

figuration of nebulæ, even more wonderful are the recent stellar discoveries made by photographing the spectra of the stars. It is in this last-named branch of astrophysics, that the women assistants at the Harvard Observatory have accomplished important results.

Perhaps the most striking results thus far achieved by these women assistants are Mrs. Fleming's discovery that variable stars of a certain type may be proved variable by the bright lines in their spectra, and Miss Maury's discovery that Beta Aurigæ is a close binary, proved so from the study of its spectrum. Yet the whole experiment of employing women to the extent to which they are here employed is worthy

of attention. For the Harvard Observatory is the first to develop a corps of trained women assistants, dealing with difficult problems as successfully as men deal with them at other observatories; and this corps of women, in addition to doing thorough routine work, has shown great capacity for original investigations. Moreover, they are employed not from the meaner motive which so often leads to the opening of some new field for women's work, viz., that their work can be obtained at a cheaper rate than that of men; for the women assistants doing routine work are paid at the same fixed rate per hour as the men in other departments of the Observatory who do the same kind of work. Work paid for by the hour possesses certain obvious advantages, since the worker is thus tied down to no fixed hours, and she may even do portions of her work at home. Much of the Harvard Observatory work is, however, carried on in two light, pleasant rooms, of which illustrations are here shown. These rooms

appear the workrooms that they are, with their convenient writing-tables, shelves of note-books, astronomical catalogues and reports, with their walls hung with star maps and portraits of noted astronomers. Here and there on tables and window-seats lie magnifying glasses, frames for holding the plates, and other

necessary appliances; while ranged in the hallway and ante-chamber are numerous wooden boxes containing the brittle though perishable glass plates,—those indisputable records of the Draper Memorial work. In these very glass plates is seen one of the chief advantages derived from the application of photography to astronomy. For these plates

reproduce the condition of the same region of the sky at various periods, and hence may be referred to at any time to confirm any discovery. Should a bright star suddenly appear in the sky, its previous absence or comparative faintness could at once be proved from these incontrovertible records.

The work in which women take part at the Harvard Observatory may be divided into three classes.

1. Computing, based on the work of others. For twenty years some women have always been included in the corps of Harvard computers.

2. Original deductions (not necessarily star-work). Work of this kind has been carried on chiefly by special students of the Harvard Annex. In this class of work must be named a longitude campaign—probably the only longitude campaign ever conducted wholly by women, whereby Miss Byrd and Miss Whitney determined the precise difference in longitude between the Smith College and



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