



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/1694>

Title:	Non-Gaussianity of diffuse Galactic synchrotron emission at 408 MHz
Authors:	Rana, S. (/jspui/browse?type=author&value=Rana%2C+S.) Bagla, J.S. (/jspui/browse?type=author&value=Bagla%2C+J.S.)
Keywords:	cosmic background radiation surveys diffuse radiation cosmology: observations
Issue Date:	2018
Publisher:	Oxford University Press
Citation:	Monthly Notices of the Royal Astronomical Society, 481(1), pp. 970-980.
Abstract:	Diffuse Galactic emission at low frequencies is a major contaminant for studies of redshifted 21 cm line studies. Removal of these foregrounds is essential for exploiting the signal from neutral hydrogen at high redshifts. Analysis of foregrounds and its characteristics is thus of utmost importance. It is customary to test efficacy of foreground removal techniques using simulated foregrounds. Most simulations assume that the distribution of the foreground signal is a Gaussian random field. In this work, we test this assumption by computing the binned bispectrum for the all-sky 408 MHz map. This is done by applying different brightness temperature (T) thresholds in order to assess whether the cooler parts of the sky have different characteristics. We find that regions with a low-brightness temperature $T < 25$ K indeed have smaller departures from a Gaussian distribution. Therefore, these regions of the sky are ideal for future H i intensity mapping surveys.
Description:	Only IISERM authors are available in the record.
URI:	https://academic.oup.com/mnras/article/481/1/970/5087677 (https://academic.oup.com/mnras/article/481/1/970/5087677) http://hdl.handle.net/123456789/1694 (http://hdl.handle.net/123456789/1694)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/1694/1/Need%20to%20add%20pdf.odt)		8.04 kB	OpenDocument Text	View/Open (/jspui/bitstream/123456789/1694/1/Need%20to%20add%20pdf.odt)

[Show full item record \(/jspui/handle/123456789/1694?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/1694/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.