

IDENTIFICATION CHARTS OF PHL OBJECTS III. PLATE CENTERED AT $2^h 28^m$ AND -5.5°

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RESUMEN

Se presentan cartas de identificación de los objetos azules descubiertos por Haro y Luyten utilizando las placas obtenidas con la cámara Schmidt de Monte Palomar, en dirección del polo sur galáctico.

ABSTRACT

We present another set of identification charts of the list of blue stars discovered by Haro and Luyten on Palomar Schmidt plates, in direction of the South Galactic Pole (PHL).

Key words: STARS-BLUE - QUASARS

In this work we present the third of a series of identification charts of the blue PHL objects (Palomar-Haro-Luyten); the previous charts were presented by Haro and Chavira (1987) and Chavira (1988) respectively.

In Figures 1 to 12, we are presenting the corresponding identification charts for the blue stellar objects in the PHL field centered at $2^h 28^m$ and -5.5° (1950), from catalog by Haro and Luyten (1962). In all cases, north is at the top and west at the right; the charts are copies of the red plate of the Palomar-National Geographic Survey. It must be noted that a considerable overlap exists among the figures.

The objects were identified in three-image plates obtained with the Palomar 48-inch Schmidt camera, following the Tonantzintla method with one exposure each in ultra-violet, yellow and blue, using 103aD emulsions and Scott UG1, Wratten No. 12, and No. 47 filters, respectively (Haro and Luyten 1962).

In Tables 1, 2 and 3, we list the very definitely blue stars, blue stars and bluish or white stars from the survey. In our tables we list the PHL numbers, equatorial 1950 coordinates (errors): $\pm 6s$ in R.A. and $\pm 1'$ in declination), galactic coordinates, magnitudes and estimated color differences are taken from the three different tables of Haro and Luyten (1962). It should be pointed out that the photometry listed in Tables 1, 2 and 3 are rough estimates obtained from photographic plates by Haro and

TABLE 1

VERY DEFINITELY BLUE STARS

PHL	R.A. (1950)	Dec.	<i>l</i>	<i>b</i>	<i>m_{pg}</i>	<i>B-V</i>	<i>U-B</i>	Fig.
1258	2 17.4	-4 54	170.0	-59.2	18.4	-0.1	-0.3	2
1259	18.3	-7 52	174.3	-61.3	15.8	-0.2	-0.4	1
1267	19.5	-5 23	171.4	-59.2	18.6	-0.1	-0.3	2
1269	19.8	-6 40	173.3	-60.1	17.7	-0.1	-0.3	1
1271	20.1	-5 20	171.6	-59.1	16.9	-0.2	-0.6	2
1274	20.8	-2 58	168.9	-57.2	18.2	-0.2	-0.6	3
1276	21.5	-5 36	172.4	-59.0	15.7	-0.2	-0.6	2
1278	22.3	-8 04	176.1	-60.7	18.3	-0.1	-0.3	1
1286	23.1	-5 23	172.7	-58.6	18.6	-0.1	-0.3	2
1288	23.4	-6 16	174.0	-59.2	16.7	-0.2	-0.4	2, 5
1292	24.1	-2 52	169.9	-56.6	17.3	-0.2	-0.4	6
1294	25.0	-3 42	171.3	-57.0	18.2	-0.2	-0.3	6
1301	25.9	-4 15	172.2	-57.3	17.9	-0.2	-0.4	6
1303	26.2	-4 48	173.0	-57.7	17.8	-0.1	-0.4	5
1304	26.2	-5 58	174.6	-58.5	17.9	-0.1	-0.3	5
1305	26.4	-3 52	171.9	-56.9	17.5	-0.1	-0.6	6
1307	26.8	-4 48	173.2	-57.6	18.2	-0.1	-0.3	5
1311	27.1	-6 06	175.0	-58.4	17.9	-0.1	-0.4	5
1314	28.0	-3 00	171.4	-56.0	17.9	-0.1	-0.3	6, 9
1315	28.0	-2 44	171.1	-55.8	18.7	-0.1	-0.3	6, 9
1316	28.1	-8 29	178.7	-59.9	16.0	-0.2	-0.2	4
1318	28.4	-3 34	172.2	-56.4	18.4	-0.1	-0.4	6, 9
1321	28.5	-3 41	172.4	-56.4	18.5	-0.1	-0.4	6, 9
1323	28.6	-6 50	176.5	-58.7	17.9	-0.2	-0.2	4
1328	28.9	-3 12	172.0	-56.0	17.9	-0.2	-0.3	6, 9
1329	29.1	-3 24	172.3	-56.1	18.1	-0.1	-0.3	6
1331	29.2	-5 26	174.9	-57.6	18.2	-0.1	-0.4	5
1340	30.4	-2 32	171.7	-55.3	17.7	-0.1	-0.4	9
1346	30.8	-5 08	175.0	-57.1	17.5	-0.2	-0.3	8
1353	31.2	-6 40	177.2	-58.1	17.9	-0.2	-0.4	7

TABLE 1 (CONTINUED)

PHL	R.A. (1950)	Dec.	l	b	m_{pg}	$B-V$	$U-B$	Fig.
1354	31.3	-7 29	178.3	-58.6	13.9	-0.2	-0.6	7
1355	31.4	-4 36	174.5	-56.6	17.4	-0.1	-0.4	8
1356	31.4	-6 02	176.4	-57.6	18.1	-0.1	-0.3	8
1358	31.6	-5 25	175.6	-57.2	13.7	-0.2	-0.3	8
1360	31.7	-4 20	174.3	-56.4	16.6	-0.2	-0.5	8
1364	31.9	-5 08	175.4	-56.9	16.3	-0.2	-0.4	8
1374	32.4	-6 22	177.1	-57.7	15.8	-0.3	-0.5	8
1377	32.6	-4 14	174.4	-56.1	16.6	-0.1	-0.4	9
1378	32.8	-4 00	174.2	-55.9	17.8	-0.1	-0.4	9
1379	32.8	-7 38	179.0	-58.5	18.6	-0.1	-0.3	7
1382	32.9	-8 45	180.7	-59.2	17.3	-0.2	-0.3	7
1384	33.0	-3 22	173.5	-55.4	18.4	-0.1	-0.3	9
1385	33.0	-6 49	178.0	-57.9	18.3	-0.1	-0.4	7
1387	33.2	-6 08	177.1	-57.4	17.4	-0.2	-0.3	8
1401	35.2	-3 15	174.1	-55.0	16.9	-0.1	-0.4	12
1421	37.6	-5 48	178.0	-56.4	18.0	-0.1	-0.3	11
1423	37.7	-3 45	175.4	-54.9	17.9	-0.2	-0.5	12
1424	37.9	-5 55	178.3	-56.4	18.5	-0.1	-0.3	11
1428	38.1	-8 04	181.3	-57.8	18.1	-0.1	-0.3	10
1430	38.2	-6 52	179.6	-57.0	18.1	-0.1	-0.4	10
1437	39.4	-2 39	174.6	-53.8	15.7	-0.3	-0.6	12
1438	39.4	-7 46	181.2	-57.3	18.4	-0.1	-0.4	10
1439	39.4	-6 42	179.8	-56.6	15.8	-0.3	-0.6	10
1444	40.2	-8 12	182.1	-57.5	18.0	-0.1	-0.3	10

TABLE 2 (CONTINUED)

