

Contributed Talk

Splinter Education

STRUCTURE-FORMING PHENOMENA IN THE UNIVERSE AND SIMPLE
APPLICATIONS AT SCHOOL

L. Bzduskova¹, S. Hohmann¹

¹ *University of Siegen, Department of Physics, Observatory*

In the universe and on earth, patterns and structures are formed. These self-running phenomena are not to be understood easily, because there are very complex processes going on. But for teachers, it is possible to put some experiments together, which can explain this complexity of the structure-forming phenomena. This contribution presents three experiments treating structure-forming phenomena: Kelvin-Helmholtz Instability, Rayleigh-Taylor Instability and Rayleigh-Bénard Convection. To reach a better understanding for the students. This contribution shows pre-experiments leading to a better understanding of the main experiments. The presented phenomena should only treat a small section of the possible structures found in the animated and unanimated nature. The self-organization of structures can wake the interest of the students in astronomy, astrophysics or physics in general, because observing these structures can be very fascinating.