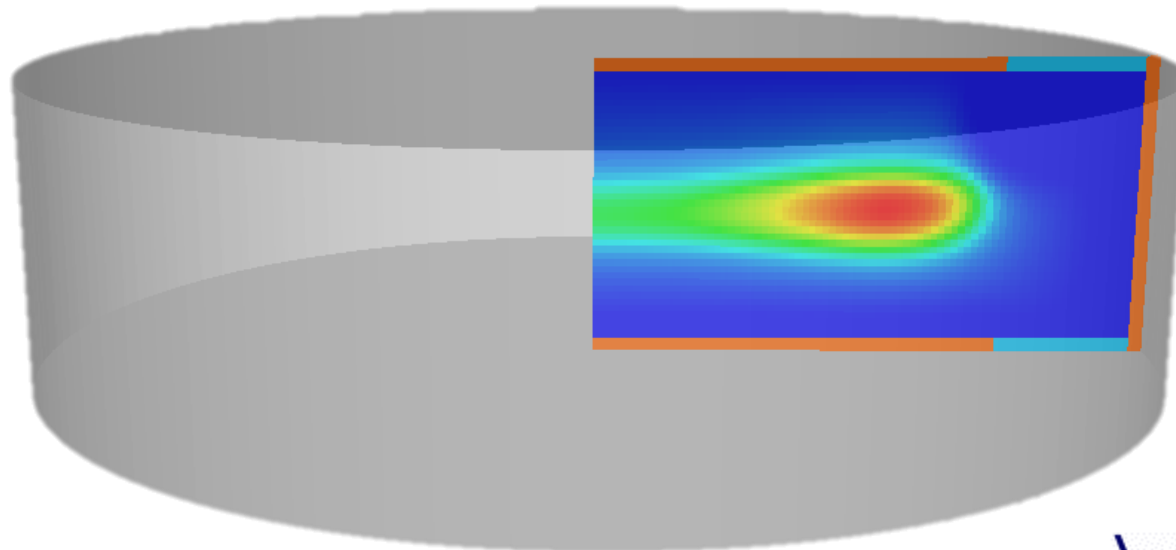


— CASE EXAMPLE —

# CCP Cleaning

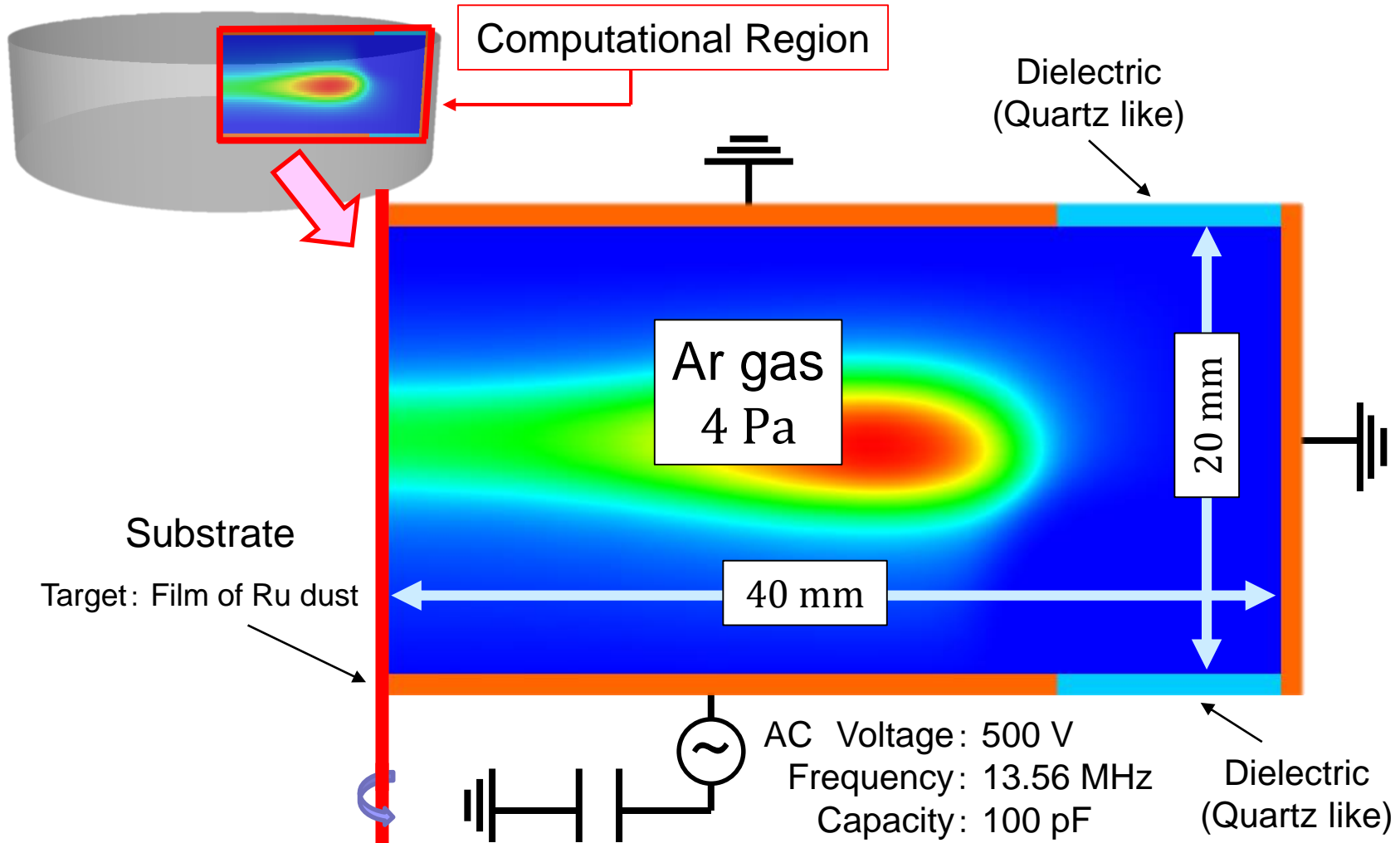
