

# REQUEST FOR ADDITIONAL RESOURCES IN THE CURRENT YEAR FOR AN EXISTING SPECIAL PROJECT

Please email the completed form to [special\\_projects@ecmwf.int](mailto:special_projects@ecmwf.int).

**MEMBER STATE:** .....ITALY.....

**Principal Investigator<sup>1</sup>:** .....Stefano FEDERICO.....

**Affiliation:** .....ISAC-CNR (Institute of Atmospheric Sciences and Climate).....  
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**Address:** Via del Fosso del Cavaliere 100, 00133 Rome  
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**Other researchers:** Claudio Transerici (account cmn).....  
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**Project title:** ... Improvement of very-short term forecast using lightning and radar data assimilation  
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**Project account:** **SPITFEDE**

Additional computer resources requested for	2021
High Performance Computing Facility (units)	2000000
Data storage capacity (total) (Gbytes)	/

*Continue overleaf*

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<sup>1</sup> The Principal Investigator is the contact person for this Special Project

## **Technical reasons and scientific justifications why additional resources are needed**

The request of 20.000.000/year that we made at the start of the project was reasonably fit because, by the end of October 2021, about 1.5 million of SBU will still be available for this project. However, we are consuming CPU at a rate of 1.5 million per month and the SBU units available by the end of October will not be sufficient to reach the end of December. There are numerical experiments running on the impact of lightning data assimilation through 3D-Var in the WRF model, and these experiments are going at a fast rate of SBU consumption (1.5 million per month). We could stop the experiments at the end of November 2021 and restart them in January, when new resources will be available, or slow down the simulations to fit our original request. Nevertheless, we would apply for additional resources to ensure the continuity of the numerical experiments and to proceed at a good pace. For this reason, we ask additional 2.000.000 SBU.