PHL	R.A.(1950) Dec.			<i>l</i>	<i>b</i>	<i>m_{pg}</i>	<i>U-V</i>	Fig.
4075	24.6	-3	38	171.0	-57.1	15.9	-0.2	6
4076	24.8	-5	01	172.8	-58.1	18.2	-0.2	5
4079	24.9	-3	53	171.4	-57.2	16.6	-0.3	6
4093	25.8	-4	26	172.4	-57.5	18.3	-0.3	6
4096	26.3	-5	25	173.9	-58.1	18.5	-0.3	5
4097	26.4	-4	51	173.2	-57.7	18.0	-0.3	5
4100	26.6	-6	36	175.6	-58.9	18.5	-0.3	4
4113	27.4	-5	16	174.0	-57.8	18.6	-0.3	5
4115	27.6	-4	57	173.7	-57.5	18.0	-0.2	5, 8
4116	27.6	-4	28	173.1	-57.2	18.6	-0.2	6, 9
4117	27.6	-7	18	176.9	-59.2	18.1	-0.3	4
4124	28.4	-5	38	174.9	-57.9	17.4	-0.3	5
4134	29.0	-3	11	172.0	-56.0	13.4	-0.2	6, 9
4135	29.0	-8	02	178.4	-59.4	17.5	-0.3	4, 7
4136	29.2	-6	46	176.7	-58.5	18.4	-0.2	4
4138	29.3	-5	04	174.4	-57.3	18.6	-0.3	5
4141	29.4	-3	58	173.1	-56.5	18.2	-0.3	6
4142	29.4	-5	04	174.4	-57.3	18.0	-0.3	5
4145	29.6	-4	14	173.5	-56.7	17.7	-0.3	6, 9
4148	30.1	-6	39	176.8	-58.3	18.8	-0.3	7
4150	30.5	-6	53	177.2	-58.4	18.8	-0.3	7
4157	31.2	-5	58	176.2	-57.6	18.6	-0.2	8
4160	31.3	-7	02	177.7	-58.3	18.6	-0.3	7
4161	31.4	-8	32	179.9	-59.3	18.7	-0.3	7
4163	31.4	-5	17	175.4	-57.1	18.4	-0.3	8
4173	32.2	-7	47	179.1	-58.7	18.6	-0.3	7
4177	32.5	-5	01	175.4	-56.7	18.7	-0.3	8
4178	32.6	-7	56	179.4	-58.7	15.5	-0.2	7
4180	32.7	-4	10	174.4	-56.1	18.4	-0.3	9
4186	33.2	-7	25	178.9	-58.3	18.6	-0.3	7
4187	33.4	-5	04	175.7	-56.6	18.6	-0.3	8
4194	33.8	-3	16	173.6	-55.2	15.7	-0.3	12
4205	34.5	-5	06	176.1	-56.4	15.7	-0.2	11
4214	35.4	-5	00	176.3	-56.2	18.8	-0.2	11
4216	35.4	-4	02	175.1	-55.5	18.4	-0.3	12
4218	35.6	-8	44	181.5	-58.7	18.8	-0.2	10
4229	36.4	-6	25	178.5	-57.0	18.4	-0.2	11
4235	37.0	-3	28	174.9	-54.8	18.5	-0.3	12
4245	37.5	-5	47	178.0	-56.4	18.6	-0.3	11
4246	37.5	-3	07	174.6	-54.5	18.6	-0.3	12
4252	37.9	-5	00	177.1	-55.7	18.4	-0.2	11
4253	38.1	-7	32	180.5	-57.4	18.6	-0.3	10
4254	38.2	-5	04	177.2	-55.7	19.1	-0.3	11
4260	38.8	-8	12	181.7	-57.7	15.1	-0.3	10
4261	39.0	-3	59	176.1	-54.8	18.7	-0.2	12
4262	39.0	-5	44	178.4	-56.1	18.1	-0.2	11
4263	39.0	-6	40	179.6	-56.7	18.3	-0.3	10
4266	39.1	-5	14	177.1	-55.7	18.9	-0.2	11
4267	39.2	-3	13	175.2	-54.3	18.7	-0.2	12
4268	39.2	-6	44	179.8	-56.7	18.5	-0.3	10
4272	39.4	-4	00	176.3	-54.8	17.7	-0.3	12
4282	40.2	-3	09	175.5	-54.0	17.9	-0.2	12
4288	40.5	-7	42	181.5	-57.1	18.3	-0.3	10
4293	41.1	-6	50	180.5	-56.4	15.7	-0.2	10

TABLE 2

BLUE STARS

PHL R.A.(1950) Dec.				l	b	m_{pg}	$U-V$	Fig.
4003	2	17.6	-3 55	168.9	-58.4	18.0	-0.3	3
4007		17.8	-5 48	171.4	-59.8	18.5	-0.3	2
4008		17.9	-6 31	172.4	-60.3	18.1	-0.2	1
4016		18.4	-5 03	170.6	-59.1	18.5	-0.3	2
4018		18.9	-4 42	170.3	-58.8	18.3	-0.3	2
4019		19.2	-5 48	171.9	-59.6	18.1	-0.3	2
4021		19.4	-7 27	172.8	-60.0	13.8	-0.3	1
4022		19.5	-7 04	173.7	-60.4	17.9	-0.2	1
4024		19.6	-4 42	170.6	-58.7	18.7	-0.2	2
4028		19.8	-6 41	173.3	-60.1	18.5	-0.3	1
4029		19.9	-3 08	168.8	-57.4	18.6	-0.3	3
4039		20.7	-6 14	173.0	-59.6	18.3	-0.2	2
4040		20.8	-5 14	171.7	-58.9	17.0	-0.3	2
4046		21.6	-2 54	169.1	-57.0	15.6	-0.3	3
4050		22.0	-5 43	172.8	-59.0	17.9	-0.3	2
4053		22.2	-3 16	169.8	-57.2	18.7	-0.2	3
4059		22.4	-7 18	175.1	-60.1	18.3	-0.2	1
4060		22.6	-6 36	174.2	-59.6	18.8	-0.3	1
4061		22.7	-5 10	172.3	-58.5	17.9	-0.3	2
4064		22.8	-5 00	172.1	-58.4	18.6	-0.3	2
4065		23.0	-3 55	170.8	-57.5	18.5	-0.3	3
4066		23.2	-3 16	170.1	-57.0	18.7	-0.3	3
4068		23.4	-5 08	172.5	-58.4	16.7	-0.2	5
4071		23.5	-7 48	176.2	-60.3	17.2	-0.3	1
4074		24.2	-7 57	176.6	-60.2	15.4	-0.3	4

TABLE 3

BLUISH OR WHITE STARS

PHL R.A. (1950) Dec.	<i>l</i>	b	<i>m_{pg}</i>	<i>B-V</i>	Fig.
116 2 16.2 -8 44	174.9	-62.2	18.0	0.0	1
119 16.4 -8 43	175.0	-62.2	18.4	-0.1	1
121 16.6 -8 00	174.0	-61.6	13.7	0.0	1
124 17.0 -7 39	173.6	-61.3	18.7	-0.1	1
125 17.2 -7 55	174.1	-61.5	15.2	0.0	1
129 17.5 -2 46	167.5	-57.5	17.4	0.0	3
130 17.5 -6 20	172.0	-60.2	17.5	-0.1	2
132 17.7 -8 08	174.6	-61.5	16.4	0.0	1
135 17.8 -5 57	171.6	-59.9	17.9	0.0	2
138 17.8 -8 22	175.0	-61.7	17.9	-0.1	1
142 18.0 -6 07	171.9	-60.0	18.1	-0.1	2
150 18.8 -4 25	169.9	-58.6	17.0	0.0	2
151 18.8 -8 30	175.5	-61.6	18.2	0.0	1
157 19.0 -7 33	174.2	-60.9	17.0	-0.1	1
160 19.1 -6 02	172.1	-59.8	18.2	-0.1	2
161 19.2 -5 00	170.8	-59.0	18.4	0.0	2
162 19.2 -8 42	176.0	-61.7	19.0	0.0	1
164 19.3 -3 16	168.7	-57.6	18.6	-0.1	3
167 19.5 -3 42	169.3	-57.9	18.1	0.0	3
177 20.2 -5 34	171.9	-59.2	15.9	0.0	2
178 20.2 -6 30	173.2	-59.9	17.9	0.0	1
185 20.6 -3 36	169.6	-57.7	17.5	0.0	3
189 21.3 -3 21	169.5	-57.4	17.3	-0.1	3
190 21.4 -7 36	175.2	-60.5	17.9	-0.1	1
193 21.6 -6 14	173.3	-59.5	18.6	0.0	2
194 21.6 -8 14	176.1	-60.9	18.2	0.0	1
200 21.7 -3 43	170.1	-57.6	18.8	-0.1	3
201 21.8 -3 10	169.5	-57.2	15.0	0.0	3
203 21.9 -6 30	173.8	-59.6	18.8	-0.1	1
216 22.5 -7 40	175.6	-60.4	18.6	-0.1	1
218 22.6 -6 11	173.6	-59.3	18.6	-0.1	2
221 22.9 -4 00	170.9	-57.6	18.4	0.0	3
222 23.0 -2 41	169.3	-56.6	16.3	0.0	3
230 23.3 -5 28	172.9	-58.6	16.8	-0.1	2
231 23.4 -8 18	176.9	-60.6	17.6	-0.1	1
236 23.7 -4 14	171.5	-57.7	17.6	-0.1	6
238 23.8 -7 06	175.3	-59.7	16.6	-0.1	4
243 24.1 -5 06	172.7	-58.2	15.7	-0.1	5
250 24.6 -2 58	170.2	-56.6	16.0	0.0	6
253 24.6 -3 57	171.4	-57.3	16.9	-0.1	6
254 24.6 -5 36	173.5	-58.5	17.5	-0.1	5
258 24.8 -8 32	177.7	-60.5	16.0	-0.1	4
259 24.8 -5 00	172.8	-58.0	17.7	-0.1	5
261 25.1 -3 23	169.7	-56.1	17.4	0.0	6
265 25.1 -4 16	172.0	-57.4	17.9	-0.1	6
269 25.5 -6 00	174.4	-58.6	16.5	-0.1	5
276 26.1 -5 26	173.8	-58.1	14.0	0.0	5
279 26.2 -8 18	177.8	-60.1	16.7	0.0	4
292 27.0 -2 28	170.5	-55.8	18.1	-0.1	6,9
293 27.2 -3 26	171.7	-56.5	17.7	0.0	6
303 27.9 -4 37	173.4	-57.2	17.6	0.0	6,9
305 28.0 -6 12	175.5	-58.3	17.5	0.0	5,8
312 28.3 -4 07	172.9	-56.8	17.4	0.0	6,9
321 28.8 -5 28	174.8	-57.7	16.6	0.0	5
322 28.8 -3 27	172.2	-56.2	18.7	0.0	6,9

