1. Title:	Impact of 3-D Mask Effects on CD and Overlay over Image Field in Extreme Ultraviolet Lithography
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3. Abstract body:

Since extreme ultraviolet lithography (EUVL) is using reflective masks, a non-telecentric off-axis illumination is required. This type of illumination in combination with topography of the mask-absorber stack causes shadowing effects, resulting in CD variations and pattern placement errors. For current alpha tool projection optics designs the angle of incidence varies across the illumination slit. Therefore, CD as well as pattern position will depend on the position of the pattern within the slit. Additionally, these effects vary for horizontal and vertical pattern. The impact over the illumination slit is quantified by simulation for various absorber stack geometries. It is shown that a thinner absorber-stack composition reduces the feature shift as well as the CD variations. Since the alpha-demo tools are expected to have a relatively high flare level, further simulations were performed to quantify the impact of flare as well as the tolerable flare variations for different stack geometries.