ABSTRACT ORAL CONTRIBUTION

A NEW ALGORITHM TO DESCRIBE GRANULARITY ON THE SUN'S CHROMOSPHERE

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Since 1960 the Sun's chromosphere has been an active topic on astrophysical research. As we get more detailed images from the Sun we need new and different ways to analyze them and extract morphological information. This information can help us to characterize the physical process at work driving the chromosphere's granularity. Here we present a new algorithm to detect and characterize the granular structure on the Sun's chromosphere. The algorithm is based on the Hessian of an image's intensity. This allows us to follow and describe filamentary structures both in observations and simulations. This way of characterizing the granular structure on the Sun provides a new machine learning tool to characterize the Sun's chromosphere and understand its relationship to its internal physical processes.

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