TABLE 3 (CONTINUED)

PHL R.A. (1950) Dec.	<i>l</i>	b	<i>m_{pg}</i>	<i>U-V</i>	Fig.
8325 28.8 -6 16	175.8	-58.3	18.5	-0.1	5
8331 29.0 -6 08	175.7	-58.1	16.9	-0.1	5
8333 29.2 -5 54	175.5	-57.9	18.5	0.0	5
8335 29.3 -2 58	171.8	-55.8	18.7	-0.1	6
8336 29.4 -3 00	171.9	-55.8	18.5	0.0	6
8340 29.7 -5 07	174.6	-57.3	18.8	-0.1	5
8345 30.0 -7 44	178.3	-59.0	18.5	-0.1	4,7
8348 30.2 -5 34	175.4	-57.5	16.6	0.0	5,8
8352 30.4 -8 32	179.6	-59.5	18.3	0.0	4
8354 30.6 -3 32	172.7	-55.9	17.4	-0.1	9
8355 30.7 -8 38	179.8	-59.5	18.4	0.0	4,7
8361 31.4 -6 22	176.8	-57.9	18.4	-0.1	8
8363 31.5 -5 48	176.1	-57.4	17.0	0.0	8
8381 33.0 -3 03	173.1	-55.2	14.8	0.0	9
8391 33.6 -8 21	180.3	-58.8	18.0	-0.1	10
8394 33.8 -4 46	175.5	-56.3	17.3	-0.1	11
8397 34.1 -8 02	180.0	-58.5	18.5	-0.1	10
8398 34.2 -8 39	180.9	-58.9	18.6	0.0	10
8402 34.4 -5 40	176.8	-56.8	17.1	0.0	11
8409 34.6 -3 08	173.7	-55.0	17.5	-0.1	12
8411 34.9 -5 22	176.6	-56.5	16.6	0.0	11
8416 35.3 -4 39	175.8	-56.0	17.7	-0.1	11
8438 36.7 -8 02	180.8	-58.0	15.8	0.0	10
8439 36.7 -3 02	174.3	-54.6	16.9	0.0	12
8442 36.8 -7 49	180.5	-57.8	15.5	0.0	10
8443 36.8 -6 48	179.1	-57.2	16.5	0.0	10
8447 37.0 -3 35	175.0	-54.9	16.6	0.0	12
8456 37.4 -7 12	179.9	-57.3	16.5	0.0	10
8457 37.4 -7 26	180.2	-57.5	16.1	0.0	10
8464 38.1 -7 34	180.6	-57.4	16.5	0.0	10
8468 38.3 -4 37	176.7	-55.4	17.8	0.0	11,12
8470 38.4 -8 03	181.3	-57.7	16.2	0.0	10
8487 39.2 -5 46	178.5	-56.0	18.6	-0.1	11
8494 39.9 -2 27	174.6	-53.6	15.8	0.0	12
8499 40.2 -2 37	174.8	-53.7	16.7	0.0	12
8503 40.5 -7 42	181.5	-57.1	18.2	0.0	10

TABLE 4

OBJECTS WITH REDSHIFTS $Z > 0.3$

PHL	R.A.	(1950)	Dec.	V	Z(em)
1305	2 ^h 26 ^m 22.06 ^s	−3° 50′ 58″	16.96	2.064	
1352	31 14.60	+2 16 18	18.0	0.322	
1377	32 36.55	−4 15 10.2	16.46	1.436	
8462	37 52.72	−23 22 8.5	16.63	2.223	

Luyten (1962). The last column in each of the tables, gives the number of the figure (from 1 to 12), in which the different stars are marked.

In Table 4 we select PHL objects with high

redshifts: $z > 0.3$ those redshifts have been obtained by different authors. The data listed here, including precise coordinates were taken from the catalogue by Hewitt and Burbidge (1987).

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 Hewitt, A. and Burbidge, G. 1987, *Ap. J. Suppl.*, **63**, 2.

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IDENTIFICATION CHARTS OF PHL OBJECTS

