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SECOND LIST OF NEBULAS OBSERVED AT THE LEANDER McCORMICK
OBSERVATORY, AND SUPPOSED TO BE NEW.

BY PROF. ORMOND STONE, DIRECTOR OF THE OBSERVATORY.

No.	R.A. 1890.0	Decl. 1890.0	Mag.	Size	Form	Condensation	No. of Obs.	Obsv'r	Notes
274	0 ^h 0.3 ^m	—14° 1'	15.4	0.5	pE 130°	sbMN	1	L	*15, sf 3 ^s } D, P 100° Δ 0'.3
275	0 0.3	14 1	15.0	0.2	R	sbMN	1	L	neb? }
276	0 3.5	12 44	13.5	0.1	iR		1	M	*.9.5, P 280° Δ 2'.0
277	0 5.7	12 37	14.5	0.6	R	sbMN	1	M	*14.5, P 50° Δ 0'.6
278	0 12.4	23 30	14.5	0.2	R	gbM	1	M	1st of 2
279	0 12.5	23 34	14.5	1.0×0.3	E 225°		1	M	2d of 2; *9, P 5° Δ 1'.2
280	0 14	—23 8	15.3	0.2	iF		1	M	*?; *9, P 280° Δ 2'.8
281	0 21	— 3 14	vF	vS	R	lbM	1	L	*8.5, p 36 ^s n 2'; α doubtful
282	0 26	23 14	15.0	0.3	IE 100°		1	M	1st of 3; *11, n 0'.5
283	0 26	23 11	15.0	0.3×0.1	mE 190°		1	M	2d of 3
284	0 26	23 16	14.8	0.2	R		1	M	3d of 3
285	0 31.0	14 13	15.3	0.4	IE 170°		1	L	*11, np 16 ^s
286	0 31.0	23 59	14.0	0.8	iR	gbM	1	L	
287	0 31.0	23 13	15.0	0.3×0.1	E 30°		1	M	*10, P 30° Δ 3'.2
288	0 31.5	23 13	15.8	1.0×0.3			1	M	
289	0 32.0	23 11	14.7	0.2×0.1	E 175°		1	M	*?
290	0 32.1	—18 27	15.5	0.1	R		1	L	L* np
291	0 37.2	—24 13	16.0	0.1	R	bMN	1	L	
292	0 37.5	24 10	15.0	0.5	R	bMN	1	L	
293	0 37.7	24 8	15.0	0.5	R	bMN	1	L	
294	0 45.5	23 18	16.0	0.8×0.3	E 265°		1	M	*11, P 10° Δ 3'.2
295	0 52	21 26	14.5	0.7	E 160°	sbMN	1	L	env 15.5; *10 n
296	0 53	3 19	15.5	0.3	R	lbM	1	L	*12, nf 3'; α doubtful
297	0 55.5	23 49	16.0	0.4	iR	sbMN	1	M	*?; 1st of 2
298	0 55.5	23 50	16.0	0.3	iR	sbMN	1	M	*?; 2d of 2
299	0 59.4	12 44	16.0	1.0×0.2	E 175°	bn	1	M	3 st 12, np 30 ^s
300	1 5.3	—18 45	16.0	0.1	R		1	L	
301	1 5	— 3 24	16.0	0.8	vIE 170°		1	L	α doubtful
302	1 15.1	22 57	16.3	0.1	R	sbMN	1	L	
303	1 15.4	9 48	14.6	0.4	R	gbMN	2	L	*12.5, np 1'; *12, nf 2'
304	1 15.5	10 27	15.8	0.2	R		1	L	neb?
305	1 21.5	23 18	15.0	0.2×0.1	E 175°		1	M	1st of 3; *11, P 75° Δ 1'.6
306	1 21.5	23 20	15.5	0.5	iR		1	M	2d of 3
307	1 21.5	23 16	15.5	0.2	R		1	M	3d of 3
308	1 25.6	18 55	15.5	0.3	R		1	L	
309	1 26.4	12 36	13.5	0.3	R	gbMN	1	M	*10, P 240° Δ 2'
310	1 27.6	—12 46	13.0	0.8	R	gbM	1	M	
311	1 27.9	—12 47	14.5	0.2	R	gbMN	1	M	f(310), P 115° Δ 4'
312	1 29	—20 43	15.0	0.2	R	vgbM	1	M	*10, P 280° Δ 2'.4

