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The Malitsky-Tam forward-reflected-backward splitting method for nonconvex problems

We extend the Malitsky-Tam forward-reflected-backward (FRB) splitting method to the full nonconvex setting. By assuming the generalized concave Kurdyka-Łojasiewicz (KL) property of a quadratic regularization of the objective, we show that the FRB method converges globally to a stationary point of the objective and enjoys finite length property. The sharpness of our approach is guaranteed by virtue of the generalized concave KL property.