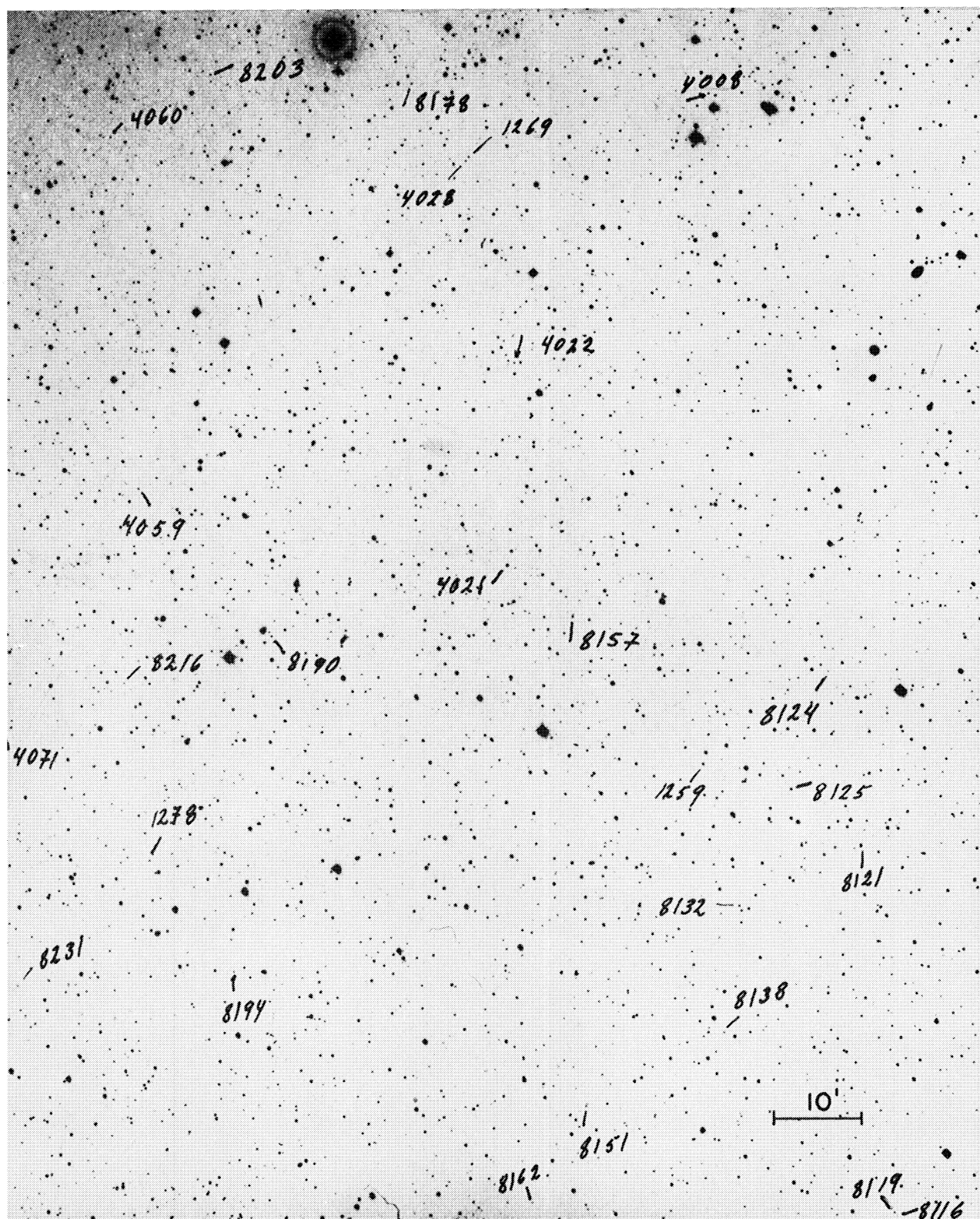


Fig. 1. Identification charts.