No.	R.A. 1890.0	Decl. 1890.0	Mag.	Size	Form	Condensation	No. of Obs.	Obsvr	Notes
313	1 ^h 29 ^m	—20 42	eF	vS			1	M	f(312), P 60° Δ 0'.5; vF*?
314	1 29.7	10 21	14.5	0.5	IE 160°		1	L	env 15.5
315	1 34.1	9 57	15.8	0.6	IE 170°	lbMN	1	L	*10, s 4'
316	1 34.8	9 49	15.0	1.2	IE 160°	bMN	1	L	1st of 2; *8, f 16 ^s
317	1 35.0	9 50	15.8	0.4	pE 180°	bM* *?	1	L	2d of 2
318	1 39.5	23 30	15.5	0.3	R		1	M	*10, P 320° Δ 1'.6
319	1 45.4	12 35	16.0	1.0×0.4	E 105°	bnp	1	M	curved; *9.5, p 22 ^s
320	1 46.6	— 9 38	15.7	0.8×0.3	E 90'	glbMN	1	L	*14, np 2'
321	1 50.8	—10 0	15.8	0.8	IE 180°		1	L	
322	1 51	3 36	vF	vS	R?		1	L	α doubtful
323	1 52.8	10 6	16.0	1.3×0.3	E 160°		1	L	
324	1 59.4	9 38	15.6	0.1	R		1	L	neb?; *10, s 1'
325	2 4.0	22 35	14.0	0.4	R	gbMN	1	M	
326	2 4	22 58	15.5	0.8	vE 0°		1	L	*10, n 1'
327	2 5.1	22 52	14.8	0.5	R		1	L	neb?
328	2 8.1	23 1	16.0	1.3	R?		1	L	
329	2 11.1	23 42	15.5	0.3×0.1	E 170°		1	M	* *?; *10, P 320° Δ 2'.8
330	2 12.2	—23 54	15.7	0.2	R		1	L	
331	2 12.4	— 9 29	16.0	0.8	iR	bM (N?)	1	L	
332	2 12.8	4 44	15.8	0.2	R	sbMN	1	L	
333	2 15.4	23 38	16.0	0.1	E?		1	L	neb?
334	2 17.9	9 14	16.0	0.1	R		1	L	*??; *9, p 20 ^s
335	2 21.2	12 35	15.3	0.6×0.2	E 170°		1	M	*8.5, P 15° Δ 3'.8
336	2 23.9	22 52	16.3	0.4	E 0°		1	L	*??
337	2 25.8	9 47	15.5	0.2	R		1	L	neb?; *9, sp 30 ^s
338	2 25.8	7 24	15.5	1.5×1.0	E 230°		1	S	*10 at end
339	2 26.3	4 43	15.5	0.5	R	gbM	1	L	r
340	2 27	—20 22	15.0		R		1	L	*9, sp 2'
