

In order to make the text more readable in a 'nonlinear' fashion, some definitions and explanations appear at more than one place in the text.

Viewing

To navigate the text, you will need a way of returning to the location where you came from. In Acrobat Reader the key for returning is `cmd-leftarrow`, in Apple Preview and in Skim `cmd-[` . In Acrobat on Windows and unix, try `alt+leftarrow` or figure out how to add back/forward buttons into the menu bar.

The animation clips

To make the animations link automatically from the pdf, keep the mp4 files in the same directory as the pdf. The names of the mp4 files correspond to their link names in the text.

On a Mac, the animation links connect well with Acrobat Reader, Skim, and with the default pdf viewer in the Latex distribution, but not with Apple preview.

The appearance of the animations depends on the default video viewer of your system. Quicktime Player works well on Macintosh. VLC also works but produces somewhat unwieldy video windows. If QT is not the default player, you can make it so via the 'info' window (`cmd-i`) of a video file. Under 'open with' select QuickTime Player, and click the 'change all' button.

On Linux machines, the Evince (3.2.1) player is reported to connect properly from the pdf to the clips. Movie Player in Gnome also works under Linux. In Windows, the default player (Windows Media) refuses 3 of the 8 clips in some configurations; VLC and KM-player are believed to work better.

Distribution

Distribution in hardcopy is not planned at the moment, but a version suitable for 'print-on-demand' may appear here at some point in time, depending on demand.

The pdf and the video clips can be freely used and distributed as is, but not modified, nor used commercially. When citing the text, refer to it by its arXiv name, `arXiv:1301.5572 [astro-ph.IM]`.

Version history

v3.5.1 23 August 2017

Text improvements. Section 2.3 expanded a bit, causing page numbering to change from p42 onward.

v3.5 3 July 2017

Section on reconnection improved and expanded with a new section 2.4.6.

Further text improvements.

v3.4 3 April 2017

Sign error in drift velocity corrected on p. 42 and in problem 3.2 (with thanks to Seiji Zenitani)

Paragraph added on three-dimensional vs. 2D reconnection in section 2.4.2

Text improvements for readability and clarity.

v3.3 14 December 2016

Problem 3.28 reinstated (was correct after all)

v3.2 (interim version) 9 September 2016

Problem 3.28 deleted

new figure in section 2.10

Text improvements.

v3.1 15 June 2016
Typos and smaller corrections.

v3.0 31 May 2016 (v3 on ArXiv)
New section with solutions to the exercises and problems. (The formulation of some has been revised.)
Problems 23 and 28 have been replaced by more interesting ones.
Expressions 4.24-4.26 (new numbering) have been corrected, and the equivalent ones in spherical coordinates added.
Many smaller improvements.

v2.2 8 November 2015 Missing piece of text on p52 fixed
Section on reconnection updated, subsection 2.4.5 added.

v2.1 24 October 2015
Some more text polishing.

v2.0.5 11 October 2015
Some more text polishing.

v2.0 7 October 2015
New (sub)sections have been added, especially in Chapter 2. This has changed a few subsection numbers. The section on reconnection has been rewritten and expanded. Extensive polishing of the text.

v1.2 11 May 2013
Changes in 1.1.1 (MHD approximation)
Correction in 1.1.4 (Geometrical meaning of $\text{div} \mathbf{B} = 0$)
Minor text editing throughout.

v1.1 27 January 2013 arXiv:1301.5572 v1