9.9	1629
1114389	130.6809	132.1019	0.0088	0.0050	9.9 5.5	1630
1114572	130.1562	133.1787	0.0006	0.0012	3.3 3.3	1631
1115780	130.6663	134.9631	0.0068	0.0045	9.9 7.0	1632
1116048	132.7938	129.8077	0.0014	0.0010	4.0 3.0	1633
1119331	134.7290	132.3849	0.0019	0.0038	1.1 3.8	1634
1120120	124.7757	136.9749	0.0079	0.0006	1.2 2.2	1635
1120867	122.9260	143.5757	0.0019	0.0017	2.7 9.9	1636
1121299	125.6732	139.0293	0.0025	0.0016	2.6 6.7	1637
1122027	126.5290	137.2605	0.0061	0.0028	1.5 6.1	1638
1122241	126.2923	138.4620	0.0049	-0.0024	2.0 2.6	1639
1122826	124.3518	143.9028	0.0013	0.0001	4.3 5.5	1640
1124287	128.2114	139.4937	-0.0033	0.0009	0.9 4.7	1641
1126647	128.4694	143.2201	0.0029	-0.0007	7.5 1.6	1642
1127069	131.1042	138.6909	0.0022	0.0022	1.7 3.0	1643
1128301	130.8235	140.6104	0.0041	0.0035	2.8 2.3	1644
1128328	130.8797	141.2278	0.0014	0.0001	1.2 5.0	1645
1129007	132.3610	138.8222	-0.0004	0.0014	1.0 3.0	1646
1129852	130.6675	145.2525	0.0003	-0.0026	3.5 5.1	1647
1130249	121.6255	147.1013	0.0088	0.0060	1.4 3.1	1648
1130348	121.2925	147.8767	0.0010	0.0036	3.3 3.2	1649
1130624	120.4099	149.8543	0.0026	0.0025	1.2 2.9	1650
1131067	123.2304	145.5150	0.0025	-0.0006	3.9 2.5	1651
1132277	123.6153	147.3897	0.0001	0.0009	1.5 2.6	1652
1132675	122.5505	150.5653	-0.0025	0.0028	4.1 8.9	1653
1134036	125.5916	146.0548	0.0063	0.0001	2.5 9.3	1654
1134657	124.0184	151.1982	-0.0046	0.0042	2.0 4.7	1655
1134756	123.7144	151.8969	0.0009	0.0022	1.8 9.9	1656
1135013	126.3771	146.0064	0.0023	0.0080	4.5 5.9	1657
1137669	126.6090	152.1061	-0.0005	0.0078	2.6 4.1	1658
1137991	126.2702	153.9198	-0.0058	0.0033	0.7 0.4	1659
1139226	129.2229	148.8342	0.0062	0.0073	1.4 1.3	1660
1139316	128.8150	149.6396	-0.0092	0.0039	1.3 0.5	1661
1140243	118.9006	154.8285	0.0028	0.0025	9.9 5.8	1662
1143162	121.9787	154.7189	0.0037	0.0019	2.5 2.1	1663
1145008	123.2819	154.6556	0.0015	-0.0005	3.5 3.3	1664
1148615	124.2237	159.9887	0.0103	0.0039	2.7 3.5	1665
1154829	117.1053	168.9938	-0.0016	-0.0009	2.7 2.8	1666
1155982	118.3856	169.6722	0.0046	0.0002	4.7 1.0	1667
1156179	121.3678	164.0307	-0.0039	0.0048	1.6 3.9	1668
1158866	120.9904	169.7847	0.0040	-0.0017	8.3 1.1	1669
1159585	122.9053	167.6356	-0.0015	-0.0022	1.2 9.9	1670
1160615	111.2062	174.0666	-0.0064	0.0061	2.4 4.7	1671
1162703	112.4986	175.0707	0.0008	0.0023	2.5 2.4	1672
1163531	114.3395	173.6903	-0.0359	-0.0350	0.6 3.0	1673
1165610	115.6058	174.7841	-0.0044	-0.0020	1.9 3.8	1674
1166219	117.4545	172.6093	-0.0024	0.0019	2.1 6.1	1675
1166779	116.3725	176.6431	-0.0031	0.0056	3.5 2.3	1676
1166876	116.0968	177.1670	-0.0046	0.0023	9.9 5.5	1677
1171842	108.2575	183.1406	-0.0058	0.0002	2.2 2.4	1678
1172430	110.5171	180.2358	-0.0003	0.0020	2.2 4.1	1679
1174647	111.3994	182.7427	-0.0007	-0.0003	3.1 1.7	1680
1183746	106.4725	190.1980	-0.0047	0.0019	1.6 3.6	1681
1185873	108.1787	191.1455	0.0010	0.0018	2.5 4.8	1682
1186398	110.9061	188.3466	0.0006	-0.0007	6.8 6.0	1683
1186625	109.3306	190.0611	0.0031	0.0023	9.9 4.0	1684
1187203	111.6123	187.3543	0.0035	-0.0054	0.7 2.4	1685

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1101408	20.1215	11.9395	0.11017	0.04768	0.99277	1613
1101533	20.3852	12.4124	0.11316	0.05298	0.99216	1614
1102233	21.2401	9.6531	0.12260	0.02265	0.99220	1615
1104147	23.1331	9.1235	0.14384	0.01725	0.98945	1616
1104267	23.3674	10.0380	0.14650	0.02741	0.98883	1617
1104970	23.3482	15.7009	0.14672	0.09017	0.98506	1618
1105015	23.7332	7.9934	0.15057	0.00493	0.98859	1619
1105355	24.1512	10.6797	0.15534	0.03471	0.98725	1620
1105749	23.9737	14.6661	0.15365	0.07884	0.98498	1621
1106487	25.2857	11.7656	0.16819	0.04703	0.98463	1622
1107113	25.5425	8.7089	0.17096	0.01331	0.98519	1623
1109776	27.8501	14.2660	0.19736	0.07550	0.97742	1624
1111602	19.9397	22.2593	0.10956	0.16250	0.98061	1625
1112024	21.1203	16.9889	0.12186	0.10395	0.98709	1626
1112423	21.0416	20.5001	0.12155	0.14308	0.98222	1627
1113433	22.0435	20.4720	0.13279	0.14301	0.98077	1628
1114344	23.0375	19.6389	0.14381	0.13395	0.98050	1629
1114389	23.4744	20.1084	0.14882	0.13931	0.97900	1630
1114572	23.2775	21.2912	0.14683	0.15247	0.97734	1631
1115780	24.2744	22.8583	0.15840	0.17028	0.97258	1632
1116048	24.8478	17.3050	0.16382	0.10842	0.98051	1633
1119331	27.4368	19.2270	0.19338	0.13060	0.97239	1634
1120120	19.1980	26.4666	0.10229	0.20952	0.97244	1635
1120867	19.3021	33.3278	0.10578	0.28699	0.95208	1636
1121299	20.6431	28.1824	0.11900	0.22916	0.96609	1637
1122027	20.9605	26.2413	0.12199	0.20739	0.97062	1638
1122241	21.0754	27.4617	0.12363	0.22115	0.96737	1639
1122826	20.7625	33.2356	0.12212	0.28629	0.95033	1640
1124287	23.2092	27.9052	0.14776	0.22668	0.96270	1641
1126647	24.5168	31.4077	0.16369	0.26659	0.94981	1642
1127069	25.7548	26.3109	0.17600	0.20945	0.96185	1643
1128301	26.0318	28.2328	0.17971	0.23118	0.95617	1644
1128328	26.2613	28.8093	0.18249	0.23775	0.95403	1645
1129007	26.9974	26.0789	0.18998	0.20722	0.95967	1646
1129852	27.2028	32.7320	0.19459	0.28241	0.93935	1647
1130249	19.0581	37.0815	0.10465	0.32958	0.93831	1648
1130348	18.9593	37.9204	0.10394	0.33912	0.93498	1649
1130624	18.6756	40.0695	0.10183	0.36359	0.92598	1650
1131067	20.1458	35.1021	0.11597	0.30732	0.94451	1651
1132277	21.0482	36.7915	0.12686	0.32676	0.93656	1652
1132675	20.9306	40.1422	0.12719	0.36497	0.92229	1653
1134036	22.5636	34.9476	0.14309	0.30618	0.94116	1654
1134657	22.5183	40.3314	0.14517	0.36756	0.91860	1655
1134756	22.4255	41.0885	0.14453	0.37620	0.91520	1656
1135013	23.3031	34.6774	0.15130	0.30331	0.94080	1657
1137669	25.2608	40.4648	0.17623	0.36990	0.91221	1658
1137991	25.4519	42.3018	0.17943	0.39102	0.90272	1659
1139226	26.8365	36.5805	0.19212	0.32603	0.92563	1660
1139316	26.6745	37.4696	0.19070	0.33611	0.92231	1661
1140243	18.6434	45.2728	0.10445	0.42330	0.89995	1662
1143162	21.5640	44.2909	0.13668	0.41274	0.90054	1663
1145008	22.7956	43.8590	0.15031	0.40811	0.90047	1664
1148615	25.2160	48.7086	0.18095	0.46490	0.86668	1665
1154829	20.9519	59.3776	0.14186	0.58851	0.79595	1666
1155982	22.3726	59.6640	0.15827	0.59236	0.78997	1667
1156179	23.6274	53.4008	0.16662	0.51903	0.83836	1668
1158866	24.9025	59.0300	0.18640	0.58575	0.78876	1669
1159585	26.1273	56.4223	0.19779	0.55540	0.80772	1670
1160615	16.7382	65.9258	0.10167	0.66541	0.73995	1671
1162703	18.2632	66.5213	0.11965	0.67303	0.72988	1672
1163531	19.6358	64.6723	0.13287	0.65120	0.74718	1673
1165610	21.1613	65.3612	0.15104	0.65999	0.73593	1674
1166219	22.3153	62.7477	0.16100	0.62905	0.76051	1675
1166779	22.4254	66.9268	0.16749	0.67936	0.71443	1676
1166876	22.3100	67.5081	0.16697	0.68637	0.70783	1677
1171842	16.4921	75.4733	0.11342	0.78234	0.61244	1678
1172430	17.8325	72.0422	0.12272	0.74017	0.66113	1679
1174647	19.3918	74.1966	0.14414	0.76744	0.62470	1680
1183746	16.7882	82.7542	0.13379	0.87648	0.46248	1681
1185873	18.6939	83.1775	0.15729	0.88326	0.44171	1682
1186398	20.5130	79.7148	0.16867	0.83818	0.51866	1683
1186625	19.4900	81.8088	0.16239	0.86525	0.47431	1684
1187203	20.9079	78.5614	0.17047	0.82342	0.54121	1685

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1187220	111.8464	187.1720	0.0009	-0.0038	1.0 7.5	1686
1187688	110.5354	190.5780	0.0063	0.0017	2.8 9.9	1687
1189692	112.5545	190.6214	-0.0008	0.0014	1.8 5.5	1688
1190407	100.5575	193.7549	0.0016	-0.0034	2.5 1.0	1689
1195692	104.6000	195.6572	0.0024	-0.0029	0.6 3.9	1690
1198247	108.4628	194.3782	-0.0042	0.0036	3.0 3.5	1691
1199183	110.2890	193.8081	-0.0044	-0.0035	1.8 7.7	1692
1200464	138.0510	125.2454	0.0020	0.0043	5.3 6.1	1693
1201249	139.1934	124.1545	0.0063	-0.0018	5.8 3.3	1694
1202215	139.9116	123.9305	0.0046	-0.0038	3.3 3.1	1695
1202901	138.0535	129.6073	0.0015	0.0021	2.8 6.2	1696
1203167	141.3227	123.5781	-0.0020	0.0016	3.2 3.1	1697
1203364	140.9140	125.0513	0.0065	0.0019	1.9 9.3	1698
1203773	140.0031	128.4408	-0.0028	0.0099	3.4 2.3	1699
1204043	142.4093	122.5716	-0.0012	-0.0029	1.8 5.8	1700
1204817	139.9118	129.7138	0.0025	0.0014	1.3 4.7	1701
1204898	140.6268	129.9630	0.0040	-0.0018	3.8 5.1	1702
1205896	141.5268	130.0349	-0.0020	0.0018	2.2 2.7	1703
1205945	140.8489	130.7056	0.0066	0.0008	0.7 1.6	1704
1206609	142.0428	128.6168	-0.0023	0.0054	1.1 1.9	1705
1206876	142.2117	130.2447	0.0028	0.0007	3.2 3.7	1706
1207522	143.5194	127.3940	0.0077	0.0014	1.4 3.3	1707
1208864	143.8425	130.4367	0.0066	-0.0001	2.8 1.3	1708
1209479	145.7267	127.6559	-0.0056	0.0140	0.8 0.5	1709
1209826	144.3048	130.7419	0.0025	0.0035	3.0 4.3	1710
1210458	135.3071	134.1046	0.0054	0.0051	7.3 7.1	1711
1210596	135.3563	134.9122	0.0082	-0.0067	2.9 9.9	1712
1211068	137.2489	131.0234	-0.0032	0.0016	5.9 1.9	1713
1211665	135.7486	135.8105	0.0014	0.0005	4.3 2.3	1714
1212271	137.8706	132.3468	0.0011	0.0036	5.7 3.5	1715
1213091	139.3794	130.8271	0.0071	-0.0012	4.0 4.1	1716
1213650	137.4959	135.8593	0.0094	0.0031	1.1 4.0	1717
1213780	137.4744	136.7573	0.0023	-0.0003	6.2 4.1	1718
1214298	139.5398	133.3817	0.0093	0.0042	4.2 4.4	1719
1214333	138.8934	133.6661	-0.0001	-0.0034	4.0 1.9	1720
1214463	138.8803	134.6326	0.0048	0.0028	2.5 7.3	1721
1214953	137.3952	138.8591	0.0026	0.0020	4.7 9.9	1722
1216237	140.7222	133.6606	-0.0004	0.0008	1.9 9.9	1723
1218225	142.4183	133.9236	0.0038	0.0033	4.2 9.9	1724
1219435	142.7979	135.8670	0.0017	0.0004	1.9 3.3	1725
1221382	134.0334	141.5436	-0.0026	-0.0004	9.3 1.3	1726
1221681	133.2366	143.9946	0.0025	0.0014	3.2 9.9	1727
1222449	134.0978	143.1234	0.0038	-0.0019	1.7 1.5	1728
1222924	132.6507	146.8081	0.0006	0.0006	4.1 2.6	1729
1224526	135.4522	144.0732	0.0064	-0.0062	9.9 0.8	1730
1226365	138.0977	142.8692	-0.0010	0.0014	2.1 3.5	1731
1226526	137.1858	144.5133	0.0065	0.0036	4.1 2.0	1732
1227249	138.8818	142.5219	-0.0019	0.0027	1.2 5.1	1733
1230961	128.5285	154.5469	0.0055	0.0038	2.4 4.6	1734
1231049	131.5407	147.9289	0.0011	0.0058	2.0 2.9	1735
1232160	132.5447	148.2135	0.0037	0.0041	2.0 5.6	1736
1232632	130.7747	152.5891	0.0020	0.0049	2.2 5.8	1737
1233671	132.0539	152.7481	-0.0057	0.0049	1.4 3.4	1738
1235315	133.9031	150.9707	-0.0107	0.0029	1.1 2.7	1739
1238001	137.4260	148.6673	0.0024	-0.0036	1.7 1.0	1740
1238760	135.8944	154.5918	-0.0052	0.0134	3.2 9.9	1741
1241874	126.7375	162.3508	-0.0003	0.0037	4.1 9.9	1742
1242227	128.8904	157.8836	0.0050	0.0020	1.6 1.8	1743
1245437	130.8755	160.1402	0.0032	0.0034	9.9 9.9	1744
1245880	130.2971	162.9344	0.0032	0.0027	3.0 2.4	1745
1247352	133.1802	159.4336	0.0062	0.0024	3.1 9.9	1746
1247535	132.3641	161.1771	0.0093	-0.0015	9.2 6.8	1747
1249511	133.9400	161.2684	0.0041	0.0009	1.0 0.9	1748
1250344	124.0546	166.0997	0.0020	0.0069	5.8 9.9	1749
1251018	125.5006	164.1043	0.0045	0.0028	6.5 4.1	1750
1259008	132.1930	165.8505	-0.0028	0.0004	3.3 9.9	1751
1259234	131.8985	167.2214	0.0027	0.0030	5.4 9.9	1752
1260222	121.1607	172.9866	0.0009	0.0012	1.9 9.9	1753
1260406	120.1890	174.8005	-0.0038	0.0030	1.4 9.9	1754
1263863	122.0657	178.4259	0.0019	0.0035	2.8 9.9	1755
1264186	125.2534	173.5171	0.0020	-0.0004	1.8 3.2	1756
1265429	124.5310	176.1882	-0.0011	0.0013	3.0 2.4	1757
1265989	123.4006	180.0942	0.0040	0.0021	3.3 1.3	1758

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1187220	21.0806	78.3198	0.17191	0.82040	0.54534	1686
1187688	20.7924	81.9617	0.17808	0.86808	0.46338	1687
1189692	22.7409	81.4283	0.19941	0.86219	0.46568	1688
1190407	12.1280	87.8522	0.09985	0.94655	0.30671	1689
1195692	16.5457	88.5264	0.15867	0.96238	0.22056	1690
1198247	19.8860	86.1988	0.18372	0.92738	0.32591	1691
1199183	21.4751	85.1316	0.19779	0.91291	0.35704	1692
1200464	28.5912	11.4296	0.20553	0.04429	0.97765	1693
1201249	29.3763	10.0573	0.21436	0.02936	0.97631	1694
1202215	30.0013	9.6378	0.22143	0.02493	0.97486	1695
1202901	29.8346	15.6147	0.22002	0.09113	0.97123	1696
1203167	31.2542	8.8977	0.23565	0.01719	0.97169	1697
1203364	31.2814	10.4279	0.23601	0.03411	0.97115	1698
1203773	31.3722	13.9400	0.23731	0.07305	0.96868	1699
1204043	32.0098	7.6224	0.24423	0.00338	0.96971	1700
1204817	31.6468	15.1876	0.24057	0.08701	0.96672	1701
1204898	32.4034	15.2231	0.24919	0.08768	0.96448	1702
1205896	33.2869	15.0358	0.25925	0.08593	0.96198	1703
1205945	32.8276	15.8725	0.25411	0.09506	0.96249	1704
1206609	33.3783	13.5279	0.26013	0.06922	0.96309	1705
1206876	34.0034	15.0420	0.26743	0.08627	0.95971	1706
1207522	34.4463	11.9339	0.27219	0.05195	0.96084	1707
1208864	35.6218	14.7618	0.28591	0.08381	0.95458	1708
1209479	36.6375	11.5566	0.29726	0.04866	0.95356	1709
1209826	36.1520	14.9230	0.29201	0.08582	0.95256	1710
1210458	28.4804	20.7126	0.20548	0.14752	0.96748	1711
1210596	28.7573	21.4736	0.20878	0.15613	0.96542	1712
1211068	29.4659	17.2028	0.21605	0.10868	0.97032	1713
1211665	29.3891	22.2239	0.21611	0.16474	0.96237	1714
1212271	30.4385	18.2957	0.22727	0.12119	0.96626	1715
1213091	31.4530	16.4076	0.23852	0.10051	0.96592	1716
1213650	31.0785	21.7731	0.23522	0.16028	0.95864	1717
1213780	31.3134	22.6410	0.23810	0.17008	0.95623	1718
1214298	32.3336	18.8134	0.24893	0.12765	0.96007	1719
1214333	31.7947	19.2704	0.24287	0.13255	0.96096	1720
1214463	32.0571	20.2016	0.24604	0.14305	0.95865	1721
1214953	31.8354	24.6805	0.24456	0.19316	0.95020	1722
1216237	33.5468	18.7443	0.26277	0.12734	0.95642	1723
1218225	35.2481	18.5136	0.28219	0.12544	0.95112	1724
1219435	36.1650	20.2704	0.29304	0.14546	0.94497	1725
1221382	29.3754	28.2141	0.21761	0.23205	0.94805	1726
1221681	29.3086	30.7931	0.21775	0.26116	0.94041	1727
1222449	29.8866	29.7118	0.22394	0.24914	0.94222	1728
1222924	29.5472	33.6599	0.22161	0.29374	0.92984	1729
1224526	31.4556	30.2375	0.24200	0.25566	0.93599	1730
1226365	33.6499	28.3286	0.26640	0.23495	0.93479	1731
1226526	33.2432	30.1661	0.26240	0.25555	0.93051	1732
1227249	34.3030	27.7720	0.27370	0.22894	0.93417	1733
1230961	27.7959	42.2604	0.20602	0.39134	0.89689	1734
1231049	28.8016	35.0516	0.21373	0.30929	0.92664	1735
1232160	29.8454	35.0388	0.22561	0.30952	0.92374	1736
1232632	29.3929	39.7419	0.22278	0.36304	0.90475	1737
1233671	30.6648	39.5301	0.23718	0.36110	0.90186	1738
1235315	31.9324	37.2978	0.25051	0.33607	0.90791	1739
1238001	34.6554	34.0840	0.28019	0.30058	0.91167	1740
1238760	34.8722	40.2055	0.28581	0.37062	0.88372	1741
1241874	28.2987	50.2593	0.21724	0.48405	0.84765	1742
1242227	29.0923	45.3593	0.22275	0.42752	0.87613	1743
1245437	31.6379	46.9594	0.25299	0.44708	0.85797	1744
1245880	31.8782	49.8056	0.25791	0.48027	0.83835	1745
1247352	33.6469	45.6249	0.27514	0.43252	0.85862	1746
1247535	33.3603	47.5305	0.27322	0.45448	0.84782	1747
1249511	34.8975	47.1692	0.29068	0.45101	0.84386	1748
1250344	26.7925	54.6211	0.20371	0.53447	0.82027	1749
1251018	27.6114	52.2944	0.21104	0.50753	0.83539	1750
1259008	34.5258	52.0640	0.29035	0.50793	0.81099	1751
1259234	34.6335	53.4634	0.29286	0.52442	0.79951	1752
1260222	25.9767	62.0542	0.20200	0.62217	0.75637	1753
1260406	25.5610	64.0716	0.19966	0.64618	0.73660	1754
1263863	28.3920	67.0161	0.23623	0.68313	0.69104	1755
1264186	30.0523	61.3976	0.24813	0.61617	0.74750	1756
1265429	30.1195	64.1666	0.25234	0.64948	0.71729	1757
1265989	30.1468	68.2369	0.25844	0.69899	0.66680	1758

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1266243	126.4001	174.3985	0.0011	0.0013	7.3 8.3	1759
1266533	125.3082	176.6731	0.0005	0.0029	2.6 7.8	1760
1269738	126.9839	179.2314	-0.0008	0.0033	1.1 2.9	1761
1270195	118.6894	180.2506	-0.0023	0.0012	4.3 1.9	1762
1272162	120.2567	180.3816	-0.0054	0.0030	2.1 1.9	1763
1272255	119.7352	181.3494	0.0024	0.0005	2.4 9.9	1764
1274107	121.2122	181.0761	-0.0081	0.0063	2.7 2.7	1765
1274399	121.2596	182.8992	-0.0006	-0.0044	2.3 2.8	1766
1274883	119.6032	186.1148	0.0011	-0.0096	1.5 9.9	1767
1277926	121.1055	187.5522	-0.0033	-0.0023	1.5 2.0	1768
1281407	114.0497	189.7847	-0.0037	-0.0038	1.1 2.4	1769
1281599	114.3145	190.7816	-0.0058	-0.0025	6.3 8.9	1770
1281796	113.6266	191.8966	-0.0031	-0.0005	3.0 6.8	1771
1282038	116.5753	187.3521	0.0048	0.0000	1.8 0.8	1772
1282415	115.0109	189.9176	-0.0072	-0.0015	1.2 1.0	1773
1283696	115.6767	191.6573	-0.0010	-0.0009	1.2 3.5	1774
1283960	114.4527	193.1312	0.0018	0.0004	2.0 3.4	1775
1285759	116.4998	192.8056	0.0042	-0.0008	2.2 9.9	1776
1287033	120.8931	187.9832	-0.0006	0.0010	2.8 1.6	1777
1287413	119.2222	190.6956	-0.0025	0.0012	0.9 8.0	1778
1288416	119.9596	191.1025	0.0069	0.0008	3.3 3.0	1779
1289512	120.5746	191.6692	-0.0044	0.0006	1.4 9.9	1780
1289952	119.1904	194.2426	-0.0018	0.0002	5.5 1.6	1781
1289962	119.1943	194.2454	-0.0057	-0.0001	0.9 9.9	1782
1290212	110.0807	194.4430	-0.0051	-0.0014	2.6 5.2	1783
1291024	111.7563	193.5863	-0.0052	-0.0079	3.2 1.7	1784
1292172	112.7516	194.3104	0.0015	0.0006	6.8 2.9	1785
1292203	111.6203	194.8074	0.0008	-0.0023	3.8 9.9	1786
1297180	116.9381	194.9914	-0.0025	-0.0002	2.1 2.1	1787
1300330	146.7382	126.1476	0.0009	0.0015	1.8 9.9	1788
1300796	145.9674	130.2455	-0.0070	-0.0036	2.8 1.7	1789
1302127	148.6411	125.4534	-0.0066	0.0103	9.9 9.9	1790
1302614	147.3394	129.4834	-0.0020	0.0032	2.3 9.9	1791
1302871	147.3360	131.1080	0.0040	0.0024	5.4 1.6	1792
1304810	148.6257	131.3162	-0.0051	0.0085	2.0 2.6	1793
1305137	151.2108	126.1319	-0.0014	-0.0032	4.7 2.2	1794
1305650	150.2903	129.8664	-0.0011	0.0016	5.0 6.2	1795
1306658	150.9510	130.7885	-0.0004	-0.0040	0.6 6.7	1796
1306944	150.1368	132.9985	0.0004	-0.0043	5.1 0.7	1797
1310502	143.1781	136.5400	0.0022	0.0166	0.3 0.3	1798
1310936	142.2666	140.3876	0.0018	0.0030	4.2 4.1	1799
1311345	144.8619	135.4565	-0.0046	0.0091	9.9 4.1	1800
1312236	145.8132	134.8312	0.0041	0.0029	3.3 3.0	1801
1312699	145.1319	138.6234	-0.0023	0.0036	2.1 9.9	1802
1313988	145.1730	141.2385	0.0008	0.0020	7.6 3.9	1803
1317280	150.6194	135.5271	0.0024	0.0051	1.8 9.9	1804
1318992	149.6605	141.8291	-0.0010	0.0002	4.5 4.5	1805
1320358	141.2942	143.9856	-0.0028	0.0067	1.8 1.5	1806
1321081	143.3609	141.1470	0.0029	0.0065	3.9 9.9	1807
1323594	143.7177	145.9786	0.0011	0.0054	2.6 4.1	1808
1325303	145.1812	144.4592	0.0009	0.0028	9.9 9.9	1809
1325698	144.9550	147.6399	-0.0021	0.0050	1.2 5.6	1810
1326433	146.0119	145.5550	-0.0003	0.0019	3.1 4.7	1811
1328168	148.6642	143.9512	-0.0084	0.0073	2.2 3.2	1812
1329295	149.5122	144.7967	-0.0017	0.0026	1.6 8.7	1813
1332680	139.7322	154.6425	-0.0012	0.0049	3.6 1.3	1814
1333492	141.1798	153.3838	0.0012	0.0068	0.9 1.4	1815
1334516	140.9637	154.5770	0.0013	0.0011	5.1 9.9	1816
1336307	143.1423	153.3408	-0.0142	0.0008	1.5 5.0	1817
1337641	143.6047	155.6282	0.0069	0.0026	2.1 4.4	1818
1338297	145.8148	153.1033	-0.0062	0.0035	1.9 1.5	1819
1338397	145.5476	153.9664	-0.0023	0.0019	3.1 8.1	1820
1339904	143.9675	158.6761	-0.0072	0.0027	1.1 0.9	1821
1340383	135.9132	160.2090	0.0004	0.0015	3.3 9.0	1822
1340529	134.6217	162.1494	-0.0024	0.0021	7.5 5.6	1823
1341925	134.3860	165.2803	-0.0046	0.0040	3.7 5.7	1824
1342158	137.8173	159.3774	-0.0006	0.0003	9.9 4.0	1825
1343365	138.1407	160.9743	0.0009	-0.0063	9.0 1.9	1826
1344344	138.9119	161.0699	0.0002	-0.0007	1.8 1.8	1827
1345782	138.9202	164.3810	-0.0079	-0.0072	2.8 0.4	1828
1348362	142.4556	161.7181	-0.0080	0.0000	1.3 4.3	1829
1351838	131.6416	172.6858	-0.0036	0.0045	6.0 2.9	1830
1352185	135.1700	167.2083	0.0048	0.0027	4.7 6.7	1831

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1266243	31.4027	61.9168	0.26439	0.62308	0.73612	1759
1266533	31.0027	64.4106	0.26292	0.65290	0.71035	1760
1269738	33.3375	66.3883	0.29296	0.67829	0.67386	1761
1270195	25.6735	69.7288	0.20885	0.71493	0.66727	1762
1272162	27.2137	69.4081	0.22616	0.71177	0.66501	1763
1272255	26.9890	70.4854	0.22528	0.72491	0.65096	1764
1274107	28.3276	69.8024	0.23972	0.71721	0.65432	1765
1274399	28.8917	71.5384	0.24923	0.73903	0.62588	1766
1274883	28.2181	75.0960	0.24819	0.78334	0.56990	1767
1277926	30.0677	76.0475	0.27217	0.79682	0.53944	1768
1281407	23.9367	80.1995	0.21000	0.84662	0.48902	1769
1281599	24.4743	81.0807	0.21890	0.85877	0.46325	1770
1281796	24.1318	82.3466	0.21887	0.87572	0.43036	1771
1282038	25.6666	77.1458	0.22270	0.80791	0.54561	1772
1282415	24.8963	80.0533	0.22094	0.84535	0.48639	1773
1283696	26.0297	81.5331	0.23893	0.86615	0.43897	1774
1283960	25.2753	83.2961	0.23617	0.89003	0.38996	1775
1285759	27.1457	82.4006	0.25552	0.87923	0.40206	1776
1287033	29.9866	76.5216	0.27232	0.80289	0.53030	1777
1287413	29.1560	79.6004	0.27056	0.84273	0.46542	1778
1288416	29.9789	79.7808	0.28108	0.84592	0.45322	1779
1289512	30.7299	80.1495	0.29143	0.85169	0.43553	1780
1289952	30.1346	83.0133	0.29547	0.89175	0.34276	1781
1289962	30.1392	83.0148	0.29553	0.89178	0.34262	1782
1290212	21.4560	85.8002	0.20084	0.92291	0.32849	1783
1291024	22.8190	84.5008	0.21129	0.90496	0.36932	1784
1292172	23.9795	84.9122	0.22743	0.91226	0.34068	1785
1292203	23.0360	85.7114	0.21994	0.92336	0.31468	1786
1297180	28.1878	84.3733	0.27777	0.90968	0.30876	1787
1300330	37.1784	9.8211	0.30337	0.02968	0.95241	1788
1300796	37.6051	13.9731	0.30858	0.07589	0.94817	1789
1302127	38.8057	8.6129	0.32203	0.01705	0.94658	1790
1302614	38.7040	12.8510	0.32111	0.06392	0.94488	1791
1302871	39.1629	14.4110	0.32656	0.08145	0.94166	1792
1304810	40.4589	14.2434	0.34149	0.08020	0.93646	1793
1305137	41.4629	8.5321	0.35268	0.01740	0.93558	1794
1305650	41.6427	12.3781	0.35498	0.06006	0.93294	1795
1306658	42.5386	13.0747	0.36542	0.06825	0.92834	1796
1306944	42.3865	15.4274	0.36394	0.09433	0.92663	1797
1310502	36.7211	20.8079	0.29953	0.15171	0.94195	1798
1310936	36.9417	24.7598	0.30306	0.19614	0.93257	1799
1311345	38.0275	19.2886	0.31424	0.13530	0.93965	1800
1312236	38.7619	18.4176	0.32254	0.12590	0.93815	1801
1312699	39.1874	22.2507	0.32826	0.16900	0.92935	1802
1313988	39.9708	24.7486	0.33798	0.19743	0.92021	1803
1317280	43.5687	17.7165	0.37803	0.12046	0.91792	1804
1318992	44.4421	24.0372	0.38968	0.19179	0.90076	1805
1320358	37.0328	28.4895	0.30529	0.23822	0.92198	1806
1321081	38.2071	25.1769	0.31775	0.20141	0.92654	1807
1323594	39.9238	29.7118	0.33911	0.25343	0.90597	1808
1325303	40.8950	27.8369	0.34967	0.23272	0.90751	1809
1325698	41.5830	30.9536	0.35885	0.26837	0.89398	1810
1326433	42.0033	28.6519	0.36283	0.24252	0.89974	1811
1328168	44.0904	26.3574	0.38631	0.21774	0.89630	1812
1329295	45.1442	26.9272	0.39881	0.22477	0.88906	1813
1332680	38.5668	39.1611	0.32788	0.36043	0.87326	1814
1333492	39.5969	37.5409	0.33893	0.34240	0.87629	1815
1334516	39.7291	38.7475	0.34113	0.35629	0.86988	1816
1336307	41.4666	36.9407	0.36034	0.33654	0.87000	1817
1337641	42.5608	39.0040	0.37426	0.36082	0.85424	1818
1338297	43.9618	35.9516	0.38893	0.32666	0.86141	1819
1338397	43.9511	36.8560	0.38930	0.33701	0.85725	1820
1339904	43.7758	41.8256	0.39027	0.39406	0.83211	1821
1340383	36.4883	45.5906	0.30793	0.43349	0.84691	1822
1340529	35.8019	47.8205	0.30163	0.45903	0.83565	1823
1341925	36.4666	50.8922	0.31184	0.49522	0.81087	1824
1342158	38.0776	44.2503	0.32541	0.41880	0.84777	1825
1343365	38.8421	45.6906	0.33532	0.43590	0.83519	1826
1344344	39.6088	45.5627	0.34416	0.43485	0.83215	1827
1345782	40.5588	48.7377	0.35774	0.47237	0.80554	1828
1348362	43.1914	45.1754	0.38579	0.43250	0.81493	1829
1351838	35.9417	58.7804	0.31355	0.58811	0.74553	1830
1352185	37.7669	52.5190	0.32843	0.51503	0.79175	1831

