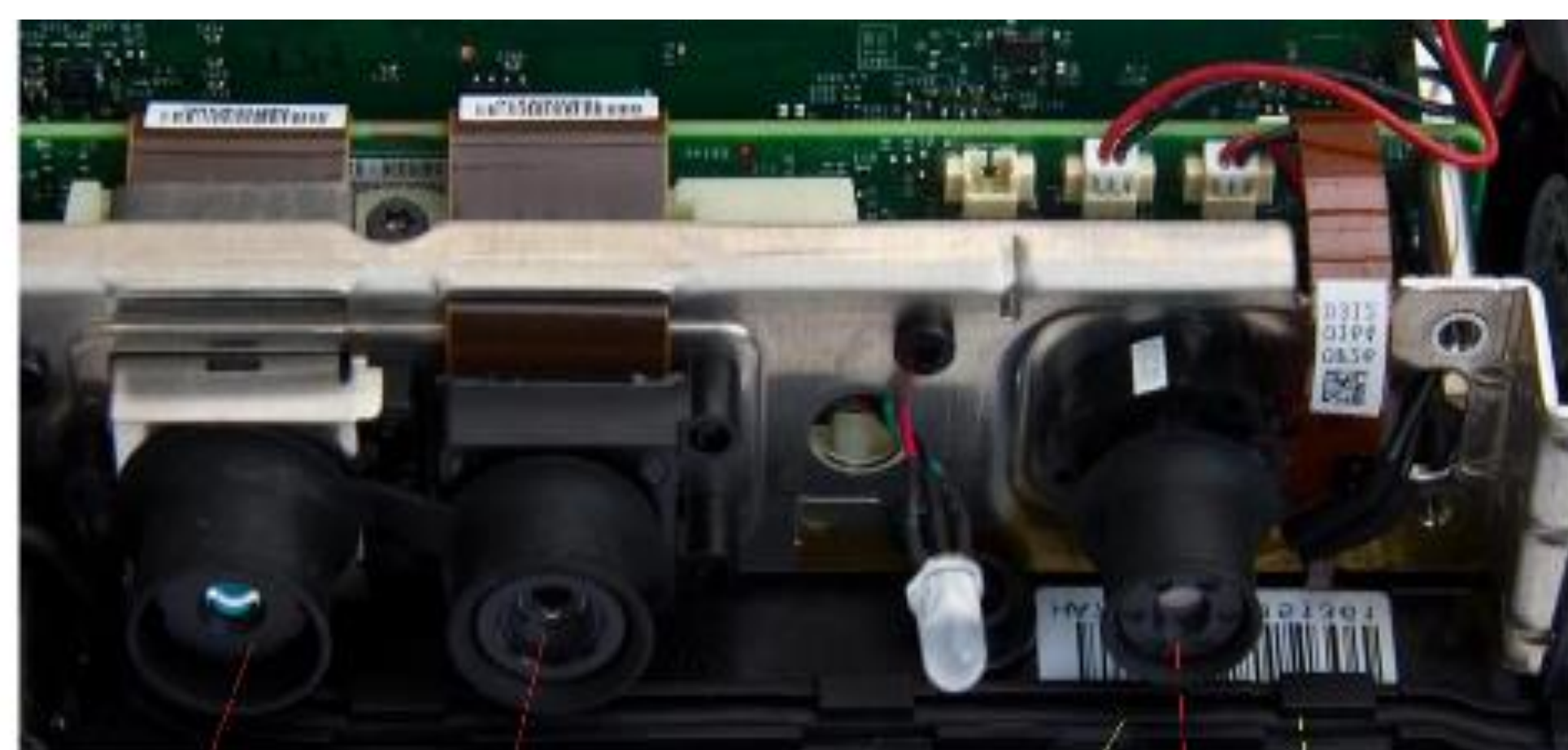
