BARNEY, Ida. November 6, 1886—March 7, 1982. SMITH COLLEGE (BA 1908), YALE UNIVERSITY (PHD 1911).

Ida Barney was born in New Haven, Connecticut, the first of two daughters of Ida (Bushnell) (1858–1941) and Samuel Eben Barney (1859–1940), natives of Connecticut who married in 1884. Her father was born in New Haven, graduated from the Sheffield Scientific School of Yale University in 1879, served as a consultant on various engineering projects, and was on the civil engineering faculty at Yale from 1882 until his retirement in 1924. Her sister, Elizabeth Hunt (1894–1958), graduated from Smith College in 1914 and was secretary to the dean, and later to the registrar, of the Yale Divinity School.

Ida Barney attended New Haven High School 1900–04, Smith College 1904–08, and Yale Graduate School 1908–11. She was a mathematics major at Smith, where her studies included a course in general astronomy and one in the theory and use of transit instruments in addition to various ones in geometry, calculus, theory of equations, history of mathematics, and real and complex variables. Her courses at Yale included, among others, advanced theory of functions, elliptic functions, Abelian functions, and abstract thermodynamics, all from James Pierpont, who also directed her dissertation. She received her PhD from Yale in 1911.

After Barney finished her graduate work, she spent the next ten years on various mathematics faculties, starting as professor of mathematics at Rollins College in Winter Park, Florida, 1911–12. She was at Smith College for six years: as an assistant 1912–13, as instructor 1913–17, and as assistant professor 1920–21. Between her two periods of time at Smith, she was professor first at Lake Erie College in Painesville, Ohio, 1917–19, and then at Meredith College in Raleigh, North Carolina, 1919–20, where she was the only member of the department. All but Rollins College were women's colleges at the time.

Barney spent the rest of her life in or around New Haven, where she and her sister lived with their parents until their parents' deaths in the early 1940s. After that Ida Barney and her sister lived in the family home until her sister's death in 1958.

In 1921 Barney enrolled in a graduate course in astronomy at Yale, and the following year she was appointed research assistant at the Yale Observatory. She took additional graduate courses in astronomy in 1922 and 1928. Early in her tenure at the observatory she became involved in a major star mapping project under the direction of Frank Schlesinger. This project, cataloguing positions and proper motions of stars, was done with the participation of the Lick Observatory of the University of California, the US Naval Observatory, and the Royal Observatories at Greenwich and the Cape of Good Hope. Barney was coauthor with Schlesinger, and sometimes others, of twelve volumes of catalogues that appeared in the *Transactions of the Astronomical Observatory of Yale University*. The first six of these volumes, appearing 1925 though 1934, were produced before IBM punch-card machines were used to facilitate computations.

After Frank Schlesinger's retirement in 1941, Barney was named director of the project. Between 1945 and 1950 she authored another eight volumes of catalogues. In 1949 she was promoted to research associate in astronomy, with the rank of associate professor, for a five-year term. When the project was completed in 1950 it resulted in what is known as the Yale Photographic Zone catalogues. In 1951

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through 1954 Barney authored a supplementary volume and two revised catalogues. She also coauthored three new catalogues, one in 1954 and two in 1959, four years after her retirement.

Barney was recognized by her colleagues for her achievements. In 1945 the American Astronomical Society created a council, and the following year Barney was elected to a three-year term on it. She was a fellow of the Royal Astronomical Society of London. In 1952 Barney was awarded the Annie J. Cannon Prize, established in 1934 and given no more often than every three years, by the American Astronomical Society. According to an item in the April 1953 issue of the *Publications of the Astronomical Society of the Pacific*, "Miss Barney was cited for her work on the . . . Yale Photographic Zone Catalogue, which required a half-million measurements and twenty-three years of computation work before it was completed in 1950" (65:99). A letter to the editor of *Sky and Telescope* after Barney's death in 1982 quoted Dirk Brouwer, director of the Yale Observatory 1941–66, concerning her receipt of the prize: "It seems especially fitting that the prize named for a woman who classified a half-million spectra should be given to one who made approximately the same number of measures for the positions and motions of stars."

Ida Barney continued to live in the family house in New Haven for several years. She had no immediate survivors at the time of her death in an assisted living facility in Hamden, Connecticut, just outside New Haven, at age ninety-five in 1982. She is buried in the family plot in the Grove Street Cemetery in New Haven.

**Organizational affiliations:** AMS, MAA (charter member), Amer. Astron. Soc., Internat. Astron. Union, Roy. Astron. Soc., AAAS, Phi Beta Kappa, Sigma Xi.

## Dissertation:

1911 Line and surface integrals. PhD dissertation, Yale University, directed by James Pelham Pierpont. Printed version, reprinted from Amer. J. Math. 36 (1914): 137–50.