E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

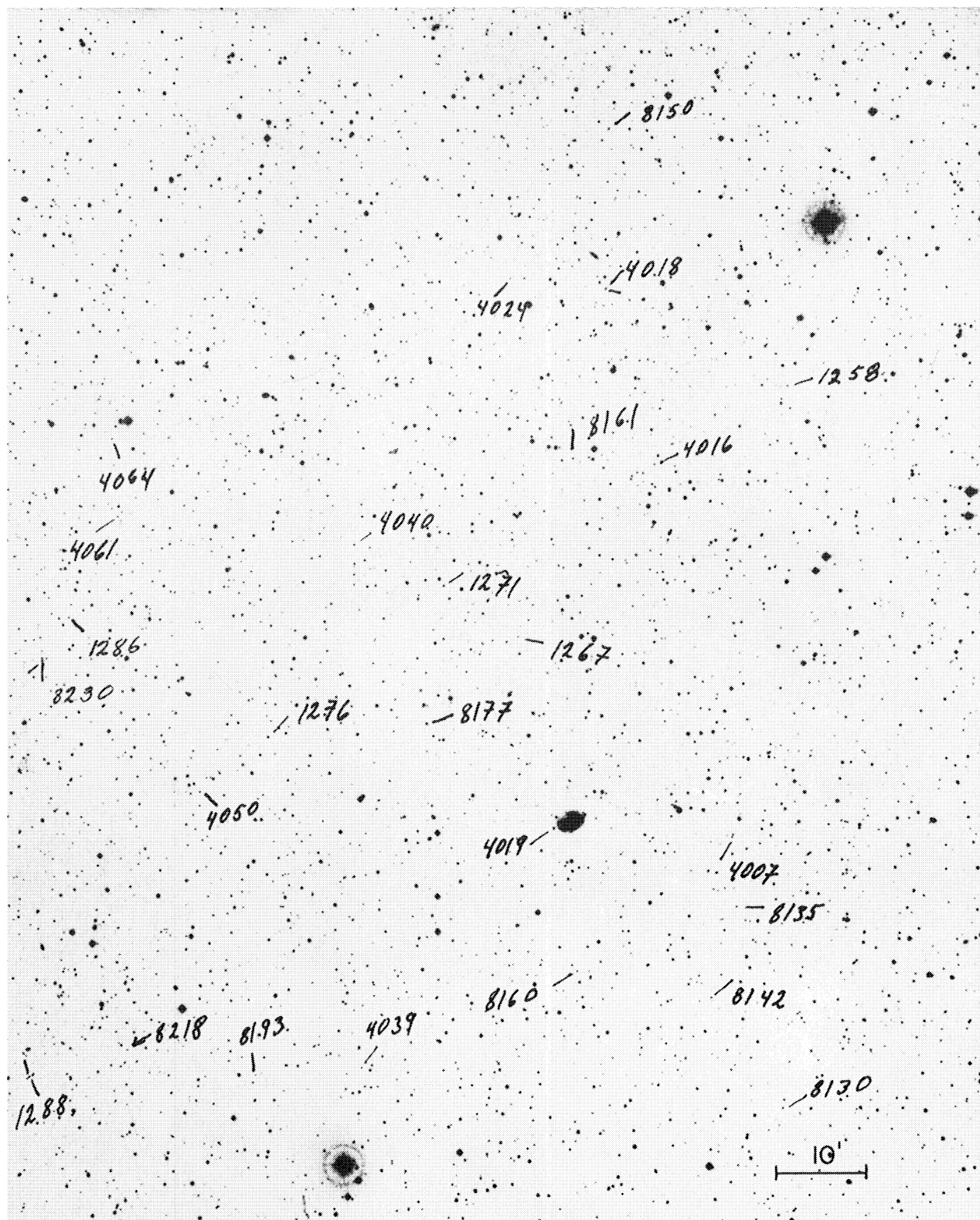


Fig. 2. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

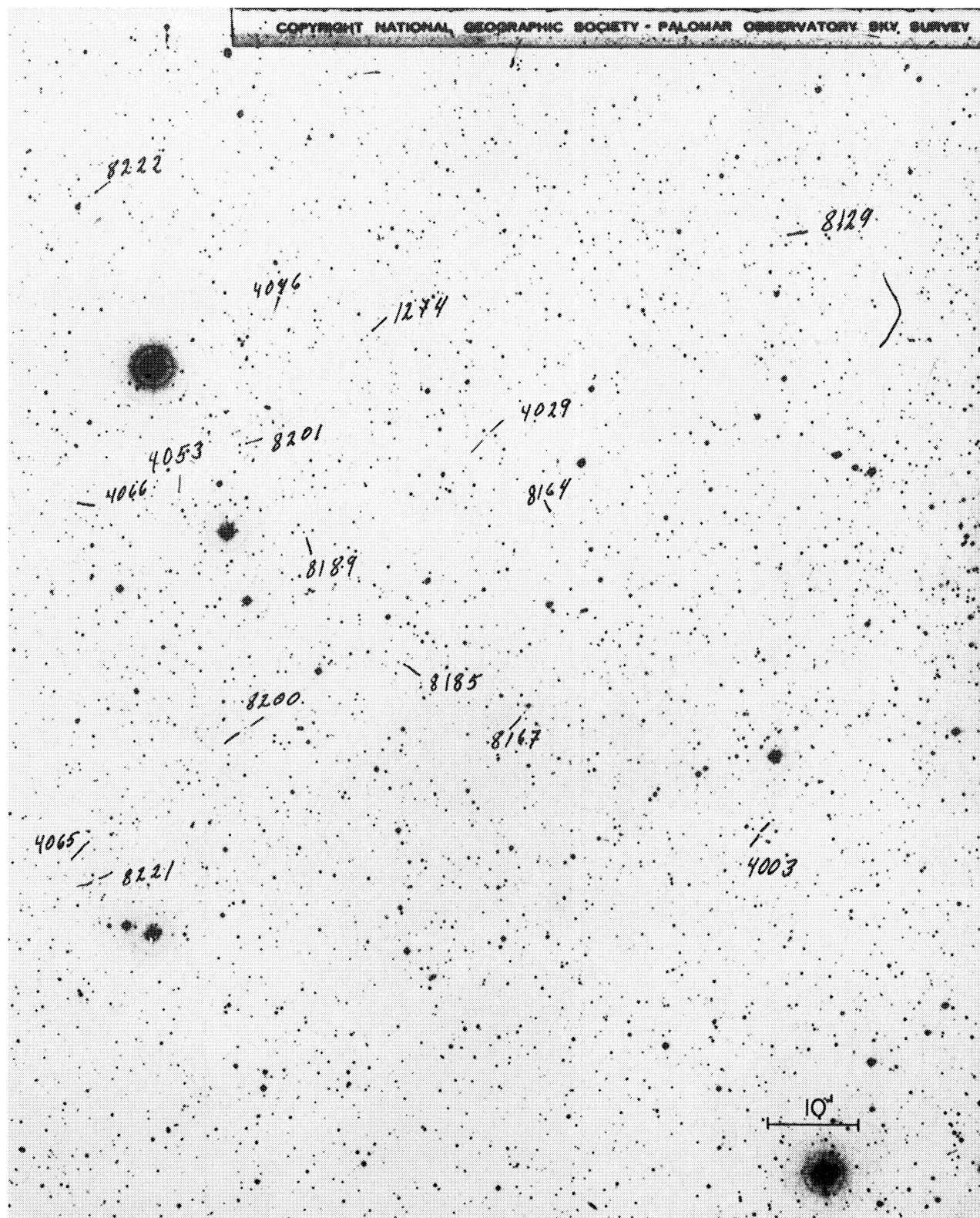


Fig. 3. Identification charts.

