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Madrid, 7 August 2018

Dr. Florence Rabier
Director General
European Centre for Medium Range Weather Forecast
Shinfield Park, Reading RG2 9AX
REINO UNIDO

SUBJECT: Endorsement letter of support for ExtremeEarth

Dear Mrs. Florence,

Being aware of the importance of the future ExtremeEarth (www.extremearth.eu) project to predict and monitor environmental extremes and their impacts on society enabled by the imaginative integration of edge and exascale computing and beyond, and the real-time exploitation of pervasive environmental data, hereby with this endorsement letter, I would like to express AEMET's strong support for it following the ECMWF Council's decision to lead it as a preparatory project for an EU Flagship.

Nowadays there are limitations in the physics of existing meteorological models and computational restrictions (for instance in ensemble data assimilation methods, or methods of empirical inference) that restrict the ability to ingest and make use of data collected continually by a vast array of sensors: satellites, ground stations, organized surface networks, commodity device sensing, etc. The data scale and computing needs are orders of magnitudes larger than current capabilities and these facts imply a strong necessity of a radical re-design of current software frameworks and hardware systems. In this context, ExtremeEarth will build upon and strengthen European excellence in Earth sciences, support European institutions, and launch a new wave of innovation at the intersection of Earth-system and information science and will bring an entirely new quality to the European HPC programme.

AEMET would employ the novel capabilities that ExtremeEarth will develop, and would contribute to future requirements and the ability to adapt to fundamentally new systems need to be accounted for very early on in the ExtremeEarth. The involvement of National Meteorological Services such as AEMET will be crucial for defining the ExtremeEarth full-scale end-to-end demonstrators as these are key project deliverables that will revolutionize their capabilities.

I fully trust on the success of this project and the opportunities ahead of it.

Yours sincerely,

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