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Improved sky subtraction for galaxy kinematics: application to Magellan spectroscopy of NGC 7727 NOAH PINKNEY, JASON PINKNEY, Ohio Northern University — The Earth's atmosphere contributes light to galaxy spectra taken from the ground and this contamination can corrupt measurements of absorption line strengths and stellar velocity dispersions. We develop a method of scaling a non-contemporary sky exposure for use with galaxy spectra for which the galaxy light fills the entire slit. The method relies on the comparison of the spectral light profile (SLP) with a light profile taken from an independent, sky-subtracted image (ILP). The method is applied to longslit spectra of NGC 7727 (Arp 222) taken with the Magellan I (Baade) 6.5-m telescope. We demonstrate the improvement of stellar kinematical measurements with the new method. NGC 7727 is particularly interesting because it is undergoing a merger and our slit crosses the remnant of the secondary nucleus.

Jason Pinkney
Ohio Northern University

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