E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

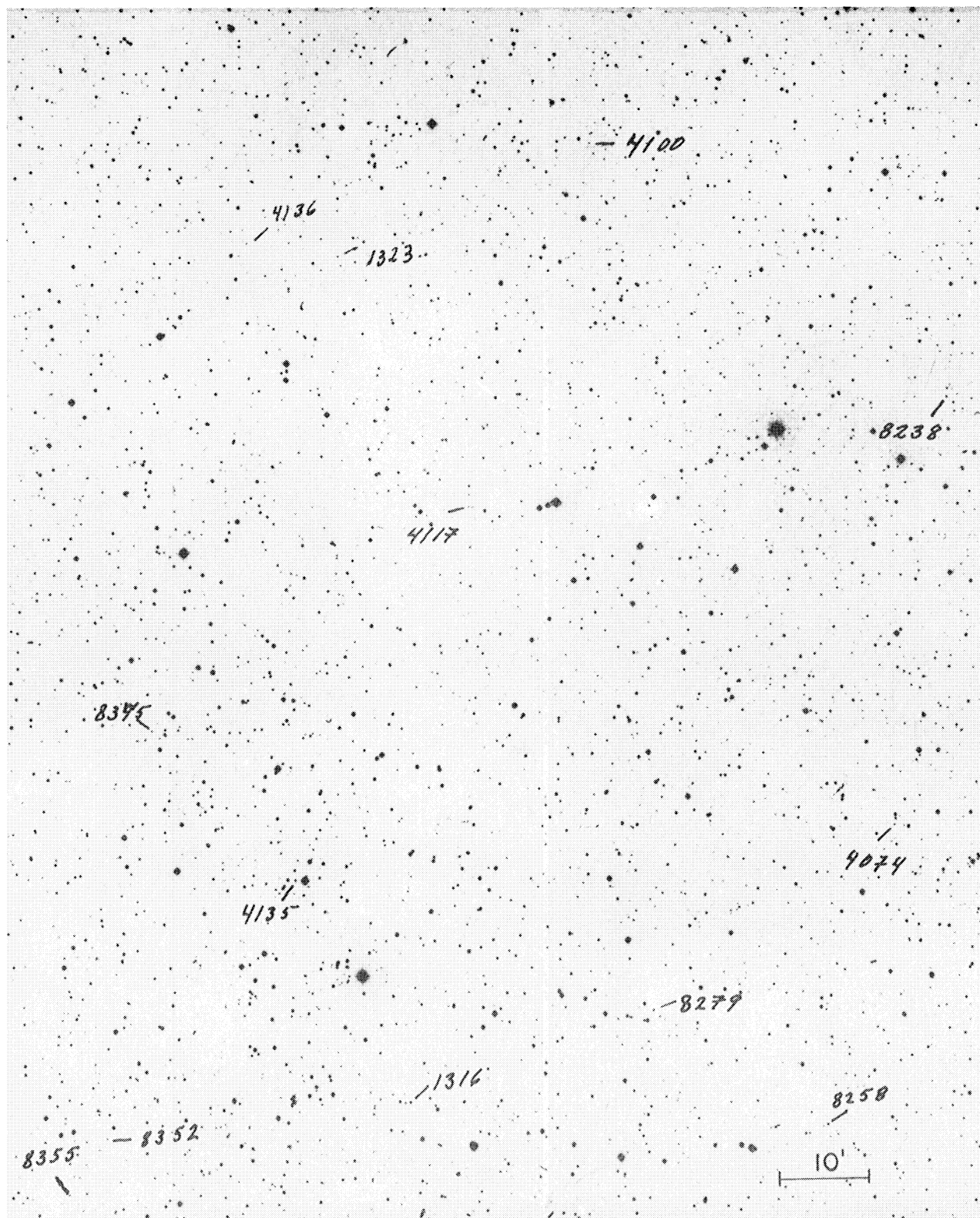


Fig. 4. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

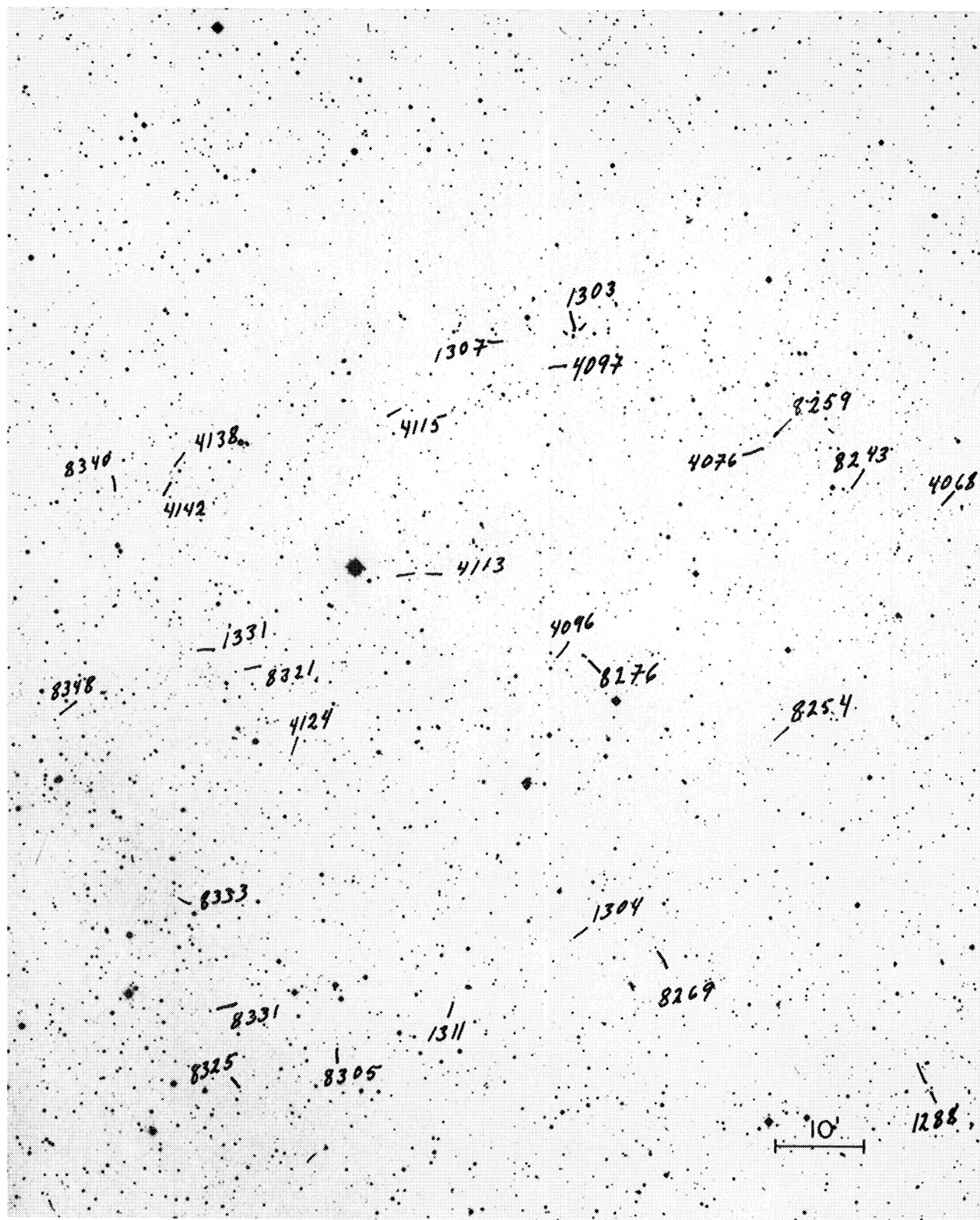


Fig. 5. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

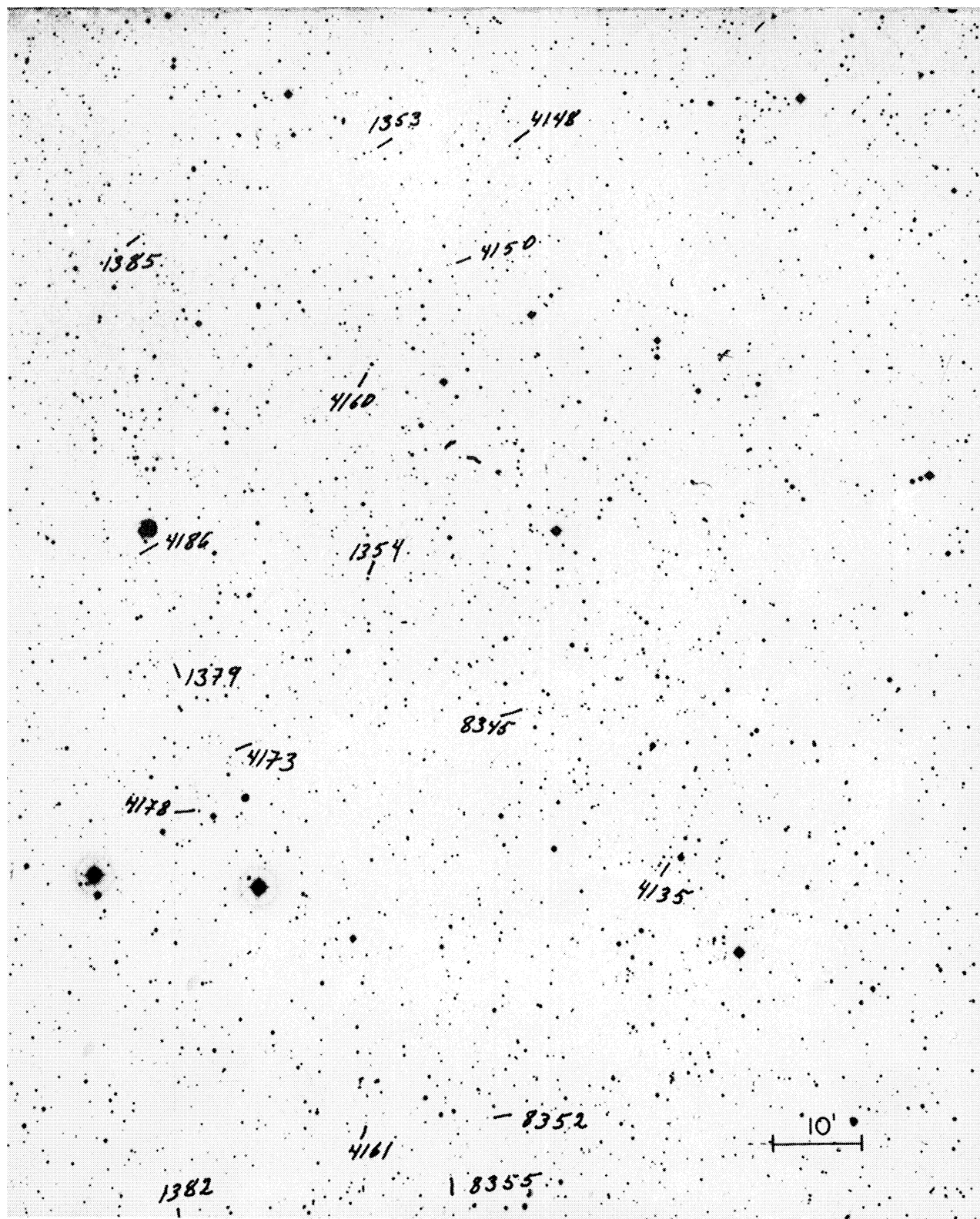


Fig. 7. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS.

