A detailed response to Reviewer 1

Comment	Response
This paper significantly exceeds the page limit. It is currently 14 pages long. The paper is interesting and well-written. If the figures can be significantly reduced, or perhaps significant reduction in background and model CFD set-up information may allow the paper to be reduced to 10 pages. Then it would be acceptable with the following issues also addressed:	The content of the paper has been made shorter by reducing the size of the figures and editing out the least relevant information in the sections "Introduction" and "Numerical model". **1) Deleted:** "The Savitsky method [1], which previously only included the viscous and pressure drag components in the bottom area aft of the stagnation line, was recently updated with an analytical model [6] that predicts the viscous drag in the spray area as a function of deadrise angle, trim angle and speed. However, the equations for the evaluation of the wetted area and length apply only to a monohedral hull with a constant deadrise." It is less relevant, for brevity. **2) Reformulated (made shorter):** "The spray deflectors proposed in [1] were experimentally compared with conventional spray rails in model scale through towing tank testing in calm water and irregular waves at $Fr_\nabla = 4.3$ and $Fr_\nabla = 5.8$ [1]. The study reported that while the conventional spray rail setup reduced the total resistance by up to 9%, the two spray deflector configurations reduced it by 14.5% and 20% at $Fr_\nabla = 4.3$ and $Fr_\nabla = 5.87$ respectively." To "The spray deflectors proposed in [6] were experimentally compared with conventional spray rails in model scale through towing tank testing in calm water and irregular waves [10]. The study reported that while the conventional spray rail setup reduced the total resistance by up to 9%, the spray deflectors reduced it by up to 20%."
In Fig 5 - what is the difference between the symmetry and wall surfaces? And is the overset surface the upper level?	Caption label corrected: Figure 9. Distribution of the total resistance R_{TM} on the hull with conventional spray rails (SR) and V-shaped spray interceptor (VSI) at Fr_∇ = 3.108.

Comment	Response
The grid study was conducted by looking at resistance. But trim is significantly more sensitive to gridding. Was trim looked at when determining the grid size? Resistance does not require as small a grid mesh as trim does.	The reviewer is right, trim is certainly much more sensitive to mesh resolution. Unfortunately, the we did not have enough time to conduct a new mesh sensitivity analysis. Future studies will certainly include mesh sensitivity analysis of a hull free to pitch and heave. At he moment we can only report the mesh sensitivity curve of resistance since it is more important than dynamic trim in the early-stage design. On the other hand, some articles [1,2] present only mesh sensitivity analysis for resistances. The running position of a planing hull depends on the equilibrium of forces acting on it (in this case weight of the hull, lift and drag), in particular their magnitudes and points of application. Furthermore, resistance is very sensitive to trim as well. Hence, running the mesh sensitivity analysis with the hull free to sink and pitch will cause more oscillation in resistance and trim due to multiple variables. [1] Khazaee R, Rahmansetayesh MA, Hajizadeh S. Hydrodynamic evaluation of a planing hull in calm water using RANS and Savitsky's method. Ocean Eng [Internet]. 2019;187(July):106221. Available from: https://doi.org/10.1016/j.oceaneng.2019.106221 [2] Bilandi RN, Dashtimanesh A, Tavakoli S. Hydrodynamic study of heeled double-stepped planing hulls using CFD and 2D+T method. Ocean Eng [Internet]. 2020;196(June 2019):106813. Available from: https://doi.org/10.1016/j.oceaneng.2019.106813
Was is the test condition presented in Figure 11?	A new, improved figure provided.
Sentence in conclusion appears unfinished: "Furthermore, future studies will investigate the fairly new feature in the STAR-CCM+ software, the Adaptive Mesh Refinement (AMR) model with the. "	Sentence corrected: Furthermore, future studies will investigate the application of the Adaptive Mesh Refinement (AMR), a fairly new feature in the STAR-CCM+ software.

A detailed response to Reviewer 2

Comment	Response
The proposed paper deals with very interesting topic, it is well suited into the Conferences topics. Authors didn't respect the paper length limit of 8 pages. It can be accepted up to 10 pages, so some modifications are required to enter into the 10 pages limit.	Paper edited to 10 pages.
Abstract is actually more than 400 words. It should not exceed 300 words	Abstract edited to 296 words, by omitting spray deflectors from the abstract since they are not the object of the study. Deleted: "While the spray deflectors are in principle steps, the V-shaped spray interceptors are strips welded to the hull i.e. they are more like spray rails. Experimental investigations have shown that compared to the bare hull, spray deflectors reduce the total resistance by up to 25% while conventional spray rails only reduce it by up to 18%. A recent numerical investigation of spray deflectors reported a reduction of 32% in total resistance (compared to the bare hull), of which 28% was due to reduction of the wetted surface while the remaining 4% was due to aftward deflection of the spray. However, the test vessel was simulated at a fixed running position i.e. the influence of the spray deflectors on the craft's heave and pitch motions was neglected."
When Authors write "This study aims to compare the influence of the VSI proposed in [12] on the hydrodynamic characteristics (lift, resistance, running position and wetted area) of a planing craft in calm water (Fr_∇=1.776…3.108) with that of conventional spray rails." It is not clear that the comparison will be CFD-EFD. Please reformulate this sentence, as it should give the novelty and methodology of the proposed paper.	Sentence reformulated: "This study aims to further investigate the influence of the V-shaped spray interceptors [11] on the hydrodynamic characteristics of a planing craft in calm water and compare it with that of conventional spray rails. The numerical analysis allows analysing phenomena (pressure distribution and wetted area) that are difficult to evaluate under experimental conditions. Finally, the numerical results of simulations of both hulls are compared with experimental data."

Comment	Response
Numerical set up is well described, but I would suggest to summarise it only to the principal information, to re-enter in the page limit.	Deleted: **Table 3.** Main particulars of the background and overset regions. Deleted: **Figure 3.** Volume mesh near the spray rails (left) and spray interceptor (right). Deleted: **Table 4.** Results of the grid sensitivity study. Deleted: **Figure 5.** Time step compared to ITTC recommendations. Deleted: **Figure 6.** Distribution of CFL on the free surface The numbers of cells in the computational domain and time step are within the text.
When discussing Figure 10 – please add the position of towing point in experiments	Sentence reformulated: "In the experimental setup, on the other hand, besides the lift and drag, a towing force is acting at the towing point (x=0.36 m from the transom and z= 0.09 m from the baseline)."
The label 60 N in Fig 11 is confusing, because the reported values are around 5N, and the y axis has the maximum at 5N. Can you please comment it on the Figure or remove it?	Label corrected: "Values out of range, both reach ca. 60 N"