M33 Galaxy

This image of Messier 33 was obtained with the mosaic CCDs of the Wide Field Camera at the INT telescope. The authors are L. Magrini and M. Perinotto (University of Florence, Italy), R. Corradi (ING), and A. Mampaso (IAC). The image is a composition of frames taken in three narrow bands: the green colour represents the galaxian emission in a filter centred on the [OIII] nebular line at 500.7 nm, red is the Hα hydrogen emission at 656.3 nm, while blue is mainly stellar light taken through a continuum filter centred at 555.0 nm (Stromgren Y). In only one observing night, and with two positionings of the telescope, it was possible to cover the whole galaxy which has a size of approximately one degree in the sky.

The main scientific goal of these observations was to search for planetary nebulae in this nearby galaxy. They are recognised as emission-line objects with generally intense [OIII] and Hα lines, negligible continuum emission, and a point-like appearance (1 arcsec corresponds to about 4 pc at the distance of M33). 134 newly discovered planetary nebulae were selected, but these observations also contain a large amount of information about other ionised nebulae, such as HII regions, supernova remnants, Be stars, symbiotic binaries, Wolf-Rayet stars, LBVs, etc. Their excitation status can be estimated by using the ratio between the [OIII] and Hα emission. Results concerning the search for planetary nebulae are in press on the *Astronomy and Astrophysics Journal* (Magrini et al., 2000).

Romano Corradi (rcorradi@ing.iac.es)