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1352553	133.7158	170.2355	-0.0031	-0.0029	3.4 0.8	1832
1353930	133.2135	173.2045	0.0045	0.0040	3.8 4.5	1833
1354427	135.3481	170.0536	-0.0034	0.0075	1.9 2.0	1834
1357750	137.3730	172.4942	-0.0027	0.0066	3.8 9.9	1835
1358431	138.8984	170.4040	-0.0027	0.0042	1.3 9.9	1836
1358553	138.7470	171.3587	-0.0085	0.0040	1.6 0.7	1837
1359111	140.4990	168.1682	0.0073	0.0008	4.1 1.9	1838
1360540	128.8763	177.2779	-0.0051	0.0076	9.9 8.9	1839
1361420	129.8721	176.7085	-0.0064	0.0030	2.4 3.2	1840
1362157	131.6799	175.2010	-0.0075	0.0223	3.1 1.7	1841
1362696	130.4358	179.0051	-0.0025	0.0053	1.7 1.6	1842
1364082	134.0654	174.4644	-0.0074	0.0026	0.8 9.9	1843
1366697	133.6650	179.8409	-0.0054	0.0089	2.1 9.9	1844
1366870	133.0833	180.8425	0.0015	0.0043	3.0 7.8	1845
1367646	134.1491	179.8610	-0.0008	0.0023	1.4 1.9	1846
1371862	125.2785	187.3109	-0.0058	0.0049	3.6 1.9	1847
1376641	129.9349	186.6883	-0.0065	0.0005	4.0 2.6	1848
1376726	129.2708	187.7482	-0.0065	0.0017	0.8 3.9	1849
1377239	131.8371	184.5554	-0.0060	0.0033	4.3 2.0	1850
1383543	124.0143	192.4537	0.0011	0.0007	2.8 3.1	1851
1383881	123.0691	194.2350	-0.0225	0.0147	0.8 1.0	1852
1384214	125.7005	190.6452	-0.0106	0.0025	8.2 9.9	1853
1384512	124.5905	192.5510	-0.0069	0.0048	3.4 2.5	1854
1386689	125.9487	193.9348	-0.0018	0.0023	4.3 4.0	1855
1390177	118.8613	195.7571	-0.0032	-0.0017	0.3 7.3	1856
1395011	123.0745	195.4578	-0.0021	0.0109	0.4 2.0	1857
1402214	156.7843	128.1218	-0.0032	0.0035	3.5 1.2	1858
1404480	158.6309	130.0620	-0.0004	0.0029	5.8 4.6	1859
1406203	160.0049	128.7199	0.0011	0.0010	1.3 8.7	1860
1407320	160.7770	129.6415	0.0017	-0.0011	1.5 2.7	1861
1408184	162.5370	128.5466	-0.0033	-0.0004	3.4 1.7	1862
1408335	161.6759	130.2547	-0.0089	0.0002	3.3 1.6	1863
1409547	161.9885	132.3294	-0.0001	0.0055	2.2 9.9	1864
1410930	150.8425	141.8910	0.0018	0.0038	2.7 6.7	1865
1411731	152.1777	140.5404	0.0048	0.0029	2.2 1.2	1866
1411836	151.7831	141.7543	-0.0023	0.0050	9.9 5.7	1867
1413632	154.0658	140.1427	-0.0025	0.0031	5.1 4.7	1868
1416336	157.2893	138.5437	-0.0094	0.0095	2.5 1.1	1869
1418758	157.8930	142.5035	0.0013	0.0026	2.5 1.3	1870
1420238	149.7864	145.1179	-0.0052	0.0009	4.6 9.9	1871
1422946	149.5860	151.2446	-0.0013	0.0226	2.7 0.7	1872
1423596	151.9809	148.2393	0.0006	0.0039	1.7 5.0	1873
1424430	152.7461	146.8744	0.0054	0.0057	2.2 5.6	1874
1425520	153.2306	147.9673	-0.0022	0.0070	3.8 5.5	1875
1425791	153.1628	149.8338	-0.0038	0.0027	2.4 3.9	1876
1426352	154.8295	146.7114	0.0010	0.0057	9.9 9.9	1877
1426789	153.7065	150.7397	-0.0072	0.0120	3.9 0.9	1878
1428050	157.3751	144.3578	-0.0020	0.0047	9.9 1.4	1879
1429974	155.6381	152.5356	0.0047	-0.0035	3.6 4.7	1880
1431810	146.0984	157.9956	-0.0019	0.0058	9.9 5.6	1881
1434974	148.6482	159.8263	0.0030	0.0012	0.6 2.3	1882
1436230	152.1606	153.9938	-0.0140	0.0094	1.9 2.7	1883
1436629	150.5571	158.0572	-0.0040	-0.0027	4.7 2.3	1884
1440795	143.1036	165.6460	-0.0002	-0.0044	4.7 0.9	1885
1444281	147.8737	162.0669	-0.0093	0.0033	1.1 1.6	1886
1444666	146.4086	165.5567	-0.0060	0.0003	4.8 9.9	1887
1445077	149.1412	161.0331	-0.0010	0.0029	4.9 2.7	1888
1445947	146.1116	168.2873	-0.0116	0.0050	2.5 9.9	1889
1448649	149.4620	166.4816	-0.0004	0.0005	2.6 7.3	1890
1449062	152.4633	161.3449	-0.0124	0.0042	2.1 2.1	1891
1450639	139.6980	172.9557	0.0029	0.0037	3.4 2.1	1892
1451295	142.3725	169.8111	-0.0072	0.0084	0.9 1.7	1893
1451624	140.6436	172.7435	-0.0080	0.0121	3.0 2.5	1894
1452836	140.7984	174.6923	-0.0003	-0.0004	2.8 1.4	1895
1452935	140.4555	175.3994	-0.0012	0.0025	3.4 8.7	1896
1453417	142.7258	171.7481	-0.0061	0.0079	1.7 1.5	1897
1455881	143.7511	174.8972	-0.0026	0.0010	3.1 3.4	1898
1456131	146.3532	169.5863	0.0007	0.0023	0.8 9.9	1899
1457625	145.4236	173.9114	0.0039	0.0009	5.0 3.0	1900
1458629	146.1085	174.3850	-0.0033	0.0045	2.2 3.8	1901
1458890	146.3285	175.3514	-0.0074	0.0081	2.7 2.2	1902
1458942	145.5294	176.2145	0.0010	-0.0012	4.0 4.2	1903
1459883	146.9488	175.7621	-0.0012	-0.0023	1.8 3.1	1904

## POSITIONS ON THE DISK

5b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1352553	37.2336	55.8382	0.32546	0.55389	0.76634	1832
1353930	37.5967	58.8304	0.33300	0.58972	0.73576	1833
1354427	38.7472	55.1987	0.34252	0.54724	0.76368	1834
1357750	41.3833	56.9641	0.37549	0.56997	0.73085	1835
1358431	42.2514	54.5238	0.38308	0.54155	0.74831	1836
1358553	42.3778	55.4831	0.38561	0.55303	0.73855	1837
1359111	43.1502	51.9224	0.39108	0.51142	0.76518	1838
1360540	34.5964	63.9747	0.30429	0.64972	0.69662	1839
1361420	35.3893	63.1447	0.31247	0.64017	0.70181	1840
1362157	36.6940	61.1831	0.32525	0.61735	0.71631	1841
1362696	36.5833	65.1880	0.32941	0.66579	0.66949	1842
1364082	38.7720	59.7968	0.34799	0.60206	0.71863	1843
1366697	39.9177	65.0703	0.36887	0.66684	0.64750	1844
1366870	39.6448	66.1972	0.36741	0.68048	0.63401	1845
1367646	40.3876	64.9517	0.37431	0.66577	0.64548	1846
1371862	34.0007	74.6274	0.31596	0.78173	0.53765	1847
1376641	38.2888	72.7037	0.36351	0.76097	0.53739	1848
1376726	37.9535	73.9100	0.36226	0.77620	0.51603	1849
1377239	39.5061	70.1151	0.37280	0.72919	0.57384	1850
1383543	34.2515	79.9226	0.33440	0.85268	0.40138	1851
1383881	33.8519	81.9012	0.33802	0.88091	0.33128	1852
1384214	35.3540	77.7069	0.34063	0.82356	0.45357	1853
1384512	34.8318	79.8519	0.34147	0.85247	0.39584	1854
1386689	36.5279	80.7930	0.36771	0.86895	0.33124	1855
1390177	30.2499	84.5604	0.30674	0.91682	0.25563	1856
1395011	34.2050	83.0732	0.35051	0.90072	0.25662	1857
1402214	47.3737	8.8543	0.42141	0.02412	0.90655	1858
1404480	49.6965	10.1902	0.44870	0.04031	0.89277	1859
1406203	50.6322	8.5109	0.45962	0.02232	0.88784	1860
1407320	51.6348	9.1754	0.47146	0.03032	0.88137	1861
1408184	53.0111	7.6234	0.48766	0.01408	0.87292	1862
1408335	52.6713	9.5078	0.48372	0.03469	0.87454	1863
1409547	53.5613	11.4098	0.49440	0.05639	0.86740	1864
1410930	45.5932	23.7599	0.40304	0.18932	0.89539	1865
1411731	46.4893	22.0836	0.41305	0.17101	0.89451	1866
1411836	46.4563	23.3609	0.41301	0.18534	0.89167	1867
1413632	48.1868	21.1642	0.43270	0.16171	0.88692	1868
1416336	50.8230	18.7116	0.46315	0.13592	0.87580	1869
1418758	52.5285	22.3396	0.48424	0.17781	0.85668	1870
1420238	45.4985	27.1574	0.40303	0.22758	0.88644	1871
1422946	47.0494	33.0938	0.42371	0.29593	0.85609	1872
1423596	48.4909	29.5277	0.43907	0.25630	0.86112	1873
1424430	48.8364	28.0000	0.44252	0.23920	0.86427	1874
1425520	49.6120	28.9108	0.45203	0.25004	0.85624	1875
1425791	50.0779	30.7212	0.45832	0.27093	0.84648	1876
1426352	50.7879	27.2502	0.46528	0.23202	0.85421	1877
1426789	50.8571	31.4357	0.46788	0.27962	0.83839	1878
1428050	52.5594	24.2666	0.48521	0.19955	0.85133	1879
1429974	53.2203	32.6090	0.49659	0.29477	0.81640	1880
1431810	45.6256	40.5656	0.41118	0.38070	0.82825	1881
1434974	48.5916	41.5962	0.44695	0.39467	0.80279	1882
1436230	50.3004	34.9987	0.46310	0.31992	0.82655	1883
1436629	49.9188	39.3548	0.46120	0.36973	0.80659	1884
1440795	44.9303	48.7602	0.40922	0.47549	0.77875	1885
1444281	48.4863	43.9669	0.44745	0.42210	0.78843	1886
1444666	48.0742	47.7331	0.44567	0.46577	0.76449	1887
1445077	49.4077	42.6139	0.45739	0.40707	0.79062	1888
1445947	48.5663	50.4381	0.45409	0.49799	0.73879	1889
1448649	51.2654	47.7510	0.48394	0.46859	0.73907	1890
1449062	52.6821	41.9669	0.49608	0.40216	0.76952	1891
1450639	43.7441	56.7448	0.40327	0.56909	0.71660	1892
1451295	45.4142	52.9654	0.41899	0.52539	0.74055	1893
1451624	44.5906	56.2718	0.41282	0.56409	0.71511	1894
1452836	45.2934	58.0978	0.42346	0.58656	0.69039	1895
1452935	45.1658	58.8741	0.42292	0.59580	0.68276	1896
1453417	46.3041	54.7235	0.43153	0.54698	0.71735	1897
1455881	48.1832	57.4535	0.45748	0.58133	0.67288	1898
1456131	49.1675	51.6159	0.46251	0.51242	0.72353	1899
1457625	49.5066	56.0311	0.47171	0.56543	0.67659	1900
1458629	50.2981	56.2905	0.48167	0.56931	0.66624	1901
1458890	50.7840	57.1553	0.48877	0.58024	0.65148	1902
1458942	50.2633	58.2111	0.48386	0.59252	0.64405	1903
1459883	51.4957	57.3727	0.49780	0.58362	0.64155	1904

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1460880	136.4390	181.5401	-0.0013	0.0036	2.5 0.8	1905
1462758	137.8571	181.7028	-0.0010	0.0091	0.9 3.8	1906
1462965	137.3612	183.0193	-0.0046	0.0087	4.4 1.8	1907
1464889	139.3193	182.9057	0.0047	0.0095	2.7 9.3	1908
1468119	144.4157	178.1880	-0.0019	0.0053	5.1 3.3	1909
1468364	144.3191	179.3981	0.0031	0.0032	1.0 3.4	1910
1470411	133.6727	185.8907	-0.0109	-0.0007	1.3 9.6	1911
1471800	132.9876	188.7859	-0.0069	-0.0022	3.0 1.6	1912
1473167	137.4085	184.7140	0.0029	0.0080	1.9 1.4	1913
1473253	137.0911	185.1813	-0.0075	0.0106	2.4 4.5	1914
1473932	134.3198	189.9523	-0.0004	-0.0018	3.2 3.1	1915
1473999	134.5255	190.5322	0.0009	-0.0030	3.8 6.2	1916
1475034	139.2663	184.1062	-0.0073	0.0052	5.8 9.9	1917
1477305	139.4269	186.5220	0.0007	0.0034	4.1 5.1	1918
1481507	129.8227	193.7315	-0.0028	0.0014	1.3 1.1	1919
1485373	134.4324	192.8152	-0.0096	0.0140	3.0 1.9	1920
1487277	136.2417	192.6310	-0.0116	0.0028	0.7 2.1	1921
1500933	161.7337	135.6805	-0.0005	-0.0051	3.3 9.9	1922
1503595	165.6674	133.0203	-0.0025	-0.0028	4.3 1.8	1923
1503826	164.3090	135.5277	-0.0107	-0.0020	3.4 2.4	1924
1510688	160.1015	142.1032	-0.0069	0.0124	4.4 1.7	1925
1511584	161.3037	141.1355	-0.0101	0.0048	7.0 1.6	1926
1513346	163.1153	139.8468	-0.0032	0.0039	4.5 5.9	1927
1514129	164.2363	138.5494	0.0100	0.0015	1.6 1.9	1928
1514744	162.9223	143.3184	-0.0029	0.0088	1.7 8.3	1929
1514769	162.9015	143.7850	-0.0026	0.0032	0.6 2.4	1930
1517679	165.7370	143.4314	0.0004	0.0067	1.0 6.3	1931
1519616	166.9361	143.4423	0.0048	0.0025	2.9 1.8	1932
1520148	158.4042	146.2819	-0.0063	0.0069	5.9 3.5	1933
1520728	156.5489	151.2227	-0.0021	0.0037	8.2 2.8	1934
1522028	160.2391	145.7141	0.0093	0.0025	2.1 3.7	1935
1525411	161.6429	148.9823	-0.0017	0.0060	6.3 9.9	1936
1526767	161.8215	152.2426	-0.0131	0.0137	1.1 2.1	1937
1528408	163.7646	150.0895	-0.0065	0.0091	1.2 1.5	1938
1532443	156.5156	157.0479	0.0079	-0.0028	2.1 6.9	1939
1532935	154.8292	161.2764	-0.0055	0.0065	3.1 2.8	1940
1533005	158.0798	154.0076	-0.0084	0.0246	1.2 3.0	1941
1533874	156.2982	160.6182	-0.0095	-0.0008	1.1 0.9	1942
1533970	156.1912	161.0497	-0.0025	0.0034	9.9 5.2	1943
1535462	159.0988	157.5606	-0.0044	0.0007	2.6 1.0	1944
1536881	158.9616	160.8799	-0.0106	0.0052	1.2 2.6	1945
1548406	157.9486	166.2637	-0.0069	0.0092	2.0 1.5	1946
1550305	148.6711	172.1331	-0.0011	0.0114	0.5 0.3	1947
1551224	149.9529	171.4103	-0.0071	0.0080	3.6 2.3	1948
1554785	151.2206	175.9231	-0.0126	0.0110	1.1 2.5	1949
1560300	145.5888	179.3389	0.0011	0.0082	2.3 1.5	1950
1560376	145.9528	179.8887	-0.0054	0.0052	4.0 2.5	1951
1561004	147.2193	177.5271	-0.0123	0.0140	1.0 1.4	1952
1561794	145.5988	182.8780	0.0012	0.0119	1.5 0.9	1953
1563836	146.2307	183.9489	-0.0045	0.0115	5.6 1.5	1954
1564576	148.4026	181.9821	-0.0039	0.0097	0.5 1.0	1955
1565013	150.5383	178.0911	-0.0013	0.0055	1.5 1.9	1956
1567869	149.4982	184.6662	-0.0077	0.0149	1.9 0.7	1957
1572153	144.6478	185.7432	-0.0109	0.0026	2.7 1.6	1958
1573150	145.4511	185.7348	-0.0075	0.0119	0.8 0.7	1959
1575059	147.1053	185.8152	-0.0114	0.0095	0.5 0.8	1960
1578546	147.2960	189.2103	0.0009	0.0012	2.0 9.9	1961
1581156	139.5126	192.2888	0.0111	0.0131	0.2 0.2	1962
1604688	174.1555	136.0722	-0.0025	0.0005	2.8 1.5	1963
1604927	172.9727	138.3591	-0.0119	0.0109	1.2 0.5	1964
1606517	175.4827	135.2983	0.0048	0.0059	1.9 0.6	1965
1606614	175.3316	135.8917	-0.0009	0.0007	7.3 9.9	1966
1607119	177.3165	132.1632	0.0042	0.0007	1.0 0.7	1967
1607815	175.5435	137.8391	0.0024	0.0063	2.3 1.6	1968
1611381	170.0737	140.9424	0.0076	0.0045	2.6 8.9	1969
1611564	169.2876	142.8066	0.0026	-0.0067	5.9 0.8	1970
1611666	168.9370	143.9024	-0.0094	0.0058	1.1 1.7	1971
1612412	170.0333	141.9084	-0.0003	0.0063	2.1 3.9	1972
1613774	170.4117	144.8893	-0.0041	0.0061	1.4 4.2	1973
1620428	165.5786	150.4987	0.0077	-0.0071	3.1 4.5	1974
1621621	165.9984	151.7850	-0.0004	0.0001	1.3 2.3	1975
1630010	163.9690	154.8208	-0.0262	0.0057	1.0 5.3	1976
1631305	163.7045	157.8096	-0.0028	0.0073	1.4 1.4	1977

## POSITIONS ON THE DISK

6b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1460880	43.0612	65.9108	0.40811	0.67993	0.60921	1905
1462758	44.4674	65.6631	0.42479	0.67821	0.59965	1906
1462965	44.3664	67.0677	0.42613	0.69565	0.57835	1907
1464889	46.2118	66.4009	0.44758	0.68926	0.56973	1908
1468119	49.7567	60.4221	0.48092	0.61897	0.62096	1909
1468364	50.0084	61.6109	0.48594	0.63386	0.60173	1910
1470411	41.6462	70.8737	0.40053	0.74096	0.53902	1911
1471800	41.8129	73.8472	0.40999	0.77983	0.47305	1912
1473167	44.8939	68.6805	0.43589	0.71659	0.54453	1913
1473253	44.7225	69.2193	0.43492	0.72326	0.53642	1914
1473932	43.4223	74.5870	0.43273	0.79204	0.43060	1915
1473999	43.7845	75.0849	0.43913	0.79947	0.40990	1916
1475034	46.5025	67.5681	0.45353	0.70433	0.54611	1917
1477305	47.3438	69.8406	0.46935	0.73462	0.48995	1918
1481507	40.1850	79.4945	0.41045	0.85670	0.31239	1919
1485373	44.3448	77.3023	0.45654	0.83286	0.31291	1920
1487277	46.0274	76.6102	0.47685	0.82668	0.29867	1921
1500933	54.2704	14.6982	0.50321	0.09348	0.85909	1922
1503595	57.2857	11.0249	0.53870	0.05488	0.84071	1923
1503826	56.6964	13.8180	0.53199	0.08548	0.84242	1924
1510688	54.5324	21.3264	0.50777	0.16788	0.84498	1925
1511584	55.4099	20.0554	0.51789	0.15426	0.84143	1926
1513346	56.7805	18.3028	0.53384	0.13566	0.83463	1927
1514129	57.4864	16.7385	0.54195	0.11871	0.83198	1928
1514744	57.5831	21.6892	0.54437	0.17436	0.82053	1929
1514769	57.6959	22.1429	0.54586	0.17957	0.81841	1930
1517679	60.3144	20.9959	0.57710	0.16889	0.79902	1931
1519616	61.4674	20.6649	0.59098	0.16621	0.78938	1932
1520148	54.0936	25.8199	0.50400	0.21823	0.83568	1933
1520728	53.7202	31.0896	0.50180	0.27781	0.81916	1934
1522028	55.6917	24.7524	0.52270	0.20740	0.82690	1935
1525411	57.9676	27.4888	0.55113	0.24030	0.79907	1936
1526767	59.0665	30.5666	0.56589	0.27636	0.77678	1937
1528408	60.3172	27.9470	0.57980	0.24763	0.77622	1938
1532443	55.3455	36.6892	0.52444	0.34334	0.77916	1939
1532935	54.9314	41.2273	0.52264	0.39551	0.75526	1940
1533005	55.9805	33.3261	0.53007	0.30522	0.79111	1941
1533874	56.1528	40.1773	0.53663	0.38442	0.75116	1942
1533970	56.1729	40.6218	0.53722	0.38960	0.74807	1943
1535462	57.9685	36.4454	0.55603	0.34288	0.75714	1944
1536881	58.7813	39.6698	0.56828	0.38105	0.72929	1945
1548406	59.3416	45.1248	0.57999	0.44556	0.68197	1946
1550305	52.1148	53.3997	0.50022	0.53637	0.67977	1947
1551224	53.1384	52.3410	0.51148	0.52472	0.68048	1948
1554785	55.6379	56.3105	0.54764	0.57540	0.60746	1949
1560300	51.2091	61.1925	0.50013	0.63006	0.59405	1950
1560376	51.7146	61.6164	0.50716	0.63591	0.58173	1951
1561004	52.2572	58.9894	0.50959	0.60416	0.61262	1952
1561794	52.2256	64.5859	0.51933	0.67385	0.52557	1953
1563836	53.1362	65.4335	0.53294	0.68605	0.49529	1954
1564576	54.6594	62.9275	0.54699	0.65632	0.51966	1955
1565013	55.6004	58.5853	0.55079	0.60329	0.57678	1956
1567869	56.4736	65.1912	0.57638	0.68875	0.43979	1957
1572153	52.1288	67.6062	0.52529	0.71271	0.46488	1958
1573150	52.8967	67.3694	0.53474	0.71090	0.45680	1959
1575059	54.5059	66.9754	0.55504	0.70864	0.43561	1960
1578546	55.6546	70.1791	0.58451	0.75724	0.29145	1961
1581156	49.0666	75.3502	0.51490	0.81647	0.26123	1962
1604688	66.2936	11.5361	0.64797	0.06867	0.75857	1963
1604927	65.8100	14.0675	0.64242	0.09641	0.76026	1964
1606517	67.3461	10.4154	0.66081	0.05730	0.74837	1965
1606614	67.3701	11.0279	0.66118	0.06414	0.74748	1966
1607119	68.2127	6.8846	0.67125	0.01906	0.74099	1967
1607815	68.1273	12.8363	0.67082	0.08513	0.73672	1968
1611381	63.7649	17.3723	0.61807	0.13137	0.77507	1969
1611564	63.5415	19.3851	0.61588	0.15378	0.77269	1970
1611666	63.5170	20.5365	0.61593	0.16672	0.76996	1971
1612412	64.0010	18.3108	0.62120	0.14214	0.77065	1972
1613774	65.2120	21.0635	0.63691	0.17439	0.75096	1973
1620428	62.1732	27.8231	0.60238	0.24801	0.75870	1974
1621621	62.9417	28.9379	0.61236	0.26152	0.74607	1975
1630010	61.8593	32.4291	0.60102	0.30043	0.74062	1976
1631305	62.4560	35.3726	0.61029	0.33501	0.71786	1977

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
1631517	163.0495	159.6846	-0.0105	0.0258	0.4 0.2	1978
1644691	162.9253	168.5528	-0.0261	0.0219	5.0 0.4	1979
1647616	164.4878	169.2774	-0.0053	0.0203	2.9 5.2	1980
1652448	158.1816	174.8900	-0.0020	0.0077	3.7 0.9	1981
1653039	160.0743	172.1190	-0.0061	0.0067	1.5 0.6	1982
1654142	160.8387	172.4499	-0.0128	0.0118	3.4 4.4	1983
1654985	158.3653	178.7780	-0.0093	0.0008	0.6 0.3	1984
1660925	151.2224	185.3415	-0.0148	0.0132	1.6 2.3	1985
1662187	156.0928	180.1234	-0.0026	0.0097	2.5 2.9	1986
1715286	181.3114	142.5588	-0.0057	0.0137	1.3 2.8	1987
1737891	175.4323	163.6650	0.0282	-0.0304	9.9 7.5	1988
1800432	187.0701	135.8555	0.0035	0.0055	2.2 2.0	1989
1801309	187.6454	135.6999	0.0008	0.0015	1.9 1.7	1990
1809610	193.0036	138.0918	-0.0317	0.0261	0.6 0.3	1991
1814817	185.8897	148.5063	0.0084	0.0100	2.2 0.8	1992
1815060	189.4792	141.3137	-0.0085	0.0136	1.0 0.9	1993
1820074	182.8561	149.5825	0.0062	0.0073	1.5 1.0	1994
1821149	182.9850	150.8922	0.0026	0.0016	1.4 6.7	1995
1822182	184.2613	150.4085	0.0100	0.0103	6.8 1.8	1996
1824002	185.3639	149.7288	0.0014	0.0073	4.4 4.0	1997
1824106	184.9770	150.8979	0.0018	-0.0078	2.1 0.6	1998
1824247	184.8822	151.8485	0.0046	-0.0022	3.3 8.3	1999
1825266	185.7713	151.8330	0.0045	0.0083	0.8 0.3	2000
1826243	186.5171	151.5694	0.0112	0.0057	1.4 1.0	2001
2001789	117.8361	122.8466	-0.0049	-0.0024	9.9 2.4	2002
2002279	118.3766	118.3948	0.0034	0.0001	4.2 1.7	2003
2002613	118.0029	121.4400	-0.0026	-0.0018	1.4 3.3	2004
2002871	117.0528	122.8855	-0.0024	0.0079	2.7 2.9	2005
2004452	116.4860	119.0003	0.0038	0.0024	3.8 3.5	2006
2004753	115.6393	121.7336	-0.0005	0.0031	3.1 4.8	2007
2005334	116.0069	118.1579	0.0001	-0.0042	4.0 2.6	2008
2005960	114.3065	122.8663	-0.0016	-0.0026	1.3 0.8	2009
2006259	115.0389	117.3767	0.0019	-0.0017	2.5 0.9	2010
2010324	117.7475	128.0287	0.0054	-0.0013	3.4 2.1	2011
2011466	116.2746	128.7223	-0.0029	0.0014	1.9 5.5	2012
2011901	115.5616	132.7007	-0.0003	-0.0038	1.3 1.3	2013
2012258	115.9825	126.9711	0.0023	-0.0039	6.9 6.3	2014
2012507	115.6676	129.5132	-0.0107	0.0107	2.1 2.4	2015
2013692	113.8570	129.4731	-0.0008	0.0013	4.7 8.7	2016
2014004	115.2930	124.5043	-0.0141	0.0074	1.3 9.3	2017
2014128	114.7834	125.5921	-0.0022	0.0101	3.0 2.3	2018
2015188	113.3113	125.2602	0.0004	0.0000	2.9 2.1	2019
2015532	112.9098	128.3004	-0.0061	0.0065	7.8 7.1	2020
2016111	113.2721	124.5294	0.0006	-0.0007	9.9 2.9	2021
2021141	114.6635	134.2407	0.0066	0.0017	5.4 4.2	2022
2021376	113.7330	136.2664	-0.0012	0.0025	1.2 1.8	2023
2023537	111.7646	137.6978	-0.0033	0.0048	2.0 3.9	2024
2026538	109.0582	136.9729	0.0007	0.0025	7.3 6.0	2025
2027762	107.6154	137.8085	0.0042	0.0052	9.9 9.9	2026
2028442	107.6542	135.1523	-0.0001	0.0006	4.5 9.9	2027
2031915	109.7141	149.7110	0.0014	-0.0014	2.0 4.0	2028
2039218	104.5902	142.1529	0.0007	0.0005	5.9 3.8	2029
2044213	106.3227	151.2613	-0.0023	0.0023	1.0 3.2	2030
2045400	105.0440	152.4378	0.0009	-0.0027	0.7 2.0	2031
2049093	101.7962	148.1460	0.0026	0.0059	8.9 2.5	2032
2049780	99.8909	153.6402	-0.0073	0.0090	1.5 1.9	2033
2052224	104.9420	159.9077	-0.0065	0.0010	2.8 4.0	2034
2052770	103.0884	163.4759	-0.0094	0.0049	5.3 2.6	2035
2053392	103.1736	160.1726	-0.0011	0.0073	9.9 5.4	2036
2060324	103.2826	169.1100	-0.0054	-0.0008	0.6 1.5	2037
2061420	102.1673	169.3380	-0.0063	0.0038	2.4 2.8	2038
2064627	98.7233	170.7254	-0.0090	0.0011	2.1 1.1	2039
2070831	98.3377	180.2296	-0.0139	-0.0061	1.7 0.6	2040
2073298	96.9849	175.4469	-0.0059	0.0021	2.7 3.7	2041
2075524	94.9266	177.0456	-0.0084	0.0021	1.2 2.8	2042
2080090	97.0903	181.5333	-0.0008	0.0028	2.6 3.3	2043
2082200	95.4289	182.6579	-0.0125	-0.0036	6.3 2.1	2044
2093572	88.5199	190.8293	0.0032	-0.0092	0.9 0.5	2045
2100351	111.4748	116.5191	0.0007	0.0027	2.0 2.9	2046
2102391	109.4417	115.9325	0.0011	0.0014	8.3 4.5	2047
2110458	108.4207	126.6324	0.0000	-0.0007	8.2 3.4	2048
2140430	100.3836	151.0041	0.0022	0.0028	1.0 4.1	2049
3000058	121.2347	115.6778	-0.0019	0.0023	4.1 4.3	2050

