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Searches for and properties of the sources of cosmic reionization

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I will present an update and overview on searches for sources of cosmic reionization and their analogs at lower redshift from numerous recent observational efforts with the HST and large ground-based telescopes. Recent breakthroughs have allowed us to find fairly strong Lyman continuum emitters (with escape fractions ~5-40%), and to significantly increase the number of such confirmed sources. We discuss the physical properties of these sources and the physical mechanisms allowing the escape of ionizing radiation. The new results also allow us to define several new indirect diagnostics (using e.g. Lyman-alpha, UV absorption lines, rest-optical emission lines), which can be used up to the highest redshift and which will be crucial to identify and study these sources with upcoming facilities and instruments, such as the JWST and the ELTs.

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