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Io sodium jets observed by the TRAPPIST telescopes

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Io is one of the most active bodies of the solar system, with an intense volcanism powered by tidal forces. Directly or indirectly, the outgassing from the volcances is the source of particles populating both the tenuous and patchy atmosphere of Io and the magnetosphere of Jupiter. We report here on the observations of Io with a narrow-band NaI filter on the TRAPPIST-south telescope (ESO La Silla, Chile) during 15 nights between December 4, 2014 and March 31, 2015. The images are strongly contaminated by Jupiter in the field of view. However, we developed and tested several image processing techniques to remove the background and reveil spectacular sodium jets. We detected these jets on 6 nights out of 15. We will discuss the main properties of these jets, such as their length, which can be up to 7 Jovian radii long.