1160-13-58 **Shinya Kumashiro*** (`shinyakumashiro@gmail.com`), Chiba University, Yayoi-cho 1-33, Inage-ku, Chiba 263-8522, Japan. *The Auslander-Reiten conjecture for certain non-Gorenstein Cohen-Macaulay rings.* Preliminary report.

The Auslander-Reiten conjecture is one of the notorious conjectures about the vanishing. It is stated that, for a Noetherian ring R and a finitely generated R-module M, $\mathrm{Ext}_R^{>0}(M, M \oplus R) = 0$ implies that M is projective. In this talk we assume that R is commutative. Then the following fact is fundamental: "Let R be a commutative Noetherian local ring and Q an ideal of R generated by a regular sequence. Then the Auslander-Reiten conjecture holds for R if and only if it holds for R/Q"

The fact immediately follows that the conjecture holds for complete intersections. Furthermore it is known that the conjecture holds for several classes of rings, say Gorenstein normal domain, Cohen-Macaulay normal domain $\mathbb{Q}$-algebras, Golod rings, and so on.

Motivated by these results, we explore the Auslander-Reiten conjecture for R/Q^ℓ in connection with that for R, where $\ell > 0$. It is one of the natural questions that arise from the above fact. On the other hand, R/Q^ℓ is neither a Gorenstein ring nor a domain if $\ell > 1$. Therefore, the affirmative answer of the problem provides a new class of rings which satisfy the Auslander-Reiten conjecture. In this talk we give a partial affirmative answer to the question. (Received August 02, 2020)