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Physical properties of circumnuclear ionising clusters.

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Abstract

Nuclear rings are generally formed when gas is accumulated in orbital resonances, due to a non-axisymmetric gravitational potential related to a barred structure. However, NGC 7742 does not exhibit this latter feature, thus being an ideal candidate for a minor merger event. In this work, we analyze 89 HII regions of the nuclear ring, from MUSE integral-field spectroscopy data. We have studied their metal content using sulfur as tracer in order to find patterns in chemical composition. From R-I colors and H beta equivalent width values and using PopStar models, we estimate ages and percentages of red super giant stars. In addition, we have measured calcium triplet (CaT) equivalent widths and we can estimate the luminosity class of the stars in these clumps producing this feature. Finally, we expect to test if this is compatible with the idea of all regions having formed at the same time and if a minor merger event is consistent with observations.

My poster is available at https://zenodo.org/record/7043323#.Y1pXWexBxJU