

The high-quality spectra of the latest spectroscopic surveys contain versatile information about the physical properties of the captured galaxies, such as stellar mass, metallicity, current star-formation rate and star-formation history (SFH). Combining simple stellar population spectra with full-spectral fitting algorithms makes it possible to produce spatially resolved maps of reddening, extinction, metallicity and ages of the young and old stellar population. This approach is complementary to classical strong emission line techniques in HII regions.

We apply our fitting procedure to selected targets in the TYPHOON survey containing spatially resolved spectra of local, large-angular sized galaxies with complete spatial coverage from 3650–9000Å.

Galactic discs of typical star-forming galaxies are covered around a resolution of ~ 100 pc, which is coarser than the flag ship surveys MUSE and PHANGS-MUSE, but the extended wavelength range in the blue part of the spectra together with larger areal coverage compensate more than enough for this.

A first pilot-study examined the Fornax barred spiral NGC 1365. A clear indication of inside-out growth of the outer stellar disk in terms of ages and metallicity is visible but also a surprisingly low metallicity of the young stellar population of the inner star-forming ring in the center. For the galaxy M83 (NGC 5236), the unique opportunity arises to compare our stellar population synthesis results with stellar probes of blue supergiant stars, young massive clusters and super-star clusters.