Mapping the Diffuse Interstellar Bands towards the Coalsack Nebula: A Theoretical Framework for SALT HRS Observations

A, n, a, t, h, i, D, l, a, m, i, n, i, ,, P, i, e, t, e, r, v, a, n, d, e, r, M, e, r, w, e, ,, L, i, n, d, i, w, e, P, r, e, t, o, r, i, u, s, ,, T, h, a, n, d, i, w, e, N, k, o, s, i

DOI: https://doi.org/10.5281/zenodo.18565296

Abstract

This study addresses a current research gap in Physics concerning Mapping the distribution of diffuse interstellar bands (DIBs) toward the Coalsack Nebula using high-resolution spectra from the SALT High Resolution Spectrograph (HRS) in South Africa. The objective is to clarify key debates, identify practical implications, and outline a focused agenda for scholarship and policy. A qualitative approach was used, drawing on recent literature and policy sources to frame the analysis. This abstract is primarily indicative, outlining the scope and conceptual framing rather than reporting empirical results. The paper argues for context-specific approaches and stronger empirical foundations in future research. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Mapping the distribution of diffuse interstellar bands (DIBs) toward the Coalsack Nebula using high-resolution spectra from the SALT High Resolution Spectrograph (HRS), South Africa, Africa, Physics, theoretical This structured abstract provides a standardised summary to support rapid screening, indexing, and assessment of scholarly contribution.