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Relation between A_{xx} and A_{yy} in pd radiative capture KENSHI SAGARA, TAKASHI KUDOH, Dept. of Physics, Kyushu University, YUJI TAMESHIGE, KICHIJI HATANAKA, RCNP, Osaka University, TAKANORI YAGITA, SEN Co. Ltd. — We have measured A_{xx} and A_{yy} of pd radiative capture at $E_d = 200$ MeV and 140 MeV. A vertically polarized d-beam was incident on a liquid hydrogen target, and ^3He recoils were detected in vertical and horizontal planes to measure A_{xx} and A_{yy} , respectively. Polarization of the d-beam was measured during the experiment using the maximum value of A_{yy} in the angular distribution of dp scattering. The polarimeter A_{yy} at 200 MeV was calibrate using $^{12}\text{C}(d, ^4\text{He})$ reaction at zero degree in a separate experiment. Measured A_{xx} and A_{yy} of pd radiative capture have nearly equal values at 200 and 140 MeV, also at 17.5 MeV in our previous experiment. The relation $A_{xx} \sim A_{yy}$ in pd capture is curious one because, so far as we know, all the reactions other than pd capture (and probably dd capture) have the relation $A_{xx} \sim -A_{yy}$. Calculated A_{xx} and A_{yy} of pd capture are nearly equal below 50 MeV, and become separate at higher energy. As a result, large difference between the calculation and experiment of A_{xx} is seen at 140-200 MeV. Recently A_{xx} and A_{yy} of pd capture have been measured. The relation $A_{xx} \sim A_{yy}$ seems to hold, however, the absolute values of A_{xx} and A_{yy} are different with ours.

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