## **Cosmic Ray International Seminar 2015**



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## Universality (and its limitations) in cosmic ray shower development

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In this talk we review the concept of "universality" in the development of very high energy cosmic rays showers. The main result is that the distributions of photons and electrons in a shower have shapes that are essentially determined by the the stage of shower development (the shower age) independently from the energy and identity of the primary particle. The implications of this result for the interpretation of the observations will be discussed.

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