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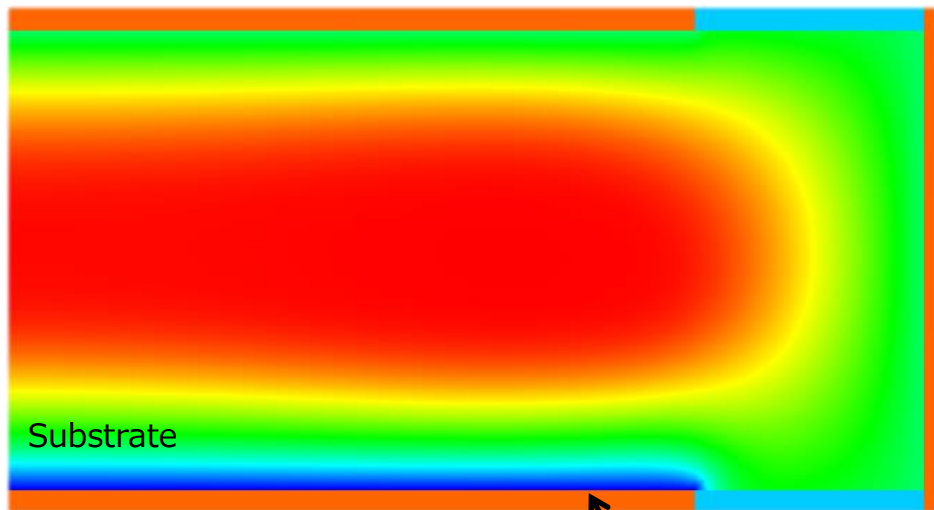
# Model

