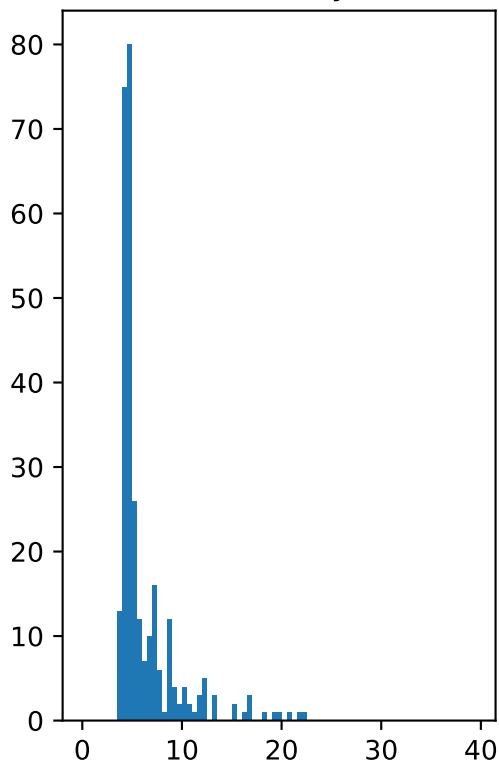Structural output TGA