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12:25

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Dear Dr Denes,

Copied below are the reviewer's comments on your manuscript entitled "Exploring the pattern of the Galactic HI foreground of GRBs with the ATCA", ref. MN-19-0163-MJ, which you submitted to Monthly Notices of the Royal Astronomical Society.

Minor revision of your manuscript is requested before it is reconsidered for publication.

You should submit your revised version, together with your response to the reviewer's comments via the Monthly Notices ScholarOne Manuscripts site <https://mc.manuscriptcentral.com/mnras>.

Enter your Author Centre, where you will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript reference will be appended to denote a revision.

IMPORTANT: do not submit your revised manuscript as a new paper!

You will not be able to make your revisions to the originally submitted files of the manuscript held on ScholarOne Manuscripts. Instead, you must delete the original files and abstract and replace them with your revised files. Check that any requests for colour publication or online-only publication are correct. Carefully proof read the resulting PDF and HTML files that are generated. If you have used a .bib file to generate your bibliography in Latex, please include this in your .tar archive along with the .bbl and .tex files; this will aid the editing and typesetting process.

When submitting your revised manuscript, you will be able to respond to the comments made by the reviewer in the space provided. You should also use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer. Changes to the manuscript should be highlighted (e.g. in bold or colour), to assist the referee and editor. Along with the highlighted manuscript you should also upload clean files (remove any bold font/track changes) for our publishers, as accepted manuscripts are now immediately published online ahead of the proof-corrected version.

Because we are trying to facilitate timely publication of manuscripts submitted to MNRAS, your revised manuscript should be uploaded promptly. If you do not submit your revision within six months, we may consider it withdrawn and request it be resubmitted as a new submission.

Please note that, due to the tight schedule, any post-acceptance changes notified after the paper has gone into production (i.e. the day after the acceptance email is sent) cannot be incorporated into the paper before it is typeset. Such changes will therefore need to be made as part of the proof corrections. To avoid excessive proof corrections and the delay that these can cause, you are strongly encouraged to ensure that each version of your paper submitted to MNRAS is completely ready for publication!

I look forward to receiving your revised manuscript.

Regards,

Helen

Dr Helen Klus
Assistant Editor MNRAS
Royal Astronomical Society

cc: all listed co-authors.

Scientific Editor's Comments:
Editor: Tim Pearson
Comments to the Author:
See additional minor points:

Please try to follow the MNRAS style (see the Instructions to Authors); e.g., most label subscripts should be in roman type, redshift z should be italic, operator $\log$ should be roman.

In Section 4.1.2, can you explain what you mean by "a very typical value"? Do you just mean that your value is consistent with published estimates?

In the references: "Tóth L. V., et al., 2018a, JAXA Special Publication, pp 119–122" is not sufficient information to locate the paper. Include a volume/serial number, and a DOI or URL if available.

For Tóth et al 2017, include the journal name, volume number, and page number.

Reviewer's Comments:
Reviewer: 1

Comments to the Author

The paper is well written and intends to address the question of neutral column density measurements along Gamma-ray Bursts (GRBs) line of sights. Specifically, the authors are trying to perform a more accurate analysis of the Milky Way intrinsic neutral hydrogen measurements that contributes to the overall line of sight absorption. Thanks to new data, specifically the Planck and ATCA data, which have much higher spatial resolution than the typical LAB survey, the authors claimed that the estimated X-ray derived intrinsic MW HI column density is underestimated.

Major consequence of these findings is that the GRB host galaxy $N(\text{HI})$ is therefore lower than what previously assumed.

I highly recommend the manuscript for publication, though the following minor corrections should be addressed:

1) Introduction

a) I found the introduction section lacking of a long list of recent (in the last 5 years) studies of GRB hosts and their spectroscopic data analysis. Specifically the work done by the TOUGH survey, Perley et al. and SHOALS.

b) There are a lot of studies of X-ray Swift data analysis and reconciliation between optical $N(\text{HI})$ and $N_{\text{X}}(\text{HI})$ that is not cited: Campana et al. , Darac Watson et al. It would be beneficial to the reader if these articles were added and also discussed in the discussion session 2.4 and 3.

2) Data selection:

a) Why the authors did not focused their observation only on nearby GRBs? For which the statistics would be more constraining?

3) Section 3:

a) The case of GRB100621A is quite puzzling, but the author did not clarify the issue: why, if the GRB is near a molecular cloud the $N(\text{HI})$ measured is so low?

b) GRB 081008 it is at $z=1.9$: is it possible that some of the contribution comes from unresolved intervening systems?

c) The authors presented a time-averaged X-ray spectrum: would that be any change in the X-ray data

derived $N(\text{HI})$ if used only early data vs. late time data? We know the GRB ionizes the surrounding environment, so the value may be different.

Smaller notes: there are some "???" where referencing sections of the paper. Please, make sure these are fixed.