## Publications:

**1914** An extension of Green's theorem. *Amer. J. Math.* 36:137–50. Published version of PhD dissertation. Reviews: *JFM* 45.0569.01 (T. Carleman); *Rev. semestr. publ. math.* 23, pt. 1: 1 (E. B. Cowley).

**1923** The spectrum of Algol. *Astron. J.* 35:95–99.

1925-59 Yale Zone Catalogues. Trans. Astron. Obs. Yale Univ., New Haven, CT: The Observatory. 4 (1925), catalogue of 8359 stars  $+50^{\circ}$  to  $+55^{\circ}$ , with F. Schlesinger and R. H. Tucker; 3, pt. 4 (1926), catalogue of 1275 stars +1° to +2°, with F. Schlesinger, C. J. Hudson, and L. Jenkins; 5 (1926), catalogue of 5833 stars  $+2^{\circ}$  to  $+1^{\circ}$ , with F. Schlesinger, C. J. Hudson, and L. Jenkins; 7 (1930), catalogue of 7727 stars  $+55^{\circ}$  to  $+60^{\circ}$ , with F. Schlesinger; 9 (1933), catalogue of  $10358 \text{ stars } +25^{\circ} \text{ to } +30^{\circ}$ , with F. Schlesinger; 10 (1934), catalogue of 8703 stars  $+20^{\circ}$  to  $+25^{\circ}$ , with F. Schlesinger and C. Gesler; 11 (1939), catalogue of 8101 stars  $-10^{\circ}$  to  $-14^{\circ}$ , with F. Schlesinger; 12, pt. 1 (1940), catalogue of 8563 stars  $-14^{\circ}$  to  $-18^{\circ}$ , with F. Schlesinger; 12, pt. 2 (1940), catalogue of  $4553 \text{ stars } -18^{\circ} \text{ to } -20^{\circ}, \text{ with F. Schlesinger; } 13, \text{ pt. } 1 \text{ (1943), catalogue of } 4292 \text{ stars}$  $-20^{\circ}$  to  $-22^{\circ}$ , with F. Schlesinger; 13, pt. 2 (1943), catalogue of 9455 stars  $-27^{\circ}$ , to  $-30^{\circ}$ , with F. Schlesinger; 14 (1943), catalogue of 15110 stars  $-22^{\circ}$  to  $-27^{\circ}$ , with F. Schlesinger; 16 (1945), catalogue of 8248 stars  $-6^{\circ}$  to  $-10^{\circ}$ ; 17 (1945), catalogue of 8108 stars  $-2^{\circ}$  to  $-6^{\circ}$ ; 18 (1947), catalogue of 9092 stars  $+15^{\circ}$  to  $+20^{\circ}$ ; 19 (1948), catalogue of 8967 stars  $+10^{\circ}$  to  $+15^{\circ}$ ; 20 (1949), catalogue of 7996 stars  $+1^{\circ}$  to  $+5^{\circ}$ , with errata slip; 21 (1950), catalogue of 5583 stars  $-2^{\circ}$  to  $+1^{\circ}$ ; 22, pt. 1 (1950), catalogue of 9060 stars  $+5^{\circ}$  to  $+9^{\circ}$ ; 22, pt. 2 (1950), catalogue of 1904 stars  $+9^{\circ}$  to  $+10^{\circ}$ ; 23 (1951),  $-30^{\circ}$  to  $+30^{\circ}$ , supplementary volume; 24 (1953), revised catalogue of 10358 stars  $+25^{\circ}$  to  $+30^{\circ}$ ; 25 (1954), revised catalogue of 8703 stars  $+20^{\circ}$  to  $+25^{\circ}$ ; 26, pt. 1 (1954), catalogue of Book Web Page BARNEY - 3

 $1031~\rm stars~+85^{\circ}$  to  $+90^{\circ},$  with A. J. J. van Woerkom; 26, pt. 2 (1959), catalogue of 8380 stars  $+50^{\circ}$  to  $+55^{\circ},$  with D. Hoffleit and R. B. Jones; 27 (1959), catalogue of 8164 stars  $+55^{\circ}$  to  $+60^{\circ},$  with D. Hoffleit and R. B. Jones.

1927 with J. Schilt. Discussion of the proper motions in the equatorial zone. *Astron. J.* 37:181-90.

**1928a** Review of A Guide to the Constellations, by S. G. Barton and W. H. Barton, Jr. Science n.s., 68:16.

1928b Review of Romance of the Sun, by M. Proctor. Science n.s., 67:444-45.

1929 Review of *Life and Work of Sir Norman Lockyer*, by T. M. Lockyer and W. L. Lockyer, with the assistance of Professor H. Dingle. *Science* n.s., 69:475–76.