341	2 29.3	— 9 17	13.8	vS	R	bMN	1	L	env 16.0; N 0'.1
342	2 32.5	10 0	15.0	0.1	iR		1	M	1st of 2
343	2 32.7	9 59	15.0	0.2×0.1	E 180°		1	M	2d of 2
344	2 33.7	9 16	15.5	1.5	iE 190°	sbMN	1	L	
345	2 36.8	9 50	16.0	0.5	R		1	L	
346	2 37.7	9 15	15.3	0.3×0.1	pE 180°		1	L	*10, p 16 ^s ; *9, f 15 ^s
347	2 39.1	9 54	15.5	0.1	R		1	M	*9.5, f 30 ^s s 2', same as (345)?
348	2 42.5	22 41	15.7	0.2	R		1	L	
349	2 43.5	8 17	15.8	2.8×0.3	E 348°		1	L	
350	2 47.4	— 9 16	14.0	0.3×0.2	IE 45°		1	L	*12, np 3'; *12, nf 2'
351	2 49.8	— 9 34	15.0	0.4×0.2	E 180°		1	M	*9.5, f 25 ^s n 1'
352	2 52.2	8 7	16.0	0.5	E 135°		1	L	fan-shaped, radiating from * 14
353	2 57.5	9 34	15.7	0.8	pE 15°		1	L	
354	3 0.0	6 55	15.5	0.3			1	S	wide *, P 45° Δ 4'
355	3 0.7	9 16	15.6	0.2	vIE 180°		1	L	
356	3 3.1	4 41	15.5	0.2×0.1	E 170°		1	L	*P 175°
357	3 3.6	4 34	15.0	0.3	R	gbMN	1	L	1st of 2
358	3 3.8	4 31	15.5	0.2	R		1	L	2d of 2
359	3 4.3	23 21	15.5	0.1	R	gbM	1	L	1st of 2
360	3 4.3	—23 24	16.0	0.1	R	gbM	1	L	2d of 2
361	3 4.5	—23 26					1	L	*??
362	3 5.0	8 16	16.2	0.6	iR		1	L	1 or 2 eF st inv; *9, p 30 ^s
363	3 5.4	9 5	13.0	0.4	E 170°		1	M	* *?
364	3 9.4	22 12	15.6	1.2	vIE 0°		2	L	G.C. 665, s 12'
365	3 14.2	13 28	15.3	0.2	R		1	L	
366	3 16.8	4 57	15.3	0.2	R		1	L	*9.5, f 8 ^s n 3'
367	3 18.3	4 34	16.0	2.0	E 170°		1	L	*10, with eF neb s; *16 in M?
368	3 20.6	4 31	14.5	0.1	R	bMN	1	L	
369	3 25.0	—22 39	16.0	1.0×0.8	E 130°	sbMN	1	L	

