

We consider the scattering problem of the local perturbation of an open periodic waveguide in the half plane. Recently in [Kirsch and Lechleiter 2018], a new radiation condition was introduced in order to solve the unperturbed case of this problem. In this talk, under the same radiation condition with [Kirsch and Lechleiter 2018], we show the well-posedness of the perturbed scattering problem.