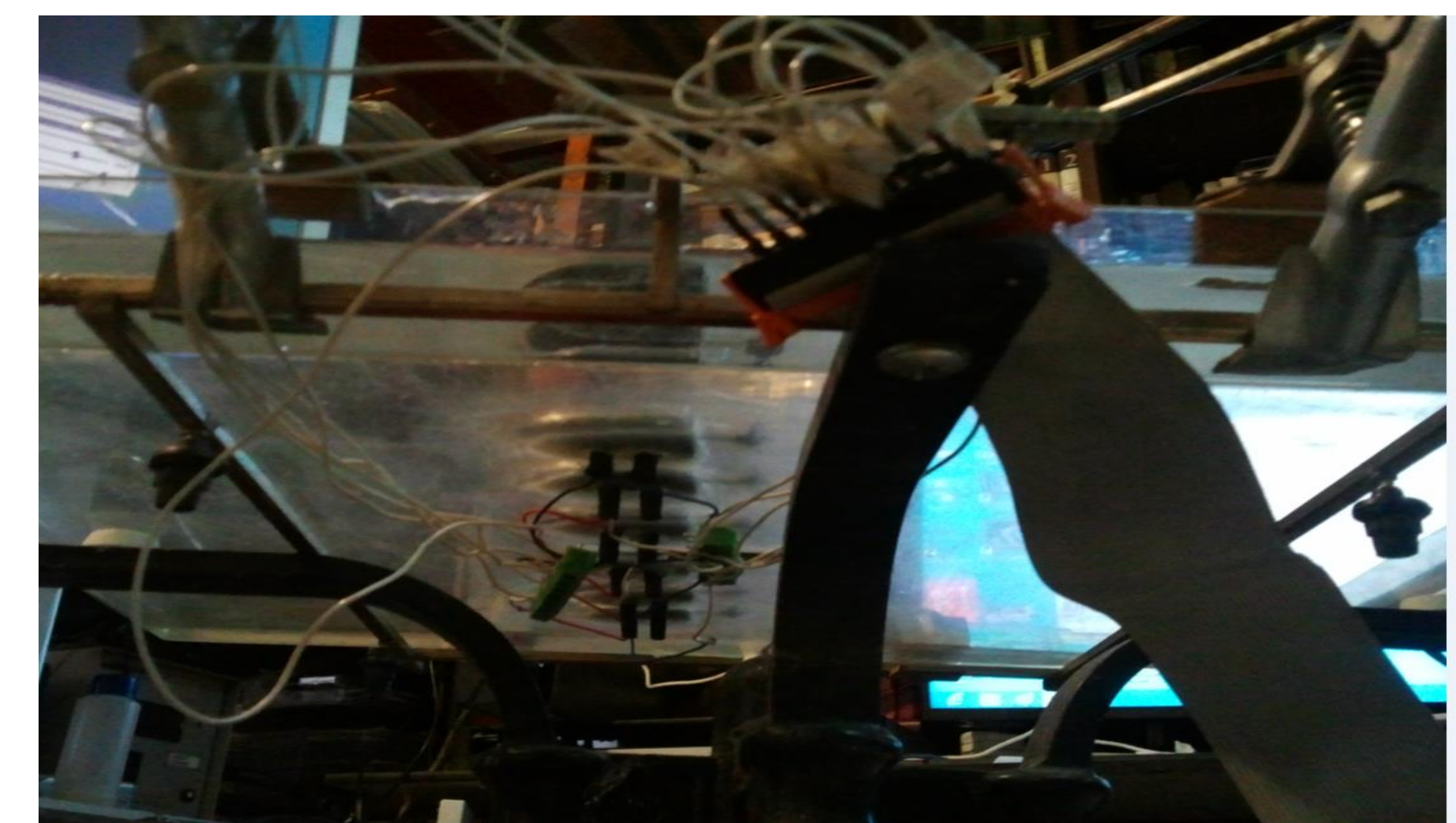