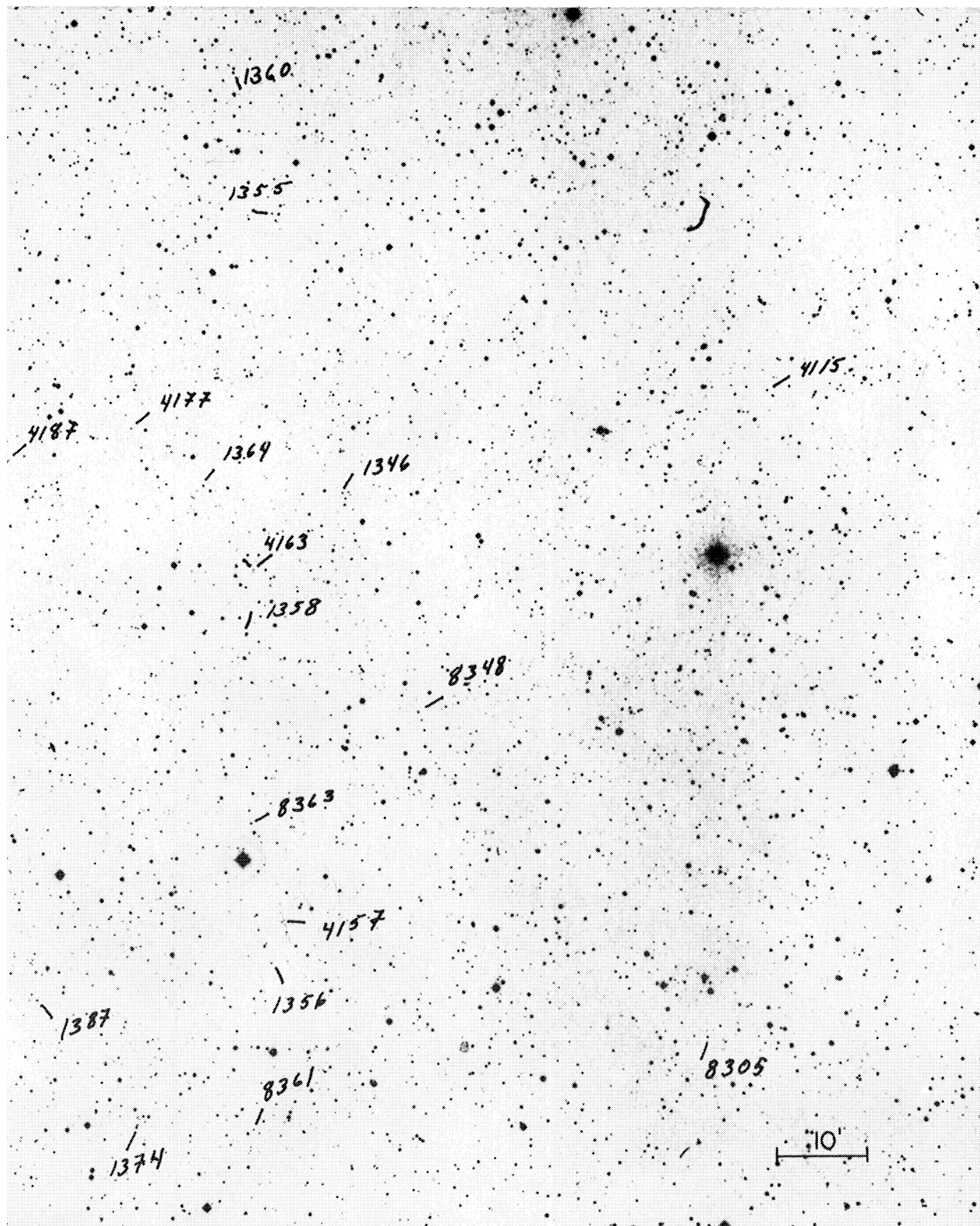


Fig. 8. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

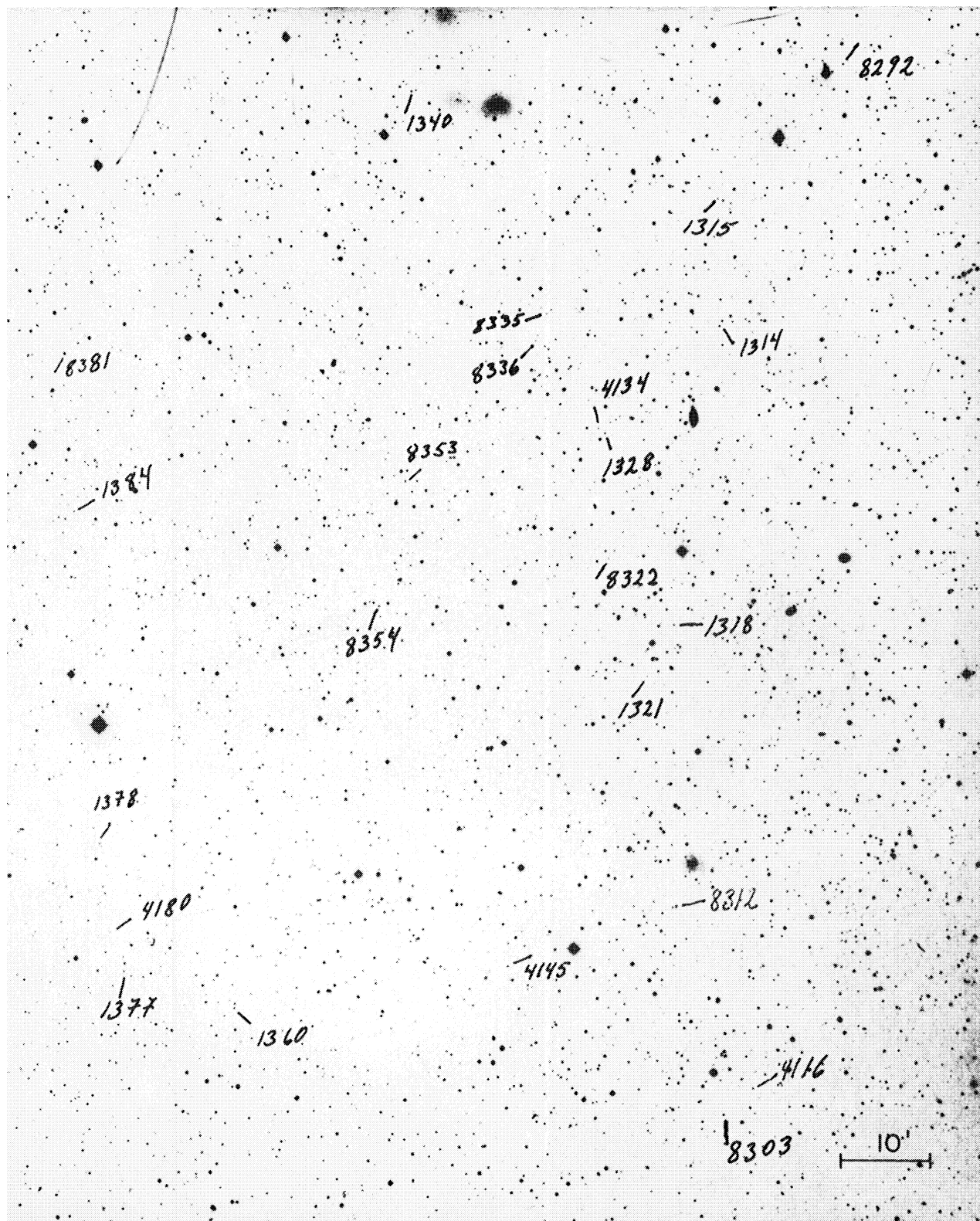


Fig. 9. Identification charts.
E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

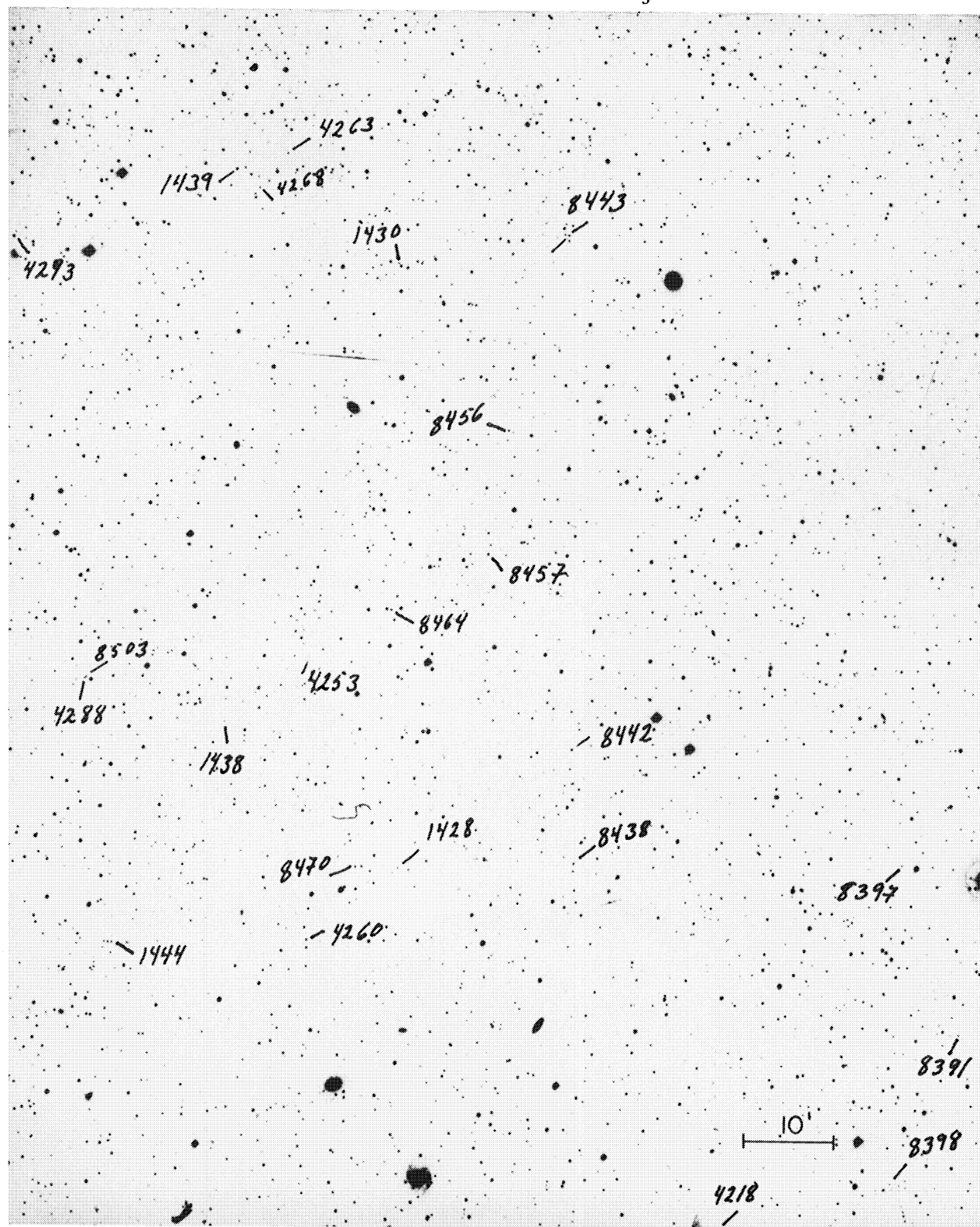


Fig. 10. Identification charts.

