Extended abstract ERAD2022

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Abstract

This template should be used to write your extended abstract for ERAD2022. The extended abstract should be 4-8 pages long and not exceed 15 MB. Please do not change the font or font size. You can use any dialects of English, but please be consistent throughout your text.

1 Introduction

The introduction section is mandatory. This template is based on the notation terminology from the Copernicus Publications guidelines available at
`https://publications.copernicus.org/for_authors/manuscript_preparation.html`
Please refer to this link to prepare your extended abstract. If you have questions, ask the ERAD2022 organising committee.

2 My first section

2.1 My first subsection

You can use subsections

2.1.1 My first subsubsection

You can use up to two level of subsections (e.g. 2.1.1) to divide your sections. Refer to sections by using the abbreviation "Sec." in running text, unless it appears at the beginning of a sentence. Section 2.1 is the first subsection and Sec. 3 give details on figures conventions.

3 Figures

Please give all the necessary details to understand your figure in the caption. Use vectorised format if possible (e.g. pdf, eps) or 300 dpi rasterised images (e.g. png). Please use colour blind friendly colour panels (e.g. avoid the parallel usage of red and green). A list of colour blind friendly panels can be found here `http://colorbrewer2.org`. Please refer to all figures in the text. The abbreviation "Fig." followed by a number should appear in running text (e.g. Fig. 1) unless it appears at the

beginning of a sentence. Figure 1 shows a picture of EPFL's dual-polarisation Doppler radar named MXPol.

Figure 1: Picture of EPFL's dual-polarisation radar MXPol in Martigny, Switzerland. ©LTE, EPFL

4 Equations

Please define your equations as illustrated in this section. The reflectivity factor at horizontal polarisation for raindrops can be expressed as:

$$Z_h = \int D^6 N(D) dD, \tag{1}$$

where D is the diameter and $N(D)$ is the number concentration of raindrops with diameter D. For short equations, you can define them inline, such as $Z_{DR} = Z_H - Z_V$, where Z_H and Z_V are the reflectivity factors at horizontal and vertical polarisations, respectively, expressed in dBZ. Please use the same referring convention as explained in Sect. 3 for equations, except that the number is written in brackets (e.g. Eq. (1) in running text, but Equation (1) at the beginning of a sentence).

5 Tables

Tables should be self-explanatory and include a descriptive caption. Note that "Table" is never abbreviated and should start with a capital when followed by a number (e.g. Table 1 show the specifications of two different radars).

6 Units, date and time

Please use SI units and write them exponentially (e.g. $\mathrm{m\,s^{-1}}$). Please format the date and time as follows: 25 July 2007 (dd month yyyy), 15:17:02 (hh:mm:ss). Please specify if time is UTC or in another time zone (e.g. ECT).

Table 1: Specifications of radar 1 and radar 2

Specifications	Radar 1	Radar 2
Frequency	9.41 GHz	94 GHz
3 dB beamwidth	1.27°	0.53°
Sensitivity at 8 km	5 dBZ	-40 dBZ
Transmission type	pulsed	frequency modulated

7 Citation

Please make a proper reference to the formal literature. Refer to the "References section" of the Copernicus Publications guidelines provided in Sec. 1 for more details. Use a `.bst` file in which your references are defined. Please quote inline citation as follows: Medina and Houze (2015) studied small-scale precipitation elements in midlatitude cyclones. An example of citation in brackets can be found in the following sentence. The Hallet-Mossop mechanism (Hallett and Mossop, 1974) is an important source of secondary ice generation. For multiple citations in brackets refer to the following example: the Hallett-Mossop mechanism (hereafter HM mechanism, Hallett and Mossop, 1974; Mossop, 1980) is not the only source of secondary ice. Note that it is sometimes necessary to run your file from the command line to compile the references correctly with:

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$pdflatex my_abstract.tex
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```

8 Conclusion

The conclusion is a mandatory section.

Acknowledgements

Please insert your acknowledgements here

References

Hallett, J. and Mossop, S. C.: Production of secondary ice particles during the riming process, Nature, 249, 26–28, https://doi.org/10.1038/249026a0, 1974.

Medina, S. and Houze, R. A.: Small-Scale Precipitation Elements in Midlatitude Cyclones Crossing the California Sierra Nevada, Monthly Weather Review, 143, 2842–2870, https://doi.org/10.1175/MWR-D-14-00124.1, URL `http://journals.ametsoc.org/doi/10.1175/MWR-D-14-00124.1`, 2015.

Mossop, S. C.: The mechanism of ice splinter production during riming, Geophysical Research Letters, 7, 167–169, https://doi.org/10.1029/GL007i002p00167, 1980.