

Measurements of oxygen abundances in HII regions in star-forming dwarf and spiral galaxies show a high degree of regularity as a function of radius. This argues strongly against in situ pollution and is best understood as the newly synthesized oxygen being released into the hot phase of the ISM where it is well mixed before cooling sufficiently to be observed. This mixing over long time scales underlies the very small dispersion seen in the mass-metallicity relationships for dwarf and spiral galaxies.