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
1631517	62.3613	37.3585	0.61057	0.35794	0.70646	1978
1644691	64.7652	45.9040	0.64908	0.46167	0.60462	1979
1647616	66.4697	46.1544	0.67139	0.46724	0.57526	1980
1652448	62.0192	53.3365	0.62420	0.54775	0.55708	1981
1653039	63.0458	50.1383	0.63260	0.51023	0.58266	1982
1654142	63.8730	50.2381	0.64341	0.51269	0.56848	1983
1654985	63.3015	57.0152	0.64808	0.59600	0.47410	1984
1660925	58.3192	65.3482	0.60229	0.69492	0.39284	1985
1662187	61.5051	58.9536	0.62823	0.61728	0.47360	1986
1715286	75.0011	15.7227	0.75832	0.12625	0.63954	1987
1737891	75.3681	37.6513	0.77905	0.38111	0.49784	1988
1800432	78.6163	7.6498	0.80373	0.04147	0.59354	1989
1801309	79.1237	7.3366	0.81041	0.03885	0.58458	1990
1809610	84.9424	8.1059	0.89061	0.05964	0.45084	1991
1814817	81.0835	20.1261	0.84125	0.18717	0.50721	1992
1815060	82.4794	12.2015	0.85686	0.09985	0.50578	1993
1820074	78.4807	22.0229	0.80686	0.20369	0.55452	1994
1821149	78.9769	23.2430	0.81435	0.21872	0.53759	1995
1822182	80.0632	22.4153	0.82864	0.21138	0.51833	1996
1824002	80.9271	21.4490	0.83994	0.20209	0.50365	1997
1824106	80.8887	22.6811	0.84028	0.21628	0.49714	1998
1824247	81.0683	23.6203	0.84353	0.22762	0.48646	1999
1825266	81.9164	23.3522	0.85535	0.22656	0.46589	2000
1826243	82.5566	22.8869	0.86417	0.22277	0.45120	2001
2001789	8.5238	14.8852	-0.01847	0.07855	0.99674	2002
2002279	7.7755	10.4592	-0.02702	0.02947	0.99920	2003
2002613	8.2836	13.4879	-0.02124	0.06303	0.99779	2004
2002871	7.7837	15.1456	-0.02660	0.08138	0.99633	2005
2004452	6.1348	11.5787	-0.04503	0.04173	0.99811	2006
2004753	6.1005	14.4428	-0.04520	0.07346	0.99627	2007
2005334	5.4357	10.9068	-0.05274	0.03426	0.99802	2008
2005960	5.1447	15.9094	-0.05555	0.08968	0.99442	2009
2006259	4.2852	10.4328	-0.06539	0.02896	0.99744	2010
2010324	9.9131	19.8833	-0.00245	0.13431	0.99094	2011
2011466	8.6980	20.9684	-0.01567	0.14630	0.98912	2012
2011901	9.1461	24.9893	-0.00985	0.19135	0.98147	2013
2012258	7.9197	19.3711	-0.02454	0.12841	0.99142	2014
2012507	8.3410	21.9003	-0.01943	0.15668	0.98746	2015
2013692	6.5933	22.3775	-0.03859	0.16187	0.98606	2016
2014004	6.5567	17.2003	-0.03987	0.10412	0.99376	2017
2014128	6.3775	18.3893	-0.04167	0.11735	0.99222	2018
2015188	4.8714	18.4901	-0.05821	0.11838	0.99126	2019
2015532	5.3513	21.5219	-0.05242	0.15223	0.98695	2020
2016111	4.6259	17.8000	-0.06101	0.11068	0.99198	2021
2021141	8.7231	26.7229	-0.01407	0.21077	0.97743	2022
2021376	8.4071	28.9319	-0.01691	0.23560	0.97170	2023
2023537	6.9267	30.8661	-0.03260	0.25729	0.96579	2024
2026538	4.1252	30.9413	-0.06338	0.25796	0.96407	2025
2027762	2.9794	32.1541	-0.07552	0.27162	0.95944	2026
2028442	2.2609	29.5941	-0.08425	0.24269	0.96644	2027
2031915	8.3782	42.9784	-0.01119	0.39521	0.91852	2028
2039218	1.3143	37.1848	-0.09172	0.32863	0.93999	2029
2044213	5.5670	45.4320	-0.04076	0.42316	0.90514	2030
2045400	4.6756	46.9252	-0.04963	0.44030	0.89648	2031
2049093	0.3401	43.7317	-0.09906	0.40343	0.90963	2032
2049780	0.0761	49.5468	-0.09828	0.47046	0.87693	2033
2052224	6.7029	54.1226	-0.02211	0.52395	0.85146	2034
2052770	5.9406	58.0747	-0.02709	0.57021	0.82105	2035
2053392	5.0825	54.8805	-0.03934	0.53268	0.84540	2036
2060324	7.7297	63.4261	-0.00190	0.63375	0.77354	2037
2061420	6.7251	63.9625	-0.01242	0.64003	0.76825	2038
2064627	3.8172	66.2748	-0.04179	0.66747	0.74346	2039
2070831	6.1514	75.5052	-0.00257	0.78036	0.62532	2040
2073298	3.4934	71.3009	-0.03866	0.72829	0.68418	2041
2075524	1.9745	73.4213	-0.05213	0.75422	0.65455	2042
2080090	5.3261	77.1115	-0.00877	0.80036	0.59945	2043
2082200	4.0528	78.6639	-0.01979	0.81985	0.57224	2044
2093572	-0.2477	88.4733	-0.03695	0.95240	0.30260	2045
2100351	0.6235	10.6249	-0.10546	0.03099	0.99394	2046
2102391	-1.4930	10.6411	-0.12854	0.03118	0.99121	2047
2110458	0.5720	21.1998	-0.10483	0.14848	0.98334	2048
2140430	-0.2014	46.8768	-0.10308	0.43961	0.89226	2049
3000058	9.7433	7.0378	-0.00536	-0.00809	0.99995	2050

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
3000360	121.7331	113.7953	-0.0003	0.0021	5.6 3.5	2051
3000493	121.8423	112.5148	-0.0010	0.0006	5.5 2.3	2052
3001501	121.8732	111.8469	0.0005	0.0016	5.3 6.6	2053
3001553	121.5169	111.5050	0.0006	-0.0005	2.1 1.4	2054
3002862	121.3423	108.6783	-0.0056	0.0034	1.8 9.9	2055
3003391	118.8428	112.8610	-0.0018	0.0040	6.0 8.0	2056
3003559	119.9222	110.4420	-0.0032	-0.0044	5.0 2.3	2057
3004334	118.6113	112.5063	0.0000	0.0027	6.8 3.7	2058
3005192	116.6169	114.0143	0.0044	0.0025	1.7 2.1	2059
3005530	118.1828	110.8614	0.0027	-0.0015	1.2 1.0	2060
3005655	118.3532	109.4768	0.0040	0.0018	2.2 9.5	2061
3005857	118.9351	107.5571	-0.0080	0.0075	4.5 3.6	2062
3006355	116.7446	111.8477	0.0041	0.0024	9.9 5.1	2063
3007790	116.4083	108.4081	-0.0036	0.0053	3.0 3.7	2064
3008096	113.9212	113.7398	-0.0004	-0.0003	9.9 1.5	2065
3009506	115.0724	109.3818	-0.0089	0.0138	4.7 1.9	2066
3009921	115.7608	106.2128	-0.0006	0.0048	2.3 3.7	2067
3009983	115.2496	105.8974	-0.0059	0.0086	1.1 6.1	2068
3010091	123.2719	107.4507	0.0039	0.0000	3.8 2.0	2069
3010882	125.3310	100.2804	-0.0009	0.0066	9.2 6.2	2070
3011196	122.7363	105.8965	-0.0053	0.0022	6.2 6.8	2071
3011268	123.3156	104.9455	0.0044	-0.0006	3.2 1.5	2072
3011364	123.4996	104.4250	0.0059	0.0039	0.6 2.9	2073
3011448	124.0214	103.2160	-0.0081	0.0057	9.3 1.4	2074
3011617	124.6971	101.5482	0.0098	-0.0009	0.8 0.3	2075
3012351	122.6147	104.3995	0.0048	0.0019	5.9 4.3	2076
3013287	121.4489	104.4151	0.0023	0.0052	0.8 5.9	2077
3013674	122.4391	101.1926	-0.0020	0.0008	0.7 1.1	2078
3014393	120.6148	103.6020	0.0029	0.0028	0.7 0.5	2079
3014443	121.2517	102.8484	0.0015	0.0064	2.5 6.2	2080
3014877	122.1286	98.8926	0.0047	0.0028	1.6 1.2	2081
3014922	122.6551	98.6276	0.0035	0.0027	3.4 1.6	2082
3015256	119.8492	104.0643	-0.0100	-0.0105	1.6 7.5	2083
3015683	120.5159	100.7889	0.0029	0.0033	0.9 6.3	2084
3015765	121.0314	99.7562	0.0034	0.0057	2.4 5.7	2085
3015838	121.5540	98.6317	-0.0002	0.0040	2.4 1.4	2086
3016216	119.3202	103.9548	0.0030	-0.0057	1.1 8.6	2087
3016583	119.3853	101.3658	0.0015	0.0076	9.9 3.7	2088
3017131	117.9081	104.9256	0.0014	0.0012	2.4 2.2	2089
3017273	117.9220	103.7928	0.0045	0.0015	4.5 2.3	2090
3018639	118.5081	99.5815	0.0050	0.0052	9.9 6.1	2091
3018666	118.1508	99.7626	-0.0015	0.0023	9.9 9.9	2092
3018995	118.6361	97.1201	-0.0022	-0.0021	8.1 1.3	2093
3019627	117.6494	99.4981	0.0044	0.0088	6.3 2.0	2094
3019895	117.5310	97.7244	0.0025	0.0020	6.3 2.7	2095
3020471	126.8517	95.1114	0.0056	-0.0029	2.5 1.5	2096
3020688	127.4184	92.5838	-0.0003	0.0040	9.9 3.6	2097
3021145	125.6306	97.2105	0.0027	0.0023	4.1 9.9	2098
3021231	125.8336	96.7308	0.0012	0.0005	4.7 6.7	2099
3023133	123.9616	96.9641	-0.0003	0.0009	2.6 3.7	2100
3023338	124.5277	94.7346	0.0024	0.0034	2.6 0.6	2101
3023523	124.9931	93.4005	-0.0010	0.0065	3.9 9.9	2102
3023586	124.5353	92.9887	0.0050	-0.0007	2.1 2.9	2103
3024233	123.2894	95.7654	-0.0013	0.0026	1.2 4.6	2104
3024271	122.8873	95.8802	0.0070	0.0011	2.2 2.9	2105
3024993	124.4095	89.3716	0.0000	0.0094	2.6 4.2	2106
3025173	121.8208	96.2947	0.0016	0.0017	1.1 1.4	2107
3031542	128.8614	84.9242	0.0020	0.0046	7.6 2.1	2108
3032013	127.0983	89.1804	0.0030	0.0068	2.0 9.9	2109
3032164	126.9202	88.0068	0.0003	0.0026	1.8 4.5	2110
3032858	128.7544	81.3699	-0.0069	0.0064	1.3 5.6	2111
3033475	126.7238	84.9581	0.0041	0.0040	2.5 2.8	2112
3033478	126.7999	84.6960	0.0062	0.0061	4.1 1.7	2113
3033824	128.0333	81.5716	0.0017	0.0047	3.5 4.9	2114
3034871	126.6235	81.4799	0.0070	0.0019	2.7 2.3	2115
3035610	125.8300	83.2708	0.0029	0.0060	5.5 3.9	2116
3036662	124.5090	82.6945	0.0024	0.0067	9.9 7.5	2117
3038961	123.4839	79.5861	-0.0059	0.0006	5.5 1.5	2118
3039789	122.0951	80.3094	-0.0001	0.0072	1.1 4.0	2119
3040372	131.2536	77.7965	0.0027	0.0062	2.4 3.5	2120
3040635	132.3342	74.8731	0.0068	0.0088	1.0 1.1	2121
3040705	132.8196	73.9849	0.0015	0.0018	8.0 5.3	2122
3040843	132.6825	73.1817	0.0061	0.0015	2.1 9.8	2123

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
3000360	9.6857	5.0893	-0.00595	-0.02954	0.99955	2051
3000493	9.4261	3.8294	-0.00876	-0.04341	0.99902	2052
3001501	9.2657	3.1797	-0.01049	-0.05056	0.99867	2053
3001553	8.8268	2.9531	-0.01532	-0.05308	0.99847	2054
3002862	7.8551	0.2902	-0.02581	-0.08235	0.99627	2055
3003391	6.6482	5.0160	-0.03943	-0.03061	0.99875	2056
3003559	6.9951	2.3872	-0.03546	-0.05944	0.99760	2057
3004334	6.3253	4.7415	-0.04297	-0.03364	0.99851	2058
3005192	4.8418	6.7567	-0.05932	-0.01156	0.99817	2059
3005530	5.4464	3.2851	-0.05255	-0.04969	0.99738	2060
3005655	5.2159	1.9078	-0.05499	-0.06481	0.99638	2061
3005847	5.2278	-0.1001	-0.05467	-0.08680	0.99472	2062
3006355	4.3479	4.6412	-0.06468	-0.03486	0.99730	2063
3007790	3.0468	1.4362	-0.07874	-0.07007	0.99443	2064
3008096	2.1787	7.2611	-0.08851	-0.00611	0.99606	2065
3009506	2.0428	2.7511	-0.08983	-0.05568	0.99440	2066
3009921	1.8014	-0.4860	-0.09218	-0.09114	0.99156	2067
3009983	1.2214	-0.6431	-0.09850	-0.09287	0.99079	2068
3010091	9.3563	-1.4374	-0.00906	-0.10110	0.99483	2069
3010882	9.2909	-8.9047	-0.00846	-0.18240	0.98319	2070
3011196	8.4005	-2.7763	-0.01942	-0.11581	0.99308	2071
3011268	8.6854	-3.8539	-0.01612	-0.12754	0.99170	2072
3011364	8.7138	-4.4058	-0.01571	-0.13355	0.99092	2073
3011448	8.8702	-5.7146	-0.01376	-0.14778	0.98892	2074
3011617	9.0437	-7.5076	-0.01149	-0.16726	0.98585	2075
3012351	7.8580	-4.1783	-0.02519	-0.13114	0.99104	2076
3013287	6.7445	-3.8312	-0.03750	-0.12744	0.99114	2077
3013674	6.7772	-7.2057	-0.03653	-0.16417	0.98576	2078
3014393	5.7133	-4.3740	-0.04875	-0.13343	0.98986	2079
3014443	6.1097	-5.2785	-0.04424	-0.14325	0.98870	2080
3014877	5.8251	-9.3244	-0.04654	-0.18723	0.98121	2081
3014922	6.2546	-9.7287	-0.04172	-0.19158	0.98059	2082
3015256	5.1107	-3.7123	-0.05548	-0.12625	0.99045	2083
3015683	4.8181	-7.0453	-0.05810	-0.16254	0.98499	2084
3015765	5.0187	-8.1832	-0.05566	-0.17489	0.98301	2085
3015838	5.1999	-9.4111	-0.05339	-0.18820	0.98068	2086
3016216	4.5722	-3.6667	-0.06140	-0.12578	0.99016	2087
3016583	3.8981	-6.1697	-0.06836	-0.15306	0.98585	2088
3017131	3.4943	-2.3329	-0.07341	-0.11127	0.99107	2089
3017273	3.1853	-3.4239	-0.07664	-0.12319	0.98942	2090
3018639	2.5493	-7.6321	-0.08285	-0.16900	0.98213	2091
3018666	2.2582	-7.3566	-0.08609	-0.16602	0.98236	2092
3018995	1.9717	-10.0306	-0.08862	-0.19504	0.97678	2093
3019627	1.7021	-7.4676	-0.09215	-0.16724	0.98160	2094
3019895	1.0839	-9.1360	-0.09854	-0.18535	0.97772	2095
3020471	9.2786	-14.2982	-0.00717	-0.24076	0.97056	2096
3020688	9.1029	-16.8851	-0.00827	-0.26866	0.96320	2097
3021145	8.7048	-11.9360	-0.01418	-0.21529	0.97645	2098
3021231	8.7630	-12.4542	-0.01339	-0.22089	0.97521	2099
3023133	7.0342	-11.6971	-0.03265	-0.21285	0.97654	2100
3023338	6.9428	-13.9979	-0.03301	-0.23772	0.97077	2101
3023523	7.0095	-15.4106	-0.03184	-0.25295	0.96695	2102
3023586	6.4534	-15.6754	-0.03787	-0.25585	0.96598	2103
3024233	6.0486	-12.6560	-0.04323	-0.22328	0.97379	2104
3024271	5.6957	-12.4313	-0.04717	-0.22088	0.97416	2105
3024993	5.3037	-19.1107	-0.04932	-0.29288	0.95488	2106
3025173	4.7909	-11.7298	-0.05730	-0.21334	0.97530	2107
3031542	8.3075	-24.6465	-0.01397	-0.35195	0.93591	2108
3032013	7.8277	-20.0600	-0.02119	-0.30290	0.95279	2109
3032164	7.3230	-21.1355	-0.02633	-0.31447	0.94890	2110
3032858	7.1937	-28.0269	-0.02463	-0.38808	0.92129	2111
3033475	6.2673	-24.0052	-0.03673	-0.34526	0.93779	2112
3033478	6.2657	-24.2784	-0.03663	-0.34818	0.93671	2113
3033824	6.5596	-27.6279	-0.03181	-0.38388	0.92283	2114
3034871	5.1816	-27.3144	-0.04712	-0.38063	0.92352	2115
3035610	4.9302	-25.3698	-0.05081	-0.35991	0.93160	2116
3036662	3.4994	-25.5466	-0.06643	-0.36186	0.92986	2117
3038961	1.6321	-28.2375	-0.08557	-0.39059	0.91658	2118
3039789	0.5061	-27.1479	-0.09842	-0.37900	0.92015	2119
3040372	8.5737	-32.1678	-0.00717	-0.43193	0.90188	2120
3040635	8.7782	-35.2810	-0.00304	-0.46483	0.88540	2121
3040705	8.9910	-36.2716	-0.00006	-0.47526	0.87985	2122
3040843	8.6310	-37.0033	-0.00356	-0.48300	0.87561	2123

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
3040954	132.8086	72.1428	0.0057	0.0016	5.8 3.2	2124
3041147	130.2987	79.0321	0.0006	0.0009	9.9 9.9	2125
3041195	129.7880	79.0445	0.0073	0.0026	5.8 5.3	2126
3041288	130.1951	77.8567	0.0052	0.0053	5.6 3.1	2127
3041329	131.0061	77.0617	0.0002	0.0027	1.0 3.4	2128
3041609	131.8139	74.2789	0.0041	0.0020	3.6 9.9	2129
3042317	130.2007	76.9864	0.0066	0.0041	2.9 2.6	2130
3042532	130.3231	75.5784	0.0019	0.0050	4.4 3.3	2131
3043400	129.4628	76.4909	-0.0013	-0.0014	9.9 0.7	2132
3043923	130.4254	71.5654	0.0006	0.0094	0.9 4.8	2133
3044049	127.5205	78.9496	0.0061	0.0015	1.7 1.2	2134
3044651	128.5680	74.1842	-0.0015	0.0016	3.3 2.0	2135
3045406	127.7936	75.4286	0.0009	0.0048	2.9 9.9	2136
3045485	127.1599	75.2900	0.0008	0.0040	9.9 9.9	2137
3046119	126.3021	77.6452	0.0001	-0.0016	3.1 3.4	2138
3047225	125.4820	76.7899	-0.0011	0.0041	5.0 2.5	2139
3047793	125.8514	72.2237	0.0027	0.0027	3.2 1.7	2140
3047866	126.3917	71.0445	0.0039	-0.0046	3.8 1.6	2141
3048800	125.9967	71.4919	-0.0048	0.0138	4.8 1.1	2142
3049763	124.4238	71.7945	-0.0009	0.0044	2.5 4.1	2143
3050356	133.6856	68.2225	0.0011	0.0011	2.2 2.4	2144
3050534	134.2406	66.5935	-0.0009	0.0038	4.8 4.2	2145
3050832	134.8347	63.9804	0.0025	0.0034	2.7 2.0	2146
3051248	132.7578	68.7263	-0.0021	-0.0019	3.3 5.1	2147
3052042	131.3053	70.9481	0.0009	0.0027	2.6 2.2	2148
3052509	132.8747	65.6534	-0.0095	0.0013	0.8 3.0	2149
3052625	132.7944	65.0377	0.0006	0.0015	1.2 1.0	2150
3054665	130.7371	64.5018	-0.0001	0.0019	1.0 2.5	2151
3055736	130.3647	63.2733	0.0038	0.0035	3.9 4.2	2152
3056258	128.3165	67.4572	0.0065	0.0024	3.8 4.7	2153
3056414	128.9986	66.0980	0.0009	-0.0012	9.6 6.8	2154
3056454	128.6295	66.0000	0.0038	-0.0059	8.2 2.6	2155
3056477	128.4881	65.5996	0.0014	0.0013	6.3 4.9	2156
3056985	129.4127	61.1128	-0.0002	0.0049	4.1 2.9	2157
3057050	126.8059	69.8076	-0.0018	0.0058	1.9 5.2	2158
3057660	127.9778	64.2224	0.0027	-0.0005	2.5 3.6	2159
3058347	126.7943	66.1182	-0.0002	0.0052	8.9 6.1	2160
3058687	127.0529	63.1787	-0.0046	0.0104	1.1 1.0	2161
3059511	126.5241	64.5951	0.0042	0.0068	7.1 3.2	2162
3060185	135.0362	60.7563	-0.0017	-0.0029	1.2 3.9	2163
3062958	135.1597	52.3820	-0.0026	0.0040	3.3 3.8	2164
3063192	132.2714	60.1851	0.0009	-0.0021	2.0 5.8	2165
3063340	133.0135	58.6437	0.0015	0.0009	9.9 2.5	2166
3065165	130.8574	59.5524	-0.0031	0.0145	0.9 1.5	2167
3065712	132.3617	54.1836	0.0009	0.0006	1.0 1.0	2168
3066146	130.1859	59.2523	0.0052	0.0003	2.6 1.3	2169
3066345	130.5452	57.3583	-0.0006	0.0039	3.6 1.1	2170
3066837	131.5856	52.3936	0.0051	0.0007	5.1 7.5	2171
3066997	131.2865	51.3268	0.0004	-0.0013	9.9 6.6	2172
3067278	129.2386	57.7110	0.0012	0.0012	4.5 6.2	2173
3068334	128.8725	57.0039	-0.0021	0.0096	0.9 5.2	2174
3069255	127.6163	57.5597	0.0025	0.0104	3.0 1.4	2175
3071974	137.4812	43.1728	0.0014	0.0020	4.3 3.9	2176
3072375	135.6431	48.7505	0.0002	0.0035	4.9 2.2	2177
3073253	134.7467	49.6135	0.0054	-0.0024	3.3 1.6	2178
3073443	135.1272	47.7543	0.0012	0.0067	3.4 9.4	2179
3074539	134.6316	45.9922	0.0029	0.0012	9.9 9.9	2180
3075133	132.9121	50.1845	-0.0005	0.0004	4.2 2.4	2181
3076550	132.5118	46.2437	0.0012	0.0019	4.4 9.9	2182
3077230	131.3672	48.9963	-0.0052	0.0012	1.8 2.3	2183
3077379	131.2741	47.0285	-0.0003	0.0013	3.6 9.9	2184
3077951	132.3509	41.8918	0.0000	-0.0005	1.8 1.2	2185
3078910	131.8046	41.9078	0.0028	-0.0085	1.3 1.9	2186
3081229	138.4167	39.7071	0.0030	0.0014	1.5 3.3	2187
3081267	138.0427	39.8140	0.0043	0.0001	2.4 2.4	2188
3082332	137.4979	39.1217	0.0133	0.0143	1.0 1.6	2189
3082862	137.9062	33.8807	-0.0035	-0.0028	3.8 2.7	2190
3083208	136.8562	39.4212	0.0009	0.0076	1.8 0.7	2191
3083679	136.7444	35.0076	-0.0008	-0.0057	6.9 1.6	2192
3083680	136.5919	35.9480	0.0005	-0.0011	6.1 1.0	2193
3084536	136.0856	36.1576	-0.0022	-0.0028	1.7 1.1	2194
3084763	136.0352	34.2964	0.0054	-0.0061	0.9 2.0	2195
3085387	134.5236	37.7191	0.0019	-0.0028	4.0 3.1	2196

## POSITIONS ON THE DISK

9b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
3040954	8.4563	-38.0362	-0.00480	-0.49389	0.86951	2124
3041147	8.0095	-30.7101	-0.01422	-0.41653	0.90901	2125
3041195	7.5233	-30.5528	-0.01966	-0.41490	0.90965	2126
3041288	7.5757	-31.8086	-0.01838	-0.42821	0.90349	2127
3041329	8.1273	-32.8025	-0.01173	-0.43869	0.89856	2128
3041609	8.1102	-35.7030	-0.01015	-0.46934	0.88296	2129
3042317	7.3335	-32.6453	-0.02057	-0.43710	0.89918	2130
3042532	7.0503	-34.0314	-0.02287	-0.45178	0.89184	2131
3043400	6.4849	-32.9107	-0.02977	-0.43997	0.89752	2132
3043923	6.0067	-37.9115	-0.03189	-0.49278	0.86957	2133
3044049	5.3219	-29.9980	-0.04419	-0.40916	0.91139	2134
3044651	4.9706	-34.8694	-0.04524	-0.46077	0.88636	2135
3045406	4.5820	-33.4547	-0.05037	-0.44584	0.89369	2136
3045485	3.9349	-33.4072	-0.05750	-0.44537	0.89350	2137
3046119	3.7824	-30.9027	-0.06061	-0.41884	0.90603	2138
3047225	2.7526	-31.4899	-0.07157	-0.42511	0.90231	2139
3047793	1.8078	-35.9770	-0.07923	-0.47258	0.87772	2140
3047866	1.9904	-37.2625	-0.07640	-0.48612	0.87054	2141
3048800	1.7389	-36.7207	-0.07951	-0.48042	0.87343	2142
3049763	0.3167	-35.9823	-0.09553	-0.47265	0.87606	2143
3050356	8.1820	-42.0480	-0.00496	-0.53601	0.84420	2144
3050534	8.2508	-43.7693	-0.00287	-0.55399	0.83252	2145
3050832	8.0770	-46.4462	-0.00261	-0.58190	0.81326	2146
3051248	7.4356	-41.3003	-0.01375	-0.52825	0.84898	2147
3052042	6.6749	-38.7545	-0.02396	-0.50159	0.86477	2148
3052509	6.6735	-44.2824	-0.01987	-0.55948	0.82860	2149
3052625	6.4213	-44.8504	-0.02220	-0.56543	0.82450	2150
3054665	4.2960	-44.7787	-0.04563	-0.56481	0.82396	2151
3055736	3.5894	-45.8516	-0.05252	-0.57602	0.81575	2152
3056258	2.8156	-41.2532	-0.06459	-0.52802	0.84677	2153
3056414	3.0830	-42.7518	-0.06053	-0.54370	0.83709	2154
3056454	2.7012	-42.7407	-0.06473	-0.54359	0.83685	2155
3056477	2.4517	-43.0847	-0.06720	-0.54720	0.83430	2156
3056985	2.0618	-47.6537	-0.06774	-0.59481	0.80101	2157
3057050	2.0357	-38.5674	-0.07503	-0.49985	0.86285	2158
3057660	1.5705	-44.2610	-0.07593	-0.55950	0.82534	2159
3058347	0.9750	-42.1046	-0.08410	-0.53698	0.83939	2160
3058687	0.3866	-44.9991	-0.08828	-0.56721	0.81882	2161
3059511	0.2825	-43.4893	-0.09061	-0.55146	0.82927	2162
3060185	7.3530	-49.5975	-0.00784	-0.61466	0.78875	2163
3062958	5.0890	-57.6689	-0.02462	-0.69780	0.71587	2164
3063192	4.5392	-49.3582	-0.03905	-0.61239	0.78959	2165
3063340	4.8123	-51.0487	-0.03449	-0.62985	0.77595	2166
3065165	3.0033	-49.5626	-0.05573	-0.61457	0.78689	2167
3065712	2.9184	-55.1431	-0.05122	-0.67208	0.73871	2168
3066146	2.2740	-49.6593	-0.06364	-0.61560	0.78549	2169
3066345	2.0797	-51.5792	-0.06398	-0.63544	0.76949	2170
3066837	1.6649	-56.6398	-0.06336	-0.68744	0.72347	2171
3066997	1.0746	-57.5783	-0.06879	-0.69704	0.71373	2172
3067278	0.9271	-50.8686	-0.07727	-0.62813	0.77426	2173
3068334	0.3748	-51.4429	-0.08276	-0.63406	0.76884	2174
3069255	-0.6717	-50.5517	-0.09502	-0.62486	0.77494	2175
3071974	4.6951	-67.1675	-0.01678	-0.79365	0.60815	2176
3072375	4.5194	-61.2915	-0.02663	-0.73465	0.67792	2177
3073253	3.9053	-60.2080	-0.03470	-0.72370	0.68924	2178
3073443	3.7412	-62.1005	-0.03418	-0.74287	0.66856	2179
3074539	2.7646	-63.6503	-0.04291	-0.75854	0.65021	2180
3075133	2.3085	-59.1375	-0.05350	-0.71290	0.69923	2181
3076550	0.8034	-62.8052	-0.06550	-0.75008	0.65810	2182
3077230	0.4889	-59.8378	-0.07260	-0.72005	0.69012	2183
3077379	-0.1602	-61.6996	-0.07743	-0.73892	0.66933	2184
3077951	-0.5890	-66.9356	-0.07508	-0.79150	0.60654	2185
3078910	-1.1083	-66.7647	-0.08099	-0.78979	0.60801	2186
3081229	4.6062	-70.7598	-0.01218	-0.82920	0.55881	2187
3081267	4.2780	-70.5507	-0.01614	-0.82717	0.56172	2188
3082332	3.5586	-71.0599	-0.02322	-0.83222	0.55396	2189
3082862	2.4591	-76.2056	-0.02591	-0.88220	0.47017	2190
3083208	3.0285	-70.5897	-0.02983	-0.82763	0.56049	2191
3083679	1.6656	-74.7933	-0.03740	-0.86866	0.49400	2192
3083680	1.7869	-73.8474	-0.03783	-0.85950	0.50973	2193
3084536	1.3610	-73.5021	-0.04313	-0.85616	0.51490	2194
3084763	0.7832	-75.2738	-0.04615	-0.87330	0.48498	2195
3085387	0.3074	-71.5587	-0.05806	-0.83721	0.54378	2196

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
3085743	135.3726	34.0958	-0.0032	-0.0027	1.1 6.1	2197
3088174	131.6663	39.3742	-0.0041	0.0099	1.2 5.7	2198
3090060	139.8360	32.4382	-0.0016	0.0054	1.1 0.7	2199
3093012	137.6938	31.6003	0.0004	0.0013	4.6 1.9	2200
3093068	137.2443	30.9065	0.0031	-0.0048	1.5 3.1	2201
3102487	111.5207	109.1407	-0.0035	0.0054	3.0 7.7	2202
3102572	111.6608	108.7619	0.0022	0.0065	6.9 7.1	2203
3104301	110.0243	110.1974	0.0007	0.0066	4.2 2.8	2204
3104515	110.5510	108.1178	0.0007	0.0017	9.9 1.3	2205
3105564	109.2228	107.7839	-0.0049	0.0041	2.4 3.8	2206
3110588	116.0067	99.9427	0.0099	0.0045	3.8 2.4	2207
3110591	115.7489	100.4477	-0.0016	0.0020	3.1 8.2	2208
3110780	116.3616	98.8404	-0.0073	0.0008	2.2 2.5	2209
3110991	116.7821	96.9600	-0.0034	0.0013	9.9 6.3	2210
3111557	115.3813	99.8210	-0.0035	0.0069	7.5 2.6	2211
3111964	116.1926	96.5277	0.0006	0.0033	1.1 0.9	2212
3112667	114.7065	98.6072	-0.0039	0.0017	3.4 4.8	2213
3116195	109.6329	102.1235	-0.0063	0.0134	1.7 1.9	2214
3121650	117.8862	90.6089	-0.0046	0.0075	5.3 1.5	2215
3122213	116.4755	93.7464	0.0012	0.0011	1.1 0.6	2216
3123111	115.2992	94.5638	-0.0078	0.0137	3.6 1.3	2217
3125563	114.0541	90.1939	-0.0045	0.0038	1.6 1.2	2218
3129060	109.3337	93.8541	-0.0018	0.0045	9.9 1.7	2219
3130018	120.2904	86.6515	0.0040	0.0019	8.0 4.7	2220
3133358	117.9601	83.1110	0.0010	0.0080	4.5 2.2	2221
3133789	118.6805	79.2224	0.0021	0.0229	1.3 1.7	2222
3133822	119.2364	79.1911	-0.0025	0.0058	5.1 4.2	2223
3153439	122.7775	63.6789	0.0011	0.0044	0.8 5.2	2224
3160663	127.3649	53.6283	0.0002	0.0072	8.1 2.2	2225
3162495	125.0479	54.7872	0.0009	0.0015	2.3 4.0	2226
3164362	123.2174	55.5479	-0.0001	-0.0048	1.5 1.4	2227
3170517	129.4879	44.6537	-0.0081	0.0031	1.3 1.2	2228
3170631	129.3867	44.1775	-0.0024	-0.0030	1.9 1.7	2229
3170730	129.5027	43.3226	-0.0046	0.0104	2.7 2.4	2230
3171575	128.1129	44.3907	0.0024	-0.0007	2.1 7.1	2231
3180018	130.3214	39.4997	0.0046	0.0015	1.3 1.8	2232
4000393	123.0929	113.9027	0.0053	0.0083	5.3 2.2	2233
4000545	123.2058	111.8034	0.0064	0.0004	8.7 4.4	2234
4001202	122.9205	114.8386	0.0010	0.0036	8.7 5.8	2235
4001754	124.6736	110.4644	0.0031	0.0037	6.7 9.9	2236
4002083	124.0452	116.9305	0.0048	0.0072	4.6 7.1	2237
4003067	124.7905	116.7551	0.0095	-0.0011	2.8 1.6	2238
4003377	125.6590	114.2236	0.0060	0.0039	6.4 4.7	2239
4003777	126.6797	110.6893	0.0017	0.0038	5.6 4.1	2240
4004094	125.8226	117.3830	0.0024	0.0032	2.2 1.7	2241
4004586	127.1120	112.8133	0.0052	0.0042	6.9 5.6	2242
4004882	127.7163	110.5186	0.0006	0.0013	3.0 5.1	2243
4004905	127.3766	109.2274	0.0053	0.0044	3.3 9.9	2244
4005162	126.6897	116.8758	0.0053	-0.0011	6.1 4.1	2245
4005338	127.0461	114.4888	-0.0046	0.0079	3.9 5.1	2246
4005342	126.9809	115.0402	-0.0004	0.0020	9.9 4.2	2247
4005745	128.0375	111.3186	0.0039	0.0048	1.2 2.2	2248
4005773	128.3072	111.5939	0.0062	0.0065	2.5 4.6	2249
4007659	129.7620	112.3054	0.0116	0.0054	1.4 2.5	2250
4007714	129.5618	111.8424	0.0058	0.0038	1.6 1.7	2251
4008874	131.1770	111.3398	0.0011	0.0012	2.0 5.6	2252
4010524	125.5883	103.0663	0.0020	0.0056	2.7 0.9	2253
4011082	125.6457	108.0255	-0.0003	0.0036	2.0 2.5	2254
4011632	126.6625	102.5909	-0.0002	0.0068	6.7 2.7	2255
4012366	127.1938	105.2230	-0.0028	0.0037	9.9 4.0	2256
4012549	127.5475	103.1858	-0.0047	-0.0028	9.9 4.4	2257
4013281	127.8550	106.8730	-0.0064	0.0055	0.9 0.7	2258
4015361	129.6655	106.3627	-0.0052	0.0101	1.5 1.0	2259
4015407	129.5720	104.8418	0.0048	0.0057	5.6 3.3	2260
4015975	131.3260	100.7533	0.0099	0.0006	3.7 2.2	2261
4016127	129.8424	107.7749	-0.0009	0.0014	9.9 5.1	2262
4016549	131.0085	104.1115	-0.0039	0.0043	3.7 4.2	2263
4016748	131.5365	102.4002	0.0022	0.0049	4.0 3.0	2264
3005847	131.7992	106.5141	0.0046	0.0052	7.5 3.1	2265
4017525	131.6483	104.7258	-0.0045	0.0037	7.5 2.8	2266
4017781	132.5818	103.3973	-0.0069	0.0003	3.5 9.9	2267
4017984	133.1162	101.4053	0.0018	0.0034	1.3 6.6	2268
4019454	133.3592	106.2198	0.0058	0.0106	4.6 1.4	2269