## Surface Cleaning by Ar Plasma

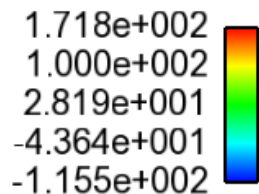
## Axi-symmetric model



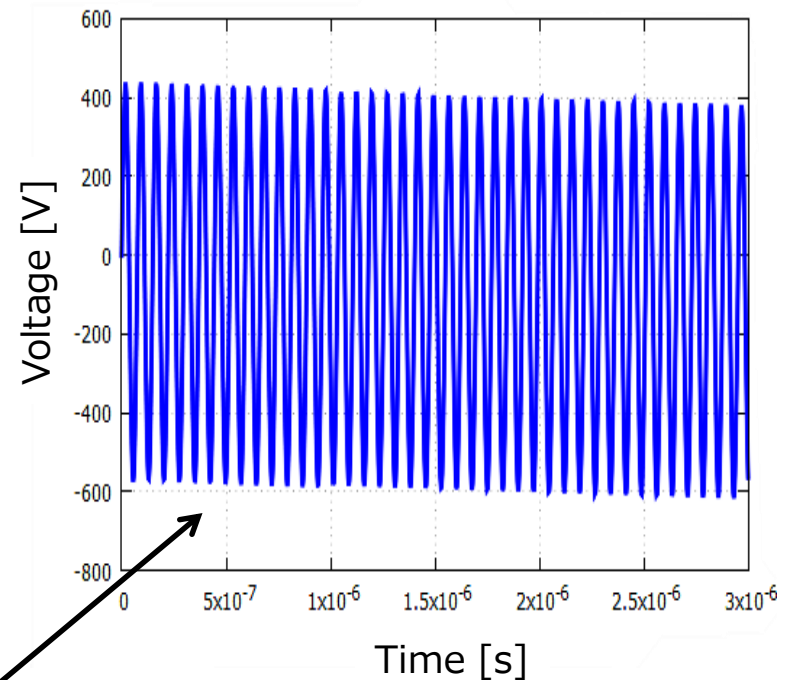
Voltage averaged over a period



ave\_electric\_potential [V]

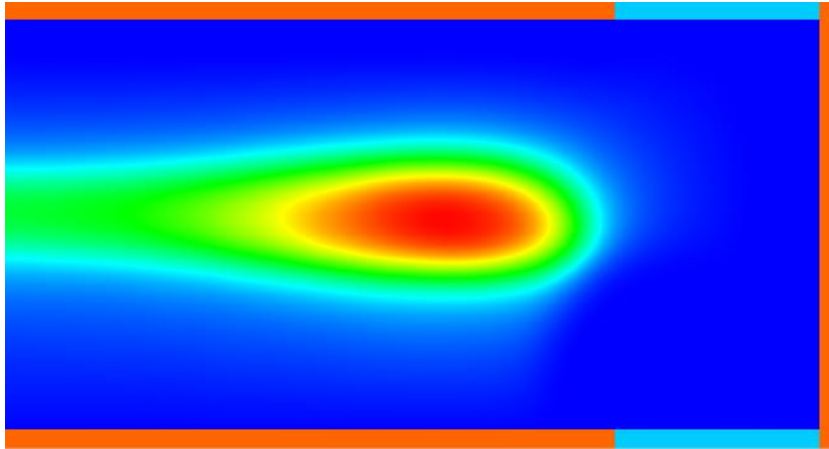


Voltage on substrate

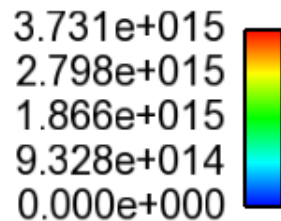


- ✓ Voltage on substrate has minus component of DC because of self-bias. (NOTE: Applied from power source is 500 V.)

