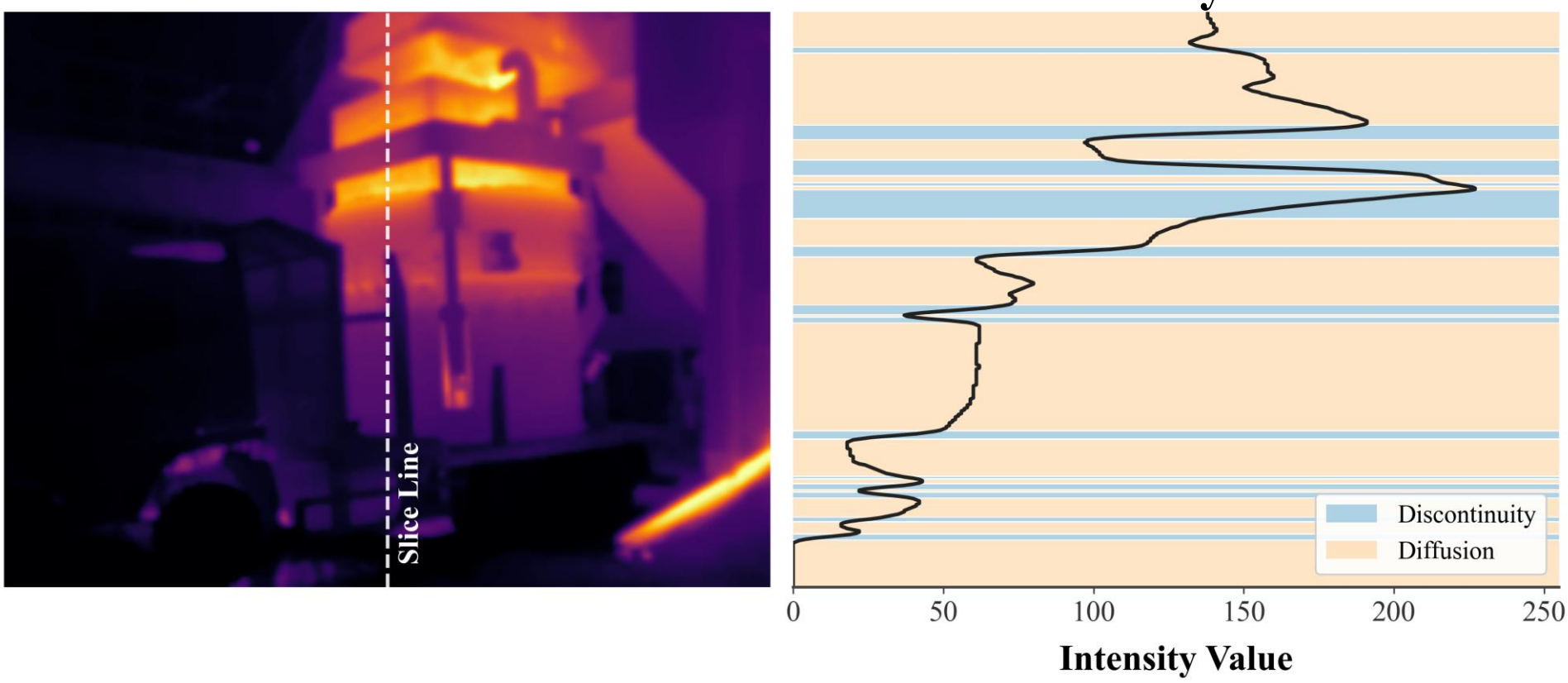
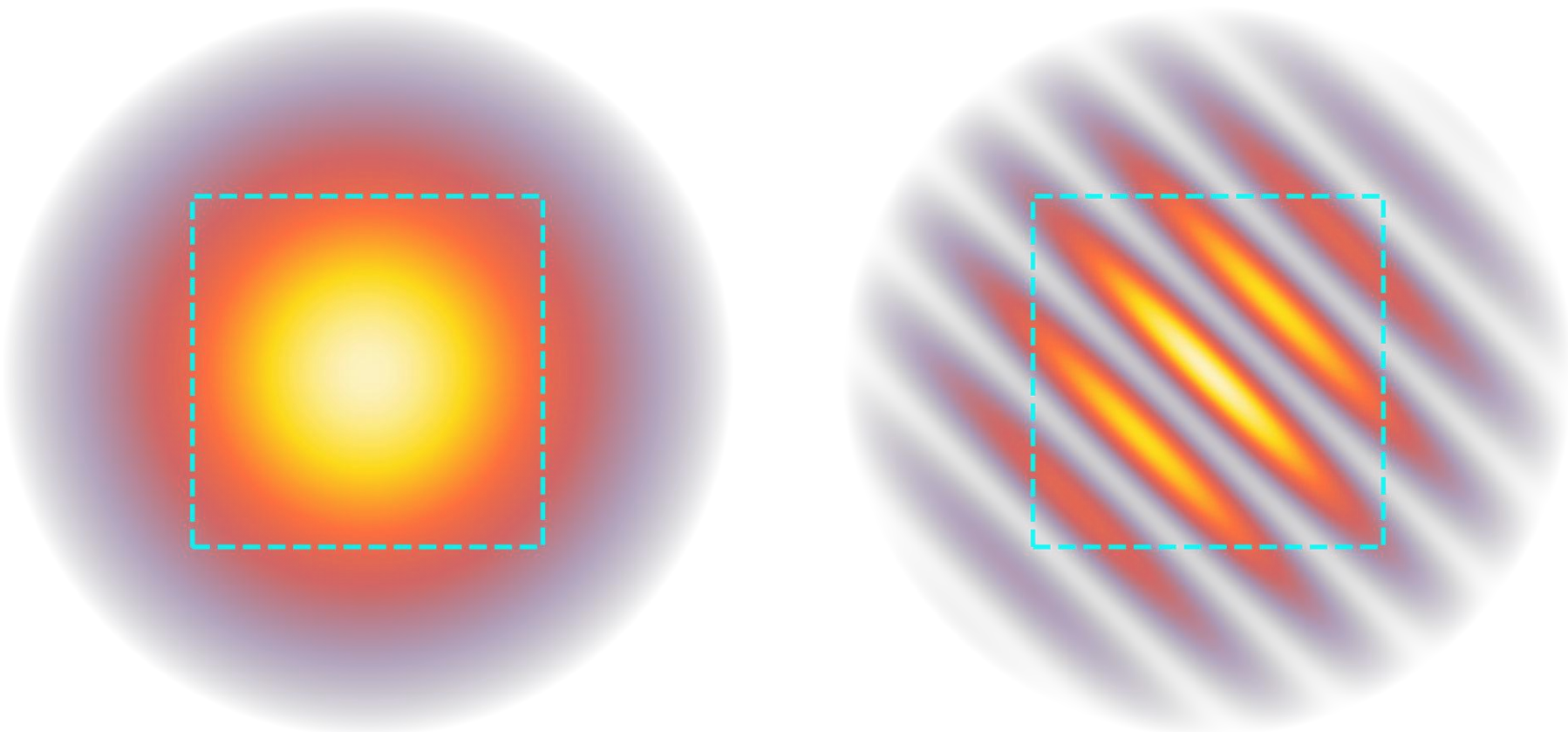


(a) Physical Duality of Thermal Radiance



Standard 3DGS
Over-smoothed
No Texture

Frequency-Aware Methods
Signal Leakage
Rich Texture

Shape-Aware Methods
Sharp Boundary
Missing Internal Texture

Ours (S^3-TIR)
Fits Boundary
Preserves Texture

(b) Evolution of Spatial-Spectral Primitives