Emission-Line Diagnostics for Galaxies

Lisa J. Kewley 1,2

1 RSAA, Australian National University, Cotter Road, Weston Creek, ACT 2611, Australia
2 Institute for Astronomy, University of Hawaii, 2680 Woodlawn Drive, Honolulu, HI, USA
email: kewley@msoc.anu.edu.au

Abstract. I will give an overview of the emission-line diagnostics used for star-forming galaxies. I will review the UV, optical, and IR diagnostics that can be used to yield information about the ISM conditions, star-formation properties, and power sources in GRB hosts, both globally, and with spatially-resolved data. I will discuss wide integral field spectroscopy and AO-led integral field spectroscopy on current and future telescopes, focusing on the insights to be gained on the properties of GRB sites.