No.	R.A. 1890.0	Decl. 1890.0	Mag.	Size	Form	Condensation	No. of Obs.	Obsvr	Notes
370	3 ^h 29.1 ^m	— 6 37 ^s	15.5	0.1		gbMN	1	S	
371	3 29.7	—10 12	14.5	0.5	vIE 170°		2	M	P 75° Δ 2'.5 with neb disc by Burnham
372	3 33.2	19 24	14.0	1.0×0.6	E 260°		1	M	
373	3 33.5	18 42	15.4	0.4	R	gbMN	1	L	1st of 3, one of which is G.C. 742
374	3 33.7	18 38	14.5	0.4×0.2	E 170°	sbMN	1	L	3d of 3
375	3 34.6	22 45	14.0	0.1			1	L	neb*
376	3 34.6	18 53	15.0	0.2	R	gbM	1	L	
377	3 36.1	22 5	15.8	1.6×0.1	E 0°	bMN	1	L	
378	3 36.2	23 8	15.5	0.5	R		1	M	*8.7, nr; *8.6, n 2'
379	3 37.6	22 3	15.5	0.8×0.2	E 80°		1	L	
380	3 38.5	—18 35	15.4	0.6×0.4	E 20°	sbMN	2	L	
381	{ 3 38.1	— 5 4	15.2	0.2	R	gbM	1	L	1st of 2, one of which is G.C. 763; *10,
	{ 3 38.6	5 4	15.5	0.3×0.2	E 180°	gbMN	1	L	2d of 2 [p 15°
382	3 39.1	10 2	15.3	0.4	R		1	M	*8.5, f 25 ^s n 3'
383	3 40.4	10 12	14.5	0.3	R		1	M	*9, P 330° Δ 2'
384	3 40.5	9 23	14.5	0.4	R		1	L	neb?; *7.5, f 13 ^s n 1'
385	3 41	21 2	14.5	0.05	R		1	M	*?; *9.5, P 240° Δ 3'.2
386	3 41.1	18 59	14.7	0.5	IE 30°	sbMN	1	L	
387	3 42	18 35	13.0	0.3	R		1	L	○; neb?
388	3 46.7	9 11	15.0	0.3	R		1	M	*9, P 185° Δ 4'.2
389	3 47.9	9 20	15.0	0.8×0.2	E 180°		1	M	*9.5, p 20 ^s s 2'
390	3 48.8	— 8 27	15.3	0.1	R		1	L	*14, np 4'
391	3 49.1	—10 32	16.0	0.6×0.1			1	M	1st of 2; neb*, P 170°
392	3 49.3	10 35	15.5	0.4	iR		1	M	2d of 2; *10, f 30 ^s
393	3 52.1	22 8	15.8	0.2	R		1	L	
394	3 53.4	19 32	15.0	1.0×0.6	E 190°		1	M	
395	4 20.7	10 21	13.5	1.0	R		1	M	*9.5, P 185° Δ 2'
396	4 27.3	4 49	15.5	0.2	R	bMN	1	L	
397	4 31.8	5 13	15.0	0.2	R		1	L	*8, np 12 ^s
398	4 33.1	19 8	16.0	0.1	R		1	L	
399	4 33.9	9 40	15.0	0.2	R		1	M	
400	5 17.1	—23 56	14.0	3.0×1.8	E 240°		1	M	*8, P 245° Δ 0'.6
401	8 15.6	— 8 37	15.8	1.0			1	S	rr; *7.5, P 50° Δ 5'
402	8 18.6	4 37	13.5	0.4	R	sbMN	1	M	1st of 4
403	8 18.8	4 36	14.0	0.5	R		1	M	2d of 4
404	8 18.9	4 33	14.0	0.5	R		1	M	3d of 4
405	8 19.0	4 35	16.2	0.8	R		1	M	4th of 4; neb?
406	8 37.7	3 13	12.0	0.7×0.3	E 50°	gbM stell N	1	S	*9, P 240° Δ 0'.8
407	8 41.0	18 55	11.0	0.6	R	gbMN	1	M	
408	9 0.1	18 39	15.0	0.4	R		1	M	1st of 3
409	9 0.5	18 36	15.0				1	M	2d of 3; *?
410	9 0.6	—18 36	15.2	0.5×0.4	E 180°		1	M	3d of 3
411	9 19	— 9 57	15.3	0.4	R		1	M	10 ^s p (412); α 9 ^h 24 ^m ?
412	9 19	9 57	14.5	1.2×0.6	E 170°	gbM	1	M	bet 2 st 12 and 14
413	9 20:	6 15	13.5	0.4		gbM	1	S	
414	9 34	9 39	15.5	0.6	iR	sbM	1	M	*9.5, f 30 ^s
415	9 34.2	18 40	12.0	0.4	R		1	M	*9.5, P 130° Δ 3'.8
416	9 43.8	2 21	15.0	0.2			1	S	*11, P 300° Δ 3'
417	9 45.0	11 44	15.7	0.2	R	gbsbMN	1	L	
418	9 49	9 52	14.0	0.6	vIE 200°	gbMN	1	M	
419	10 3.1	11 27	16.2	0.2	R		1	L	
420	10 4	—11 24	16.0	0.1	R		1	L	1st of 2
421	10 4	—11 16	15.6	0.1	R		1	L	2d of 2
422	10 29.4	16 42	15.7	0.4	IE 180°	gbM	1	L	*7.5, n 6'
423	10 32.8	11 5	15.7	1.0	vE 160°		1	L	*np end
424	10 34.5	—23 15	14.0	0.8	vIE 180°		1	M	

