The proposed method for underwater image enhancement integrates the impulse response of a Low-Pass Filter (LPF) with the raw image inside each convolutional block. A key innovation is the incorporation of the **SimAM** (a non-parametric, energy-based attention mechanism that generates 3D weights to identify significant neurons) into each block. Unlike conventional attention modules, **SimAM** avoids the need for an additional subnetwork, thereby reducing computational complexity while providing powerful feature extraction and improving generalization on limited datasets. This approach differs from the baseline Shallow-UWnet model primarily in the number of features used in the final layer of each block (58 vs. 61). This research matters because it offers a computationally efficient method to improve the clarity of underwater images, which is crucial for applications like marine robotics and oceanic research.