

Quality Management Systems oriented to homeland security and Space Climate: the experience of Mexico

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Abstract:

Solar activity phenomena have gained relevance in homeland security matters in several countries. The monitoring and research of space weather are part of the efforts oriented to mitigate or reduce the harmful effects of such phenomena on strategic technologies and facilities as well. For homeland security systems to be successful in safeguarding the integrity of these technologies and facilities, they require timely and accurate information to make the appropriate decisions to respond to the threat of potentially catastrophic effects of solar activity. In this context, the Space Weather National Laboratory (LANCE) generates the space weather bulletin (BOCE) for the National Civil Protection System of Mexico. The BOCE is a brief document to inform in citizen-language about possible high-risk scenarios caused by solar activity. The BOCE is the LANCE's most relevant product and, for such a reason, its elaboration has a Quality Management System (QMS) certified in accordance with the ISO 9001:2015 standard. Our QMS allows us to determine the processes and resources required for the expeditiously and accurately elaboration of the BOCE, when required. Additionally, our QMS facilitates the optimization of our resources through strategic planning and provides the means for continuous improvement in the BOCE's elaboration. In this work, we present the LANCE's experience of implementing a QMS in a process of scientific analysis oriented to the homeland security of Mexico.

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References:

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