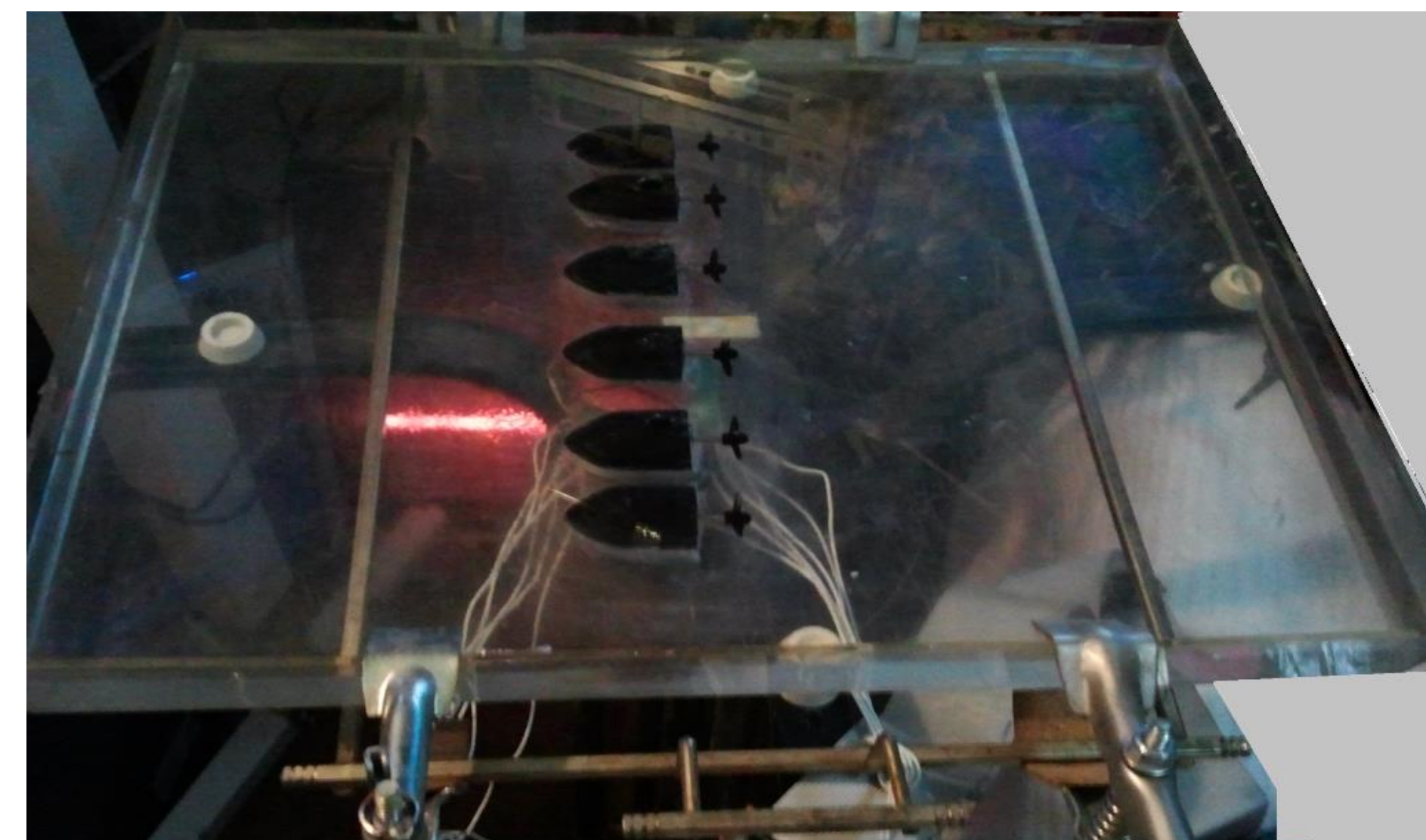