## POSITIONS ON THE DISK

10b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
3085743	0.0907	-75.2775	-0.05372	-0.87335	0.48413	2197
3088174	-1.9617	-69.1566	-0.08671	-0.81353	0.57502	2198
3090060	3.8993	-78.1395	-0.00597	-0.90048	0.43485	2199
3093012	1.6066	-78.3334	-0.03078	-0.90243	0.42973	2200
3093068	0.9782	-78.8712	-0.03647	-0.90751	0.41845	2201
3102487	-1.4317	3.5313	-0.12780	-0.04713	0.99068	2202
3102572	-1.4051	3.1279	-0.12749	-0.05156	0.99050	2203
3104301	-2.5660	4.9716	-0.14022	-0.03129	0.98963	2204
3104515	-2.6526	2.8259	-0.14105	-0.05485	0.98848	2205
3105564	-4.0212	2.8838	-0.15592	-0.05417	0.98628	2206
3110588	0.2533	-6.5731	-0.10815	-0.15753	0.98157	2207
3110591	0.1498	-6.0150	-0.10939	-0.15146	0.98239	2208
3110780	0.2800	-7.7319	-0.10763	-0.17012	0.97953	2209
3110991	0.1483	-9.6562	-0.10864	-0.19100	0.97556	2210
3111557	-0.3810	-6.5117	-0.11509	-0.15686	0.98089	2211
3111964	-0.5400	-9.9032	-0.11608	-0.19368	0.97417	2212
3112667	-1.3734	-7.4843	-0.12571	-0.16742	0.97784	2213
3116195	-5.2384	-2.6649	-0.16855	-0.11482	0.97898	2214
3121650	-0.5998	-16.0654	-0.11499	-0.26026	0.95867	2215
3122213	-1.0600	-12.6527	-0.12104	-0.22343	0.96717	2216
3123111	-1.9554	-11.5333	-0.13110	-0.21131	0.96859	2217
3125563	-4.3926	-15.3722	-0.15647	-0.25269	0.95481	2218
3129060	-7.8779	-10.5153	-0.19558	-0.19999	0.96008	2219
3130018	0.5798	-20.5478	-0.10052	-0.30845	0.94592	2220
3133358	-2.6621	-23.2816	-0.13472	-0.33770	0.93156	2221
3133789	-3.0776	-27.2184	-0.13743	-0.37970	0.91484	2222
3133822	-2.5534	-27.4068	-0.13164	-0.38173	0.91485	2223
3153439	-3.5709	-43.3014	-0.13273	-0.54942	0.82493	2224
3160663	-2.0312	-54.2528	-0.10624	-0.66297	0.74107	2225
3162495	-3.9234	-52.4808	-0.12857	-0.64467	0.75357	2226
3164362	-5.4623	-51.2294	-0.14646	-0.63168	0.76127	2227
3170517	-2.5487	-63.4698	-0.10121	-0.75673	0.64584	2228
3170631	-2.7812	-63.8979	-0.10317	-0.76103	0.64046	2229
3170730	-2.9132	-64.7514	-0.10346	-0.76960	0.63009	2230
3171575	-3.9420	-63.3305	-0.11653	-0.75527	0.64498	2231
3180018	-3.2157	-68.6531	-0.10113	-0.80849	0.57975	2232
4000393	11.0202	4.8051	0.00881	-0.03252	0.99943	2233
4000545	10.5312	2.7584	0.00352	-0.05505	0.99848	2234
4001202	11.1212	5.7523	0.00990	-0.02209	0.99971	2235
4001754	11.5578	1.0554	0.01501	-0.07360	0.99718	2236
4002083	12.7948	7.4394	0.02841	-0.00331	0.99959	2237
4003067	13.4596	7.0589	0.03579	-0.00741	0.99933	2238
4003377	13.5723	4.3822	0.03711	-0.03684	0.99863	2239
4003777	13.5455	0.6998	0.03707	-0.07723	0.99632	2240
4004094	14.6280	7.3674	0.04876	-0.00383	0.99880	2241
4004586	14.5644	2.6150	0.04823	-0.05609	0.99726	2242
4004882	14.4910	0.2408	0.04762	-0.08211	0.99548	2243
4004905	13.7979	-0.9015	0.04005	-0.09471	0.99470	2244
4005162	15.3152	6.6338	0.05641	-0.01181	0.99834	2245
4005338	14.9779	4.2416	0.05273	-0.03817	0.99788	2246
4005342	15.0722	4.7893	0.05375	-0.03214	0.99804	2247
4005745	15.0266	0.9170	0.05350	-0.07463	0.99577	2248
4005773	15.3636	1.1044	0.05723	-0.07252	0.99572	2249
4007659	16.9611	1.3728	0.07500	-0.06931	0.99477	2250
4007714	16.6374	0.9855	0.07143	-0.07361	0.99473	2251
4008874	18.0433	0.0432	0.08720	-0.08367	0.99267	2252
4010524	10.3302	-6.3046	0.00247	-0.15406	0.98806	2253
4011082	11.7961	-1.5619	0.01793	-0.10219	0.99460	2254
4011632	11.2251	-7.0667	0.01252	-0.16224	0.98667	2255
4012366	12.4834	-4.6922	0.02601	-0.13625	0.99033	2256
4012549	12.2430	-6.7479	0.02373	-0.15865	0.98705	2257
4013281	13.5869	-3.2971	0.03803	-0.12090	0.99194	2258
4015361	15.1778	-4.3025	0.05586	-0.13162	0.98973	2259
4015407	14.6555	-5.7354	0.05030	-0.14730	0.98781	2260
4015975	15.1743	-10.1584	0.05703	-0.19524	0.97910	2261
4016127	15.7492	-2.9977	0.06201	-0.11730	0.99116	2262
4016549	15.8252	-6.8453	0.06353	-0.15918	0.98520	2263
4016748	15.8447	-8.6379	0.06413	-0.17865	0.98182	2264
4017396	17.2670	-4.7649	0.07921	-0.13630	0.98750	2265
4017525	16.6135	-6.4381	0.07223	-0.15462	0.98533	2266
4017781	17.1307	-7.9788	0.07831	-0.17127	0.98211	2267
4017984	17.0765	-10.0426	0.07818	-0.19367	0.97795	2268
4019454	18.6792	-5.4917	0.09510	-0.14394	0.98501	2269

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4022257	129.3549	97.1190	0.0063	-0.0004	3.1 3.1	2270
4023150	129.7554	98.9211	0.0065	0.0015	6.2 6.9	2271
4024147	130.7103	98.5255	0.0051	-0.0001	4.4 4.3	2272
4024319	131.0023	96.4361	-0.0038	0.0027	2.7 4.7	2273
4024931	132.4078	91.8059	-0.0036	0.0010	2.9 1.3	2274
4027023	132.7704	100.3990	0.0071	0.0050	1.4 4.7	2275
4027274	133.7231	98.6290	0.0025	0.0017	2.5 4.7	2276
4028258	134.5640	98.4961	0.0043	0.0009	3.1 1.9	2277
4028634	135.2568	95.2243	0.0048	0.0048	9.9 3.0	2278
4029034	134.6201	100.8436	0.0064	0.0044	1.1 3.3	2279
4029769	136.6908	94.1576	0.0043	0.0005	9.9 2.8	2280
4030878	131.4897	82.1830	-0.0020	0.0077	5.6 3.1	2281
4030925	131.2219	81.4098	0.0003	0.0024	1.2 3.8	2282
4031069	130.4604	89.5132	-0.0022	0.0018	4.3 1.6	2283
4031674	131.8255	84.5615	0.0011	0.0053	1.2 5.1	2284
4032265	131.7239	88.3139	0.0054	0.0038	9.9 5.8	2285
4033039	131.9126	90.0046	-0.0027	0.0021	2.0 5.8	2286
4033325	132.4879	87.5795	0.0001	0.0092	4.1 9.9	2287
4033734	133.4282	84.1182	0.0012	0.0021	7.1 4.2	2288
4034114	132.7567	89.6948	0.0022	0.0045	3.2 6.8	2289
4034290	133.5903	89.3282	-0.0016	0.0033	1.1 1.1	2290
4035611	134.6977	85.7270	0.0067	0.0003	1.3 9.9	2291
4036321	134.9965	88.7052	0.0027	0.0047	2.3 9.9	2292
4037042	135.3706	91.5789	-0.0045	0.0035	4.5 1.4	2293
4037346	136.1408	88.5198	0.0031	0.0046	3.7 2.8	2294
4037834	137.1194	84.1151	0.0017	0.0001	9.9 8.6	2295
4038980	138.5740	83.9337	0.0092	0.0011	8.9 9.9	2296
4039636	138.4194	86.2374	0.0067	0.0064	9.9 9.9	2297
4039736	138.6910	85.3829	0.0054	0.0022	1.2 2.6	2298
4040006	131.3175	80.3164	0.0080	-0.0002	0.7 4.9	2299
4040106	131.5115	79.4930	0.0012	0.0112	5.9 2.6	2300
4040617	132.7537	74.7746	0.0054	0.0031	2.0 0.4	2301
4040823	133.1548	73.3379	-0.0002	0.0005	9.9 9.9	2302
4041138	132.6732	79.5256	0.0024	0.0034	2.7 5.5	2303
4041955	134.5878	72.5474	0.0021	-0.0012	2.5 4.5	2304
4042738	134.8674	74.2848	0.0070	-0.0009	9.9 9.9	2305
4043060	134.2748	81.7482	0.0012	0.0073	0.8 2.6	2306
4043153	134.5370	80.5748	0.0036	-0.0038	2.1 1.9	2307
4044215	135.2891	79.6196	0.0022	0.0006	2.0 5.9	2308
4046047	136.8512	81.8539	0.0033	0.0020	5.9 2.3	2309
4047339	138.3869	79.1408	0.0085	-0.0003	9.9 3.0	2310
4048108	138.4649	81.1192	-0.0001	0.0008	9.9 3.0	2311
4049184	139.9667	82.0521	0.0011	0.0041	4.7 7.8	2312
4049781	141.2016	76.7707	0.0048	-0.0066	6.8 3.8	2313
4050435	134.5841	67.6029	0.0001	0.0045	3.6 4.1	2314
4050473	134.8849	67.9106	-0.0022	-0.0015	1.1 1.6	2315
4050541	134.7610	66.9913	0.0067	0.0023	1.1 4.2	2316
4050993	136.0998	63.2224	-0.0053	-0.0042	0.8 1.0	2317
4051884	136.6907	64.2593	0.0083	0.0047	1.7 9.9	2318
4052851	137.1678	64.7574	0.0027	0.0031	1.9 1.3	2319
4053415	136.9906	68.2323	0.0023	0.0021	2.5 1.5	2320
4055379	139.1111	69.4824	0.0024	0.0024	3.6 2.3	2321
4056499	140.3427	68.7899	0.0031	-0.0001	0.9 1.2	2322
4056700	140.0322	66.6871	0.0015	-0.0001	4.3 7.3	2323
4057798	141.8428	66.3229	0.0004	0.0040	1.4 4.7	2324
4058333	141.2458	70.6226	0.0076	0.0015	3.4 9.9	2325
4058378	141.6972	70.3170	0.0046	0.0013	2.4 9.9	2326
4062731	138.7760	56.1173	0.0043	0.0035	5.8 5.4	2327
4062942	139.3005	54.1625	-0.0075	0.0053	9.9 3.0	2328
4063248	138.9273	60.4901	0.0046	0.0000	4.8 2.6	2329
4063998	140.7178	53.9948	0.0012	0.0019	0.6 0.6	2330
4065375	141.0138	60.3911	-0.0054	0.0019	0.7 4.4	2331
4066737	142.4097	56.5242	-0.0030	0.0093	1.2 0.6	2332
4067932	143.5264	55.3090	-0.0028	0.0048	1.9 0.2	2333
4068186	143.3191	62.9468	0.0088	0.0019	4.2 3.4	2334
4070103	137.6181	51.5097	0.0047	-0.0002	1.6 3.3	2335
4071334	139.0548	49.8131	0.0114	-0.0028	0.9 4.2	2336
4072017	139.2478	52.6648	0.0040	0.0010	3.4 2.1	2337
4072173	139.9496	52.1999	0.0035	-0.0040	0.9 1.1	2338
4072862	141.0316	45.4118	0.0117	0.0023	8.9 9.3	2339
4073188	140.9719	51.9766	0.0017	0.0045	3.4 1.6	2340
4073480	141.3469	49.8127	-0.0010	0.0016	3.0 1.1	2341
4074671	142.5166	47.9704	0.0111	-0.0027	3.4 1.3	2342

## POSITIONS ON THE DISK

11b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4022257	12.2502	-13.0846	0.02534	-0.22732	0.97349	2270
4023150	13.1469	-11.4693	0.03484	-0.20974	0.97714	2271
4024147	13.9501	-12.1209	0.04393	-0.21667	0.97526	2272
4024319	13.6356	-14.2091	0.04104	-0.23928	0.97008	2273
4024931	13.6661	-19.0527	0.04302	-0.29142	0.95563	2274
4027023	16.4586	-10.9098	0.07151	-0.20317	0.97653	2275
4027274	16.8686	-12.8797	0.07662	-0.22440	0.97148	2276
4028258	17.6372	-13.2467	0.08530	-0.22823	0.96986	2277
4028634	17.3707	-16.5838	0.08338	-0.26426	0.96084	2278
4029034	18.3588	-11.0100	0.09274	-0.20390	0.97459	2279
4029769	18.4423	-18.0158	0.09585	-0.27946	0.95536	2280
4030878	10.0480	-28.0257	0.00688	-0.38781	0.92172	2281
4030925	9.5712	-28.6914	0.00195	-0.39494	0.91871	2282
4031069	11.1464	-20.6982	0.01572	-0.30941	0.95080	2283
4031674	11.0467	-25.8388	0.01685	-0.36440	0.93109	2284
4032265	12.0168	-22.2090	0.02598	-0.32549	0.94519	2285
4033039	12.6788	-20.6403	0.03268	-0.30859	0.95063	2286
4033325	12.5405	-23.1313	0.03218	-0.33529	0.94157	2287
4033734	12.4575	-26.7207	0.03291	-0.37362	0.92700	2288
4034114	13.4001	-21.1780	0.04090	-0.31426	0.94846	2289
4034290	14.0952	-21.7672	0.04886	-0.32047	0.94600	2290
4035611	14.1326	-25.5384	0.05095	-0.36077	0.93126	2291
4036321	15.2664	-22.7656	0.06231	-0.33097	0.94158	2292
4037042	16.4427	-20.1144	0.07432	-0.30237	0.95029	2293
4037346	16.3110	-23.2694	0.07416	-0.33618	0.93887	2294
4037834	15.9963	-27.7750	0.07279	-0.38430	0.92033	2295
4038980	17.3395	-28.3634	0.08808	-0.39031	0.91646	2296
4039636	17.8467	-26.1086	0.09261	-0.36621	0.92591	2297
4039736	17.8640	-27.0060	0.09325	-0.37577	0.92201	2298
4040006	9.3518	-29.7679	0.00009	-0.40640	0.91369	2299
4040106	9.3036	-30.6133	0.00002	-0.41538	0.90965	2300
4040617	9.1524	-35.4950	0.00123	-0.46705	0.88423	2301
4040823	9.1283	-36.9879	0.00193	-0.48279	0.87573	2302
4041138	10.4269	-30.9129	0.01260	-0.41844	0.90816	2303
4041955	10.2776	-38.1547	0.01542	-0.49494	0.86879	2304
4042738	11.0400	-36.5670	0.02281	-0.47814	0.87799	2305
4043060	12.5951	-29.2362	0.03572	-0.40037	0.91566	2306
4043153	12.5127	-30.4369	0.03545	-0.41313	0.90998	2307
4044215	12.9621	-31.5677	0.04108	-0.42506	0.90423	2308
4046047	15.0958	-29.8685	0.06386	-0.40671	0.91132	2309
4047339	15.7965	-32.9095	0.07340	-0.43881	0.89557	2310
4048108	16.4342	-31.0332	0.07942	-0.41883	0.90458	2311
4049184	18.1397	-30.5657	0.09821	-0.41355	0.90517	2312
4049781	17.8214	-35.9856	0.09793	-0.47091	0.87673	2313
4050435	8.8673	-42.8985	0.00326	-0.54483	0.83854	2314
4050473	9.2433	-42.6889	0.00726	-0.54260	0.83996	2315
4050541	8.8630	-43.5358	0.00371	-0.55149	0.83417	2316
4050993	9.0746	-47.5339	0.00935	-0.59310	0.80507	2317
4051884	9.9362	-46.7071	0.01818	-0.58442	0.81125	2318
4052851	10.5354	-46.3650	0.02453	-0.58079	0.81369	2319
4053415	11.3541	-42.9799	0.03086	-0.54539	0.83761	2320
4055379	13.7432	-42.3843	0.05696	-0.53882	0.84049	2321
4056499	14.7272	-43.3996	0.06871	-0.54927	0.83282	2322
4056700	13.8312	-45.3291	0.06029	-0.56953	0.81976	2323
4057798	15.4639	-46.1943	0.07922	-0.57825	0.81200	2324
4058333	16.1146	-41.8981	0.08303	-0.53333	0.84183	2325
4058378	16.4606	-42.3199	0.08722	-0.53767	0.83863	2326
4062731	9.6195	-55.1144	0.02266	-0.67125	0.74088	2327
4062942	9.5663	-57.1397	0.02427	-0.69197	0.72152	2328
4063248	11.0086	-50.9612	0.03390	-0.62835	0.77719	2329
4063998	10.8777	-57.7043	0.03947	-0.69756	0.71544	2330
4065375	12.9813	-51.6505	0.05651	-0.63517	0.77030	2331
4066737	13.2198	-55.7589	0.06339	-0.67732	0.73295	2332
4067932	13.9449	-57.2431	0.07313	-0.69235	0.71784	2333
4068186	15.9191	-49.8545	0.08758	-0.61611	0.78278	2334
4070103	7.1983	-59.2062	0.00041	-0.71329	0.70087	2335
4071334	8.0933	-61.2435	0.01277	-0.73386	0.67918	2336
4072017	9.0897	-58.5619	0.02060	-0.70653	0.70739	2337
4072173	9.6304	-59.2079	0.02735	-0.71303	0.70060	2338
4072862	8.7368	-66.0302	0.02629	-0.78191	0.62284	2339
4073188	10.5472	-59.7134	0.03814	-0.71804	0.69496	2340
4073480	10.2912	-61.8967	0.03799	-0.74018	0.67133	2341
4074671	10.8887	-63.9978	0.04739	-0.76125	0.64673	2342

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4075884	143.8339	46.0075	0.0053	0.0024	5.2 7.1	2343
4077548	144.7657	48.8871	0.0066	0.0004	3.0 6.4	2344
4078380	145.4800	52.0245	0.0025	-0.0001	7.1 3.3	2345
4078735	145.7714	47.4702	0.0003	0.0030	9.9 4.7	2346
4079581	146.6559	50.2050	-0.0056	0.0105	0.6 1.1	2347
4080587	140.5367	37.3470	0.0067	0.0036	4.3 9.9	2348
4080768	140.6331	35.0716	0.0084	-0.0120	2.7 1.8	2349
4082568	142.1338	37.7029	0.0044	0.0035	2.5 2.1	2350
4084043	142.9376	43.7315	0.0047	0.0013	2.6 3.0	2351
4084447	143.4653	39.8122	-0.0016	0.0037	1.5 0.5	2352
4086438	145.1890	39.6322	-0.0013	-0.0030	1.5 0.7	2353
4087404	145.6941	40.1718	0.0096	-0.0021	3.4 1.2	2354
4087466	146.2378	40.1688	0.0037	0.0000	1.9 9.9	2355
4087565	146.3486	39.2393	-0.0026	0.0023	8.1 4.0	2356
4088066	146.5466	44.4367	0.0002	-0.0051	2.1 1.6	2357
4088543	147.0077	39.5573	0.0043	0.0009	5.8 1.3	2358
4089054	147.2711	44.8299	0.0005	-0.0073	9.9 7.0	2359
4089777	148.4171	37.9751	0.0047	-0.0017	0.9 1.8	2360
4089823	148.0844	36.6117	-0.0086	-0.0097	0.7 0.8	2361
4089830	148.1022	36.9761	0.0076	-0.0053	0.7 1.1	2362
4089830	148.0937	36.9662	0.0011	-0.0077	8.3 2.2	2363
4091371	142.0586	29.7120	-0.0046	0.0081	1.0 1.4	2364
4091816	141.4116	22.7817	-0.0036	-0.0058	0.5 1.4	2365
4092386	143.0204	29.3714	0.0029	0.0003	0.6 1.4	2366
4092795	143.2235	24.7089	0.0051	0.0101	0.4 0.8	2367
4094628	144.3048	25.8626	-0.0084	-0.0074	4.7 1.9	2368
4094897	144.6637	23.4524	0.0017	-0.0031	0.8 1.2	2369
4096219	145.8841	30.9101	0.0077	0.0107	1.4 1.6	2370
4097891	147.3822	25.0563	-0.0111	0.0007	0.4 0.3	2371
4098278	148.0301	31.6773	0.0066	0.0075	2.4 1.0	2372
4098992	147.7632	23.4210	0.0106	0.0095	2.6 1.3	2373
4099163	148.6971	33.5039	-0.0002	-0.0005	3.2 3.6	2374
4099807	148.0692	24.2148	-0.0111	0.0050	0.2 0.3	2375
4099972	148.3792	23.4885	-0.0009	0.0069	0.2 6.3	2376
4100041	130.5399	118.9200	0.0036	0.0010	1.5 4.3	2377
4100276	131.4683	116.8308	0.0051	-0.0009	9.9 3.9	2378
4100847	132.7144	111.4367	0.0064	-0.0028	2.2 2.8	2379
4102237	132.8314	117.1429	0.0004	0.0004	5.1 2.4	2380
4102396	133.5663	116.4908	0.0042	0.0042	1.7 4.6	2381
4102520	133.3081	115.1642	-0.0006	0.0048	0.7 4.4	2382
4102897	134.8585	112.0503	-0.0057	0.0028	7.3 0.9	2383
4103720	134.7645	113.5868	0.0036	0.0007	9.9 3.9	2384
4105095	135.3403	119.9032	0.0093	0.0029	9.9 1.7	2385
4105995	137.6371	112.0629	0.0088	0.0009	0.8 3.6	2386
4106149	136.0913	118.8297	0.0001	0.0039	7.7 2.3	2387
4107401	137.1716	117.0245	0.0054	0.0038	2.6 8.1	2388
4107618	137.9524	114.6927	0.0047	0.0048	2.0 2.5	2389
4107761	138.5160	114.5117	0.0061	0.0060	9.9 9.6	2390
4108438	138.4717	116.7214	0.0097	0.0048	3.5 4.7	2391
4109229	138.7825	118.5346	0.0032	0.0044	3.6 9.9	2392
4109440	139.2502	117.6813	-0.0029	0.0012	3.1 6.8	2393
4110383	134.2121	107.5242	0.0061	0.0022	2.0 6.2	2394
4111741	135.6829	104.2695	0.0062	-0.0050	2.4 1.1	2395
4111992	136.6053	102.5227	0.0038	-0.0015	9.9 9.9	2396
4112591	136.4074	106.4086	0.0009	0.0014	0.6 9.6	2397
4113812	137.4177	103.7166	0.0079	0.0011	2.9 4.4	2398
4113936	137.8698	102.5067	0.0029	0.0027	9.3 7.5	2399
4114035	136.5289	110.8294	0.0109	-0.0005	6.5 5.1	2400
4114228	137.0220	108.7048	0.0002	0.0063	2.9 0.4	2401
4115169	137.9595	109.8685	-0.0021	0.0023	2.6 2.3	2402
4115468	138.7202	107.2937	-0.0026	0.0022	9.9 4.1	2403
4115787	139.5892	104.7244	0.0027	-0.0002	3.4 9.9	2404
4115879	139.8240	103.6630	0.0039	0.0007	3.2 9.9	2405
4119155	141.2664	111.0835	0.0045	0.0044	3.0 4.5	2406
4119371	141.7641	109.7711	0.0063	0.0026	2.2 9.9	2407
4119414	141.5889	108.4125	-0.0007	0.0082	3.2 1.2	2408
4119516	141.9320	107.3848	-0.0014	0.0046	5.0 9.9	2409
4120089	136.0542	100.7552	-0.0037	0.0025	3.3 3.3	2410
4120204	135.7627	99.2457	-0.0016	-0.0005	6.9 8.7	2411
4120330	136.1542	98.7461	0.0011	0.0024	2.8 4.2	2412
4120412	136.2099	97.6206	0.0022	0.0041	2.8 8.9	2413
4120888	137.9389	93.6598	0.0066	0.0015	2.1 6.5	2414
4121834	138.2878	94.1581	-0.0047	0.0025	1.9 3.0	2415

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4075884	11.5935	-66.2566	0.05842	-0.78374	0.61834	2343
4077548	13.3063	-63.7587	0.07406	-0.75843	0.64754	2344
4078380	14.8838	-60.9514	0.08806	-0.72983	0.67793	2345
4078735	13.8676	-65.4048	0.08263	-0.77480	0.62678	2346
4079581	15.4938	-63.0324	0.09760	-0.75068	0.65342	2347
4080587	5.9677	-73.6284	0.00785	-0.85710	0.51509	2348
4080768	5.4128	-75.8394	0.00594	-0.87848	0.47775	2349
4082568	7.6005	-73.7418	0.02617	-0.85801	0.51297	2350
4084043	10.0865	-68.1855	0.04449	-0.80316	0.59410	2351
4084442	9.4775	-72.0969	0.04411	-0.84174	0.53808	2352
4086438	11.0792	-72.7605	0.06317	-0.84793	0.52633	2353
4087404	11.7171	-72.3866	0.06965	-0.84417	0.53154	2354
4087466	12.2376	-72.5443	0.07576	-0.84560	0.52842	2355
4087565	12.0794	-73.4679	0.07568	-0.85459	0.51375	2356
4088066	13.7479	-68.5367	0.08598	-0.80596	0.58569	2357
4088543	12.8019	-73.3504	0.08357	-0.85330	0.51468	2358
4089054	14.5545	-68.3657	0.09477	-0.80409	0.58690	2359
4089772	13.7033	-75.2702	0.09744	-0.87157	0.48049	2360
4089823	12.9964	-76.4838	0.09198	-0.88332	0.45966	2361
4089830	13.1061	-76.1462	0.09251	-0.88008	0.46572	2362
4089830	13.1171	-76.1391	0.09262	-0.88001	0.46583	2363
4091371	5.2550	-81.3887	0.01687	-0.93053	0.36582	2364
4091816	2.6629	-87.8549	0.01065	-0.98590	0.16701	2365
4092386	6.0804	-81.9895	0.02767	-0.93588	0.35122	2366
4092795	4.9487	-86.5216	0.03009	-0.97521	0.21921	2367
4094628	6.3138	-85.7224	0.04222	-0.96842	0.24572	2368
4094897	5.9723	-88.1376	0.04920	-0.98735	0.15073	2369
4096219	9.2643	-81.3285	0.06149	-0.92932	0.36412	2370
4097891	9.0355	-87.3727	0.08010	-0.98080	0.17779	2371
4098278	11.5405	-81.2035	0.08681	-0.92764	0.36326	2372
4098992	8.9356	-89.0505	0.08910	-0.99206	0.08877	2373
4099163	12.6997	-79.6406	0.09587	-0.91300	0.39654	2374
4099807	9.4549	-88.3759	0.09047	-0.98772	0.12740	2375
4099972	9.5455	-89.1612	0.09718	-0.99227	0.07717	2376
4100041	19.5889	7.4988	0.10407	-0.00148	0.99457	2377
4100276	19.8848	5.2295	0.10742	-0.02641	0.99386	2378
4100847	19.5451	-0.3017	0.10402	-0.08714	0.99075	2379
4102237	21.2807	5.1408	0.12306	-0.02707	0.99203	2380
4102396	21.7999	4.3057	0.12892	-0.03613	0.99100	2381
4102520	21.1749	3.1062	0.12197	-0.04945	0.99130	2382
4102897	21.7757	-0.3236	0.12901	-0.08689	0.98783	2383
4103720	22.1227	1.1777	0.13275	-0.07038	0.98865	2384
4105095	24.4719	7.0751	0.15888	-0.00500	0.98729	2385
4105995	24.4439	-1.1029	0.15908	-0.09475	0.98271	2386
4106149	24.8867	5.8310	0.16357	-0.01859	0.98636	2387
4107401	25.4090	3.7910	0.16953	-0.04087	0.98468	2388
4107618	25.4944	1.3310	0.17067	-0.06784	0.98299	2389
4107761	25.9834	0.9967	0.17621	-0.07136	0.98176	2390
4108438	26.5695	3.1299	0.18267	-0.04780	0.98201	2391
4109229	27.3834	4.7813	0.19178	-0.02942	0.98100	2392
4109440	27.5892	3.8293	0.19415	-0.03982	0.98016	2393
4110383	19.8682	-4.4829	0.10821	-0.13272	0.98523	2394
4111741	20.3527	-8.0251	0.11432	-0.17113	0.97859	2395
4111992	20.7402	-9.9641	0.11912	-0.19208	0.97412	2396
4112591	21.6560	-6.1787	0.12855	-0.15078	0.98017	2397
4113812	21.8589	-9.0498	0.13144	-0.18192	0.97449	2398
4113936	21.9483	-10.3396	0.13276	-0.19587	0.97160	2399
4114035	23.0302	-1.9709	0.14329	-0.10460	0.98414	2400
4114228	22.8986	-4.1502	0.14214	-0.12840	0.98148	2401
4115169	24.1287	-3.3005	0.15584	-0.11883	0.98061	2402
4115468	24.1256	-5.9880	0.15626	-0.14810	0.97655	2403
4115787	24.2280	-8.7011	0.15799	-0.17755	0.97135	2404
4115879	24.1512	-9.7866	0.15738	-0.18934	0.96922	2405
4119155	27.6455	-3.0764	0.19548	-0.11540	0.97389	2406
4119371	27.7494	-4.4776	0.19688	-0.13065	0.97168	2407
4119414	27.1949	-5.7315	0.19084	-0.14446	0.97093	2408
4119516	27.2315	-6.8154	0.19146	-0.15624	0.96898	2409
4120089	19.7089	-11.5033	0.10796	-0.20897	0.97194	2410
4120204	18.9999	-12.8688	0.10041	-0.22388	0.96943	2411
4120330	19.2332	-13.4597	0.10319	-0.23021	0.96765	2412
4120412	18.9664	-14.5557	0.10054	-0.24210	0.96503	2413
4120888	19.4976	-18.8490	0.10796	-0.28820	0.95147	2414
4121834	19.9739	-18.4702	0.11315	-0.28403	0.95212	2415