1930 with J. Schilt. Analysis of the Yale proper motions in the zones between  $+50^{\circ}$  and  $+55^{\circ}$  and between  $+55^{\circ}$  and  $+60^{\circ}$ . Astron. J. 40:168–76.

1932 Review of The Universe Unfolding, by R. H. Baker. Science n.s., 75:641.

1938a with F. Schlesinger. An effect of a star's color upon its apparent photographic position. Astron. J. 47:86-88.

**1938b** Ernest William Brown, November 29, 1866–July 22, 1938. *The Sky* 3, no. 1: 14. Reprint 1938: *J. Roy. Astron. Soc. Canada* 32:410–12.

1939 with F. Schlesinger. On the accuracy of the proper motions in the General Catalogue, Albany, 1938. Astron. J. 48:51–52.

1940 with F. Schlesinger. New reductions of astrographic plates with the help of the Yale photographic catalogues. *Astron. J.* 49:39–40. Presented as "New reductions of astrographic plates with the help of recent Yale catalogues" to a meeting of Amer. Astron. Soc., New Haven, CT, 31 Dec 1930–3 Jan 1931; abstract: *Publ. Amer. Astron. Soc.* 7:14–15

**1943** Frank Schlesinger 1871–1943. *Popular Astron.* 51:409–12.

1947 On the accuracy of the proper motions in the general catalogue derived from the Yale photographic positions in the zone  $+9^{\circ}$  to  $+20^{\circ}$ . Astron. J. 52:176–77.

1949a Corrections to the Albany General Catalogue. Astron. J. 54:154–55.

**1949b** Investigation of the magnitude error in the declinations of the *General Catalogue* from a comparison with the Yale photographic positions. *Astron. J.* 54:150–53.

1956 Astrometric measurements on three Schmidt plates. Mitt. Astron. Ges. 7:38–39.

## Abstracts not listed above:

1931 with F. Schlesinger. Reduction of photographic plates of very large angular dimensions. *Publ. Amer. Astron. Soc.*, 7: 15. Presented to a meeting of Amer. Astron. Soc., New Haven, CT, 31 Dec 1930–3 Jan 1931.

**1939** with F. Schlesinger. Progress at the Yale Observatory on the duplication of the Gesellschaft zones. *Publ. Amer. Astron. Soc.* 9:165–66. Presented to a meeting of Amer. Astron. Soc., Ann Arbor, MI, 14–17 Sept 1938.

**1942a** The derivation of proper motions for the Yale photographic zone catalogues between  $-20^{\circ}$  and  $-30^{\circ}$ . *Publ. Amer. Astron. Soc.* 10:245–46. Presented to a meeting of Amer. Astron. Soc., New Haven, CT, 12–14 June 1942.

**1942b** Progress at the Yale Observatory on the photographic zone catalogues between declinations  $-30^{\circ}$  to  $+30^{\circ}$ . *Publ. Amer. Astron. Soc.* 10:157–58. Presented to a meeting of Amer. Astron. Soc., Williams Bay, WI, 7–9 Sept 1941.

 $\bf 1944$  Recent progress at the Yale Observatory on the photographic zone catalogues in northern declinations. *Astron. J.* 51:65. Presented to a meeting of Amer. Astron. Soc., Philadelphia, PA, 28–29 June 1944.

**References to:** AmMSc 3–8, 9P–11P; BiDWSci; NotWoPS; NotWoSc; WhoAmW 1–2; WhoEast 1930.

"Yale Maps Stars, Ends 23-Year Job." New York Times, 23 Oct 1950.

"Ida Barney." In "General Notes." Pub. Astron. Soc. Pac. 65 (Apr 1953): 99.

"6 at Yale to Retire." New York Times, 20 Mar 1955.

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Warner, Deborah Jean. "Women Astronomers." Natural History 88, no. 5 (May 1979): 12-29.

"Barney, Ida." (Death notice) New Haven Register, 10 Mar 1982.

Hall, John S. "Ida Barney Remembered." Sky and Telescope 63, no. 6 (June 1982): 563. "Ida Barney." (Obituary) Smith Alumnae Quarterly 73 (Summer 1982): 68.

Hoffleit, Dorrit. "Appendix H: Women Astronomers at Yale through 1968" and "Positions, Proper Motions, Catalogues." In *Astronomy at Yale 1701–1968*. New Haven: Connecticut Academy of Arts and Sciences, 1992.

Other sources: Owens questionnaires 1937, 1940; Meredith College Archives; Smith College Archives; Yale University Archives; Grove Street Cemetery, New Haven; communications with New Haven Free Public Library and with Rollins College Archives; CurBio 1940 (Barney, Samuel E.); US Census 1900, 1910, 1920, 1930 CT, 1920 NC; SSDI.

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