First model application of 3D infrared scanning on water surface (film covered) to understand sea-level fluctuations around sea vessels type propeller thrust and behavior of currents

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Introduction: Water is not a easy material for doing topographic experiments related to its own surface. Analog surface topo indicator faces with problem of water's cohesion reasoned climbs. Visible or nonvisible light user measurers can not detect reflection chaingings because their circuits has not fast enough about time clock sense related moving water surface. Thermal form correlation user photo geodesy works well with the standing solid surfaces and accelerated objects , its methodology enough fast about their video type continous 3D topo records. We are not using water topology data on scientific experiments , because Light permeable objects and water quickly disrupt of the projector's ultrared thermal reference dots before reflections. We changed the situation , now quick water topology observer experiments are possible with dark films or hydrophobic dust (without surface tension effects).

Materials and Methods



thermal camera
colour camera
Dot mapper projector

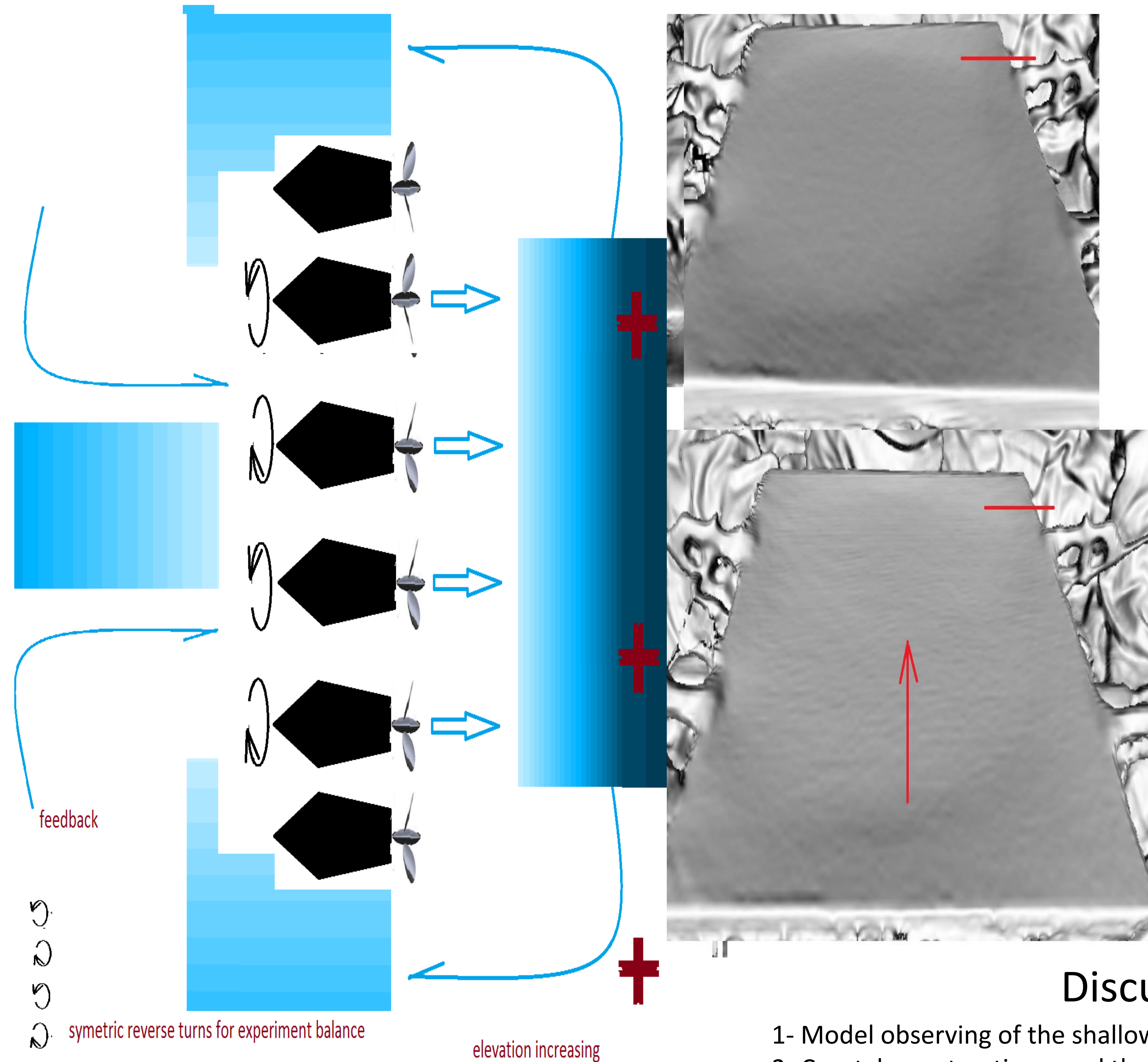


Fig 2 Maximum Water Current efficiency at close loop design (without pump feedback for less artificial unwanted effects) provided with reverse directional same thrust propeller and manual switching..

Infrared Reference dot pattern which map belong to that pattern complex it provide geodesy information of the system