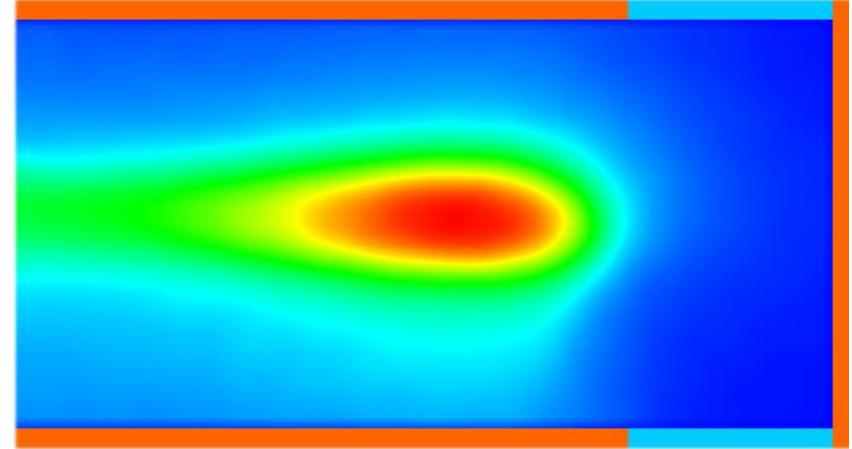
Electron Density  
averaged over a period



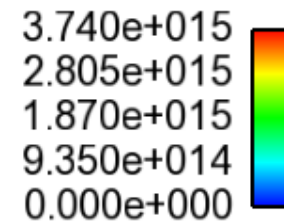
ave\_density\_ele [ /m<sup>3</sup> ]



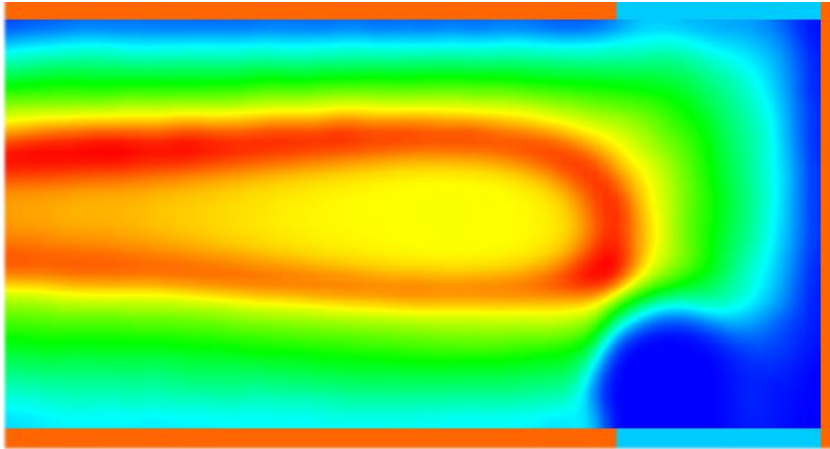
Ar Ion Density  
averaged over a period



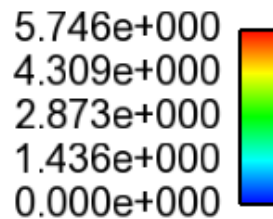
ave\_density\_Ar\_p [ /m<sup>3</sup> ]



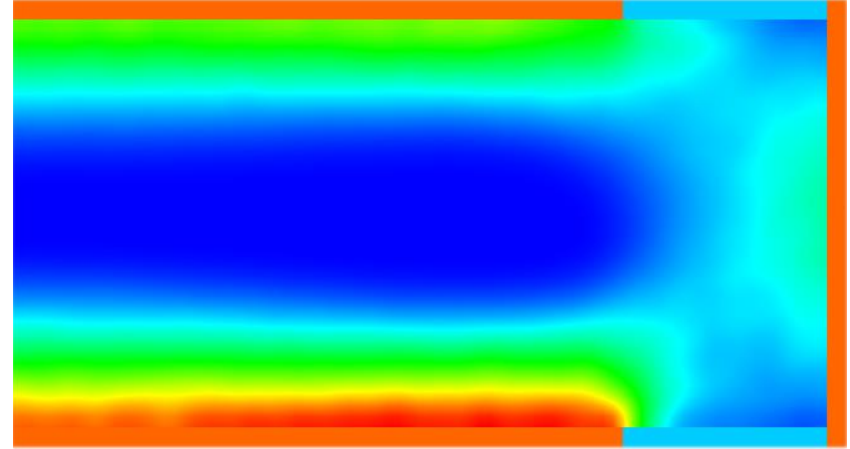
Electron Energy  
averaged over a period  
(per one particle)



