THE SPIEGEL PROJECT

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The media in which visualization is done - be it paper, a computer screen, a blackboard, a [20] 3-D space, etc. - has a big influence on the results. Sound describing a data set can be created, but it certainly is not easy to publish. The question is what kind of audio can be created that represents scientific data well for a human. A visual can be printed and can be used to publish visualization results. Sound describing data can only have broad strokes. A visual can have many details that appeal to the viewer. The sense of sight differs significantly from the sense of hearing in resolution and meaning. A visual can have many details which sound cannot express.

Visualization of data has a long history. The process converts data into a form which is easier to comprehend: something our eyes can see. This has been done for many years in the scientific community. One of the first was the so-called "spiral of Swann," which is a logarithmic spiral with a periodic function described by a circle. This type of visualization was used to study the behavior of fluids in pipes and in the atmosphere. The spiral of Swann was a precursor to the modern visualization techniques used today.

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Projects and Collaborations:

- The Ligo Scientific Collaboration (LSC) [11] is a well-organized collaboration of approximately 760 scientists worldwide who have joined together in the search for gravitational waves from the most violent events in the universe, such as the merger of black holes and neutron stars, the explosion of supernovae and the Big-Bang.
- CCF-0851743 [12]