E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

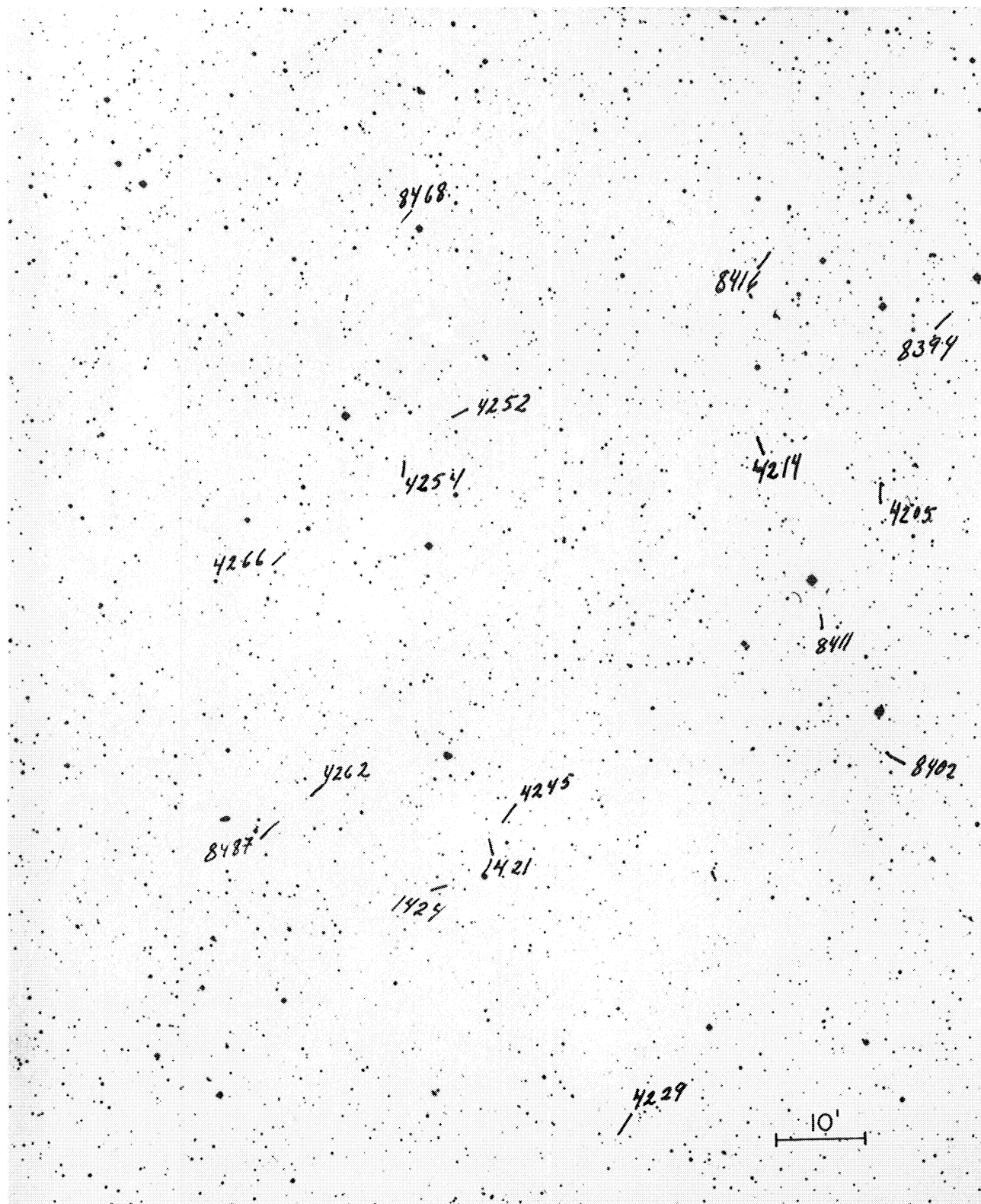


Fig. 11. Identification charts.

E. CHAVIRA (See page 47)

IDENTIFICATION CHARTS OF PHL OBJECTS

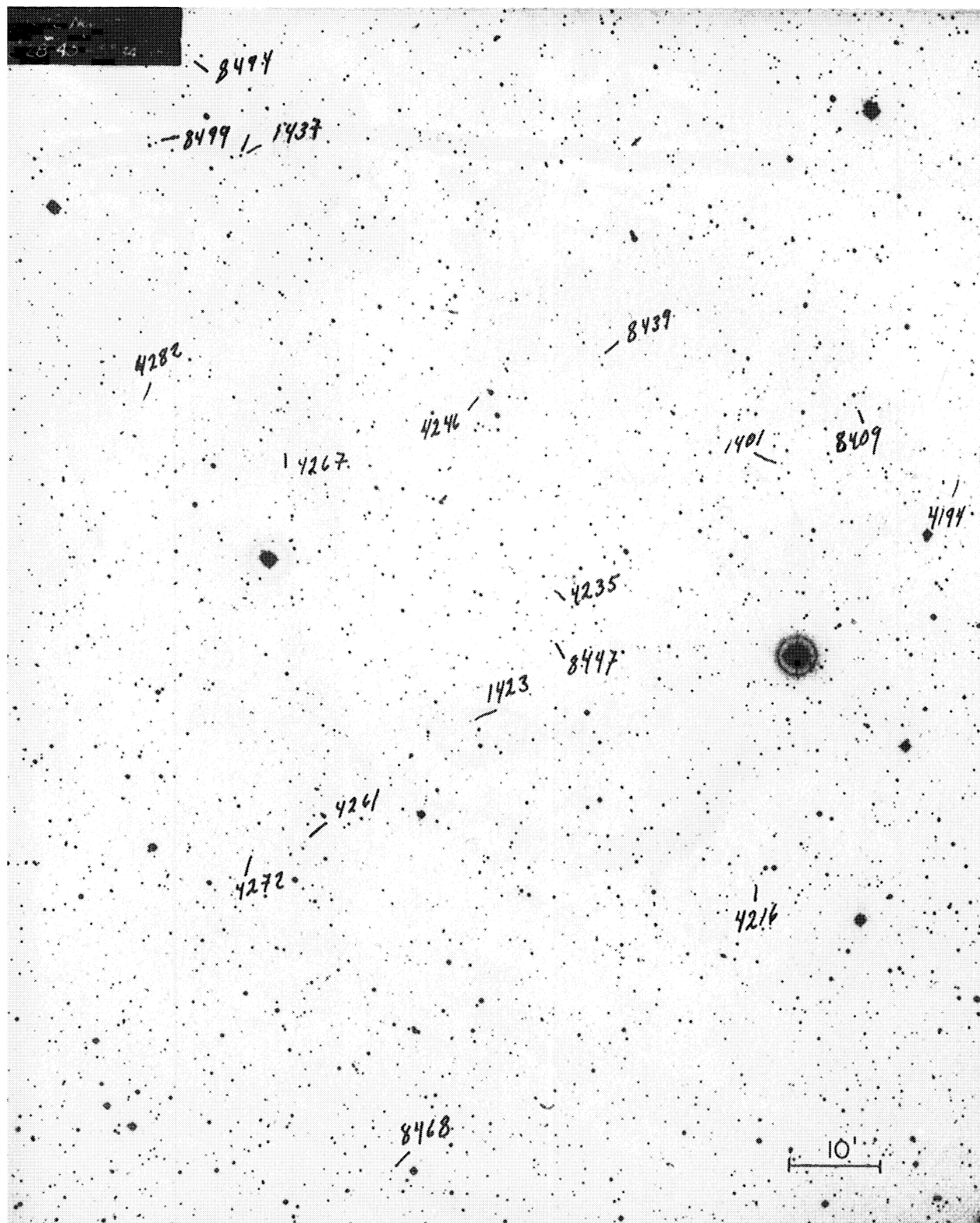


Fig. 12. Identification charts.

E. CHAVIRA (See page 47)