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No.	R.A. 1890.0	Decl. 1890.0	Mag.	Size	Form	Condensation	No. of Obs.	Obsvr	Notes
425	10 ^h 35.0 ^m	—23° 20'	13.5	0.4	iR	gbM	1	M	
426	10 44.9	16 27	16.0	0.3	E 200°	sb*	1	L	2 vF st inv in eF neb
427	10 45.4	16 38	15.4	0.2	R	pgbMN	2	L	*8.5, s 6'
428	10 45.9	16 26	15.0	0.6×0.2	E 130°	gbsbMN	1	L	
429	10 49.0	16 26	14.0	1.0×0.3		gbsbMN	1	L	
430	10 53.7	— 6 58	15.5	0.3			1	S	rr; prob vF Cl; *9, P 120° Δ 5'
431	11 0.1	—17 21	15.3	0.4	iR	gpmbM	1	L	sev vF st inv
432	11 4.0	12 48	12.0				1	M	neb*; *12, P 40° Δ 2'.1
433	11 14.8	8 24	15.5	0.1	R	bMN	1	L	} D; P 85° Δ 0'.4; *12, p 3°
434	11 14.8	8 24	15.5	0.1	R	bMN	1	L	
435	11 15.2	7 30	15.8	0.4			1	S	2 st 10 f
436	11 20	10 1	15.0	0.2	R		1	M	*10, nf; * 10, sf
437	11 22.2	8 33	16.0	0.1	IE 0°	gbM	1	L	
438	11 23.0	10 51	15.6	0.1	R	bMN	1	L	
439	11 23.6	8 23	15.2	0.1	R	glbM	1	L	*10, p 30°; *10, f 30°
440	11 25.4	—10 28	16.0	0.2	R?		1	L	*9, s 4'
441	11 27.0	— 8 51	15.5	0.1	R	gbM	1	L	
442	11 27.0	9 4	15.2	0.2	R	sbMN	1	L	1st of 2
443	11 27.2	9 6	15.0	0.4	R	sbMN	1	L	2d of 2
444	11 27.3	13 16	15.2	0.1	R	gbMN	1	L	*11, sf 1'
445	11 27.8	9 0	15.6	0.5	IE 140°	glbuM	1	L	
446	11 31.8	8 44	14.5	0.1	R		1	L	*10, p 15°
447	11 32.8	8 21	15.8	0.2×0.1	E 75°		1	L	another neb or eF* p 0'.5; *9 np 3'
448	11 34	8 59	14.8	0.3×0.2	E 180°	gbM	1	L	
449	11 38.8	8 46	14.5	0.3	IE 70°	gbsbMN	1	L	
450	11 39.1	— 8 41	15.6	0.1	R	gbM	1	L	*9.5, p 3°
451	11 47.2	—10 49	16.0	0.8×0.5	E 160°	gvlbM	1	L	
452	11 49.5	10 16	16.0	0.1	R	bMN	1	L	*9.5, np 4'
453	11 49.8	18 8	15.0	0.2		gbMN	1	S	*10, P 340° Δ 4'
454	12 7	8 32	16.0	0.3	R	stbMN	1	L	*10, f 15°
455	12 9.5	10 58	15.5	0.1	R	bMN	1	L	
456	12 41.0	3 59	15.5	0.1	R		1	L	neb?; * f 2°
457	12 56.1	3 55	15.7	0.1	R	bMN	1	L	G.C. 3366 sp 4'
458	13 9.0	3 36	15.5	0.2	R	gbM	1	L	1st of 2
459	13 9.2	3 35	15.8	0.1	E 45°		1	L	2d of 2
460	21 5	—23 32	15.5	0.5	iR		1	M	
461	21 34.5	—22 58	14.0	0.3	R	gbM	1	M	1st of 2
462	21 34.5	22 56	14.3	0.2	iR	gbMN	1	M	2d of 2
463	21 43	12 18	16.0	vS	R		1	M	neb?; *9.5, P 95° Δ 2'
464	21 51	—12 7	14.0				1	M	neb*; *9.5, P 40° Δ 2'.8
465	21 53	+ 0 54	15.7		R		1	L	4 vF st from 1' to 4' n
466	22 4.5	—23 32	15.5	0.2	vIE	gbM	1	M	*10, P 5° Δ 3'.2
467	22 16	22 17	13.0	0.4	R		1	M	*11, P 280° Δ 4'.5
468	22 22.5	22 42	15.0	0.1	E 330°		1	M	slightly nebulous**
469	22 35.5	23 28	15.0	0.3×0.1	E 175°	biN, bn	1	M	D
470	22 58.0	—23 30	15.8	0.2	IE 85°	sbM	1	M	3 st 10, p 20°
471	23 5	—22 21	15.8	0.3	E 290°		1	M	* ?
472	23 8	23 29	16.0	0.3	iR	stM?	1	M	*10, P 75° Δ 3'.2
473	23 11.5	22 46	15.8	0.7	iR	bnp	1	M	*10, P 290° Δ 4'.4
474	23 18	12 36	14.5	0.2×0.1	E 260°		1	M	neb?; *9, P 10° Δ 3'.6
475	23 43.2	22 39	15.5	0.3	iR	sbM	1	M	*10, nf 50°
476	23 57.6	—12 36	15.2	0.5×0.2	E 80°		2	M	*8.5, f 38°; *9, np 40°

