

# The 13th OpenFOAM Workshop (OFW13)

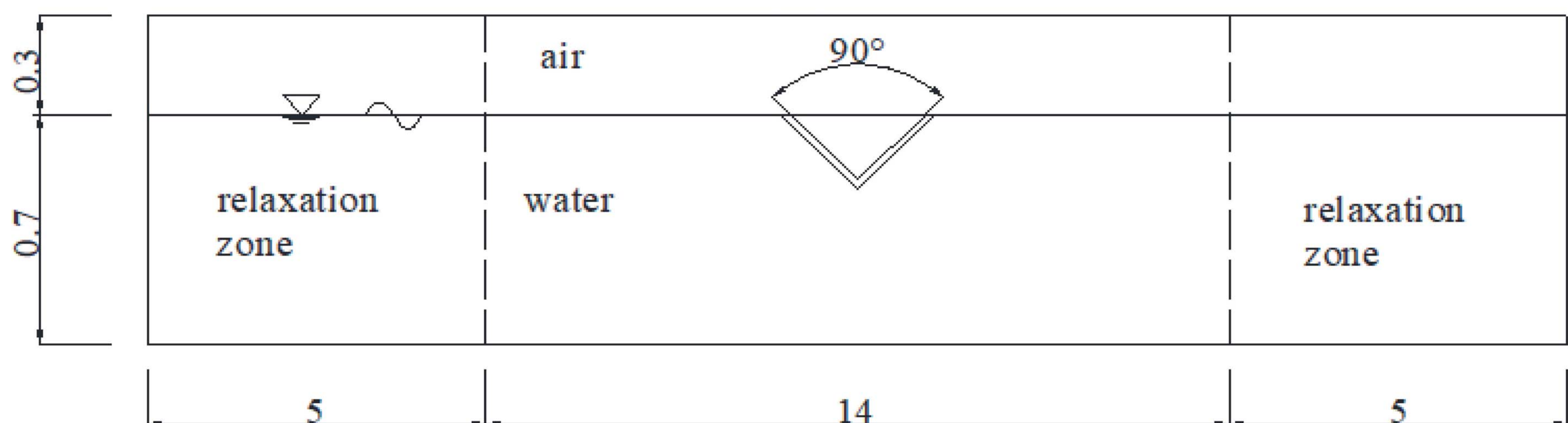
## Numerical investigation on the performance of a 'V' type breakwater

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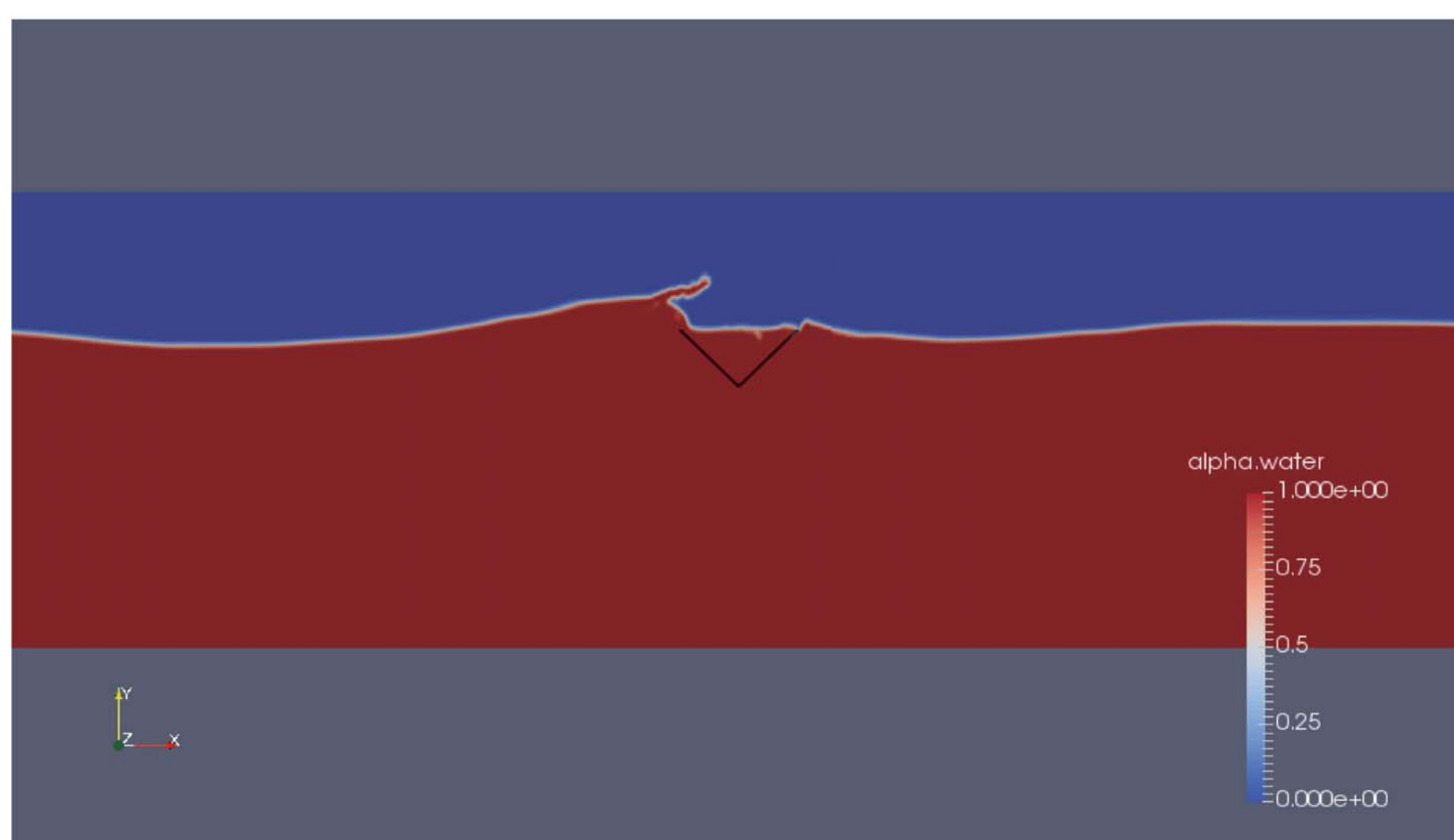
### Introduction