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4122366	138.2165	98.7466	0.0034	0.0058	3.6 4.4	2416
4122486	138.6829	97.9036	0.0075	0.0016	8.6 9.9	2417
4122624	138.5517	96.1421	-0.0003	-0.0020	2.4 1.4	2418
4122982	139.7605	93.7578	-0.0093	0.0002	4.1 1.2	2419
4124633	140.3300	96.7488	0.0044	0.0002	1.9 9.0	2420
4124703	140.3771	95.7626	0.0020	0.0044	4.1 4.0	2421
4124808	140.6574	94.4553	0.0080	0.0064	1.4 2.6	2422
4125027	139.8275	101.9636	-0.0034	0.0086	3.9 3.3	2423
4125966	142.2867	94.0690	0.0080	-0.0013	3.6 4.3	2424
4126502	141.5503	98.1094	0.0064	0.0020	3.1 3.3	2425
4126697	142.6389	97.0017	0.0046	0.0057	4.1 2.0	2426
4126898	143.1603	95.1211	0.0033	0.0048	2.6 4.5	2427
4127892	143.9416	95.8695	-0.0028	0.0042	2.6 4.0	2428
4128136	142.6414	101.8575	0.0041	0.0054	1.3 6.1	2429
4128897	144.8163	95.6573	0.0093	0.0019	7.5 9.9	2430
4129421	144.0204	99.8895	0.0093	0.0034	5.6 3.4	2431
4129646	144.7873	97.5792	-0.0025	-0.0006	2.2 8.5	2432
4130216	138.1710	90.1092	0.0039	0.0002	9.9 9.9	2433
4131927	140.7989	83.9255	0.0061	0.0038	4.8 1.0	2434
4132112	139.5652	91.8443	0.0052	0.0005	3.1 8.7	2435
4132449	140.6902	88.5342	0.0001	0.0033	2.8 4.4	2436
4132810	141.1805	85.6726	0.0034	0.0035	1.9 3.4	2437
4132924	141.5709	84.4384	-0.0034	0.0031	8.7 2.1	2438
4133871	142.5926	85.9301	0.0089	0.0006	3.1 9.9	2439
4133966	142.8170	84.5258	0.0117	0.0011	4.1 6.3	2440
4134355	142.1645	90.3094	0.0004	-0.0035	9.6 2.4	2441
4135412	142.8369	89.8421	0.0070	-0.0007	2.1 5.1	2442
4135975	144.5543	85.1578	0.0049	-0.0014	3.0 3.0	2443
4136229	143.5507	91.2193	0.0010	0.0061	2.1 9.9	2444
4136274	143.8238	91.8430	0.0049	-0.0004	3.6 4.2	2445
4136545	144.2802	88.9613	-0.0029	0.0011	2.8 0.6	2446
4136687	144.8736	87.9425	-0.0006	0.0036	1.9 2.1	2447
4137052	144.0207	93.9511	0.0034	0.0013	2.5 3.5	2448
4137093	144.3832	93.9943	0.0017	-0.0064	9.9 9.5	2449
4137450	144.8826	90.5424	0.0013	0.0025	7.1 2.5	2450
4137703	145.2304	87.4528	0.0057	-0.0012	2.9 5.3	2451
4138082	145.1498	94.3178	0.0003	0.0039	4.1 4.7	2452
4138500	145.4912	89.7459	0.0020	-0.0020	3.9 3.4	2453
4139249	146.3066	91.9607	0.0036	-0.0027	0.9 1.3	2454
4139819	147.3805	86.4499	0.0059	0.0034	4.5 5.0	2455
4140023	140.0825	83.1334	0.0060	0.0017	1.0 1.1	2456
4140784	142.1305	76.7207	0.0036	0.0025	9.9 8.0	2457
4140934	142.1377	74.7763	0.0050	0.0014	3.3 4.4	2458
4141781	142.9073	77.2589	0.0004	-0.0025	4.3 8.6	2459
4143433	143.6475	80.1692	0.0042	0.0023	5.6 3.3	2460
4143599	144.5053	78.7760	0.0025	0.0090	3.3 2.0	2461
4144181	144.1352	83.4895	0.0028	-0.0026	4.4 2.9	2462
4145812	146.0148	76.9498	0.0039	-0.0017	9.9 5.8	2463
4145973	146.7547	76.0684	0.0019	0.0007	9.9 6.1	2464
4146138	145.5977	83.1249	0.0061	-0.0026	1.2 1.8	2465
4146256	145.9877	82.4399	0.0072	0.0011	4.1 4.6	2466
4146856	147.2715	76.9219	0.0062	-0.0004	3.6 9.9	2467
4147176	146.8034	83.7113	-0.0007	0.0013	9.9 9.9	2468
4147564	147.5518	80.1676	0.0091	-0.0034	2.4 6.8	2469
4147929	148.1641	75.8559	0.0003	-0.0003	2.2 1.5	2470
4148193	147.7275	84.2481	-0.0042	-0.0009	1.8 2.9	2471
4148865	149.0414	77.5045	0.0028	0.0019	9.9 1.5	2472
4148914	148.7858	76.5663	0.0041	0.0000	5.2 1.7	2473
4149384	148.9596	82.4813	-0.0016	0.0048	1.8 1.8	2474
4150130	142.4858	73.2711	0.0062	-0.0026	1.6 1.9	2475
4150367	143.2723	70.8052	0.0056	0.0003	1.5 9.9	2476
4150406	142.9693	69.8107	-0.0013	0.0001	2.5 2.5	2477
4152078	144.5031	74.0175	0.0072	-0.0012	3.0 9.9	2478
4152471	145.1765	70.8982	0.0036	-0.0022	4.0 1.6	2479
4153218	145.2297	72.2594	-0.0003	-0.0019	1.6 2.3	2480
4153437	145.8582	70.5322	0.0037	0.0048	2.0 4.8	2481
4153556	146.1764	69.7296	0.0023	0.0014	1.6 4.3	2482
4153703	146.1460	67.9793	-0.0005	-0.0013	4.2 3.1	2483
4153955	146.9511	66.0445	-0.0068	-0.0055	1.7 0.8	2484
4154400	146.3050	71.3638	-0.0046	0.0007	1.7 0.9	2485
4154855	147.6585	67.2714	-0.0008	-0.0030	1.6 1.7	2486
4156977	149.7659	66.5968	-0.0002	-0.0061	1.8 0.9	2487
4159071	150.2998	76.2720	-0.0044	0.0010	0.9 3.0	2488

## POSITIONS ON THE DISK

13b

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4122366	21.2110	-14.0466	0.12552	-0.23612	0.96358	2416
4122486	21.4184	-14.9884	0.12814	-0.24624	0.96070	2417
4122624	20.7914	-16.6415	0.12166	-0.26419	0.95677	2418
4122982	21.2723	-19.2738	0.12800	-0.29237	0.94770	2419
4124633	22.6693	-16.5657	0.14271	-0.26293	0.95420	2420
4124703	22.4339	-17.5256	0.14040	-0.27332	0.95162	2421
4124808	22.3308	-18.8599	0.13973	-0.28768	0.94748	2422
4125027	23.6711	-11.4183	0.15240	-0.20713	0.96637	2423
4125966	23.7833	-19.6947	0.15639	-0.29628	0.94221	2424
4126502	24.2266	-15.6076	0.15991	-0.25222	0.95437	2425
4126697	24.9554	-16.9807	0.16859	-0.26681	0.94889	2426
4126898	24.9204	-18.9339	0.16891	-0.28781	0.94268	2427
4127892	25.8825	-18.4382	0.17958	-0.28222	0.94239	2428
4128136	26.3393	-12.3216	0.18272	-0.21618	0.95910	2429
4128897	26.6609	-18.8910	0.18854	-0.28686	0.93924	2430
4129421	27.1018	-14.6029	0.19203	-0.24059	0.95144	2431
4129646	27.1799	-17.0384	0.19373	-0.26680	0.94408	2432
4130216	18.7100	-22.3224	0.10054	-0.32560	0.94015	2433
4131927	19.4708	-29.0049	0.11226	-0.39670	0.91106	2434
4132112	20.5406	-21.0544	0.12050	-0.31164	0.94253	2435
4132449	20.6777	-24.5513	0.12357	-0.34901	0.92894	2436
4132810	20.3337	-27.4370	0.12111	-0.37984	0.91709	2437
4132924	20.3570	-28.7326	0.12205	-0.39361	0.91114	2438
4133871	21.7611	-27.5921	0.13722	-0.38116	0.91427	2439
4133966	21.5768	-29.0037	0.13589	-0.39621	0.90805	2440
4134355	22.5965	-23.2677	0.14453	-0.33484	0.93112	2441
4135412	23.1084	-23.9076	0.15058	-0.34155	0.92772	2442
4135975	23.4226	-28.8920	0.15659	-0.39456	0.90543	2443
4136229	24.1847	-22.7893	0.16220	-0.32932	0.93018	2444
4136274	24.6240	-22.2686	0.16692	-0.32363	0.93134	2445
4136545	24.2418	-25.1640	0.16393	-0.35466	0.92051	2446
4136687	24.5210	-26.3106	0.16764	-0.36681	0.91507	2447
4137052	25.4126	-20.3017	0.17500	-0.30235	0.93700	2448
4137093	25.7725	-20.3635	0.17908	-0.30291	0.93604	2449
4137450	25.2693	-23.8183	0.17489	-0.34002	0.92401	2450
4137703	24.7238	-26.8822	0.17022	-0.37284	0.91215	2451
4138082	26.5996	-20.2714	0.18839	-0.30168	0.93461	2452
4138500	25.6263	-24.7559	0.17936	-0.34993	0.91945	2453
4139249	27.0383	-22.8628	0.19446	-0.32930	0.92399	2454
4139819	26.5003	-28.4570	0.19111	-0.38908	0.90116	2455
4140023	18.5584	-29.5610	0.10234	-0.40280	0.90955	2456
4140784	18.6979	-36.2981	0.10795	-0.47403	0.87387	2457
4140934	18.1516	-38.1661	0.10309	-0.49379	0.86345	2458
4141781	19.5959	-36.0029	0.11782	-0.47072	0.87438	2459
4143433	21.1337	-33.4209	0.13345	-0.44312	0.88647	2460
4143599	21.5599	-35.0022	0.13923	-0.45971	0.87709	2461
4144181	22.5460	-30.3736	0.14754	-0.41051	0.89984	2462
4145812	22.4879	-37.1846	0.15112	-0.48246	0.86278	2463
4145973	22.9467	-38.2412	0.15703	-0.49345	0.85548	2464
4146138	23.8448	-31.1400	0.16261	-0.41830	0.89364	2465
4146256	24.0239	-31.9084	0.16508	-0.42639	0.88935	2466
4146856	23.6851	-37.5693	0.16489	-0.48619	0.85816	2467
4147176	25.1678	-30.9207	0.17741	-0.41561	0.89207	2468
4147564	24.8773	-34.5345	0.17633	-0.45390	0.87343	2469
4147929	24.2378	-38.8465	0.17203	-0.49945	0.84909	2470
4148193	26.2067	-30.6687	0.18902	-0.41264	0.89107	2471
4148865	25.5481	-37.5143	0.18591	-0.48508	0.85448	2472
4148914	25.0361	-38.3419	0.18070	-0.49392	0.85052	2473
4149384	26.8855	-32.7152	0.19792	-0.43409	0.87886	2474
4150130	18.0572	-39.7097	0.10313	-0.51002	0.85396	2475
4150367	18.1099	-42.3001	0.10566	-0.53713	0.83686	2476
4150406	17.5364	-43.1681	0.09992	-0.54632	0.83160	2477
4152078	20.2041	-39.5680	0.12711	-0.50806	0.85189	2478
4152471	19.9624	-42.7532	0.12680	-0.54145	0.83112	2479
4153218	20.4006	-41.4621	0.13072	-0.52785	0.83922	2480
4153437	20.5119	-43.2985	0.13341	-0.54701	0.82643	2481
4153556	20.5887	-44.1594	0.13497	-0.55597	0.82017	2482
4153703	20.0616	-45.8304	0.13044	-0.57348	0.80876	2483
4153955	20.2832	-47.9164	0.13477	-0.59508	0.79229	2484
4154400	21.1770	-42.6278	0.14036	-0.53984	0.82998	2485
4154855	21.3106	-46.9405	0.14548	-0.58470	0.79810	2486
4156977	23.1396	-48.1881	0.16726	-0.59712	0.78452	2487
4159071	26.4042	-39.0555	0.19671	-0.50099	0.84280	2488

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4160398	145.5971	61.3896	0.0085	0.0005	8.2 9.9	2489
4162911	147.6305	56.5533	0.0000	-0.0029	2.6 1.0	2490
4163728	148.3195	58.1109	0.0026	-0.0044	2.9 3.9	2491
4164265	148.4972	63.5137	0.0020	-0.0024	2.2 5.3	2492
4165018	148.5944	65.1892	-0.0008	0.0026	1.8 2.1	2493
4165466	149.7355	61.6537	0.0009	0.0052	0.6 0.8	2494
4167264	151.0461	64.2183	0.0012	0.0014	4.8 1.2	2495
4167775	152.1103	59.3996	-0.0006	-0.0019	1.0 2.9	2496
4168051	151.3206	66.6424	-0.0004	0.0034	1.8 1.8	2497
4168659	152.6274	60.1430	0.0062	-0.0022	1.1 9.9	2498
4171354	147.8147	52.2666	-0.0001	0.0043	2.3 1.8	2499
4173397	149.9788	52.5227	0.0025	0.0032	1.2 9.9	2500
4173615	149.7783	49.5533	-0.0011	0.0060	9.9 0.5	2501
4173680	150.2510	50.1114	0.0055	0.0008	3.2 7.3	2502
4173971	150.6172	47.0548	0.0033	-0.0085	1.7 0.4	2503
4174893	151.5165	48.0894	-0.0054	-0.0085	0.7 2.6	2504
4175454	151.3978	52.2091	-0.0002	0.0005	0.4 0.8	2505
4175966	152.3639	46.9992	0.0076	-0.0003	3.6 2.5	2506
4176037	151.5177	55.9391	0.0098	-0.0033	2.0 4.1	2507
4176252	151.8974	54.5632	0.0051	0.0004	3.2 1.5	2508
4176365	152.1847	53.3322	0.0041	-0.0126	0.7 1.4	2509
4176753	152.7590	49.5112	0.0073	0.0046	4.7 0.8	2510
4177844	153.7036	48.6315	0.0005	-0.0023	1.5 2.4	2511
4178615	154.0061	50.7134	0.0011	-0.0005	2.9 9.9	2512
4178670	154.3738	51.3480	0.0012	0.0011	1.9 1.6	2513
4179062	154.1818	57.2337	0.0014	0.0007	2.1 4.1	2514
4179587	155.3295	51.8168	0.0062	0.0037	2.0 7.3	2515
4180257	148.4846	42.7770	0.0052	0.0025	1.2 1.7	2516
4180259	148.4982	42.5115	0.0021	-0.0040	1.4 2.7	2517
4180337	148.4285	41.7190	0.0002	-0.0054	0.9 0.7	2518
4180568	148.9498	39.5773	0.0078	-0.0027	1.7 4.1	2519
4180894	149.5154	36.8689	-0.0006	0.0002	2.3 8.7	2520
4181022	148.7446	45.4616	0.0039	-0.0001	5.8 3.4	2521
4181212	148.9251	43.3483	0.0022	-0.0018	5.8 5.1	2522
4182098	150.2829	45.1874	0.0063	0.0002	3.5 4.1	2523
4182479	150.6384	40.9385	0.0023	-0.0053	0.7 1.5	2524
4182620	150.3444	39.7468	0.0049	-0.0011	9.9 6.7	2525
4183266	151.1345	43.5017	0.0018	0.0005	4.3 2.0	2526
4183402	150.7794	41.7802	-0.0024	-0.0040	1.0 0.5	2527
4183483	151.4818	41.8082	0.0037	-0.0076	2.3 2.8	2528
4184113	151.2773	44.9099	0.0029	-0.0012	0.8 0.7	2529
4184612	151.9792	39.9499	-0.0001	-0.0037	2.9 2.0	2530
4185213	152.3044	44.2091	0.0012	-0.0050	1.0 0.9	2531
4185769	153.4700	38.4664	0.0065	0.0017	1.3 3.4	2532
4185963	153.5679	37.0220	-0.0012	-0.0021	1.3 2.9	2533
4186483	154.0409	42.5203	0.0049	-0.0008	4.0 2.9	2534
4186523	153.7003	41.3495	-0.0022	0.0023	1.2 1.0	2535
4186549	153.9262	40.7559	-0.0030	0.0002	1.7 0.9	2536
4187123	153.9634	45.6885	0.0018	-0.0010	1.1 0.8	2537
4187603	154.4469	40.4206	0.0016	-0.0011	1.9 4.5	2538
4187617	154.6207	40.0646	0.0060	0.0009	1.1 1.1	2539
4187924	154.9792	37.1783	0.0065	0.0006	1.2 1.4	2540
4189456	156.3592	42.7842	0.0046	0.0016	2.5 1.1	2541
4189618	156.2379	40.4280	0.0058	0.0028	0.7 4.2	2542
4189891	157.0396	39.1308	-0.0036	-0.0024	0.9 1.3	2543
4190093	149.7574	34.9335	0.0085	-0.0010	1.8 1.4	2544
4192073	151.2172	35.3269	0.0104	0.0012	3.0 2.9	2545
4192200	150.8266	33.3260	0.0003	0.0024	1.2 2.2	2546
4193418	151.8517	30.3129	0.0061	0.0024	6.6 5.0	2547
4193600	151.7301	28.8470	0.0102	-0.0043	2.5 4.3	2548
4193706	151.5376	26.6925	0.0071	-0.0027	1.9 1.3	2549
4194545	152.9151	29.5887	-0.0058	-0.0014	0.2 0.2	2550
4194677	153.0480	28.1631	0.0084	0.0027	1.6 8.9	2551
4194816	152.1303	25.3001	-0.0010	0.0008	1.8 2.8	2552
4194829	151.8740	24.5132	0.0133	0.0093	0.1 1.2	2553
4196106	154.0981	34.5560	-0.0023	-0.0025	6.3 2.3	2554
4197096	155.6495	36.1054	0.0052	-0.0043	2.7 3.0	2555
4198409	155.8549	31.1111	0.0032	0.0048	0.2 0.2	2556
4198674	156.2815	29.3414	0.0066	0.0082	1.6 2.1	2557
4201629	141.5674	115.5048	-0.0005	0.0043	2.0 3.4	2558
4205214	143.6646	120.3147	0.0060	0.0053	4.4 2.2	2559
4205431	144.2840	118.9227	-0.0039	0.0000	4.0 7.7	2560
4205948	145.8020	113.9454	-0.0008	0.0021	9.9 4.9	2561

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4160398	17.6605	-51.9977	0.10917	-0.63785	0.76239	2489
4162911	18.2345	-57.2179	0.12121	-0.69118	0.71245	2490
4163728	19.3383	-55.9194	0.13217	-0.67766	0.72340	2491
4164265	21.0458	-50.7853	0.14607	-0.62453	0.76722	2492
4165018	21.6157	-49.2052	0.15098	-0.60807	0.77940	2493
4165466	21.7041	-52.9230	0.15566	-0.64634	0.74700	2494
4167264	23.6905	-50.8352	0.17602	-0.62429	0.76110	2495
4167775	23.3401	-55.7624	0.17726	-0.67492	0.71628	2496
4168051	24.6434	-48.5871	0.18466	-0.60080	0.77778	2497
4168659	24.0475	-55.1963	0.18466	-0.66891	0.72004	2498
4171354	17.1916	-61.3840	0.11452	-0.73368	0.66977	2499
4173397	19.3397	-61.7546	0.13923	-0.73686	0.66155	2500
4173615	18.3026	-64.5471	0.13132	-0.76518	0.63029	2501
4173680	18.9147	-64.1461	0.13767	-0.76100	0.63398	2502
4173971	18.3962	-67.1836	0.13627	-0.79140	0.59592	2503
4174893	19.5530	-66.4469	0.14826	-0.78375	0.60312	2504
4175454	20.6112	-62.4597	0.15456	-0.74359	0.65052	2505
4175966	20.0554	-67.7345	0.15595	-0.79635	0.58438	2506
4176037	21.7873	-58.9145	0.16335	-0.70745	0.68762	2507
4176252	21.7600	-60.3430	0.16482	-0.72192	0.67206	2508
4176365	21.6853	-61.6061	0.16561	-0.73468	0.65789	2509
4176753	21.1490	-65.4364	0.16487	-0.77320	0.61235	2510
4177844	21.8045	-66.5496	0.17401	-0.78404	0.59581	2511
4178615	22.6869	-64.6379	0.18121	-0.76473	0.61834	2512
4178670	23.2200	-64.1337	0.18656	-0.75951	0.62316	2513
4179062	24.7104	-58.4309	0.19599	-0.70160	0.68508	2514
4179587	24.2699	-63.9560	0.19830	-0.75736	0.62216	2515
4180257	15.1342	-70.6813	0.10508	-0.82675	0.55267	2516
4180259	15.0717	-70.9400	0.10482	-0.82930	0.54889	2517
4180337	14.7794	-71.6807	0.10281	-0.83660	0.53808	2518
4180568	14.6700	-73.8844	0.10563	-0.85801	0.50266	2519
4180894	14.4418	-76.6445	0.10866	-0.88446	0.45378	2520
4181022	16.1473	-68.1792	0.11241	-0.80186	0.58684	2521
4181212	15.7191	-70.2586	0.11096	-0.82245	0.55790	2522
4182098	17.5444	-68.8804	0.12931	-0.80841	0.57424	2523
4182479	16.6765	-73.0591	0.12677	-0.84948	0.51217	2524
4182620	16.0555	-74.1189	0.12176	-0.85988	0.49576	2525
4183266	17.8814	-70.7406	0.13625	-0.82657	0.54609	2526
4183402	17.0512	-72.2915	0.12959	-0.84193	0.52379	2527
4183483	17.7327	-72.4647	0.13765	-0.84340	0.51935	2528
4184113	18.4190	-69.4300	0.14012	-0.81357	0.56434	2529
4184612	17.6810	-74.3896	0.14076	-0.86198	0.48701	2530
4185213	19.2046	-70.3950	0.15068	-0.82278	0.54802	2531
4185769	18.6885	-76.2379	0.15613	-0.87923	0.45009	2532
4185963	18.3715	-77.6518	0.15570	-0.89264	0.42303	2533
4186483	20.3893	-72.5102	0.16801	-0.84295	0.51109	2534
4186523	19.7296	-73.5367	0.16244	-0.85309	0.49584	2535
4186549	19.7773	-74.1707	0.16425	-0.85915	0.48464	2536
4187123	21.2163	-69.4478	0.17198	-0.81283	0.55654	2537
4187603	20.1813	-74.6408	0.16983	-0.86350	0.47490	2538
4187617	20.2467	-75.0319	0.17140	-0.86720	0.46754	2539
4187924	19.7693	-77.9038	0.17236	-0.89443	0.41267	2540
4189456	22.6875	-72.9173	0.19516	-0.84597	0.49623	2541
4189618	21.9009	-75.1438	0.19066	-0.86758	0.45929	2542
4189891	22.3006	-76.6170	0.19857	-0.88129	0.42883	2543
4190093	14.1232	-78.5707	0.10941	-0.90266	0.41621	2544
4192073	15.6350	-78.6090	0.12669	-0.90254	0.41154	2545
4192200	14.6912	-80.4179	0.12049	-0.91953	0.37410	2546
4193418	14.8170	-83.6013	0.13139	-0.94780	0.29053	2547
4193600	14.2833	-84.9734	0.13016	-0.95963	0.24934	2548
4193706	13.4858	-86.9861	0.12972	-0.97589	0.17553	2549
4194545	15.6307	-84.5991	0.14437	-0.95589	0.25581	2550
4194677	15.3526	-86.0050	0.14691	-0.96739	0.20634	2551
4194816	13.6580	-88.4911	0.14109	-0.98568	0.09232	2552
4194829	13.1884	-89.1732	0.14172	-0.98906	0.04093	2553
4196106	18.1783	-80.1693	0.15981	-0.91594	0.36813	2554
4197096	20.1068	-79.1243	0.17932	-0.90554	0.38449	2555
4198409	18.8829	-83.9755	0.18005	-0.94893	0.25906	2556
4198674	18.7885	-85.7953	0.18668	-0.96352	0.19178	2557
4201629	29.1920	1.0807	0.21249	-0.06948	0.97469	2558
4205214	32.5715	5.0991	0.25066	-0.02421	0.96777	2559
4205431	32.7695	3.5868	0.25298	-0.04076	0.96661	2560
4205948	32.8091	-1.6219	0.25390	-0.09781	0.96227	2561

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4206063	144.4083	122.4947	0.0012	0.0005	6.9 5.6	2562
4206164	144.7100	121.5825	-0.0080	0.0105	0.7 1.2	2563
4207422	145.9775	119.2902	-0.0034	0.0125	1.4 0.6	2564
4207903	147.0510	114.7527	-0.0001	0.0001	4.6 1.6	2565
4209744	148.5852	116.9495	0.0088	0.0051	7.7 4.4	2566
4210001	141.2854	112.4687	0.0033	0.0002	4.4 8.9	2567
4210806	143.4224	104.8942	0.0091	-0.0013	6.3 3.1	2568
4211452	143.6078	109.1837	-0.0008	-0.0003	3.7 2.2	2569
4211552	143.8627	108.2853	0.0049	0.0021	6.9 5.3	2570
4211809	144.3220	104.8843	0.0063	-0.0009	0.9 3.2	2571
4211967	145.0347	104.3376	0.0008	0.0028	2.8 9.9	2572
4212244	143.8740	110.9528	0.0057	0.0046	3.3 6.4	2573
4212955	145.7573	104.7518	0.0040	0.0013	9.9 2.6	2574
4213378	145.3982	110.0348	0.0063	0.0038	9.9 5.7	2575
4214861	147.1584	106.3709	-0.0017	0.0112	5.6 0.6	2576
4215653	147.5399	108.2379	0.0000	0.0033	9.9 5.6	2577
4216277	147.6418	111.6275	0.0036	0.0010	3.8 7.8	2578
4216777	148.8608	107.1980	0.0034	0.0002	9.3 4.7	2579
4217246	148.1912	111.8667	0.0057	0.0010	3.0 1.6	2580
4217961	149.9644	106.2498	-0.0043	-0.0076	2.0 2.0	2581
4218665	150.1736	108.7079	0.0048	0.0007	1.3 9.9	2582
4218775	150.5250	107.8523	0.0074	0.0005	2.6 4.6	2583
4219634	150.7723	108.9316	0.0072	-0.0028	5.6 3.9	2584
4219847	151.3715	106.9419	0.0032	-0.0044	1.4 4.1	2585
4220221	144.4175	101.9101	0.0062	0.0030	9.9 3.1	2586
4220272	144.8633	101.8806	0.0089	0.0005	4.1 6.7	2587
4220846	146.1061	96.0705	0.0037	0.0049	6.5 6.3	2588
4221580	146.4356	99.6431	0.0066	0.0060	6.8 4.5	2589
4222197	146.5742	102.8288	0.0016	-0.0002	5.9 6.0	2590
4222200	145.9151	102.2698	0.0013	0.0036	9.9 4.1	2591
4223147	147.0432	102.9659	0.0016	0.0007	5.1 3.9	2592
4223281	147.4303	102.7059	0.0022	0.0042	3.5 2.6	2593
4223451	147.6535	100.8302	0.0056	0.0045	2.8 3.2	2594
4223506	147.6353	99.3791	-0.0029	0.0054	2.0 9.9	2595
4223784	148.6949	97.9419	0.0061	-0.0032	4.3 1.7	2596
4224320	147.9901	101.9357	0.0039	-0.0005	3.9 3.6	2597
4225079	148.7831	104.1729	-0.0003	0.0116	1.5 1.6	2598
4225544	149.6256	100.0914	0.0038	0.0001	2.5 9.9	2599
4226358	150.1756	101.7708	0.0069	-0.0031	8.9 7.5	2600
4226406	149.9475	100.9688	0.0011	-0.0016	3.2 9.9	2601
4230569	147.9606	89.5304	0.0039	0.0015	1.5 2.8	2602
4230744	148.1686	88.1042	0.0044	0.0054	1.6 2.5	2603
4231064	147.5463	94.7247	-0.0018	0.0038	3.5 8.5	2604
4231441	148.2708	91.3844	0.0006	0.0097	7.5 4.3	2605
4231500	148.1500	90.4323	0.0037	0.0001	3.9 4.5	2606
4231701	148.5821	88.5610	0.0009	0.0019	1.2 7.1	2607
4231997	149.9474	86.3237	0.0048	-0.0036	6.0 6.7	2608
4232729	149.7801	88.1041	0.0017	-0.0078	1.1 6.2	2609
4233559	150.4150	90.1536	0.0024	0.0029	5.7 1.7	2610
4233683	150.7609	89.8633	0.0003	-0.0023	4.0 9.9	2611
4233848	151.0486	87.4811	0.0050	0.0001	2.2 7.5	2612
4234570	151.2507	91.2785	0.0025	0.0038	6.4 2.8	2613
4235158	151.1600	94.3027	0.0031	0.0035	5.0 8.7	2614
4235473	151.9226	92.1609	0.0023	0.0044	7.8 1.6	2615
4235920	152.5022	87.7529	0.0046	0.0029	0.8 1.8	2616
4236269	152.3505	93.5839	-0.0036	0.0003	5.8 1.8	2617
4237215	152.6724	94.0427	0.0037	-0.0015	2.4 5.3	2618
4237288	153.3825	93.8913	0.0029	0.0022	2.5 3.5	2619
4237473	153.6280	92.5975	0.0049	0.0017	2.9 3.4	2620
4238503	154.0711	91.6912	0.0026	0.0003	2.9 2.9	2621
4239108	154.1191	95.1263	-0.0001	0.0009	1.5 9.9	2622
4239745	155.8319	90.0005	0.0013	0.9987	9.9 3.6	2623
4239877	156.3531	88.9574	0.0056	0.0006	1.9 4.5	2624
4240256	149.3550	83.3443	0.0011	0.0025	0.9 5.6	2625
4241187	150.2745	84.5085	0.0001	0.0078	9.9 1.6	2626
4241399	150.8860	82.4815	-0.0100	0.0099	1.5 0.9	2627
4241964	151.8099	77.3845	0.0055	-0.0034	1.8 2.9	2628
4242620	151.5346	80.6032	-0.0003	0.0007	1.5 5.5	2629
4242909	152.2642	77.0128	0.0020	0.0041	6.7 9.9	2630
4243362	152.1256	83.5412	0.0025	0.0045	7.1 5.2	2631
4243636	152.6377	80.3470	0.0112	-0.0054	6.3 4.5	2632
4245047	153.1194	86.1761	0.0067	-0.0076	3.3 3.1	2633
4245092	153.4374	86.7438	0.0097	-0.0005	4.2 3.6	2634

