



POLITECNICO
MILANO 1863



DIPARTIMENTO DI
SCIENZE E TECNOLOGIE
AEROSPAZIALI

EO-ALERT

Next Generation Satellite Processing Chain for Rapid Civil Alerts

Stefania Tonetti

DEIMOS SPACE-Spagna

Abstract

Deimos Space presents the EO-ALERT, an European Commission H2020 project that proposes the definition and development of the next-generation Earth Observation (EO) data processing chain, based on a novel flight segment architecture that moves optimised key EO data processing elements from the ground segment to on-board the satellite: The EO-ALERT satellite concept is based on the establishment of an on-board data handling and processing capability, that enables the generation of EO products on-board the satellite and their direct transfer to the End User.

This strategy is expected to be the core of future autonomous EO satellites. The proposed EO-ALERT satellite data handling architecture is shown and discussed with application on ship detection and extreme weather observation\nowcasting.

The beneficial exploitation of AI-based technologies in some areas of the EO-ALERT are also shown, together with their challenges.

Bio

Stefania Tonetti graduated in Space Engineering and she has a PhD in Aerospace Engineering from Politecnico di Milano.

She is currently Project Manager and Senior Mission Analyst in the System Engineering and Earth Observation Mission Analysis Division in the Flight Systems Business Unit at DEIMOS Space in Madrid.

She has a wide experience in the Mission Analysis of Earth Observation missions, having worked on more than 20 mission studies, from phases 0 to C, mainly for ESA, the European Commission or for the main European satellite manufacturing companies (Airbus Defence and Space, Thales Alenia Space, OHB).

www.aero.polimi.it

15 May 2019 at 17:15

Politecnico di Milano, Room L.15, Building B12, Campus Bovisa
Via La Masa, 34 - 20156 Milano