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ORIGINAL ARTICLE

Weather forecasting and dynamic scheduling for a modern cm/mm wave radiotelescope

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Abstract In order to maximize the productivity of a state of the art scientific instrument, concurrent projects that will be performed by the instrument itself should be scheduled and prioritized appropriately. In the case of radioastronomical facilities, the precedences are set on the basis of many parameters amongst which meteoclimatic variables play a fundamental role. The Sardinia Radio Telescope (SRT) is nearly completed, and soon it will start performing radioastronomical observations in the 0.3–100 GHz frequency range. It is known that centimeter and especially millimeter wavelengths are affected by the atmospheric water vapor content and weather conditions. In order to increase the performances of observations at higher frequencies, detailed knowledge of the climatology of the telescope site is needed, moreover, accurate weather predictions that range several days ahead are particularly useful. Such information is mandatory for the implementation of a dynamic scheduling sys-

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