The existence of Aubry–Mather sets and infinitely many subharmonic solutions to the following $p$-Laplacian like nonlinear equation

$$(p - 1)^{-1}(\phi_p(x'))' + [\alpha \phi_p(x^+) - \beta \phi_p(x^-)] + g(x) = h(t)$$

is discussed, where $\phi_p(u) = |u|^{p-2}u$, $p > 1$, $\alpha, \beta$ are positive constants satisfying

$$\alpha^{-\frac{1}{p}} + \beta^{-\frac{1}{p}} = \frac{2}{n} \text{ with } n \in \mathbb{N}, \text{ } h \text{ is piece-wise two times differentiable and } 2\pi_p, \text{ periodic, } g \in C^1(\mathbb{R}) \text{ is bounded}, \text{ } x^\pm = \max\{\pm x, 0\}, \text{ } \pi_p = \frac{2\pi}{p \sin(\pi/p)}.$$