Coronal jets are transient flux bursts of magnetically channeled solar material from the surface into the corona. They are bright at their base, with a bright point (jet bright spine) at an edge of the base. Early studies of Shibata et al. (1992) report that jets result from magnetic flux emergence: a small bipole erupts into an ambient magnetic field, driving the jet and forming the IIP via interchange reconnection. More recent studies, using higher cadence, higher-resolution, and broader wavelength coverage than before, show that prominent coronal jets are usually driven by a minifilament eruption (Sterling et al., 2015), and that, rather than flux emergence, flux cancelation usually progresses and triggers the eruption (Panesar et al., 2016). Here, we analyzed eight emerging flux regions to determine whether the emerging flux directly drove any coronal jets. We used EUV images from the Solar Dynamics Observatory (SDO)/Atmospheric Imaging Assembly (AIA) (EAH 200, 193, 211, and 193 Å channels), magnetograms from the SDO/Heliospheric & Magnetic Imager (HMI), and images from SolarSoft routines. We then made movies at two- and three-minute cadences for AIA and HMI respectively. To better see the jet spine, we made reversed color images and we made animated images by adding two adjacent images. We also made smoothed HMI magnetograms in the same way to enhance weak magnetic-field regions. We used AIA 211 Å data to make time-distance plots of the base of the emerging bipolar. These plots show the growth of the emerging bipole. We also made flux plots using this HMI data. We carefully checked each HMI frame to make sure no flux crossed the chosen boundaries. The mini-filament flux strength of the magnetic field over time, which allowed us to determine over what period of time flux was emerging and at what rate. Approximate jet speeds are the Plane-of-sky speed taken along the jet spine in saturated AIA 193 Å images (some exceptions are noted in Table 1).

We first identified emerging flux regions using HMI line-of-sight magnetograms. We then searched for faint jets in AIA EUV images. We removed solar rotation and co-aligned the data sets using SolarSoft routines. We then made movies at two- and three-minute cadences for AIA and HMI respectively. To better see the jet spine, we made reversed color images and we made animated images by adding two adjacent images. We also made smoothed HMI magnetograms in the same way to enhance weak magnetic-field regions. We used AIA 211 Å data to make time-distance plots of the base of the emerging bipolar. These plots show the growth of the emerging bipole. We also made flux plots using this HMI data. We carefully checked each HMI frame to make sure no flux crossed the chosen boundaries. The mini-filament flux strength of the magnetic field over time, which allowed us to determine over what period of time flux was emerging and at what rate. Approximate jet speeds are the Plane-of-sky speed taken along the jet spine in saturated AIA 193 Å images (some exceptions are noted in Table 1).

We studied eight emerging flux regions, which produced a total of 25 faint coronal jets. These jets are significantly dimmer than the typical coronal jet, and would likely not have been noticed had we not deliberately searched for them in emerging flux regions. The jets in 7 of these events were all clearly made by the flux-cancelation mechanism. We found the event with the fastest flux emergence may have produced one of these events. The average duration of the faint jet is 10 minutes, which is comparable to the average duration of X-ray jets studied by Panesar et al. (2018), although the average duration of the faint jets which may have been driven by flux-emergence is only 3 minutes. The average speed of the faint jets is 22 km s⁻¹.

## Results

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