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4206063	33.9049	6.9792	0.26583	-0.00301	0.96401	2562
4206164	33.9347	6.0179	0.26618	-0.01359	0.96383	2563
4207422	34.4980	3.4572	0.27271	-0.04154	0.96120	2564
4207903	34.2365	-1.2029	0.27014	-0.09270	0.95835	2565
4209744	36.3327	0.4682	0.29393	-0.07358	0.95299	2566
4210001	28.0578	-1.7526	0.19996	-0.10083	0.97460	2567
4210806	27.9521	-9.6299	0.20025	-0.18657	0.96182	2568
4211452	29.3503	-5.5664	0.21521	-0.14200	0.96619	2569
4211552	29.3391	-6.5011	0.21526	-0.15217	0.96463	2570
4211809	28.8120	-9.8957	0.21005	-0.18918	0.95921	2571
4211967	29.3399	-10.6233	0.21622	-0.19690	0.95628	2572
4212244	30.1089	-3.9445	0.22353	-0.12409	0.96677	2573
4212955	30.1507	-10.4316	0.22537	-0.19456	0.95465	2574
4213378	31.3093	-5.2596	0.23740	-0.13801	0.96156	2575
4214861	31.9549	-9.2769	0.24560	-0.18143	0.95224	2576
4215653	32.8519	-7.5940	0.25543	-0.16284	0.95302	2577
4216277	33.9139	-4.3702	0.26692	-0.12738	0.95526	2578
4216777	33.8227	-8.9681	0.26682	-0.17740	0.94728	2579
4217246	34.5088	-4.2972	0.27370	-0.12636	0.95348	2580
4217961	34.6112	-10.1923	0.27613	-0.19036	0.94208	2581
4218665	35.5112	-7.8931	0.28587	-0.16508	0.94394	2582
4218775	35.6047	-8.8142	0.28716	-0.17503	0.94176	2583
4219634	36.1489	-7.8489	0.29317	-0.16434	0.94183	2584
4219847	36.1574	-9.9290	0.29376	-0.18689	0.93743	2585
4220221	28.0574	-12.7770	0.20228	-0.22059	0.95416	2586
4220272	28.4765	-12.9323	0.20707	-0.22214	0.95277	2587
4220846	28.0153	-18.8618	0.20386	-0.28614	0.93625	2588
4221580	29.3477	-15.5273	0.21777	-0.24986	0.94348	2589
4222197	30.3869	-12.5097	0.22863	-0.21696	0.94903	2590
4222200	29.5959	-12.8584	0.21974	-0.22098	0.95020	2591
4223147	30.8757	-12.5117	0.23418	-0.21681	0.94771	2592
4223281	31.1729	-12.8714	0.23767	-0.22060	0.94597	2593
4223451	30.8533	-14.7350	0.23461	-0.24082	0.94179	2594
4223506	30.4230	-16.1223	0.23018	-0.25591	0.93890	2595
4223784	31.0302	-17.8033	0.23769	-0.27378	0.93196	2596
4224320	31.4906	-13.7700	0.24155	-0.23019	0.94269	2597
4225079	32.8875	-11.8490	0.25690	-0.20894	0.94358	2598
4225544	32.5343	-16.0056	0.25417	-0.25391	0.93323	2599
4226358	33.5395	-14.5507	0.26516	-0.23786	0.93440	2600
4226406	33.0926	-15.2553	0.26029	-0.24563	0.93377	2601
4230569	27.9330	-25.6661	0.20590	-0.35894	0.91036	2602
4230744	27.7267	-27.0939	0.20429	-0.37421	0.90456	2603
4231064	29.0135	-20.5635	0.21585	-0.30407	0.92787	2604
4231441	28.7579	-23.9753	0.21445	-0.34065	0.91541	2605
4231500	28.3712	-24.8545	0.21048	-0.35015	0.91274	2606
4231701	28.2532	-26.7734	0.21009	-0.37064	0.90471	2607
4231997	28.9259	-29.3092	0.21908	-0.39737	0.89113	2608
4232729	29.2720	-27.5530	0.22206	-0.37860	0.89853	2609
4233559	30.4639	-25.7671	0.23470	-0.35919	0.90327	2610
4233683	30.7131	-26.1442	0.23773	-0.36312	0.90091	2611
4233848	30.3112	-28.5122	0.23440	-0.38844	0.89117	2612
4234570	31.5854	-24.9256	0.24706	-0.34982	0.90365	2613
4235158	32.3588	-21.9977	0.25452	-0.31827	0.91319	2614
4235473	32.4807	-24.2702	0.25696	-0.34251	0.90369	2615
4235920	31.7825	-28.6654	0.25125	-0.38954	0.88608	2616
4236269	33.2959	-23.0265	0.26569	-0.32892	0.90621	2617
4237215	33.7351	-22.6779	0.27055	-0.32503	0.90618	2618
4237288	34.3730	-23.0255	0.27800	-0.32849	0.90267	2619
4237473	34.2403	-24.3370	0.27710	-0.34254	0.89771	2620
4238503	34.4074	-25.3329	0.27951	-0.35309	0.89286	2621
4239108	35.4307	-22.0501	0.28968	-0.31765	0.90288	2622
4239745	35.6149	-27.4568	0.29446	-0.37520	0.87893	2623
4239877	35.8179	-28.6063	0.29742	-0.38732	0.87266	2624
4240256	27.5102	-31.9996	0.20457	-0.42633	0.88113	2625
4241187	28.7232	-31.1443	0.21783	-0.41688	0.88247	2626
4241399	28.7329	-33.2636	0.21923	-0.43929	0.87119	2627
4241964	28.1688	-38.4180	0.21629	-0.49373	0.84229	2628
4242620	28.8205	-35.2508	0.22150	-0.46022	0.85973	2629
4242909	28.4987	-38.9041	0.22040	-0.49872	0.83827	2630
4243362	30.2231	-32.5998	0.23577	-0.43177	0.87063	2631
4243636	29.8054	-35.8109	0.23309	-0.46578	0.85365	2632
4245047	31.9257	-30.3543	0.25384	-0.40739	0.87727	2633
4245092	32.3922	-29.9001	0.25891	-0.40241	0.87809	2634

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4245555	154.2191	81.8150	0.0043	-0.0059	5.9 2.7	2635
4246066	154.0942	86.5235	0.0037	0.0030	0.5 0.4	2636
4246846	155.6860	79.1254	-0.0061	-0.0007	0.7 2.9	2637
4247112	154.6425	86.1501	0.0066	0.0051	2.6 9.9	2638
4250363	151.8028	73.4876	0.0072	-0.0052	1.9 2.8	2639
4251330	152.3223	73.9912	0.0067	-0.0001	6.5 3.0	2640
4252441	153.4501	73.1343	0.0035	0.0011	1.8 6.8	2641
4252454	153.5714	72.8793	0.0002	-0.0064	4.5 8.2	2642
4253687	155.1629	70.9907	-0.0015	0.0075	3.1 2.3	2643
4253722	154.7788	70.4385	0.0068	-0.0076	9.2 2.4	2644
4254272	154.9866	75.3972	0.0022	-0.0019	2.7 3.9	2645
4255336	155.7742	74.2510	-0.0044	-0.0007	1.1 1.8	2646
4255937	157.0633	68.4990	-0.0003	-0.0003	1.1 1.8	2647
4256004	155.7716	77.3760	0.0019	0.0056	2.8 0.8	2648
4258566	159.0021	73.0477	0.0039	-0.0002	2.2 3.0	2649
4261398	154.9254	63.8754	-0.0009	-0.0062	2.3 1.5	2650
4261525	154.6598	62.1239	0.0105	-0.0010	1.6 9.3	2651
4261780	155.4399	60.8069	-0.0031	-0.0056	3.7 1.5	2652
4263114	155.4523	66.4608	0.0029	-0.0054	3.1 0.9	2653
4263477	156.6330	63.3447	0.0083	0.0016	2.2 0.8	2654
4264774	157.9780	60.9942	0.0020	0.0038	2.7 3.4	2655
4265125	157.3299	66.7810	0.0065	-0.0029	1.0 4.0	2656
4267149	159.2160	66.8193	0.0074	-0.0072	2.9 8.7	2657
4267890	160.7429	61.0894	0.0003	-0.0010	1.6 2.5	2658
4269764	162.0800	61.9687	-0.0033	-0.0089	0.6 2.1	2659
4270341	155.3295	54.5790	0.0103	0.0038	2.1 3.5	2660
4270808	155.9420	48.8245	0.0081	-0.0048	1.1 0.8	2661
4270899	156.7427	48.9393	-0.0024	-0.0046	1.7 3.2	2662
4271523	156.4486	52.5316	0.0078	0.0034	1.9 3.6	2663
4272262	157.1083	55.8996	0.0093	-0.0021	5.1 2.6	2664
4274769	159.7111	50.6371	0.0076	0.0059	0.7 3.5	2665
4274936	159.6752	48.9376	0.0060	-0.0039	9.4 2.1	2666
4275237	159.4418	55.9918	0.0029	-0.0084	9.3 0.8	2667
4275454	159.9060	54.2696	0.0028	0.0012	2.3 1.0	2668
4275809	160.1859	49.7092	0.0048	-0.0031	7.1 6.1	2669
4277307	160.9734	55.3002	0.0030	-0.0054	9.9 7.1	2670
4278378	162.4689	55.5044	0.0058	0.0022	1.0 0.7	2671
4279293	163.1935	57.3506	0.0053	0.0021	1.8 1.6	2672
4280007	156.2129	46.9093	0.0091	-0.0008	1.5 1.1	2673
4280433	156.9798	43.2954	0.0048	-0.0005	1.5 2.8	2674
4281052	157.4291	47.7534	0.0027	-0.0006	0.6 2.0	2675
4281968	158.6285	37.7014	0.0049	-0.0026	2.2 1.4	2676
4282174	158.5753	46.6709	0.0098	0.0007	3.8 2.5	2677
4282297	158.9606	45.4593	0.0042	-0.0007	2.1 2.6	2678
4282528	158.6962	42.1030	-0.0010	-0.0017	0.2 2.4	2679
4283614	159.5735	41.6484	0.0088	-0.0037	2.4 1.0	2680
4283865	160.1494	39.4317	-0.0016	-0.0081	1.2 1.3	2681
4284563	160.7058	43.0402	0.0081	-0.0068	1.6 1.9	2682
4284802	160.4672	39.9118	0.0051	0.0006	2.3 3.4	2683
4284964	161.0445	38.6154	0.0119	0.0061	1.4 2.1	2684
4285264	161.1695	46.2863	0.0016	-0.0043	0.6 5.2	2685
4285793	161.9408	41.2115	0.0025	0.0004	2.9 6.3	2686
4286300	161.5917	45.7723	-0.0056	-0.0085	0.5 0.7	2687
4286557	162.2699	43.0254	0.0013	-0.0052	1.6 0.7	2688
4286778	162.6481	40.7700	0.0006	-0.0006	0.6 0.6	2689
4287082	162.7125	48.8459	-0.0051	0.0034	1.0 0.6	2690
4287315	162.5558	45.4373	0.0245	0.0022	0.7 2.2	2691
4287991	163.7274	39.6349	0.0066	0.0042	2.1 1.4	2692
4288536	163.6766	43.4241	0.0099	-0.0017	3.0 1.7	2693
4288761	164.1165	41.9023	0.0047	-0.0001	0.8 2.1	2694
4288973	164.3615	39.4568	0.0075	-0.0056	1.0 2.2	2695
4290150	157.8324	36.1632	0.0074	-0.0028	1.0 5.1	2696
4290361	157.9998	33.7287	-0.0031	-0.0041	0.2 0.8	2697
4290628	157.3757	28.9770	-0.0231	-0.0151	0.2 0.2	2698
4292222	159.2763	35.0441	-0.0001	-0.0047	0.3 0.4	2699
4292602	158.8638	29.9537	-0.0014	-0.0053	1.3 1.2	2700
4292655	159.1604	29.5898	0.0080	-0.0047	7.0 1.6	2701
4292712	158.6075	28.3854	0.0030	-0.0045	0.7 5.3	2702
4293722	159.1880	28.1495	-0.0087	-0.0079	1.6 0.5	2703
4295201	161.5171	35.6534	-0.0142	-0.0022	1.0 1.2	2704
4299221	164.8641	36.3512	0.0057	-0.0051	0.5 1.6	2705
4300129	147.8595	121.8562	0.0040	0.0012	5.8 9.2	2706
4302850	151.3813	117.0578	0.0012	0.0017	4.8 1.0	2707

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4245555	31.7395	-34.8526	0.25452	-0.45498	0.85335	2635
4246066	32.9593	-30.2986	0.26562	-0.40641	0.87423	2636
4246846	32.3810	-37.8514	0.26395	-0.48626	0.83300	2637
4247112	33.3789	-30.8131	0.27073	-0.41170	0.87018	2638
4250363	27.0533	-42.1556	0.20645	-0.53321	0.82040	2639
4251330	27.6947	-41.8203	0.21348	-0.52950	0.82101	2640
4252441	28.5325	-42.9638	0.22394	-0.54114	0.81057	2641
4252454	28.5762	-43.2431	0.22467	-0.54404	0.80842	2642
4253687	29.5651	-45.5087	0.23789	-0.56723	0.78845	2643
4253722	29.0397	-45.9292	0.23226	-0.57179	0.78683	2644
4254272	30.6497	-41.2299	0.24670	-0.52228	0.81631	2645
4255336	31.0788	-42.5541	0.25268	-0.53593	0.80556	2646
4255937	30.6786	-48.4411	0.25334	-0.59716	0.76107	2647
4256004	31.9654	-39.5545	0.26045	-0.50426	0.82334	2648
4258566	33.8319	-44.6282	0.28605	-0.55638	0.78014	2649
4261398	27.3130	-52.2691	0.21869	-0.63783	0.73848	2650
4261525	26.5600	-53.8743	0.21181	-0.65455	0.72574	2651
4261780	26.9334	-55.3603	0.21773	-0.66959	0.71010	2652
4263114	28.5538	-49.9382	0.23049	-0.61341	0.75538	2653
4263477	28.7995	-53.2648	0.23675	-0.64748	0.72438	2654
4264774	29.4206	-55.9034	0.24686	-0.67415	0.69612	2655
4265125	30.4454	-50.1657	0.25237	-0.61502	0.74703	2656
4267149	32.2650	-50.6661	0.27380	-0.61941	0.73578	2657
4267890	32.0991	-56.5996	0.27856	-0.68006	0.67818	2658
4269764	33.6314	-56.1366	0.29573	-0.67463	0.67632	2659
4270341	25.0557	-61.3053	0.20361	-0.73051	0.65185	2660
4270808	24.0059	-67.0020	0.19988	-0.78772	0.58270	2661
4270899	24.8064	-67.1199	0.20926	-0.78857	0.57825	2662
4271523	25.5464	-63.5888	0.21239	-0.75321	0.62255	2663
4272262	27.1372	-60.5447	0.22643	-0.72206	0.65373	2664
4274769	28.1359	-66.3361	0.24637	-0.77939	0.57606	2665
4274936	27.6180	-67.9567	0.24305	-0.79558	0.55496	2666
4275237	29.4011	-61.1208	0.25325	-0.72689	0.63835	2667
4275454	29.3563	-62.9057	0.25525	-0.74478	0.61656	2668
4275809	28.3273	-67.3617	0.25027	-0.78940	0.56054	2669
4277307	30.6731	-62.2207	0.26950	-0.73732	0.61945	2670
4278378	32.1653	-62.4507	0.28715	-0.73889	0.60958	2671
4279293	33.3854	-60.8854	0.29910	-0.72262	0.62319	2672
4280007	23.7208	-68.9170	0.19975	-0.80668	0.55620	2673
4280433	23.4281	-72.6035	0.20308	-0.84264	0.49872	2674
4281052	25.1272	-68.4534	0.21514	-0.80156	0.55787	2675
4281968	23.4176	-78.4412	0.21604	-0.89763	0.38416	2676
4282174	25.9184	-69.8186	0.22663	-0.81456	0.53397	2677
4282297	25.9432	-71.0911	0.22925	-0.82691	0.51349	2678
4282528	24.7348	-74.2366	0.22151	-0.85767	0.46405	2679
4283614	25.4467	-74.9227	0.23128	-0.86381	0.44760	2680
4283865	25.3683	-77.2139	0.23575	-0.88526	0.40092	2681
4284563	26.9285	-73.9096	0.24636	-0.85344	0.45930	2682
4284802	25.8097	-76.8437	0.24000	-0.88159	0.40646	2683
4284964	25.9944	-78.2522	0.24580	-0.89441	0.37364	2684
4285264	28.2967	-70.9266	0.25628	-0.82415	0.50507	2685
4285793	27.5925	-76.0162	0.25894	-0.87285	0.41361	2686
4286300	28.5553	-71.5401	0.26049	-0.82993	0.49333	2687
4286557	28.4242	-74.3693	0.26489	-0.85694	0.44214	2688
4286778	28.1452	-76.6413	0.26701	-0.87830	0.39661	2689
4287082	30.5045	-68.9098	0.27829	-0.80343	0.52636	2690
4287315	29.3845	-72.1362	0.27139	-0.83518	0.47835	2691
4287991	28.8572	-78.0380	0.27920	-0.89055	0.35912	2692
4288536	29.8865	-74.3873	0.28217	-0.85621	0.43276	2693
4288761	29.8754	-75.9730	0.28584	-0.87098	0.39960	2694
4288973	29.4146	-78.3895	0.28687	-0.89330	0.34601	2695
4290150	22.2166	-79.6906	0.20537	-0.90965	0.36105	2696
4290361	21.6845	-82.0745	0.20635	-0.93108	0.30085	2697
4290628	19.7341	-86.4566	0.20164	-0.96751	0.15252	2698
4292222	23.2828	-81.1757	0.22230	-0.92226	0.31627	2699
4292602	21.4390	-85.9432	0.21966	-0.96230	0.16037	2700
4292655	21.6199	-86.3768	0.22452	-0.96502	0.13534	2701
4292712	20.7471	-87.3752	0.22087	-0.97181	0.08246	2702
4293722	21.2366	-87.7669	0.23178	-0.97216	0.03452	2703
4295201	25.6049	-81.2293	0.25010	-0.92113	0.29828	2704
4299221	29.0130	-81.5129	0.29243	-0.92065	0.25865	2705
4300129	37.0328	5.3836	0.30166	-0.01933	0.95322	2706
4302850	39.0448	-0.2242	0.32515	-0.08000	0.94227	2707

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4302944	151.6639	115.8048	-0.0038	0.0149	3.1 0.4	2708
4303108	150.2015	122.5605	0.0021	0.0065	8.3 9.9	2709
4304095	151.4999	124.0642	-0.0071	0.0065	3.8 4.1	2710
4304439	152.1136	120.1142	-0.0005	-0.0065	5.7 5.8	2711
4304740	152.6953	118.3090	-0.0009	0.0077	9.9 9.9	2712
4305661	153.4610	119.3302	-0.0021	0.0090	6.0 9.9	2713
4306161	153.0230	123.9262	0.0013	0.0008	4.8 4.7	2714
4306335	153.3732	121.8160	-0.0004	0.0007	0.9 2.7	2715
4306426	153.6124	120.7662	0.0009	0.0075	7.8 9.2	2716
4306752	154.5482	118.6176	-0.0046	0.0154	1.2 1.9	2717
4307359	154.5273	121.6757	0.0057	0.0020	3.0 6.7	2718
4307875	155.8565	117.7029	-0.0036	0.0108	1.0 0.2	2719
4308564	155.8204	120.5577	-0.0036	0.0045	5.5 1.2	2720
4309148	155.5506	123.9146	-0.0018	0.0017	9.6 1.7	2721
4309192	155.8199	124.5461	0.0049	0.0024	2.7 4.6	2722
4310096	150.6919	114.4198	-0.0045	0.0137	4.5 1.1	2723
4311513	151.9764	110.3344	-0.0024	0.0009	3.3 7.3	2724
4312636	153.3441	109.4625	0.0091	0.0054	8.1 3.7	2725
4313732	154.3584	109.1022	0.0013	0.0062	6.6 1.7	2726
4313985	155.2839	107.1356	0.0048	0.0078	3.1 7.1	2727
4314753	155.3386	109.2880	0.0044	0.0079	9.9 9.9	2728
4315028	154.3075	115.1921	-0.0052	0.0137	9.9 6.1	2729
4315143	154.6092	114.7383	-0.0021	0.0112	3.3 2.2	2730
4315295	155.3037	113.8252	0.0010	0.0016	9.9 4.3	2731
4316243	155.6878	114.1111	-0.0032	-0.0028	1.4 1.3	2732
4320927	154.6870	97.2632	0.0058	0.0043	1.7 2.5	2733
4321235	153.9604	103.9396	0.0024	0.0075	4.2 6.0	2734
4321559	154.8912	100.9947	0.0020	0.0036	4.1 9.9	2735
4321991	156.0003	98.1478	-0.0028	-0.0003	4.2 7.3	2736
4322847	156.2704	98.6367	0.0026	0.0041	3.2 4.3	2737
4323020	154.8830	106.6100	-0.0016	-0.0001	9.9 3.4	2738
4323247	155.7135	104.2625	0.0055	0.0059	7.3 9.9	2739
4323306	155.5996	103.3084	0.0004	0.0042	4.1 3.5	2740
4324402	156.5689	102.9887	0.0011	0.0092	2.4 2.4	2741
4326430	158.4565	103.6498	0.0034	0.0019	2.0 4.1	2742
4329533	161.2530	103.0957	-0.0014	0.0055	3.6 1.9	2743
4332401	157.2378	93.6885	-0.0017	0.0002	2.7 3.4	2744
4334692	160.0973	92.3504	-0.0008	0.0006	5.2 2.8	2745
4335372	160.0805	95.2122	0.0032	0.0008	5.7 9.9	2746
4336393	161.1789	95.3906	-0.0012	-0.0009	2.4 2.1	2747
4336729	161.6339	91.0771	0.0014	0.0013	4.5 9.9	2748
4338547	162.9034	93.5116	0.0050	0.0052	4.5 3.2	2749
4339267	163.2697	96.5184	-0.0049	-0.0026	9.9 9.9	2750
4339339	163.2747	95.3045	0.0054	-0.0014	3.8 6.2	2751
4340559	158.5749	82.5526	0.0045	0.0058	2.1 4.1	2752
4341662	159.5840	82.5272	0.0049	0.0000	1.9 1.8	2753
4341810	159.5063	80.6607	-0.0013	0.0033	1.8 1.6	2754
4341952	160.1181	79.7095	0.0090	-0.0049	2.7 3.5	2755
4342715	160.2313	81.4049	-0.0013	0.0060	2.7 9.9	2756
4343013	159.5248	88.2798	-0.0069	0.0062	0.7 0.5	2757
4344220	160.7890	86.9024	0.0007	0.0037	8.9 8.6	2758
4344719	162.0003	81.3956	0.0037	-0.0017	9.3 5.1	2759
4345372	162.3374	86.1093	0.0062	-0.0002	1.5 4.2	2760
4346822	163.7798	81.5784	0.0023	-0.0003	1.0 5.3	2761
4347085	163.4654	88.9939	0.0013	0.0028	7.5 1.8	2762
4348390	164.9711	86.8776	-0.0044	0.0040	0.7 1.3	2763
4349539	165.9078	84.3692	-0.0090	-0.0036	0.5 0.5	2764
4351084	160.6436	78.5935	-0.0005	-0.0006	4.3 7.8	2765
4351330	160.7324	76.0667	-0.0087	-0.0027	1.1 1.3	2766
4351684	161.8593	73.0249	-0.0038	-0.0013	0.9 3.1	2767
4351875	162.1531	70.9559	0.0064	0.0004	8.2 9.9	2768
4352055	161.1896	78.7196	-0.0060	-0.0007	2.2 0.9	2769
4352216	161.3447	76.6337	0.0010	-0.0036	1.5 0.8	2770
4352530	161.9306	74.3980	-0.0022	-0.0021	6.3 2.0	2771
4352619	162.2265	72.5805	-0.0047	-0.0094	1.1 1.6	2772
4352727	162.4056	71.8395	-0.0039	-0.0020	0.6 1.0	2773
4353113	161.8715	78.0777	0.0036	0.0024	1.3 3.7	2774
4354778	164.5602	72.2890	0.0014	0.0144	1.0 1.1	2775
4355676	165.1414	73.5821	-0.0098	-0.0057	4.4 0.4	2776
4358204	166.1773	77.9529	-0.0055	-0.0019	0.9 1.4	2777
4358448	166.9776	75.8031	-0.0043	-0.0093	9.9 0.9	2778
4358682	167.5913	74.5778	-0.0014	0.0053	1.0 0.2	2779
4358824	167.5772	72.4405	0.0014	0.0052	1.2 1.8	2780

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4302944	38.9593	-1.5071	0.32432	-0.09406	0.94126	2708
4303108	39.4790	5.3924	0.32978	-0.01816	0.94388	2709
4304095	41.1519	6.4656	0.34907	-0.00555	0.93708	2710
4304439	40.6166	2.5002	0.34303	-0.04942	0.93802	2711
4304740	40.6608	0.6022	0.34370	-0.07021	0.93645	2712
4305661	41.6856	1.3641	0.35547	-0.06137	0.93267	2713
4306161	42.5732	5.8993	0.36551	-0.01109	0.93074	2714
4306335	42.3086	3.7746	0.36252	-0.03460	0.93134	2715
4306426	42.2394	2.6990	0.36177	-0.04645	0.93111	2716
4306752	42.5255	0.3706	0.36528	-0.07184	0.92812	2717
4307359	43.3755	3.3112	0.37490	-0.03916	0.92624	2718
4307875	43.5198	-0.8798	0.37694	-0.08502	0.92233	2719
4308564	44.2974	1.8701	0.38570	-0.05450	0.92101	2720
4309148	44.9937	5.1683	0.39363	-0.01788	0.91910	2721
4309192	45.4316	5.6976	0.39871	-0.01181	0.91700	2722
4310096	37.6332	-2.5594	0.30922	-0.10614	0.94505	2723
4311513	37.7027	-6.8457	0.31078	-0.15279	0.93812	2724
4312636	38.7662	-8.0719	0.32327	-0.16564	0.93170	2725
4313732	39.6363	-8.7066	0.33345	-0.17214	0.92692	2726
4313985	39.9643	-10.8574	0.33778	-0.19529	0.92074	2727
4314753	40.6291	-8.8075	0.34492	-0.17277	0.92259	2728
4315028	41.3201	-2.8480	0.35174	-0.10761	0.92989	2729
4315143	41.4803	-3.3694	0.35367	-0.11323	0.92849	2730
4315295	41.8865	-4.4435	0.35854	-0.12474	0.92514	2731
4316243	42.3362	-4.2785	0.36372	-0.12272	0.92339	2732
4320927	36.5832	-20.1613	0.30208	-0.29695	0.90585	2733
4321235	37.7859	-13.5474	0.31349	-0.22533	0.92247	2734
4321559	37.8407	-16.6386	0.31516	-0.25860	0.91313	2735
4321991	38.0943	-19.6864	0.31926	-0.29121	0.90181	2736
4322847	38.4924	-19.2942	0.32368	-0.28683	0.90164	2737
4323020	39.4304	-11.2476	0.33173	-0.19975	0.92198	2738
4323247	39.5589	-13.7369	0.33396	-0.22658	0.91495	2739
4323306	39.1782	-14.6200	0.32986	-0.23628	0.91398	2740
4324402	40.0168	-15.2029	0.33972	-0.24217	0.90881	2741
4326430	42.0150	-15.1061	0.36279	-0.24017	0.90039	2742
4329533	44.5390	-16.4343	0.39258	-0.25315	0.88419	2743
4332401	38.0123	-24.3182	0.32041	-0.34076	0.88387	2744
4334692	40.3737	-26.4167	0.34876	-0.36199	0.86448	2745
4335372	41.1718	-23.6656	0.35659	-0.33231	0.87316	2746
4336393	42.2759	-23.8073	0.36946	-0.33327	0.86743	2747
4336729	41.4850	-28.0762	0.36255	-0.37906	0.85139	2748
4338547	43.3950	-26.1016	0.38366	-0.35710	0.85164	2749
4339267	44.6017	-23.3205	0.39628	-0.32685	0.85798	2750
4339339	44.2611	-24.4868	0.39290	-0.33946	0.85463	2751
4340559	36.1264	-35.3853	0.30521	-0.45879	0.83448	2752
4341662	37.0868	-35.6971	0.31650	-0.46164	0.82868	2753
4341810	36.4813	-37.4661	0.31078	-0.48049	0.82009	2754
4341952	36.7973	-38.5532	0.31525	-0.49173	0.81168	2755
4342715	37.3882	-36.9585	0.32088	-0.47474	0.81954	2756
4343013	38.6666	-30.1599	0.33114	-0.40251	0.85342	2757
4344220	39.4871	-31.8418	0.34166	-0.41990	0.84080	2758
4344719	39.0820	-37.4713	0.34086	-0.47931	0.80875	2759
4345372	40.7463	-33.0439	0.35704	-0.43195	0.82821	2760
4346822	40.8404	-37.8027	0.36153	-0.48188	0.79818	2761
4347085	42.6486	-30.5970	0.37758	-0.40514	0.83264	2762
4348390	43.4904	-33.0567	0.38899	-0.43063	0.81440	2763
4349539	43.6750	-35.7306	0.39304	-0.45863	0.79698	2764
4351084	36.9838	-39.7738	0.31835	-0.50441	0.80264	2765
4351330	36.3500	-42.2239	0.31302	-0.53025	0.78794	2766
4351684	36.5653	-45.4639	0.31837	-0.56379	0.76209	2767
4351875	36.2584	-47.5330	0.31678	-0.58532	0.74636	2768
4352055	37.5432	-39.8083	0.32484	-0.50450	0.79997	2769
4352216	37.0985	-41.8542	0.32136	-0.52605	0.78740	2770
4352530	37.0243	-44.1665	0.32250	-0.55012	0.77030	2771
4352619	36.7910	-45.9949	0.32148	-0.56917	0.75677	2772
4352727	36.7519	-46.7570	0.32175	-0.57707	0.75065	2773
4353113	38.0145	-40.6185	0.33095	-0.51273	0.79220	2774
4354778	38.9459	-46.9393	0.34742	-0.57783	0.73852	2775
4355676	39.8711	-45.8640	0.35716	-0.56623	0.74284	2776
4358204	42.1080	-41.9647	0.37972	-0.52460	0.76198	2777
4358448	42.2638	-44.2556	0.38361	-0.54826	0.74313	2778
4358682	42.5037	-45.6062	0.38771	-0.56208	0.73058	2779
4358824	41.8822	-47.6532	0.38246	-0.58354	0.71639	2780

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4359855	168.6180	72.5147	0.0009	-0.0002	1.7 2.2	2781
4361029	162.1921	68.6133	0.0087	0.0015	2.4 9.3	2782
4361814	163.5574	61.3617	0.0015	-0.0007	0.5 0.3	2783
4362076	163.3973	69.2324	0.0041	0.0005	1.0 4.8	2784
4362243	163.4655	67.5331	-0.0037	-0.0065	0.7 0.2	2785
4362626	164.1358	63.3590	0.0025	0.0014	7.1 2.5	2786
4362673	164.4601	63.7290	0.0087	0.0039	2.0 9.9	2787
4363533	164.7566	64.8393	0.0010	-0.0062	9.9 0.5	2788
4364598	166.1761	64.6210	-0.0028	-0.0072	3.1 0.6	2789
4365124	165.6460	68.9823	0.0024	0.0001	4.9 1.2	2790
4366488	167.6136	66.0055	-0.0029	-0.0140	0.6 0.2	2791
4367904	168.6054	61.3921	0.0041	-0.0004	2.2 0.6	2792
4368621	169.0161	64.9693	0.0034	-0.0114	2.8 6.3	2793
4371392	164.9893	56.8500	0.0005	-0.0075	1.7 0.4	2794
4371838	165.3438	51.0399	-0.0030	-0.0114	1.6 1.5	2795
4372026	164.7925	59.4828	0.0009	0.0004	2.0 1.9	2796
4372678	166.1976	53.2998	0.0000	0.0003	1.3 0.9	2797
4372795	166.4415	52.6865	0.0107	0.0019	1.1 4.8	2798
4372984	166.6655	50.7486	-0.0015	-0.0027	1.4 1.4	2799
4373211	165.8149	58.1697	0.0001	0.0081	1.3 3.8	2800
4374769	167.9487	52.5915	0.0033	-0.0046	4.3 2.6	2801
4375594	168.6703	55.3812	0.0029	-0.0016	4.0 2.1	2802
4376838	169.4071	51.9656	-0.0068	-0.0087	1.2 4.5	2803
4377076	169.3138	60.4040	-0.0048	-0.0050	3.1 1.3	2804
4377739	170.1666	53.0628	-0.0114	-0.0141	4.7 1.7	2805
4378154	170.0476	59.7499	0.0119	0.0022	0.5 0.9	2806
4378431	170.3929	57.0753	-0.0037	-0.0066	1.6 0.9	2807
4378519	170.4925	55.3119	0.0067	0.0010	2.3 3.4	2808
4378851	171.1163	53.0606	0.0044	-0.0007	5.0 2.2	2809
4379285	171.3624	59.0302	0.0064	0.0056	1.1 2.9	2810
4380503	165.0700	44.0983	0.0030	-0.0093	1.1 1.0	2811
4381901	166.1819	40.1205	-0.0036	-0.0017	3.7 0.8	2812
4381945	166.4919	39.7082	-0.0051	-0.0110	8.7 1.2	2813
4381999	166.9182	39.2665	-0.0127	-0.0136	0.7 2.1	2814
4382492	167.2896	45.8034	0.0064	0.0024	2.6 1.5	2815
4383247	167.5668	47.4206	0.0019	-0.0021	0.6 1.7	2816
4384106	167.9487	48.6598	-0.0006	-0.0090	9.9 1.9	2817
4385870	169.8797	41.9941	-0.0123	-0.0140	0.8 1.2	2818
4386239	169.9110	47.7197	0.0029	-0.0026	1.3 1.0	2819
4386621	170.1314	44.2236	0.0018	-0.0071	1.9 3.5	2820
4387931	171.1013	40.9625	-0.0237	-0.0135	0.4 4.1	2821
4388720	171.7504	43.5401	0.0048	-0.0207	0.5 1.8	2822
4388808	171.6404	41.3156	0.0012	-0.0069	1.9 4.4	2823
4388888	172.2223	41.4575	-0.0064	-0.0088	2.3 2.9	2824
4389008	171.8312	50.3306	-0.0086	-0.0050	6.7 1.4	2825
4389470	172.5564	46.8851	-0.0015	-0.0042	1.7 4.8	2826
4389637	172.5658	43.9808	-0.0056	-0.0072	1.1 1.6	2827
4389830	172.5660	42.4856	0.0016	-0.0089	0.9 1.3	2828
4391037	166.4907	38.2690	-0.0002	-0.0093	1.0 0.3	2829
4392051	167.3888	39.0880	-0.0028	-0.0087	2.8 0.7	2830
4393082	168.3807	39.1936	-0.0068	-0.0115	1.8 1.5	2831
4395216	169.1201	36.1592	-0.0055	-0.0098	1.4 1.0	2832
4399002	172.2524	39.6089	-0.0148	-0.0212	3.9 5.3	2833
4399045	172.5487	39.2264	-0.0280	-0.0150	0.7 0.3	2834
4400190	156.6743	124.9356	-0.0010	0.0034	2.7 2.8	2835
4400768	158.1267	118.9429	0.0063	0.0052	1.4 5.3	2836
4402015	157.5407	125.5784	0.0027	-0.0033	2.1 2.1	2837
4402578	159.3106	121.1037	-0.0016	0.0021	9.9 1.6	2838
4403487	159.9612	122.2815	-0.0083	0.0088	2.3 2.6	2839
4405526	161.3888	121.7557	0.0048	0.0031	1.0 1.6	2840
4406704	162.5204	120.3790	-0.0013	0.0064	1.8 1.4	2841
4408128	162.9145	125.6886	0.0060	0.0051	8.0 1.8	2842
4408465	163.9718	123.3480	-0.0024	0.0060	1.0 9.8	2843
4409758	165.4853	120.6237	-0.0090	0.0012	1.4 0.6	2844
4417830	166.2587	111.1898	0.0065	0.0061	6.8 5.4	2845
4419590	167.5678	114.3961	-0.0004	0.0081	2.8 1.6	2846
4421723	163.3311	101.6742	-0.0022	0.0048	1.2 2.2	2847
4422923	164.6228	100.0780	-0.0008	0.0095	5.3 0.6	2848
4423720	164.9023	102.4273	-0.0019	0.0094	9.9 1.1	2849
4424951	166.5204	100.7619	0.0058	-0.0047	4.9 6.0	2850
4425715	166.5842	102.3260	0.0080	0.0045	8.2 2.9	2851
4426960	168.1773	101.2584	0.0087	-0.0026	3.1 2.6	2852
4432270	165.7070	97.7480	-0.0122	0.0032	0.2 0.4	2853

