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Can diffuse haloes and thick discs be explained by scattered light?

Poster Abstract: Studies of halos and thick discs around galaxies declare, with few exceptions, that their results are unaffected by diffuse scattered light. My scrutiny of the diffuse scattered light around galaxies shows, unexpectedly, that also its faintest components contribute to extended structures of integrated light (Sandin 2014, A&A, 567, A97). Additionally, observed structures can vary a lot, because the scattered light profile changes with time and observing conditions. I will demonstrate that scattered light can play a dominating role in explaining existing photometric observations of diffuse thick discs and halos; I consider edge-on and face-on disc galaxies, elliptical galaxies, and also hosts around blue compact galaxies. My research suggests that many diffuse halos and thick discs are scattered light. Only after the scattered-light component is correctly removed can we study the real structure.