In this paper, the character of a 'V' type breakwater will be discussed. Using the VOF model in OpenFOAM, numerical simulation of regular waves through a 'V' type breakwater is carried out. In the present research, the performance of the breakwater is evaluated by measuring reflection and transmission coefficient.

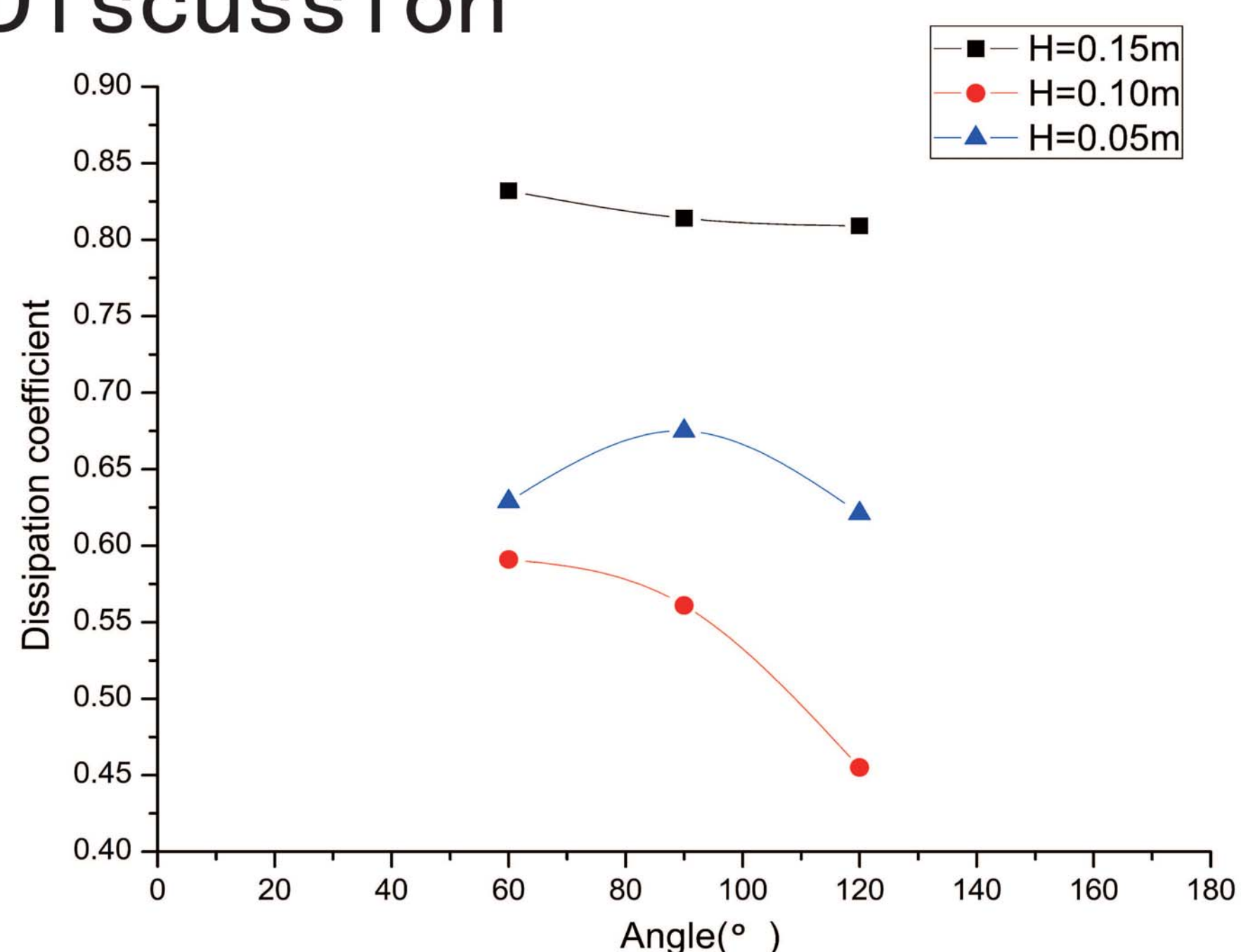


### Results

Three different angles are chosen in the study,  $60^\circ$ ,  $90^\circ$  and  $120^\circ$ . In the simulation, the bubbles are generated between the two plates, causing wave energy dissipation of wave energy.



### Discussion



The distance of two plates is shorter, namely the angle is smaller, the appearance of reverse jet is earlier and more frequent, so the dissipation coefficient is larger. With the increasing of angle, the dissipation coefficient decreases.