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4359855	42.9013	-47.8785	0.39467	-0.58524	0.70833	2781
4361029	35.6293	-49.7922	0.31176	-0.60888	0.72943	2782
4361814	34.8755	-57.1399	0.31143	-0.68417	0.65949	2783
4362076	36.9612	-49.5413	0.32695	-0.60564	0.72546	2784
4362243	36.5431	-51.1915	0.32384	-0.62278	0.71223	2785
4362626	35.9984	-55.3880	0.32233	-0.66584	0.67288	2786
4362673	36.4146	-55.1253	0.32686	-0.66295	0.67354	2787
4363533	37.0148	-54.1442	0.33268	-0.65266	0.68070	2788
4364598	38.3139	-54.7580	0.34861	-0.65818	0.66729	2789
4365124	39.0464	-50.4218	0.35218	-0.61357	0.70676	2790
4366488	40.0863	-53.8388	0.36828	-0.64782	0.66686	2791
4367904	39.7249	-58.5485	0.37015	-0.69555	0.61579	2792
4368621	41.1364	-55.2327	0.38238	-0.66129	0.64536	2793
4371392	34.9650	-61.8773	0.31897	-0.73167	0.60243	2794
4371838	33.6520	-67.5538	0.31277	-0.78841	0.52970	2795
4372026	35.5253	-59.2947	0.32185	-0.70553	0.63138	2796
4372678	35.1137	-65.6283	0.32664	-0.76868	0.54993	2797
4372795	35.1731	-66.2863	0.32847	-0.77510	0.53975	2798
4372984	34.8365	-68.2098	0.32795	-0.79404	0.51181	2799
4373211	36.1322	-60.8460	0.33114	-0.72072	0.60903	2800
4374769	36.5914	-66.8068	0.34617	-0.77925	0.52243	2801
4375594	38.0770	-64.3352	0.35950	-0.75408	0.54966	2802
4376838	37.8118	-67.8228	0.36259	-0.78825	0.49719	2803
4377076	40.1231	-59.6985	0.37650	-0.70679	0.59891	2804
4377739	38.8523	-66.9862	0.37344	-0.77939	0.50308	2805
4378154	40.6407	-60.5352	0.38388	-0.71478	0.58458	2806
4378431	40.2109	-63.2001	0.38298	-0.74144	0.55099	2807
4378519	39.8047	-64.9207	0.38107	-0.75860	0.52850	2808
4378851	39.7624	-67.2588	0.38487	-0.78133	0.49132	2809
4379285	41.6967	-61.6003	0.39811	-0.72459	0.56257	2810
4380503	31.4145	-74.1372	0.29970	-0.85286	0.42756	2811
4381901	31.3491	-78.2711	0.30985	-0.89069	0.33267	2812
4381945	31.5291	-78.7551	0.31354	-0.89480	0.31786	2813
4381999	31.8122	-79.3004	0.31879	-0.89927	0.29947	2814
4382492	34.0281	-73.1331	0.32853	-0.84160	0.42870	2815
4383247	34.7540	-71.6602	0.33390	-0.82718	0.45197	2816
4384106	35.4728	-70.5798	0.34018	-0.81640	0.46666	2817
4385870	35.4281	-77.5264	0.35746	-0.88032	0.31186	2818
4386239	37.0871	-72.0408	0.36277	-0.82897	0.42568	2819
4386621	36.3038	-75.4585	0.36198	-0.86112	0.35700	2820
4387931	36.3061	-78.8642	0.37320	-0.89070	0.25957	2821
4388720	37.6619	-76.5756	0.38215	-0.86964	0.31255	2822
4388808	36.9235	-78.6789	0.38033	-0.88839	0.25714	2823
4388888	37.5219	-78.7085	0.38810	-0.88783	0.24724	2824
4389008	39.6712	-70.0822	0.38962	-0.80837	0.44130	2825
4389470	39.3864	-73.5952	0.39472	-0.84124	0.36946	2826
4389637	38.5692	-76.3849	0.39289	-0.86695	0.30664	2827
4389830	38.1440	-77.8198	0.39257	-0.87969	0.26838	2828
4391037	31.1185	-80.1358	0.31318	-0.90708	0.28130	2829
4392051	32.2127	-79.6057	0.32477	-0.90150	0.28605	2830
4393082	33.1939	-79.7869	0.33759	-0.90200	0.26911	2831
4395216	33.0397	-82.9094	0.35065	-0.92593	0.14037	2832
4399002	37.0248	-80.4911	0.38989	-0.90235	0.18372	2833
4399045	37.2001	-80.9425	0.39486	-0.90516	0.15742	2834
4400190	46.3617	5.8280	0.40955	-0.00986	0.91223	2835
4400768	46.0496	-0.3364	0.40629	-0.07772	0.91043	2836
4402015	47.3755	6.1981	0.42139	-0.00520	0.90687	2837
4402578	47.7996	1.3999	0.42656	-0.05771	0.90262	2838
4403487	48.7586	2.3449	0.43771	-0.04677	0.89790	2839
4405526	49.9780	1.4337	0.45209	-0.05603	0.89021	2840
4406704	50.6715	-0.2097	0.46040	-0.07360	0.88466	2841
4408128	52.5600	4.7733	0.48233	-0.01766	0.87581	2842
4408465	52.9080	2.2260	0.48656	-0.04543	0.87247	2843
4409758	53.5843	-0.8193	0.49485	-0.07834	0.86544	2844
4417830	51.6420	-10.0927	0.47374	-0.18054	0.86196	2845
4419590	53.8095	-7.3887	0.49868	-0.14978	0.85375	2846
4421723	46.1274	-18.3903	0.41186	-0.27328	0.86930	2847
4422923	46.9119	-20.2900	0.42185	-0.29318	0.85796	2848
4423720	47.8483	-18.1151	0.43188	-0.26933	0.86078	2849
4424951	48.9262	-20.1742	0.44542	-0.29073	0.84680	2850
4425715	49.4324	-18.6914	0.45072	-0.27454	0.84940	2851
4426960	50.6563	-20.1696	0.46579	-0.28959	0.83617	2852
4432270	47.2887	-22.8347	0.42745	-0.32013	0.84546	2853

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4432302	165.3823	96.5691	0.0078	0.0007	4.0 9.9	2854
4432400	165.5205	95.7366	-0.0012	-0.0038	4.6 2.5	2855
4432487	166.3509	95.3024	0.0019	0.0049	5.9 2.5	2856
4433784	167.8290	93.0563	-0.0031	-0.0072	2.1 2.5	2857
4433921	167.6567	91.4088	-0.0029	0.0029	1.0 0.4	2858
4434405	167.2876	95.6896	0.0040	0.0050	6.7 1.0	2859
4437070	169.3536	100.5115	0.0021	-0.0034	1.9 7.5	2860
4438057	170.1820	100.0658	0.0058	-0.0020	9.9 1.6	2861
4439010	170.4808	100.8188	0.0072	-0.0020	3.3 4.9	2862
4440123	165.6641	88.7851	0.0004	0.0020	1.5 3.4	2863
4441582	167.7968	85.5427	-0.0022	0.0019	6.3 9.9	2864
4442173	167.7439	89.2836	0.0070	-0.0011	1.5 2.2	2865
4443295	169.0104	88.3626	0.0025	-0.0022	9.9 6.5	2866
4443550	169.2194	86.0031	0.0035	-0.0008	9.9 3.1	2867
4444373	169.8029	87.8061	0.0018	0.0035	4.5 2.2	2868
4449490	174.2221	88.1606	-0.0002	-0.0015	7.5 1.0	2869
4450677	169.2404	74.4447	-0.0058	0.0076	0.9 3.5	2870
4450988	169.9851	71.5549	-0.0002	0.0068	5.0 2.1	2871
4453854	171.9273	73.3507	-0.0039	0.0022	2.5 0.5	2872
4460085	170.0724	70.8823	0.0038	0.0047	0.9 0.6	2873
4461824	171.8394	63.3158	-0.0122	-0.0005	4.2 2.3	2874
4462800	172.4011	63.8193	0.0066	-0.0053	1.8 3.5	2875
4463628	173.2021	65.2754	-0.0018	-0.0026	1.9 0.6	2876
4466066	174.7980	71.8709	-0.0017	-0.0013	2.6 0.6	2877
4466231	174.8780	70.3285	0.0016	0.0056	6.9 0.5	2878
4466248	175.0986	69.6369	0.0038	-0.0008	1.1 2.5	2879
4466718	175.7215	64.7452	0.0030	-0.0016	2.2 3.4	2880
4472750	174.1539	54.8667	0.0022	-0.0075	9.4 3.2	2881
4472965	174.5414	52.3165	0.0006	-0.0067	0.8 1.5	2882
4475930	176.6483	53.1984	0.0085	0.0006	6.8 1.1	2883
4476250	176.6924	60.5935	-0.0081	-0.0049	0.8 0.3	2884
4476629	177.0966	55.5343	-0.0058	-0.0108	1.1 0.6	2885
4477677	178.1683	55.8908	0.0021	0.0035	3.3 1.4	2886
4479147	178.8893	61.3733	-0.0115	-0.0148	0.8 1.0	2887
4480803	173.0999	42.1487	-0.0065	-0.0146	0.5 0.5	2888
4481168	174.0027	49.6872	-0.0040	-0.0127	2.1 1.2	2889
4481281	174.1659	49.4582	-0.0048	-0.0104	1.0 1.4	2890
4482861	175.0428	42.6285	-0.0075	-0.0077	0.4 0.3	2891
4482933	174.6469	40.8892	-0.0038	-0.0092	1.4 0.5	2892
4482984	174.9599	40.7464	-0.0138	-0.0060	1.1 1.8	2893
4483407	175.3298	46.6431	-0.0014	-0.0068	3.4 2.3	2894
4484392	176.8097	48.4541	0.0014	-0.0096	2.0 0.7	2895
4486191	178.0330	51.1175	0.0074	0.0020	1.4 0.5	2896
4487455	178.6579	47.2857	-0.0074	-0.0122	0.8 2.4	2897
4487618	178.1962	44.3445	-0.0095	-0.0104	0.9 0.9	2898
4488661	179.2375	45.2458	-0.0040	-0.0066	1.2 7.6	2899
4502108	166.0043	126.3850	-0.0023	0.0015	2.6 1.6	2900
4502315	166.5456	124.9325	-0.0035	-0.0023	0.9 1.2	2901
4503688	168.7700	122.2939	-0.0007	0.0057	0.9 1.7	2902
4503973	169.2846	120.0470	-0.0058	0.0091	2.8 0.5	2903
4505492	169.7982	125.0244	-0.0006	-0.0011	2.1 6.7	2904
4505794	170.6299	122.1761	-0.0043	0.0055	1.6 0.6	2905
4505967	170.9750	120.1463	-0.0019	0.0046	6.4 9.9	2906
4508101	170.7028	128.0632	0.0000	-0.0001	3.3 3.8	2907
4508353	171.7634	126.2110	-0.0048	0.0198	2.2 4.3	2908
4510564	168.2633	114.1474	0.0101	0.0046	7.8 3.3	2909
4511103	167.5927	117.8295	0.0022	0.0051	9.9 4.9	2910
4511378	168.8369	115.7915	-0.0006	-0.0012	1.8 4.5	2911
4513169	169.8620	117.7965	-0.0011	0.0031	1.1 1.2	2912
4514237	170.6743	117.2226	0.0040	0.0047	2.2 1.2	2913
4514420	170.8659	116.1069	-0.0089	0.0084	3.4 5.4	2914
4514534	171.3283	114.7845	-0.0040	0.0130	1.9 0.5	2915
4515280	171.6981	118.0813	-0.0034	-0.0012	9.3 1.8	2916
4516001	171.3812	119.7992	0.0019	0.0074	9.9 9.9	2917
4516165	172.2363	118.7345	0.0059	0.0056	3.8 8.1	2918
4517035	172.5719	119.7293	-0.0034	0.0034	4.5 4.1	2919
4518604	174.5894	114.5922	0.0012	0.0029	1.1 4.1	2920
4518823	175.1742	112.9238	0.0087	0.0031	0.9 1.5	2921
4520149	169.6734	108.3685	0.0025	0.0014	1.4 2.5	2922
4520475	170.5274	106.0840	0.0099	0.0029	2.4 1.2	2923
4524482	173.8400	107.0392	0.0013	-0.0011	1.8 1.1	2924
4524597	174.2382	105.7321	0.0045	0.0008	5.5 1.8	2925
4526620	175.3956	105.6923	0.0038	-0.0004	0.6 0.8	2926

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4432302	46.6420	-23.8736	0.42040	-0.33159	0.84458	2854
4432400	46.5376	-24.7118	0.41961	-0.34057	0.84139	2855
4432487	47.2104	-25.3650	0.42784	-0.34712	0.83454	2856
4433784	47.9888	-27.9414	0.43844	-0.37398	0.81726	2857
4433921	47.3549	-29.4733	0.43192	-0.39058	0.81295	2858
4434405	48.2188	-25.2602	0.43962	-0.34539	0.82912	2859
4437070	51.5718	-21.2214	0.47710	-0.30022	0.82598	2860
4438057	52.2394	-21.8851	0.48532	-0.30685	0.81872	2861
4439010	52.7402	-21.2476	0.49095	-0.29970	0.81802	2862
4440123	44.6976	-31.4236	0.40201	-0.41274	0.81733	2863
4441582	45.8203	-35.1425	0.41774	-0.45121	0.78861	2864
4442173	46.8339	-31.5376	0.42713	-0.41269	0.80452	2865
4443295	47.7864	-32.7821	0.43918	-0.42520	0.79141	2866
4443550	47.3155	-35.1059	0.43530	-0.44990	0.77981	2867
4444373	48.3880	-33.5419	0.44681	-0.43280	0.78297	2868
4449490	52.7266	-34.4603	0.49899	-0.43942	0.74694	2869
4450677	44.0473	-46.2037	0.40645	-0.56730	0.71622	2870
4450988	43.9392	-49.1889	0.40831	-0.59802	0.68968	2871
4453854	46.3126	-48.0188	0.43514	-0.58446	0.68489	2872
4460085	43.8316	-49.8592	0.40778	-0.60494	0.68393	2873
4461824	43.3734	-57.6235	0.41212	-0.68382	0.60212	2874
4462800	44.0553	-57.3004	0.41980	-0.68009	0.60103	2875
4463628	45.2376	-56.1312	0.43229	-0.66750	0.60627	2876
4466066	48.6444	-50.2565	0.46551	-0.60559	0.64542	2877
4466231	48.2824	-51.7594	0.46301	-0.62111	0.63233	2878
4466248	48.2971	-52.4859	0.46411	-0.62845	0.62422	2879
4466718	47.5028	-57.3575	0.46129	-0.67796	0.57234	2880
4472750	43.1891	-66.3908	0.42460	-0.77012	0.47606	2881
4472965	42.8352	-68.9484	0.42569	-0.79479	0.43255	2882
4475930	45.1065	-68.7022	0.45316	-0.79018	0.41263	2883
4476250	47.2527	-61.6182	0.46517	-0.72022	0.51469	2884
4476629	46.2009	-66.5883	0.46194	-0.76913	0.44165	2885
4477677	47.3300	-66.5514	0.47587	-0.76758	0.42937	2886
4479147	49.5812	-61.4956	0.49352	-0.71678	0.49261	2887
4480803	38.5601	-78.2952	0.39978	-0.88304	0.24579	2888
4481168	41.5705	-71.3181	0.41574	-0.81816	0.39720	2889
4481281	41.6619	-71.5844	0.41754	-0.82053	0.39038	2890
4482861	40.5597	-78.3881	0.42649	-0.88061	0.20646	2891
4482933	39.6853	-79.9444	0.42315	-0.89335	0.15123	2892
4482984	39.9448	-80.1706	0.42841	-0.89411	0.13047	2893
4483407	41.9771	-74.6173	0.43016	-0.84744	0.31114	2894
4484392	43.9115	-73.3009	0.45059	-0.83342	0.31995	2895
4486191	45.8423	-71.0935	0.46858	-0.81129	0.34962	2896
4487455	45.3514	-74.9486	0.47528	-0.84523	0.24434	2897
4487618	44.0719	-77.6395	0.47112	-0.86792	0.15738	2898
4488661	45.3268	-77.0712	0.48580	-0.86096	0.15081	2899
4502108	55.7210	4.5616	0.51982	-0.01777	0.85409	2900
4502315	55.8269	3.0135	0.52114	-0.03472	0.85276	2901
4503688	57.2093	-0.1521	0.53788	-0.06841	0.84024	2902
4503973	57.0635	-2.4549	0.53644	-0.09370	0.83872	2903
4505492	58.9721	2.1753	0.55878	-0.04150	0.82827	2904
4505794	58.9593	-0.7949	0.55891	-0.07407	0.82591	2905
4505967	58.7127	-2.8410	0.55624	-0.09663	0.82539	2906
4508101	60.7041	4.8338	0.57952	-0.01082	0.81489	2907
4508353	61.1942	2.7543	0.58550	-0.03329	0.80999	2908
4510564	54.4057	-7.8254	0.50585	-0.15410	0.84874	2909
4511103	54.8102	-4.1010	0.50987	-0.11332	0.85275	2910
4511378	55.4235	-6.4111	0.51762	-0.13801	0.84441	2911
4513169	56.9769	-4.7790	0.53580	-0.11911	0.83590	2912
4514237	57.5926	-5.5611	0.54331	-0.12715	0.82985	2913
4514420	57.4589	-6.6863	0.54196	-0.13948	0.82875	2914
4514534	57.5261	-8.0870	0.54310	-0.15463	0.82531	2915
4515280	58.8187	-5.0286	0.55790	-0.12039	0.82113	2916
4516001	59.0035	-3.2898	0.55980	-0.10129	0.82242	2917
4516165	59.5206	-4.5551	0.56623	-0.11466	0.81623	2918
4517035	60.1255	-3.6960	0.57336	-0.10480	0.81258	2919
4518604	60.5986	-9.2004	0.58031	-0.16420	0.79767	2920
4518823	60.6848	-10.9680	0.58187	-0.18324	0.79237	2921
4520149	54.1138	-13.7727	0.50414	-0.21860	0.83550	2922
4520475	54.2828	-16.2082	0.50705	-0.24467	0.82646	2923
4524482	57.7312	-16.2350	0.54823	-0.24236	0.80044	2924
4524597	57.7411	-17.6028	0.54892	-0.25702	0.79538	2925
4526620	58.8397	-17.9706	0.56229	-0.26007	0.78498	2926

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4530156	172.0180	99.5694	0.0056	0.0074	3.6 2.2	2927
4530205	171.7971	98.7026	-0.0030	0.0022	1.1 8.0	2928
4530740	173.1591	94.6231	0.0059	-0.0007	4.1 1.2	2929
4531527	173.3574	96.4452	0.0011	-0.0025	2.1 4.0	2930
4531784	174.3994	94.5281	0.0064	-0.0074	1.4 4.0	2931
4532438	174.2252	96.9869	0.0058	0.0028	4.7 9.4	2932
4533157	174.5110	100.0515	0.0002	0.0032	2.4 4.0	2933
4534057	175.0647	101.1328	0.0002	0.0026	9.9 1.3	2934
4537324	177.9091	99.1158	0.0053	0.0035	7.5 5.8	2935
4540074	174.1499	91.6097	0.0047	0.0044	4.3 1.9	2936
4541583	176.0575	87.3081	-0.0076	0.0004	3.1 1.1	2937
4543368	177.1445	88.9673	0.0024	-0.0035	1.4 2.6	2938
4547385	180.5093	89.9673	0.0038	-0.0033	9.9 2.2	2939
4547785	181.3295	86.1421	0.0079	0.0038	1.5 2.7	2940
4549813	182.5557	85.6608	-0.0043	-0.0122	3.6 3.4	2941
4550067	176.2029	81.9420	-0.0006	-0.0099	1.1 0.4	2942
4550697	177.6412	76.2825	-0.0037	-0.0001	4.7 3.6	2943
4554173	179.6642	81.9848	-0.0047	-0.0087	0.5 1.7	2944
4555567	181.1811	78.0719	-0.0033	-0.0106	2.6 2.4	2945
4556390	181.6911	80.8700	0.0024	-0.0073	2.2 0.1	2946
4557623	182.5854	77.7080	-0.0069	-0.0043	0.7 0.9	2947
4562370	180.2033	70.4770	-0.0026	0.0029	4.0 2.2	2948
4563007	180.0422	72.7993	-0.0047	0.0015	1.1 0.8	2949
4565134	181.9497	72.4358	-0.0080	0.0059	0.4 1.2	2950
4565716	182.8045	66.2120	-0.0019	-0.0042	3.2 1.2	2951
4568577	185.2740	68.6609	-0.0066	-0.0085	2.4 4.5	2952
4568886	185.7521	65.7510	-0.0080	0.0017	0.9 0.6	2953
4571106	180.1924	61.6904	-0.0101	-0.0080	1.2 0.8	2954
4571861	181.3194	54.8119	-0.0028	-0.0148	2.0 2.1	2955
4573155	182.1142	62.1273	-0.0144	-0.0035	0.3 0.4	2956
4573602	182.3012	57.1594	0.0012	-0.0112	2.7 0.6	2957
4575074	183.6277	63.4700	-0.0098	0.0048	0.6 0.3	2958
4575431	183.7999	59.6657	-0.0013	-0.0005	2.2 0.4	2959
4577577	185.7002	58.0747	-0.0014	-0.0057	1.3 2.3	2960
4580538	180.2359	45.4478	-0.0072	-0.0105	1.0 2.0	2961
4609103	179.6445	129.6439	-0.0045	0.0056	4.4 4.3	2962
4610158	175.4246	119.1168	-0.0060	0.0064	2.1 5.7	2963
4610411	175.6888	116.9492	-0.0116	0.0047	1.4 1.5	2964
4611993	178.3972	112.6438	-0.0047	0.0030	3.0 1.9	2965
4613546	178.6936	116.2127	-0.0043	0.0121	0.8 1.4	2966
4616683	181.5679	116.1662	-0.0024	0.0046	2.2 7.5	2967
4621573	179.6517	107.2343	-0.0051	0.0047	1.9 1.0	2968
4632132	181.5248	102.0118	-0.0004	0.0075	1.2 2.0	2969
4634258	183.5911	100.8425	-0.0022	-0.0010	2.7 1.2	2970
4638539	187.2692	98.6172	0.0050	0.0083	6.1 8.0	2971
4640138	182.1518	91.9572	-0.0085	0.0116	1.1 0.4	2972
4640331	182.4375	90.6672	0.0021	0.0023	0.8 1.1	2973
4640583	183.2886	88.6877	0.0025	-0.0009	2.0 5.3	2974
4641506	183.5212	88.4412	0.0116	0.0041	0.7 1.0	2975
4646873	188.5280	86.7631	-0.0020	0.0079	3.0 1.1	2976
4648845	189.8176	86.7579	0.0042	0.0083	5.0 4.9	2977
4649619	190.0715	88.3042	-0.0018	0.0030	5.5 1.0	2978
4650485	185.0842	80.0271	-0.0142	0.0038	0.7 1.2	2979
4651068	184.9914	83.6678	0.0125	-0.0045	5.7 1.3	2980
4651472	185.7196	80.4323	-0.0013	0.0046	1.7 0.9	2981
4652362	186.2601	81.5109	-0.0011	-0.0025	3.4 1.2	2982
4652724	186.6611	77.3590	0.0049	0.0173	2.6 0.8	2983
4653334	186.8155	81.3983	0.0013	-0.0022	1.4 1.1	2984
4653760	187.7150	77.9439	0.0098	0.0090	1.6 0.5	2985
4654256	187.6478	82.2875	-0.0117	-0.0174	0.3 0.9	2986
4654808	188.3273	76.1834	0.0019	0.0029	0.9 0.8	2987
4654890	188.8531	77.0537	0.0016	0.0053	4.4 1.8	2988
4655753	189.1941	77.8524	0.0172	0.0212	4.5 2.9	2989
4660420	186.2202	70.6410	0.0095	-0.0053	3.1 2.5	2990
4661370	187.2104	71.7593	0.0048	0.0089	2.8 1.2	2991
4661560	187.4475	69.7078	-0.0061	0.0011	2.9 1.0	2992
4663120	188.0486	73.8907	-0.0034	0.0023	1.2 3.0	2993
4671364	188.3212	60.8488	-0.0002	-0.0056	0.7 0.8	2994
4676079	191.5421	63.5457	-0.0103	-0.0003	0.6 0.9	2995
4701033	181.1546	130.9031	-0.0044	0.0054	2.2 6.9	2996
4703225	183.2501	129.2318	0.0019	0.0087	1.4 5.1	2997
4715067	187.1610	122.3458	0.0019	0.0094	9.2 5.1	2998
4738042	193.8014	105.0235	0.0039	0.0118	3.2 8.7	2999

Ref	x'	y'	$\xi$	$\eta$	$\zeta$	Ser
4530156	53.8588	-22.8843	0.50506	-0.31636	0.80302	2927
4530205	53.4004	-23.6532	0.50001	-0.32487	0.80278	2928
4530740	53.5458	-27.9560	0.50424	-0.37039	0.78010	2929
4531522	54.2544	-26.2639	0.51165	-0.35196	0.78380	2930
4531784	54.7082	-28.4004	0.51840	-0.37421	0.76891	2931
4532438	55.2407	-25.9912	0.52327	-0.34833	0.77772	2932
4533157	56.3866	-23.1318	0.53537	-0.31709	0.78283	2933
4534057	57.2252	-22.2518	0.54496	-0.30707	0.78021	2934
4537324	59.3790	-24.9975	0.57246	-0.33444	0.74862	2935
4540074	53.6386	-31.1299	0.50744	-0.40379	0.76122	2936
4541583	54.2441	-35.8012	0.51823	-0.45227	0.72588	2937
4543368	55.7585	-34.5186	0.53540	-0.43765	0.72236	2938
4547385	59.2697	-34.5173	0.57795	-0.43459	0.69073	2939
4547785	58.9679	-38.4217	0.57776	-0.47540	0.66347	2940
4549813	60.0069	-39.2328	0.59129	-0.48277	0.64599	2941
4550067	52.8569	-40.9921	0.50615	-0.50729	0.69748	2942
4550697	52.6260	-46.8328	0.50944	-0.56750	0.64685	2943
4554173	56.1883	-41.9368	0.54734	-0.51423	0.66030	2944
4555567	56.5297	-46.1238	0.55612	-0.55676	0.61705	2945
4556390	57.8148	-43.5839	0.56896	-0.52960	0.62913	2946
4557623	57.7728	-46.8730	0.57232	-0.56313	0.59609	2947
4562370	53.4313	-53.1336	0.52729	-0.63048	0.56961	2948
4563007	53.9375	-50.8592	0.53034	-0.60717	0.59167	2949
4565134	55.6632	-51.7513	0.55279	-0.61443	0.56294	2950
4565716	54.7123	-57.9673	0.55090	-0.67691	0.48817	2951
4568577	57.7771	-56.3206	0.58659	-0.65716	0.47335	2952
4568886	57.4077	-59.2492	0.58760	-0.68586	0.42932	2953
4571106	50.9210	-61.5624	0.51024	-0.71602	0.47640	2954
4571861	50.0448	-68.4842	0.51505	-0.78212	0.35073	2955
4573155	52.8882	-61.6905	0.53511	-0.71502	0.44989	2956
4573602	51.6542	-66.5111	0.53048	-0.76189	0.37164	2957
4575074	54.7216	-60.8331	0.55655	-0.70456	0.44029	2958
4575431	53.8044	-64.5329	0.55320	-0.74062	0.38139	2959
4577577	55.1740	-66.6009	0.57708	-0.75708	0.30629	2960
4580538	46.3417	-77.1617	0.50219	-0.85819	0.10641	2961
4609103	69.7284	3.8039	0.69005	-0.01328	0.72364	2962
4610158	62.6868	-5.0963	0.60458	-0.11784	0.78778	2963
4610411	62.3235	-7.2517	0.60066	-0.14158	0.78687	2964
4611993	63.6958	-12.1547	0.61880	-0.19335	0.76138	2965
4613546	64.9954	-8.8142	0.63362	-0.15603	0.75774	2966
4616683	67.7384	-9.6775	0.66763	-0.16257	0.72653	2967
4621573	63.3598	-17.7031	0.61695	-0.25322	0.74515	2968
4632132	63.6702	-23.2482	0.62368	-0.31196	0.71673	2969
4634258	65.3189	-24.9589	0.64505	-0.32838	0.68999	2970
4638539	68.2130	-28.1419	0.68339	-0.35860	0.63591	2971
4640138	61.4109	-33.0755	0.60293	-0.41752	0.67982	2972
4640331	61.3178	-34.3948	0.60290	-0.43136	0.67115	2973
4640583	61.5708	-36.5368	0.60794	-0.45334	0.65184	2974
4641506	61.7238	-36.8396	0.61011	-0.45631	0.64772	2975
4646873	66.0476	-39.8760	0.66737	-0.48257	0.56723	2976
4648845	67.2827	-40.2483	0.68356	-0.48473	0.54569	2977
4649619	67.9662	-38.8367	0.69062	-0.46944	0.55015	2978
4650485	60.8288	-45.3592	0.60835	-0.54453	0.57741	2979
4651068	61.7756	-41.8391	0.61594	-0.50767	0.60240	2980
4651472	61.5534	-45.1514	0.61715	-0.54160	0.57079	2981
4652362	62.3785	-44.2702	0.62638	-0.53172	0.57002	2982
4652724	61.5819	-48.3687	0.62187	-0.57392	0.53282	2983
4653334	62.8791	-44.5365	0.63301	-0.53381	0.56066	2984
4653760	62.7589	-48.1076	0.63641	-0.56983	0.51988	2985
4654256	63.9302	-43.9202	0.64550	-0.52629	0.55349	2986
4654808	62.8452	-49.9715	0.64039	-0.58822	0.49386	2987
4654890	63.5970	-49.2860	0.64895	-0.58040	0.49193	2988
4655753	64.1512	-48.6167	0.65502	-0.57301	0.49255	2989
4660420	59.2478	-54.6900	0.60237	-0.63937	0.47787	2990
4661370	60.5155	-53.8988	0.61717	-0.62996	0.47144	2991
4661560	60.1592	-55.9351	0.61638	-0.65021	0.44419	2992
4663120	61.9257	-52.0922	0.63211	-0.61036	0.47739	2993
4671364	58.4767	-64.6853	0.61605	-0.73388	0.28618	2994
4676079	62.3326	-63.0146	0.66541	-0.71029	0.22960	2995
4701033	71.5347	4.5822	0.71264	-0.00257	0.70153	2996
4703225	73.0687	2.3815	0.73204	-0.02491	0.68081	2997
4715067	74.8600	-5.3404	0.75594	-0.10696	0.64584	2998
4738042	76.2996	-23.8547	0.78395	-0.30239	0.54220	2999

## POSITIONS ON THE DISK

Ref	x	y	$\delta x$	$\delta y$	weights	Ser
4750535	192.5423	80.1156	-0.0038	0.0104	2.4 0.7	3000
4805104	192.0478	131.4527	0.0103	0.0034	1.2 2.5	3001
4828722	200.3088	108.4480	-0.0031	0.0081	7.3 4.1	3002
4910720	199.4977	117.9346	-0.0048	0.0115	9.9 1.6	3003

Ref	$x'$	$y'$	$\xi$	$\eta$	$\zeta$	Ser
4750535	68.0059	-47.3985	0.70341	-0.55505	0.44399	3000
4805104	82.1371	2.0070	0.85072	-0.01457	0.52541	3001
4828722	83.5141	-22.4219	0.88257	-0.27221	0.38338	3002
4910720	85.4352	-13.0872	0.90244	-0.16987	0.39590	3003

