



## **Observations of the turbulent atmospheric ground layer during site testing for the Thirty Meter Telescope**

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The Thirty Meter Telescope will be one of the new generation of extremely large telescopes for astronomical research. The site where such a facility will be built has to be chosen in a way to assure the best observing conditions in order to maximize the scientific return of the telescope.

The Thirty Meter Telescope project is therefore conducting on five mountains a detailed study of the atmospheric conditions which impact astronomical observations. On each of these remote potential observatory sites, a wide variety of instrumentation has been installed, monitoring the environmental and atmospheric conditions continuously. Apart from the general meteorological conditions, special emphasis is put on the observation of the turbulence distribution through the atmosphere.

An overview of the instrumentation will be given, with a focus on the optical turbulence measurement devices. First results of the dependences of the turbulence distribution within the first few hundred meters above the ground on other environmental/meteorological parameters will be presented. These results will be discussed in view of the nowcasting and possible short term forecasting of astronomical observing conditions.