

Q39a      **NANTEN2 observation of the SMC**

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We have begun a new survey of the most active part of the Small Magellanic cloud using the NANTEN2 telescope, to observe the CO(2-1) transition. We have compiled large, contiguous maps of the entire SMC "bar", a  $\sim 3$  kpc brightened rim of the SMC with relatively enhanced star-formation, to a sensitivity of 70 mK, currently the most sensitive map of the molecular population in the SMC. We find that the brightness and distribution of the CO(2-1) transition agrees well with the  $^{12}\text{CO}(1-0)$  transition. As these new data are much deeper than existing CO(1-0) datasets, our new maps provide for the first time, direct evidence for core-dominated molecular clouds in the SMC. i.e. the molecular cloud population in the SMC does not exist in an extended CO envelope that is typical of Galactic clouds. This finding has significant ramifications for our understanding of the formation and evolution of molecular clouds in UV-rich, and poorly-enriched ISMs, such as that found in the SMC.