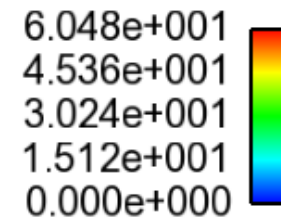
ave\_energy\_ele [eV]



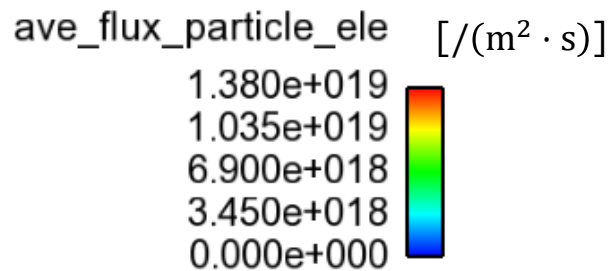
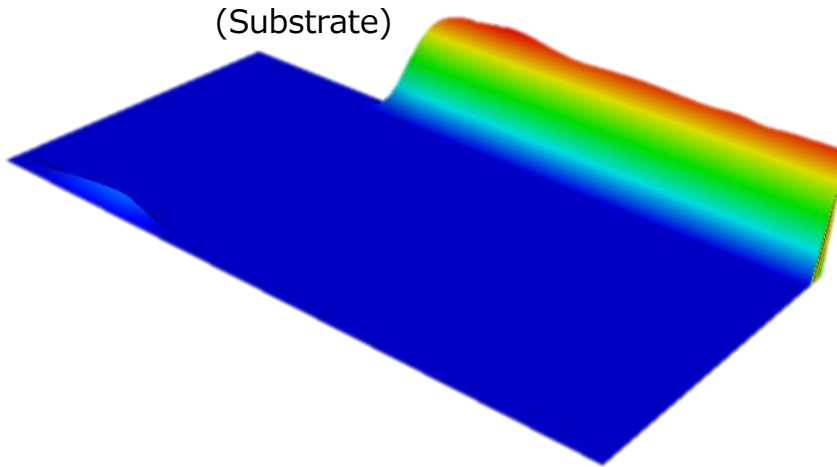
Ar Ion Energy  
averaged over a period  
(per one particle)



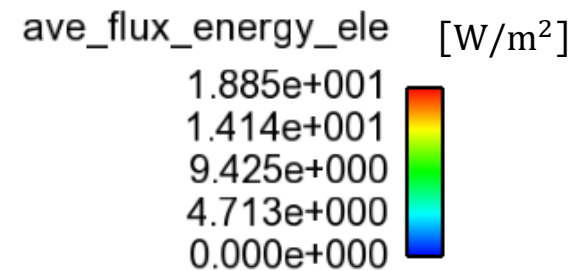
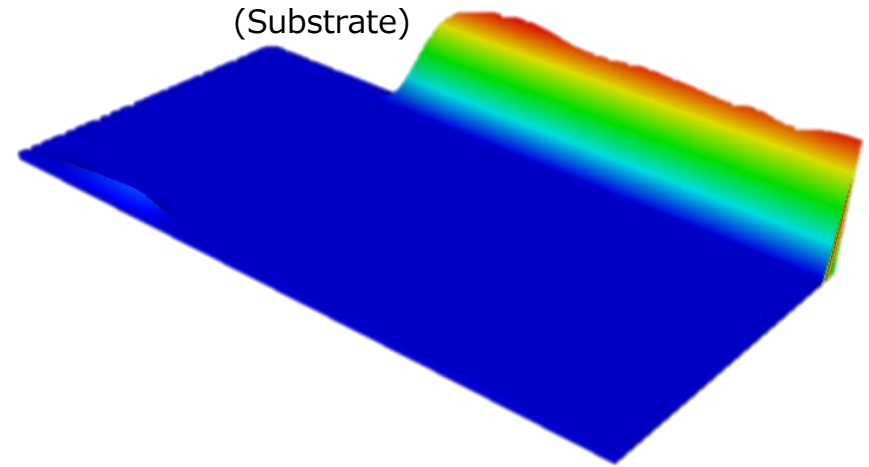
ave\_energy\_Ar\_p [eV]