## LIMB PROFILE POSITIONS

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x	y	$\delta r$	P	x'	y'	Ser
158.1996	26.9880	0.1718	192.7029	19.9584	-88.6000	3004
159.3250	27.6053	0.1916	193.5127	21.2131	-88.3281	3005
160.8910	28.7201	0.0303	194.7222	23.0320	-87.7043	3006
161.5690	29.1730	-0.0016	195.2372	23.8110	-87.4628	3007
162.0379	29.3770	0.0733	195.5569	24.3187	-87.4007	3008
162.9191	29.9409	0.0693	196.2178	25.3241	-87.1104	3009
164.2110	30.9358	-0.0544	197.2457	26.8461	-86.5237	3010
165.3890	31.6036	0.0552	198.0990	28.1657	-86.2183	3011
166.2840	32.2615	0.0290	198.8008	29.2111	-85.8419	3012
167.1856	32.8545	0.0728	199.4821	30.2444	-85.5296	3013
168.3627	33.7045	0.0886	200.3992	31.6150	-85.0492	3014
169.2246	34.3604	0.0884	201.0833	32.6282	-84.6653	3015
170.3096	35.2682	0.0421	201.9766	33.9269	-84.1031	3016
171.3626	36.2221	-0.0381	202.8735	35.2080	-83.4877	3017
171.9666	36.7220	-0.0378	203.3694	35.9294	-83.1800	3018
172.5076	37.1721	-0.0335	203.8145	36.5763	-82.9022	3019
172.7296	37.4100	-0.0707	204.0191	36.8569	-82.7371	3020
172.9722	37.5884	-0.0480	204.2090	37.1403	-82.6350	3021
173.4932	38.0593	-0.0623	204.6532	37.7738	-82.3315	3022
173.6052	38.2023	-0.0961	204.7662	37.9219	-82.2262	3023
174.2032	38.7392	-0.1016	205.2749	38.6481	-81.8813	3024
174.8092	39.1891	-0.0300	205.7502	39.3572	-81.6221	3025
175.2002	39.6121	-0.0783	206.1134	39.8525	-81.3276	3026
175.4352	39.7241	-0.0011	206.2706	40.1097	-81.2870	3027
175.9691	40.2320	-0.0083	206.7366	40.7662	-80.9517	3028
176.6971	40.9299	-0.0122	207.3743	41.6629	-80.4893	3029
177.5865	41.7399	0.0286	208.1344	42.7462	-79.9653	3030
178.1355	42.3068	0.0144	208.6332	43.4339	-79.5776	3031
178.9882	43.1805	0.0109	209.4049	44.5002	-78.9821	3032
179.8742	44.0444	0.0548	210.1866	45.5956	-78.4055	3033
180.5792	44.9373	-0.0376	210.9036	46.5257	-77.7494	3034
181.0792	45.4442	-0.0097	211.3535	47.1494	-77.4053	3035
182.0852	46.5371	0.0153	212.2926	48.4250	-76.6431	3036
182.9022	47.4230	0.0546	213.0539	49.4605	-76.0256	3037
183.2749	47.9657	-0.0114	213.4680	49.9723	-75.6110	3038
183.4639	48.2257	-0.0333	213.6708	50.2275	-75.4154	3039
183.6119	48.3427	0.0056	213.7876	50.4027	-75.3452	3040
183.8589	48.6096	0.0259	214.0171	50.7155	-75.1594	3041
184.2589	49.0966	0.0273	214.4155	51.2376	-74.8060	3042
184.9399	49.8925	0.0603	215.0772	52.1171	-74.2362	3043
185.3429	50.4465	0.0344	215.5099	52.6611	-73.8194	3044
186.0779	51.3264	0.0795	216.2338	53.6163	-73.1843	3045
186.8819	52.4133	0.0715	217.0880	54.6965	-72.3703	3046
187.2146	52.9578	0.0183	217.4899	55.1705	-71.9425	3047
187.5429	53.3799	0.0374	217.8277	55.6054	-71.6310	3048
187.9269	54.0028	-0.0109	218.2894	56.1508	-71.1426	3049
188.2009	54.3528	0.0123	218.5701	56.5132	-70.8848	3050
188.2009	54.3528	0.0123	218.5701	56.5132	-70.8848	3051
189.1059	55.7247	-0.0161	219.6093	57.7713	-69.8260	3052
189.2319	55.8527	0.0173	219.7208	57.9286	-69.7390	3053
189.6749	56.4817	0.0392	220.2070	58.5323	-69.2616	3054
190.2229	57.3997	-0.0002	220.8825	59.3190	-68.5368	3055
190.3396	57.6135	-0.0169	221.0362	59.4918	-68.3648	3056
190.7986	58.2465	0.0341	221.5295	60.1120	-67.8881	3057
191.0336	58.6645	0.0135	221.8324	60.4563	-67.5540	3058
191.1236	58.8655	-0.0152	221.9705	60.5998	-67.3867	3059
191.3916	59.2485	0.0143	222.2655	60.9657	-67.0955	3060
191.8486	60.0584	-0.0101	222.8534	61.6344	-66.4484	3061
192.1276	60.3084	0.1033	223.0790	61.9731	-66.2880	3062
192.3137	60.6914	0.0708	223.3473	62.2604	-65.9735	3063
192.4207	60.8774	0.0702	223.4829	62.4159	-65.8254	3064
193.1471	62.3754	-0.0349	224.5335	63.5387	-64.5948	3065
193.8929	63.7104	-0.0158	225.5007	64.6337	-63.5261	3066
194.7639	65.3783	-0.0100	226.6909	65.9435	-62.1736	3067
195.8338	67.6846	-0.0594	228.2992	67.6256	-60.2652	3068
196.4428	68.9596	-0.0400	229.1932	68.5724	-59.2151	3069
196.8668	69.9366	-0.0494	229.8671	69.2569	-58.3983	3070
197.1819	70.6786	-0.0546	230.3772	69.7701	-57.7760	3071
197.3419	71.1556	-0.0933	230.6947	70.0592	-57.3638	3072
197.5401	71.6026	-0.0825	231.0042	70.3765	-56.9913	3073
197.6961	72.0116	-0.0937	231.2812	70.6424	-56.6432	3074
198.1599	73.0537	-0.0511	232.0027	71.3837	-55.7753	3075
198.3919	73.7677	-0.0937	232.4772	71.8093	-55.1562	3076

## LIMB PROFILE POSITIONS

x	y	$\delta r$	P	x'	y'	Ser
198.5679	74.1757	-0.0746	232.7582	72.0942	-54.8149	3077
198.6239	74.3337	-0.0780	232.8643	72.1928	-54.6792	3078
198.8719	74.9237	-0.0515	233.2690	72.5985	-54.1836	3079
198.9840	75.2757	-0.0674	233.5026	72.8061	-53.8778	3080
199.6110	77.1026	-0.0821	234.7253	73.9271	-52.3031	3081
199.6570	77.3146	-0.1065	234.8617	74.0316	-52.1128	3082
200.0838	78.5683	-0.0929	235.7002	74.7975	-51.0313	3083
200.1638	78.8903	-0.1145	235.9099	74.9659	-50.7451	3084
200.2318	79.0243	-0.0900	236.0038	75.0692	-50.6359	3085
200.3426	79.3813	-0.0906	236.2405	75.2772	-50.3249	3086
200.3828	79.5353	-0.0980	236.3411	75.3594	-50.1886	3087
200.5829	80.0692	-0.0625	236.7014	75.7031	-49.7331	3088
200.7749	80.6902	-0.0558	237.1127	76.0639	-49.1918	3089
200.9809	81.2202	-0.0058	237.4711	76.4122	-48.7419	3090
201.0199	81.4462	-0.0304	237.6154	76.5139	-48.5362	3091
201.1089	81.5522	0.0263	237.6952	76.6294	-48.4598	3092
201.6238	83.6867	-0.0327	239.0836	77.7305	-46.5582	3093
201.6638	83.9366	-0.0558	239.2432	77.8400	-46.3297	3094
201.8888	84.6126	-0.0013	239.6926	78.2481	-45.7451	3095
201.9619	84.9716	-0.0153	239.9242	78.4202	-45.4214	3096
202.0079	85.1496	-0.0122	240.0405	78.5150	-45.2637	3097
202.1359	85.6206	0.0041	240.3490	78.7717	-44.8481	3098
202.1599	85.8126	-0.0160	240.4708	78.8494	-44.6707	3099
202.2119	85.9546	0.0028	240.5657	78.9396	-44.5493	3100
202.4929	87.0776	0.0329	241.2975	79.5286	-43.5516	3101
202.5570	87.5473	-0.0024	241.5965	79.7237	-43.1192	3102
202.7270	88.0283	0.0662	241.9161	80.0236	-42.7061	3103
202.9000	89.1073	0.0258	242.6065	80.4965	-41.7199	3104
202.9831	89.8752	-0.0345	243.0937	80.7946	-41.0066	3105
203.2051	90.7262	0.0346	243.6483	81.2496	-40.2532	3106
203.2831	91.1522	0.0397	243.9221	81.4456	-39.8666	3107
203.3271	91.5702	0.0145	244.1875	81.6067	-39.4780	3108
203.3711	91.8012	0.0209	244.3361	81.7146	-39.2688	3109
203.4359	92.5125	-0.0255	244.7870	81.9791	-38.6048	3110
203.4789	92.7105	-0.0127	244.9149	82.0767	-38.4270	3111
203.5329	93.1895	-0.0294	245.2197	82.2648	-37.9827	3112
203.5729	93.3815	-0.0172	245.3436	82.3577	-37.8099	3113
203.6499	93.7615	0.0060	245.5884	82.5397	-37.4672	3114
203.6549	93.9435	-0.0139	245.7029	82.5963	-37.2939	3115
203.6940	94.2435	-0.0154	245.8943	82.7190	-37.0172	3116
203.7290	94.3785	0.0015	245.9818	82.7910	-36.8976	3117
203.8530	95.2055	0.0203	246.5106	83.1452	-36.1393	3118
203.8420	95.4465	-0.0196	246.6612	83.2032	-35.9049	3119
203.9530	96.3795	-0.0154	247.2556	83.5751	-35.0412	3120
204.0758	97.6843	-0.0255	248.0849	84.0641	-33.8240	3121
204.0858	98.0323	-0.0477	248.3047	84.1727	-33.4929	3122
204.2429	99.6783	-0.0249	249.3510	84.7916	-31.9581	3123
204.2819	100.1033	-0.0157	249.6210	84.9499	-31.5613	3124
204.3379	100.3533	0.0237	249.7811	85.0748	-31.3374	3125
204.3629	100.7573	0.0234	250.0371	85.2137	-30.9568	3126
204.4469	101.2613	0.0784	250.3583	85.4376	-30.4971	3127
204.4549	101.7643	0.0603	250.6761	85.5884	-30.0167	3128
204.4849	101.8943	0.0840	250.7591	85.6542	-29.9005	3129
204.5318	102.8886	0.0890	251.3882	85.9821	-28.9597	3130
204.5318	103.1936	0.0784	251.5808	86.0688	-28.6670	3131
204.5578	103.4756	0.0954	251.7595	86.1740	-28.4038	3132
204.5569	103.7496	0.0866	251.9326	86.2510	-28.1405	3133
204.6139	104.4866	0.1266	252.3989	86.5154	-27.4495	3134
204.6399	104.6006	0.1505	252.4712	86.5727	-27.3475	3135
204.6229	104.7156	0.1315	252.5437	86.5891	-27.2323	3136
204.6309	105.3316	0.1315	252.9328	86.7721	-26.6435	3137
204.6069	105.6176	0.1052	253.1134	86.8304	-26.3622	3138
204.6219	106.0296	0.1184	253.3738	86.9620	-25.9711	3139
204.5559	106.6026	0.0531	253.7360	87.0618	-25.4024	3140
204.5769	106.9436	0.0763	253.9515	87.1789	-25.0812	3141
204.5008	107.8449	0.0120	254.5220	87.3624	-24.1946	3142
204.5268	108.1429	0.0438	254.7101	87.4721	-23.9160	3143
204.4729	108.6079	0.0010	255.0049	87.5527	-23.4544	3144
204.4449	109.2589	-0.0074	255.4171	87.7110	-22.8217	3145
204.3829	110.1019	-0.0370	255.9517	87.8914	-21.9951	3146
204.4009	110.2989	-0.0103	256.0757	87.9647	-21.8112	3147
204.3819	110.7219	-0.0092	256.3436	88.0669	-21.3999	3148
204.3389	111.0489	-0.0352	256.5517	88.1187	-21.0738	3149

## LIMB PROFILE POSITIONS

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x	y	$\delta r$	P	x'	y'	Ser
204.3509	111.2759	-0.0108	256.6947	88.1948	-20.8594	3150
204.3129	111.7729	-0.0195	257.0100	88.2997	-20.3716	3151
204.3257	112.9628	0.0743	257.7603	88.6505	-19.2334	3152
204.2658	113.4218	0.0499	258.0525	88.7236	-18.7759	3153
204.2718	113.5748	0.0681	258.1486	88.7729	-18.6308	3154
204.2108	114.0838	0.0502	258.4725	88.8592	-18.1249	3155
204.1978	114.3938	0.0648	258.6685	88.9350	-17.8237	3156
204.1458	114.8388	0.0543	258.9517	89.0117	-17.3819	3157
204.0708	116.0688	0.1053	259.7299	89.2897	-16.1802	3158
203.9408	116.9668	0.0783	260.3031	89.4206	-15.2814	3159
203.9318	117.1308	0.0890	260.4067	89.4586	-15.1215	3160
203.9368	117.2648	0.1102	260.4904	89.5015	-14.9943	3161
203.6628	119.0962	0.0806	261.6606	89.7597	-13.1588	3162
203.5428	119.5582	0.0288	261.9606	89.7761	-12.6813	3163
203.5218	119.8172	0.0466	262.1246	89.8297	-12.4267	3164
203.4498	120.1792	0.0305	262.3577	89.8636	-12.0589	3165
203.4438	120.5432	0.0815	262.5857	89.9614	-11.7078	3166
203.3488	120.7312	0.0177	262.7126	89.9238	-11.5004	3167
203.2378	121.1992	-0.0155	263.0162	89.9505	-11.0197	3168
203.1898	121.6732	0.0169	263.3169	90.0394	-10.5511	3169
202.9788	122.1682	-0.1049	263.6486	89.9779	-10.0160	3170
202.8358	123.0218	-0.0909	264.1967	90.0835	-9.1562	3171
202.6738	123.5988	-0.1408	264.5751	90.0923	-8.5563	3172
202.5638	124.2638	-0.1183	265.0019	90.1760	-7.8868	3173
202.5108	124.3878	-0.1453	265.0856	90.1605	-7.7527	3174
202.4036	124.8377	-0.1586	265.3785	90.1857	-7.2905	3175
202.2636	125.7297	-0.1072	265.9497	90.3053	-6.3946	3176
202.1306	126.1267	-0.1503	266.2136	90.2907	-5.9758	3177
202.0566	126.5197	-0.1350	266.4668	90.3315	-5.5775	3178
202.0126	126.7197	-0.1327	266.5965	90.3462	-5.3731	3179
201.9486	126.8247	-0.1711	266.6705	90.3147	-5.2541	3180
201.6576	128.0297	-0.1710	267.4563	90.3784	-4.0148	3181
201.5416	128.6747	-0.1253	267.8706	90.4507	-3.3628	3182
201.5276	128.8707	-0.0900	267.9931	90.4931	-3.1708	3183
201.4046	129.3057	-0.0989	268.2793	90.4989	-2.7183	3184
201.3016	129.5157	-0.1445	268.4246	90.4599	-2.4874	3185
200.7926	131.2297	-0.1765	269.5577	90.4594	-0.6977	3186
200.4847	132.3857	-0.1442	270.3156	90.4930	0.4994	3187
200.4176	132.5467	-0.1616	270.4256	90.4744	0.6730	3188
200.3936	132.7267	-0.1319	270.5392	90.5026	0.8526	3189
200.2716	133.0787	-0.1445	270.7751	90.4858	1.2251	3190
200.2606	133.2797	-0.0950	270.8987	90.5324	1.4211	3191
200.1836	133.5677	-0.0817	271.0873	90.5405	1.7194	3192
200.0816	133.8147	-0.1038	271.2560	90.5130	1.9855	3193
200.0596	133.9587	-0.0807	271.3471	90.5329	2.1299	3194
199.9016	134.5417	-0.0501	271.7290	90.5472	2.7344	3195
199.8776	134.7187	-0.0173	271.8401	90.5746	2.9111	3196
199.3356	136.2747	-0.0263	272.8828	90.4975	4.5586	3197
199.2986	136.4797	0.0071	273.0129	90.5204	4.7659	3198
199.2026	136.7237	-0.0013	273.1787	90.4977	5.0274	3199
198.8416	137.8330	0.0403	273.9162	90.4671	6.1947	3200
198.7956	137.9130	0.0252	273.9737	90.4457	6.2846	3201
198.4716	138.8110	0.0413	274.5774	90.3905	7.2386	3202
198.2046	139.4330	0.0187	275.0053	90.3115	7.9116	3203
198.1026	139.7520	0.0415	275.2166	90.3044	8.2467	3204
197.9766	140.0380	0.0310	275.4142	90.2650	8.5571	3205
197.9326	140.1980	0.0501	275.5184	90.2683	8.7232	3206
197.6226	140.8910	0.0261	275.9983	90.1682	9.4765	3207
197.3794	141.4770	0.0282	276.3996	90.1017	10.1081	3208
197.3135	141.6730	0.0440	276.5300	90.0942	10.3150	3209
196.9615	142.3950	0.0065	277.0375	89.9621	11.1081	3210
196.9004	142.5750	0.0227	277.1573	89.9547	11.2982	3211
196.7994	142.7610	0.0052	277.2907	89.9108	11.5055	3212
196.7164	142.9720	0.0147	277.4340	89.8912	11.7316	3213
196.6154	143.1650	0.0011	277.5715	89.8493	11.9456	3214
196.3794	143.8040	0.0492	278.0013	89.8048	12.6260	3215
196.3224	143.9000	0.0373	278.0715	89.7774	12.7344	3216
195.5834	145.4530	0.0282	279.1592	89.5106	14.4351	3217
195.4714	145.7430	0.0536	279.3552	89.4857	14.7453	3218
195.3084	146.0420	0.0381	279.5703	89.4145	15.0787	3219
195.1024	146.3740	0.0000	279.8163	89.3114	15.4560	3220
194.8345	146.9700	0.0268	280.2293	89.2240	16.1042	3221
194.5465	147.4440	-0.0153	280.5792	89.0827	16.6411	3222

## LIMB PROFILE POSITIONS

x	y	$\delta r$	P	x'	y'	Ser
193.9814	148.4764	-0.0401	281.3238	88.8345	17.7928	3223
193.2054	149.9194	-0.0371	282.3609	88.5009	19.3986	3224
192.7374	150.7064	-0.0619	282.9403	88.2761	20.2871	3225
192.4571	151.2613	-0.0308	283.3333	88.1651	20.8994	3226
192.1441	151.7923	-0.0356	283.7234	88.0160	21.4981	3227
191.6960	152.5441	-0.0397	284.2773	87.8002	22.3471	3228
191.4610	153.0080	-0.0023	284.6056	87.7069	22.8593	3229
191.2960	153.2620	-0.0117	284.7971	87.6209	23.1500	3230
190.9320	153.8830	0.0032	285.2525	87.4485	23.8496	3231
190.8510	154.0720	0.0342	285.3810	87.4246	24.0541	3232
190.6920	154.2780	0.0085	285.5448	87.3308	24.2971	3233
190.1540	155.1060	-0.0022	286.1695	87.0504	25.2449	3234
189.4921	156.1370	0.0061	286.9446	86.7089	26.4228	3235
189.4011	156.2250	-0.0212	287.0228	86.6467	26.5331	3236
189.3351	156.3980	0.0197	287.1371	86.6326	26.7180	3237
188.7251	157.2260	-0.0231	287.7872	86.2832	27.6863	3238
188.5899	157.5027	0.0219	287.9799	86.2323	27.9903	3239
188.4359	157.6887	0.0007	288.1321	86.1376	28.2127	3240
187.9529	158.3447	-0.0197	288.6473	85.8610	28.9797	3241
187.6729	158.8037	0.0175	288.9867	85.7231	29.4999	3242
187.5429	158.9417	-0.0079	289.1055	85.6377	29.6694	3243
186.8015	160.0366	0.0373	289.9415	85.2382	30.9313	3244
186.4755	160.4906	0.0468	290.2949	85.0548	31.4598	3245
186.3705	160.6066	0.0324	290.3934	84.9871	31.6010	3246
186.2925	160.7446	0.0531	290.4928	84.9516	31.7556	3247
184.6844	162.7769	0.0304	292.1315	83.9877	34.1639	3248
184.4624	163.1869	0.1145	292.4214	83.8914	34.6206	3249
183.9534	163.7749	0.0918	292.9127	83.5706	35.3298	3250
183.4104	164.6079	0.2072	293.5365	83.2869	36.2838	3251
183.0594	164.9489	0.1595	293.8439	83.0473	36.7110	3252
182.7714	165.3368	0.1928	294.1483	82.8815	37.1654	3253
182.1124	165.9048	0.0675	294.6921	82.4112	37.8981	3254
181.2724	166.8168	0.0454	295.4759	81.8651	39.0125	3255
180.9064	167.2008	0.0320	295.8112	81.6234	39.4853	3256
180.8304	167.3368	0.0677	295.9071	81.5892	39.6374	3257
180.2413	167.9011	0.0175	296.4220	81.1848	40.3468	3258
180.1583	168.0531	0.0605	296.5281	81.1485	40.5163	3259
179.5793	168.6411	0.0428	297.0497	80.7605	41.2454	3260
179.4113	168.7511	-0.0028	297.1734	80.6307	41.3988	3261
178.9693	169.2091	-0.0035	297.5760	80.3372	41.9642	3262
178.8113	169.4261	0.0345	297.7441	80.2474	42.2174	3263
178.1263	170.1171	0.0319	298.3594	79.7871	43.0756	3264
177.5863	170.6091	-0.0003	298.8210	79.4092	43.7016	3265
176.0308	172.0919	-0.0125	300.1805	78.3395	45.5676	3266
175.8128	172.3399	0.0192	300.3884	78.2010	45.8677	3267
174.9026	173.2062	0.0393	301.1829	77.5747	46.9582	3268
173.7726	174.2262	0.0468	302.1454	76.7812	48.2589	3269
172.8106	175.1361	0.1049	302.9816	76.1176	49.4061	3270
172.5976	175.2681	0.0674	303.1382	75.9509	49.5934	3271
171.6530	176.0190	0.0368	303.9008	75.2587	50.5830	3272
171.5420	176.1560	0.0719	304.0101	75.1912	50.7461	3273
171.3800	176.2640	0.0526	304.1325	75.0666	50.8959	3274
170.0299	177.3700	0.0695	305.2357	74.0866	52.3417	3275
169.8359	177.4799	0.0362	305.3751	73.9319	52.5025	3276
169.5308	177.7380	0.0520	305.6275	73.7127	52.8371	3277
169.2408	177.9400	0.0344	305.8507	73.4921	53.1135	3278
168.8738	178.2640	0.0685	306.1595	73.2323	53.5290	3279
168.4178	178.5460	0.0181	306.4969	72.8753	53.9295	3280
168.0478	178.8570	0.0455	306.8021	72.6089	54.3333	3281
167.4352	179.2589	0.0051	307.2647	72.1358	54.8934	3282
166.9311	179.7349	0.0943	307.6993	71.7879	55.4937	3283
166.5071	180.0798	0.1282	308.0440	71.4794	55.9456	3284
165.9101	180.5068	0.1333	308.5076	71.0284	56.5254	3285
165.6871	180.6268	0.1043	308.6665	70.8487	56.7040	3286
163.7111	181.8668	0.0252	310.1402	69.3065	58.4567	3287
163.5501	182.0207	0.0658	310.2787	69.1959	58.6503	3288
163.3711	182.1217	0.0526	310.4084	69.0530	58.7983	3289
163.1281	182.2987	0.0689	310.5981	68.8703	59.0373	3290
162.9011	182.3857	0.0192	310.7485	68.6774	59.1854	3291
161.2968	183.3959	0.0223	311.9474	67.4264	60.6118	3292
159.5878	184.4969	0.0907	313.2317	66.1008	62.1551	3293
158.9557	184.8169	0.0519	313.6787	65.5857	62.6421	3294
157.5767	185.6688	0.1211	314.7021	64.5057	63.8525	3295

## LIMB PROFILE POSITIONS

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x	y	$\delta r$	P	x'	y'	Ser
157.1616	185.8467	0.0785	314.9862	64.1582	64.1414	3296
156.8506	186.0177	0.0813	315.2104	63.9086	64.3941	3297
156.3666	186.1997	0.0140	315.5345	63.4963	64.7066	3298
155.7576	186.5266	0.0204	315.9716	63.0053	65.1938	3299
155.6696	186.5456	-0.0033	316.0265	62.9263	65.2371	3300
155.0775	186.8686	0.0132	316.4529	62.4505	65.7156	3301
154.9085	186.9396	-0.0000	316.5685	62.3086	65.8319	3302
154.6915	187.1056	0.0503	316.7383	62.1477	66.0530	3303
154.5155	187.1866	0.0438	316.8607	62.0020	66.1808	3304
154.2185	187.3696	0.0751	317.0803	61.7693	66.4410	3305
154.0025	187.4606	0.0610	317.2282	61.5880	66.5899	3306
153.7884	187.5828	0.0764	317.3837	61.4175	66.7682	3307
153.6304	187.6288	0.0485	317.4862	61.2791	66.8573	3308
152.8124	188.0998	0.1187	318.0810	60.6286	67.5423	3309
152.6064	188.1518	0.0776	318.2127	60.4459	67.6508	3310
152.4674	188.2385	0.0969	318.3155	60.3372	67.7736	3311
151.6574	188.4735	-0.0307	318.8425	59.6273	68.2298	3312
151.3324	188.6564	0.0011	319.0776	59.3677	68.4980	3313
151.1474	188.6824	-0.0514	319.1910	59.1977	68.5756	3314
150.4554	188.9504	-0.0884	319.6600	58.6103	69.0299	3315
148.5703	189.7813	-0.0650	320.9639	57.0391	70.3641	3316
146.8509	190.4712	-0.0663	322.1365	55.5865	71.5159	3317
146.5479	190.6191	-0.0380	322.3491	55.3380	71.7442	3318
146.4569	190.6321	-0.0586	322.4058	55.2544	71.7826	3319
146.3489	190.6851	-0.0478	322.4816	55.1660	71.8642	3320
146.1879	190.7191	-0.0736	322.5845	55.0212	71.9427	3321
145.9679	190.8351	-0.0432	322.7407	54.8433	72.1166	3322
145.7018	190.9261	-0.0517	322.9185	54.6141	72.2797	3323
145.5128	190.9731	-0.0738	323.0409	54.4462	72.3786	3324
145.3618	191.0671	-0.0382	323.1512	54.3281	72.5118	3325
145.0678	191.1631	-0.0496	323.3468	54.0735	72.6877	3326
144.9488	191.1771	-0.0773	323.4205	53.9634	72.7350	3327
144.6598	191.3551	-0.0085	323.6309	53.7369	72.9881	3328
144.4668	191.3720	-0.0578	323.7494	53.5566	73.0594	3329
144.1928	191.5600	0.0275	323.9526	53.3474	73.3178	3330
143.7888	191.6260	-0.0443	324.2074	52.9787	73.4962	3331
143.4748	191.7720	-0.0093	324.4254	52.7191	73.7258	3332
143.1088	191.7970	-0.1044	324.6496	52.3753	73.8540	3333
142.6438	192.0860	0.0210	324.9868	52.0116	74.2637	3334
142.1674	192.1608	-0.0578	325.2877	51.5760	74.4712	3335
141.9824	192.1737	-0.1030	325.4016	51.4023	74.5364	3336
141.5624	192.4087	-0.0084	325.7002	51.0664	74.8815	3337
141.3064	192.4857	-0.0127	325.8693	50.8428	75.0283	3338
141.0284	192.5019	-0.0809	326.0401	50.5808	75.1230	3339
140.8944	192.5579	-0.0675	326.1316	50.4682	75.2148	3340
140.4974	192.6479	-0.0989	326.3885	50.1131	75.4143	3341
140.3204	192.6838	-0.1162	326.5023	49.9536	75.4992	3342
138.8584	193.1178	-0.1145	327.4679	48.6751	76.3321	3343
138.6414	193.2598	-0.0373	327.6247	48.5074	76.5301	3344
138.3764	193.2618	-0.1074	327.7864	48.2538	76.6075	3345
137.8184	193.4177	-0.1060	328.1532	47.7631	76.9161	3346
137.5694	193.5467	-0.0468	328.3267	47.5610	77.1108	3347
137.3283	193.5475	-0.1087	328.4742	47.3301	77.1802	3348
136.7133	193.6815	-0.1361	328.8724	46.7784	77.4840	3349
136.5663	193.7565	-0.1003	328.9744	46.6588	77.5978	3350
136.3393	193.8025	-0.1123	329.1208	46.4542	77.7066	3351
136.1363	193.8385	-0.1274	329.2510	46.2698	77.7989	3352
135.7743	193.9835	-0.0748	329.4956	45.9639	78.0412	3353
135.4053	194.0814	-0.0679	329.7372	45.6379	78.2403	3354
135.2703	194.0924	-0.0892	329.8219	45.5116	78.2893	3355
135.0333	194.1924	-0.0474	329.9825	45.3128	78.4528	3356
134.7873	194.2354	-0.0626	330.1403	45.0891	78.5641	3357
134.4063	194.3794	-0.0093	330.3957	44.7647	78.8108	3358
133.6173	194.5074	-0.0594	330.9003	44.0445	79.1583	3359
132.9863	194.6763	-0.0292	331.3132	43.4875	79.5002	3360
132.5483	194.7133	-0.0842	331.5891	43.0780	79.6604	3361
132.0599	194.8312	-0.0678	331.9069	42.6432	79.9126	3362
131.6469	194.8822	-0.0996	332.1695	42.2617	80.0792	3363
131.3489	194.9322	-0.1084	332.3607	41.9902	80.2120	3364
131.1999	195.0102	-0.0603	332.4627	41.8695	80.3293	3365
130.2009	195.1911	-0.0674	333.1051	40.9630	80.7875	3366
130.0379	195.2581	-0.0306	333.2142	40.8257	80.8982	3367
128.8549	195.4071	-0.0865	333.9678	39.7337	81.3781	3368

## LIMB PROFILE POSITIONS

x	y	$\delta r$	P	x'	y'	Ser
128.1529	195.5450	-0.0633	334.4203	39.0997	81.7104	3369
127.8699	195.6620	0.0083	334.6086	38.8616	81.9033	3370
127.6949	195.6460	-0.0343	334.7165	38.6893	81.9378	3371
127.5789	195.6870	-0.0113	334.7929	38.5897	82.0102	3372
127.3896	195.6889	-0.0377	334.9115	38.4087	82.0659	3373
127.0176	195.7519	-0.0299	335.1501	38.0699	82.2323	3374
126.4396	195.8699	0.0053	335.5225	37.5492	82.5101	3375
126.0996	195.8758	-0.0351	335.7360	37.2248	82.6127	3376
125.9476	195.9268	-0.0048	335.8356	37.0936	82.7049	3377
125.7456	195.9598	0.0014	335.9650	36.9092	82.7941	3378
125.4276	196.0378	0.0378	336.1707	36.6265	82.9595	3379
124.5196	196.2308	0.1189	336.7549	35.8107	83.4033	3380
124.0856	196.2628	0.1011	337.0295	35.4036	83.5576	3381
123.8166	196.2938	0.1022	337.2005	35.1545	83.6640	3382
123.5226	196.3157	0.0925	337.3866	34.8788	83.7688	3383
122.4783	196.3666	0.0386	338.0464	33.8918	84.1151	3384
122.1203	196.3726	0.0115	338.2721	33.5502	84.2228	3385
121.8493	196.4116	0.0263	338.4449	33.3014	84.3374	3386
121.1883	196.4685	0.0277	338.8643	32.6838	84.5803	3387
120.7283	196.4625	-0.0140	339.1539	32.2409	84.7056	3388
120.1473	196.5455	0.0271	339.5241	31.7074	84.9507	3389
118.7643	196.5734	-0.0294	340.3980	30.3891	85.3714	3390
118.4823	196.6554	0.0380	340.5787	30.1420	85.5304	3391
117.8243	196.6874	0.0393	340.9951	29.5201	85.7485	3392
117.6743	196.7344	0.0799	341.0910	29.3897	85.8363	3393
116.9773	196.7814	0.1008	341.5321	28.7347	86.0799	3394
116.7293	196.7454	0.0568	341.6879	28.4866	86.1160	3395
116.5583	196.7903	0.0967	341.7968	28.3354	86.2078	3396
116.3033	196.7913	0.0906	341.9578	28.0912	86.2814	3397
115.6893	196.7623	0.0476	342.3452	27.4941	86.4284	3398
114.8263	196.7993	0.0719	342.8908	26.6771	86.7097	3399
114.3423	196.7543	0.0233	343.1964	26.2001	86.8044	3400
113.7503	196.7882	0.0566	343.5706	25.6421	87.0056	3401
113.3093	196.8062	0.0765	343.8491	25.2243	87.1484	3402
111.5093	196.7371	0.0376	344.9871	23.4786	87.5948	3403
109.0993	196.5500	-0.0531	346.5144	21.1143	88.1017	3404
108.0213	196.5190	-0.0202	347.1963	20.0717	88.3789	3405
107.6523	196.5560	0.0415	347.4274	19.7284	88.5195	3406
105.7259	196.3211	-0.0389	348.6533	17.8143	88.8428	3407