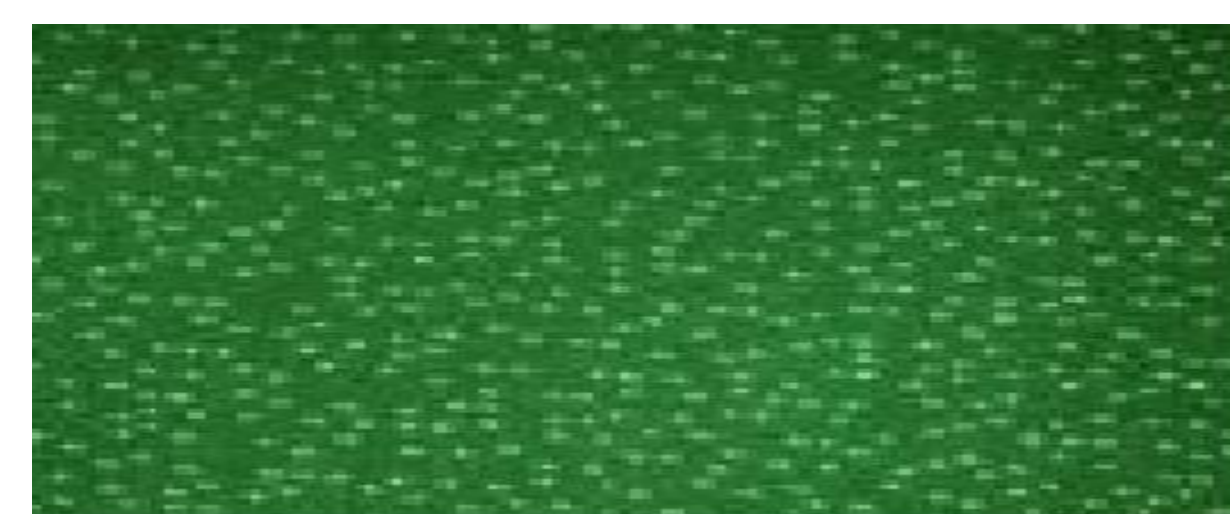


Fig 4 dot reference

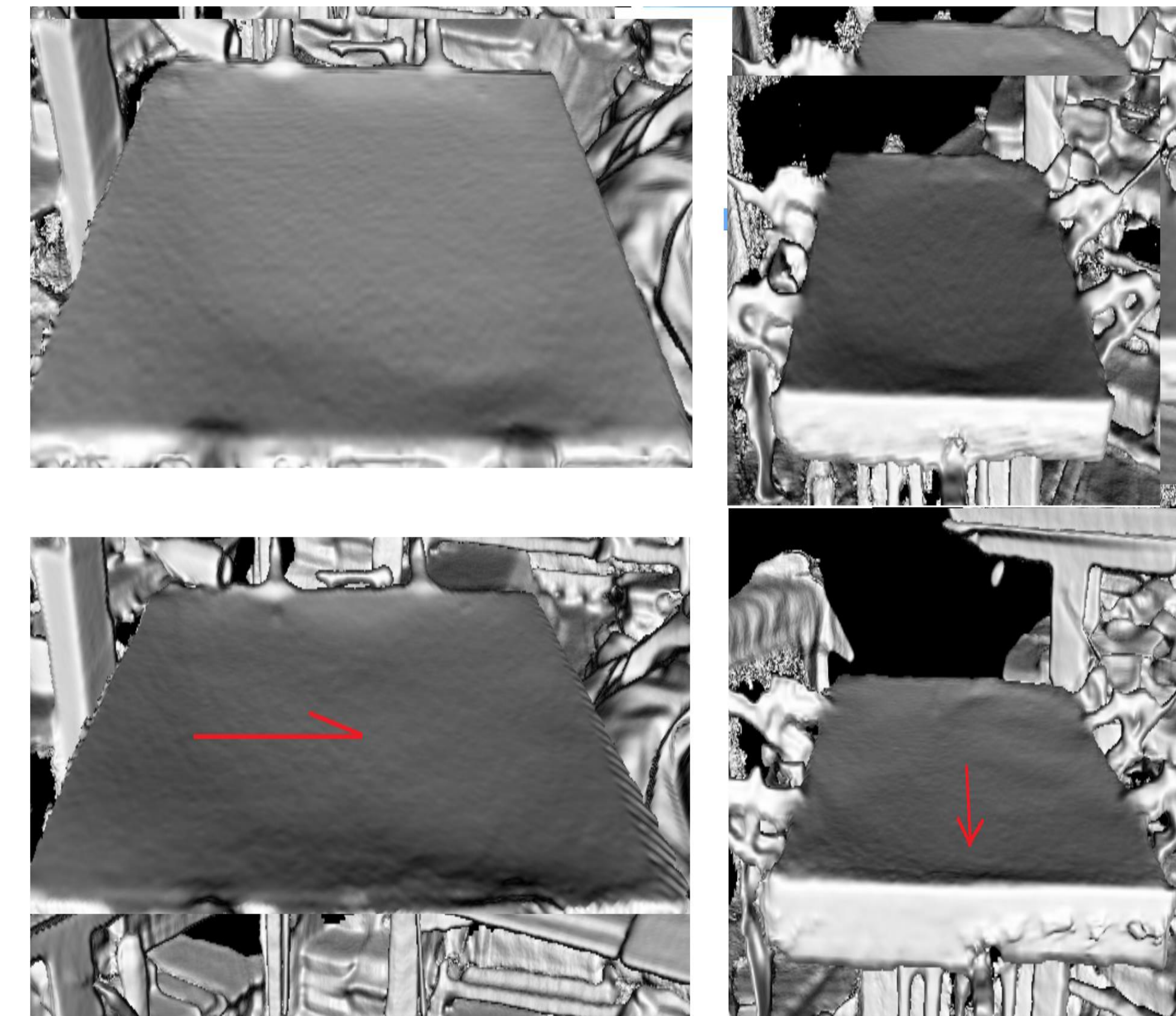


Fig 3. First 3d images of the water topology. Thin dark film or dark hydroscopic dust covering (for eliminate surface tension of water) will provide lab experiments about nature

Discussion: What is the targets of the experiment ?