S = Ormond Stone; L = F. P. Leavenworth; M = Frank Muller.

After our copy had gone to press, no. 6 of our last list

was found to be identical with nebula no. 2, catalogue no. 4, of nebulas discovered at the Warner Observatory (A.N. 2752). No. 146 was also found to be G.C. 998. Its right-

ascension in the General Catalogue is probably 2^m too small, | The right-ascension of nos. 89-93 should be 2^h 58^m instead
that given in the note as brought up from C.H. being right. | of 3^h 1^m.

University of Virginia, 1887 January 26.

RING-MICROMETER OBSERVATIONS OF COMET 1886 *e* (FINLAY)

MADE AT THE LEHIGH UNIVERSITY OBSERVATORY

By C. L. DOOLITTLE.

1887	Greenwich M.T.	*	No. Comp.	$\Delta\alpha$	$\Delta\delta$	α	δ	log $p\Delta$	
								for α	for δ
Jan. 25	13 ^h 35 ^m 24.1 ^s	s	5	+4 ^m 20.02 ^s	- 2' 28.9"	1 ^h 42 ^m 40.38 ^s	+12° 13' 14.9"	9.462	0.667
26	12 34 25.2	t	6	+0 43.33	-14 32.9	1 46 37.12	+12 37 23.8	9.323	0.639

Mean Places for 1886.0 of Comparison-Stars.

*	α	Red. to app. place	δ	Red. to app. place	Authority
s	1 38 17.53	+2.83	+12° 15' 30.9"	12.9	W. Bessel I 668
t	1 45 50.91	+2.88	12 51 44.2	12.6	W. Bessel I 786

FILAR-MICROMETER OBSERVATIONS OF COMETS 1887 *b* (BROOKS)
AND 1887 *c* (BARNARD)

MADE AT THE DUDLEY OBSERVATORY, ALBANY.

1887 Albany M.T.	*	No. Comp.	$\Delta\alpha$	$\Delta\delta$	α	δ	log $p\Delta$		Obs'r	
							for α	for δ		
<i>COMET 1887 b</i>										
Jan. 24	14 ^h 22 ^m 49 ^s	a	21, 7	+ 5 ^m 14.36 ^s	+3' 5.1"	18 ^h 23 ^m 26.17 ^s	+73° 53' 30.9"	n0.149	0.642	B
26	15 50 43	b	15, 5	- 8 1.90	+2 11.3	18 49 14.90	+75 40 19.9	n0.240	0.377	B
27	11 5 37	c	3, 1	-12 6.33	-2 21.6	19 1 7.41	+76 19 56.8	n9.782	0.885	B
29	10 53 45	d	15, 5	-1 54.54	+2 36.4	19 36 27.53	+77 50 45.0	8.763	0.882	B
Feb. 9	8 34 22	e	12, 4	- 8 3.50	-5 59.7	0 32 33.80	+77 45 16.0	0.305	9.275	B
<i>COMET 1887 c</i>										
Jan. 24	18 4 12	1	7, 7	+ 1 19.09	-3 2.4	19 10 19.99	+25 58 14.3	n9.662	0.652	E
26	18 7 13	2	9, 3	- 6 9.53	+3 26.8	19 15 45.14	+27 12 13.1	n9.330	0.635	B

Adopted Mean Places for 1887.0 of Comparison-Stars.

*	α	Red. to app. place	δ	Red. to app. place	Authority
a	18 18 15.74	-3.93	+73° 50' 28.1"	- 2.3	DM. 73°, 817; Bonn VI.
b	18 57 21.12	-4.32	75 38 9.1	- 0.5	Radcliffe and Kasan, A.G. Zones
c	19 13 18.24	-4.50	76 22 18.2	+ 0.2	Greenwich Nine-Year Catalogue
d	19 38 26.93	-4.86	77 48 7.4	+ 1.2	Kasan, A.G. Zones
e	0 40 38.96	-1.66	77 51 4.4	+11.3	Fed. 116 ($\frac{1}{2}$ Wt.) and Oe. Argel. 720
1	19 9 2.44	-1.54	26 1 16.0	+ 0.7	W. Bessel, 19 ^h , 216
2	19 21 56.20	-1.53	+27 8 45.9	+ 0.4	W. Bessel 624 and comp. with ditto 625

The observation marked E was made by Mr. H. V. EGBERT; those marked B by Prof. Boss.

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