Effect of relaxation and radiation transport on the structure of electro-magnetically driven strong shock waves\textsuperscript{1} KOTARO KONDO, MIT-SUO NAKAJIMA, TOHRI KAWAMURA, KAZUHIKO HORIOKA, Tokyo Institute of Technology, DEPARTMENT OF ENERGY SCIENCES TEAM — Strong shocks appear in many astrophysical phenomena, such as supernova remnants. Ion-electron relaxation process and radiative transport affect the structure of strong shock waves. Study on these phenomena should contribute to get the well understanding of astrophysical phenomena. We investigate electro-magnetically driven shock in the laboratory experiments. The pulse power device with tapered electrodes can generates a quasi steady and 1-D shock \textsuperscript{[1]}, which enables to analyze ion-electron relaxation and radiation processes. The shock Mach number can be up to 250, which correspond to 45 km/s. We will discuss the structure of electro-magnetically driven shock, especially ion-electron relaxation process accompanied with radiation transport, based on experimental results.

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