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**Photonuclear reactions studied with the time-dependent density-functional theory**

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Photonuclear reaction cross sections are known to be of fundamental importance in nuclear structure as well as a variety of applications, such as nucleosynthesis and nuclear power. Especially, it is highly desired to improve reliability of E1 strength distribution in unstable nuclei which are not experimentally reachable. We are performing systematic calculations of nuclear photoabsorption cross sections using the time-dependent density-functional theory. For this purpose, we have developed a new numerical approach to the linear response problems, “Finite Amplitude Method” (FAM). In this talk, we present recent results of our microscopic calculations with the FAM applied to the Skyrme functionals and discuss properties of nuclear E1 strength distribution in light- and medium-mass nuclei.