Electron Particle Flux  
averaged over a period

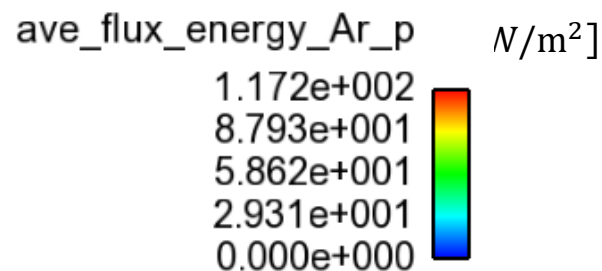
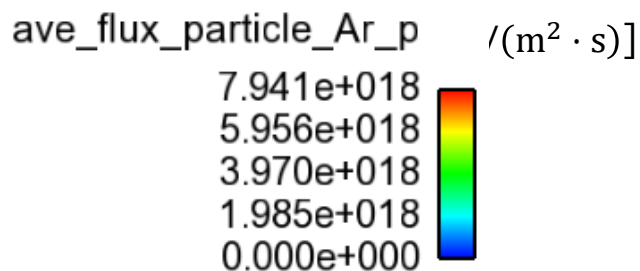
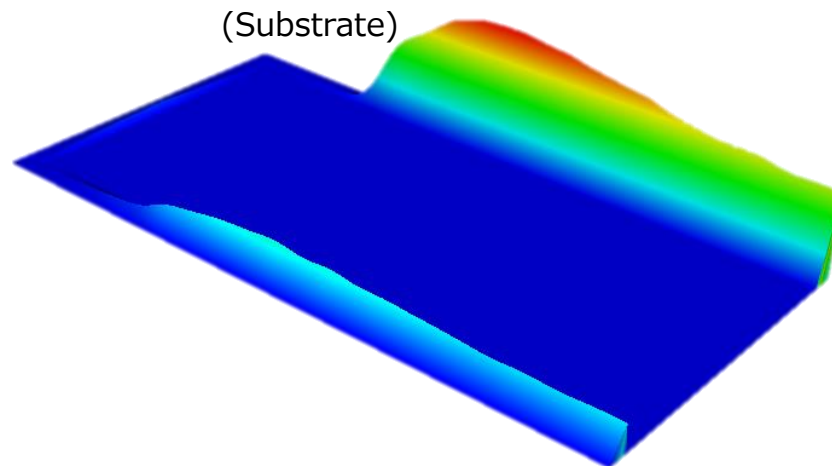
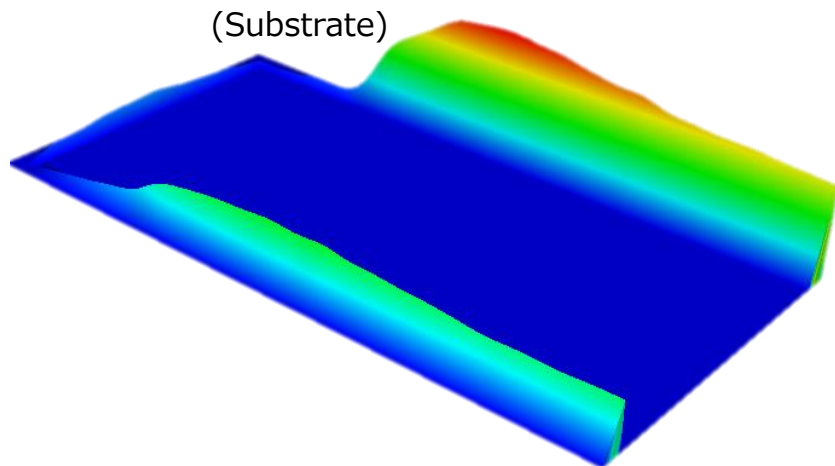