- 1- Model observing of the shallow coast areas about tidal functions (tsunami – atmospheric effects)
- 2- Coastal constructions and their relationship with water currents (renewable energy sources)
- 3- Dangerous pull push forces of the propellers about coastal suction effects. (during maneuvers –water topo changings)
- 4- Underwater mass displacements (tectonics fault acts - side slides or water suctions)
- 5- Shallow water experiments
- 6- Ice loads and their effects on the sea surface
- 7- Hydrophobic dust behaviours on the water surface (polen coverage)

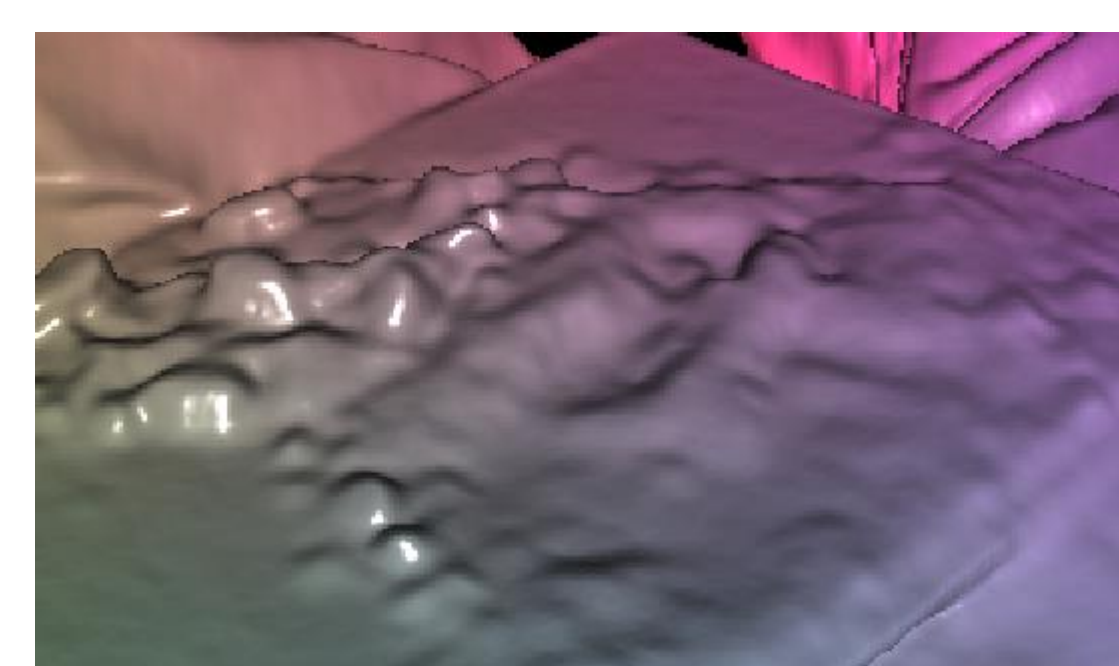


Fig 5 dust topology experiment

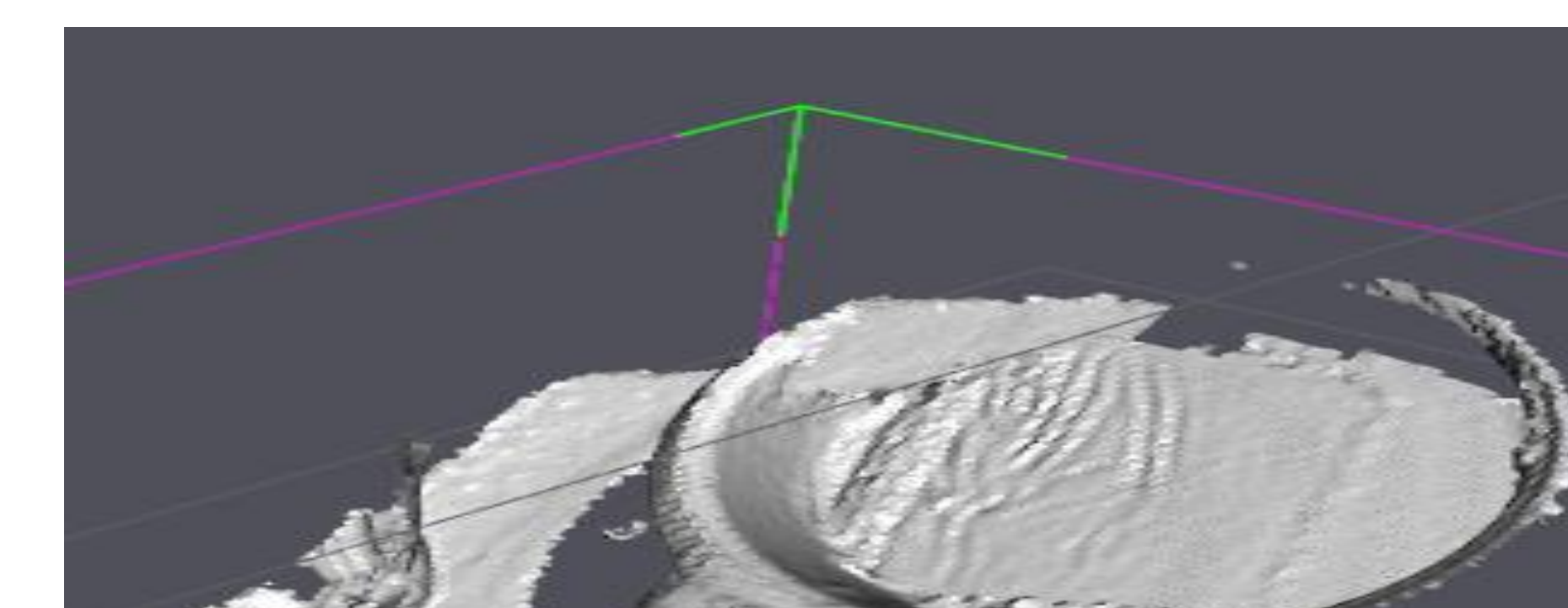


Fig 6 semi water semi film cover

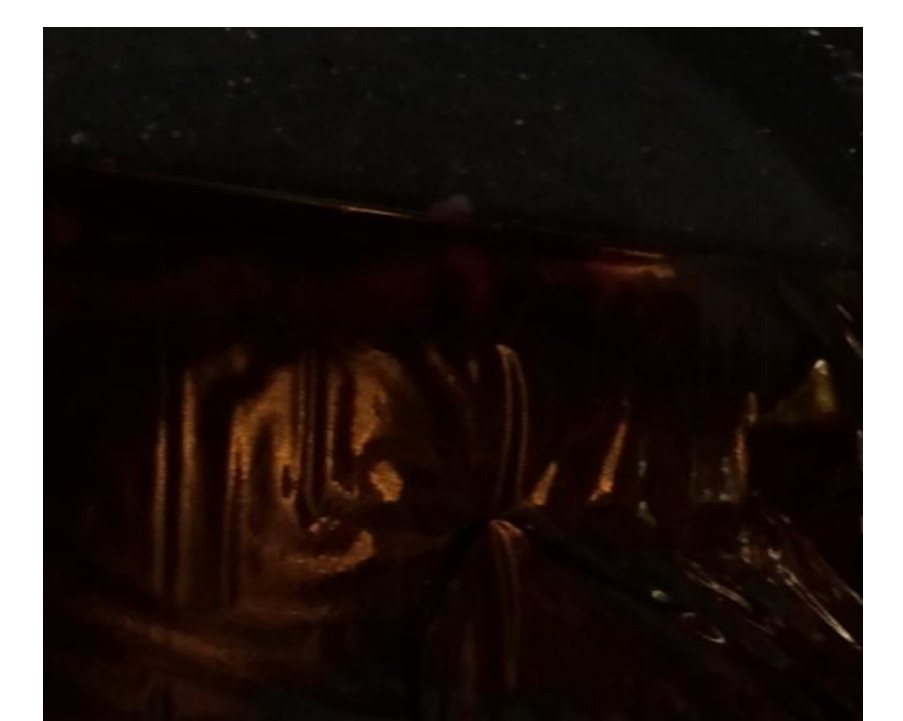


Fig 1 integrated design figures of the experiment