## The measurement



We see shapes. These shapes change over time. No two shapes are alike. How to measure these shapes? Their size, their area, etc.

Such image reminds us of the quantum foam (vacuum fluctuations) with which our entire universe is filled

However, the shapes of the first image may exist in many different variants - see the next variant in the image on the right, but still the same chaos.

Different and unexpected shapes every time, but the essence is the same. See the grain on the untuned TV screen.



**To measure shapes, we need to select a suitable base unit.** But where to get it? The base unit must be stable. But here everything changes.

**First problem** – we are unable to recognize any familiar shape. Like stones, apples, leaves, etc.

**Second problem** – Where the base unit come from? We need to go to the next level of quantum foam formation. See the next image.



Here are some familiar shapes. Clouds, circles or points with a different diameter, curves and so on.

We could take an orange point as the base unit. O.K. We can measure what we want.

Very important question. Where the "regular" shapes (as orange points) come from?

In other words, what happened to make the difference between shapes of the first two images and the third image? Where the points, circles, clouds and curves come from? And how these structures can exist for some time despite the surrounding and internal chaos. And what's the point of measuring and evaluating all of this. But that's a philosophical question.

Let's go back to the base unit expressed by the orange point. What is the **absolute size of one part?** Where is the reference point? Somewhere above? It is impossible to describe the absolute size of the shape with the help of other shapes.

to be continued ...