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Optical follow-up of fast radio bursts[1]

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Fast radio bursts (FRBs) remain one of the most puzzling classes of transient phenomena in modern astrophysics. While FRBs are observed with incredibly high radio flux densities, no transient emission at other wavelengths has yet been associated with an extragalactic FRB. There have been hints, such as from the recent galactic magnetar flare, that FRBs may also be accompanied by multiwavelength emission, particularly at X-ray wavelengths, and transient optical emission has been proposed by some theorists. While multiwavelength transient emission of FRBs remains unknown, optical observations of FRB host galaxies have provided a wealth of information about the FRB population. In this talk I will summarize the state of optical observations of FRB, both searches for transient emission, and deep optical observations of FRB hosts. I will also discuss what comes next, and how the next generation of optical facilities can provide valuable information about the emission mechanisms and progenitors of FRBs.

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