Electron Energy Flux  
averaged over a period

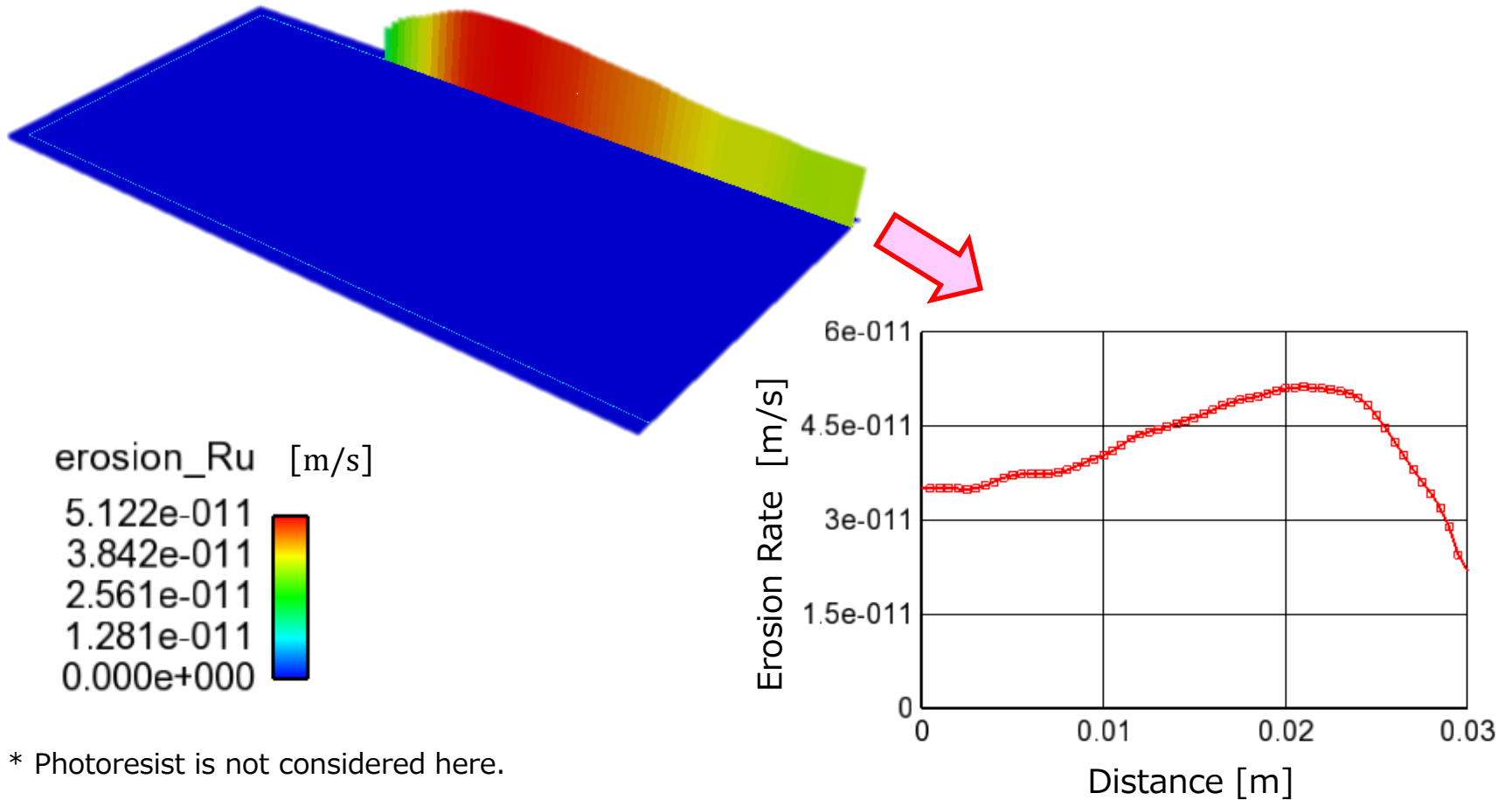


Ar Ion Particle Flux  
averaged over a period

Ar Ion Energy Flux  
averaged over a period



## Ru Erosion Rate



\* Photoresist is not considered here.