**Technical/Scientific Contact Person : Shia-Hui Peng**

**Organisation**  **:** FOI Totalforsvarets forskningsinstitut

Information and Aeronautical systems

SE-164 90 Stockholm, Sweden

Telephone: +46 8 5550 3188

Email: shia-hui.peng@foi.se

**Quick Overview**

Please mark with an “X” in the red, yellow or green boxes how do you assess the present (general) status of your work:

(red = critical status, yellow = moderately problematic status, green = everything is running well)

**Timely according to DoW**

**Costs**

**Technical Progress**

**x**

**x**

**x**

**Please note:**

**When you have ticked yellow or red boxes, please explain problems you have encountered and possible solutions below:**

* …
* …
* …

**Please double-click on the table to open Excel file**
**\*) Task Status: N = Not yet started, O = Ongoing, C = Completed**

**Summary of Activities**

Please describe concisely, for the actual quarter and task by task, e.g.:

*Work started, work performed, achievements, problems, dissemination activities, technical meetings managed and/or participated in, purchases, subcontracts, and what else is important for monitoring the project*

Task 1.1: Internal project management at FOI.

Task 1.2: Coordination the work for TC F2.

Task 2.1: Continuation of the computations for TC F2 (Turbulent shear layer) using reformulated energy backscatter function incorporated in the HYB0 model with several different grids, including the FOI coarse grid (4.4M nodes) and a newly generated FOI fine grid (with about 10M nodes). The computations have been conducted using the original HYB0 model, the HYB0M (including only the energy-backscatter term) and HYB0M modified with a LES length scale defined with the minimum cell size. The vorticity-based LES length scale is now also incorporated and tested for the HYB0 and HYB0M model, respectively. The computations have been done with the FOI coarse grid and ongoing with the FOI fine grid. The Go4Hybrid mandatory grid is being checked and converted for the use in the computation of Quarter 8, which should serve a relevant cross plotting based on the same mandatory grid.

FOI has kept working on a Delta-based energy transfer formulation (Delta is the LES length scale). The validation and verification have been mainly undertaken for the mixing layer (TC F2) and the 2D hump flow (TC I2) based on the HYB0 model.

Task 2.2: The computation for test case I3 (three-element airfoil) has been conducted with the HYB0M model on a grid taken from the previous ATAAC project. FOI has further prepared to compute this case using a new grid comparable to the mandatory grid. This is in contact with DLR and the computation should be done in Quarter 8. Moreover, the 2D hump flow has been computed using the HYB0 model. Refined computations are, or will be, carried out using the HYB0 model with or without Delta-based energy transfer formulation.

Task 3.1: not involved

Task 3.2: not involved

Task 4.1: not involved

Task 4.2: After the M18 meeting and in discussion with other partners, particularly with CFDB,, FOI has started the work in this task in terms of different aspects to be included in the Deliverable concerning BPGs and knowledge preservation.