

DATA FILES FOR CLASSICAL AND \mathbb{C} -MOTIVIC ADAMS CHARTS

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ABSTRACT. This document describes the structure of some comma-separated-value (CSV) files that contain detailed information about the algebraic Novikov, Adams, and Adams-Novikov spectral sequences, in both the classical and \mathbb{C} -motivic contexts.

This document describes the structure of some comma-separated-value (CSV) files that contain detailed information about the algebraic Novikov, Adams, and Adams-Novikov spectral sequences, in both the classical and \mathbb{C} -motivic contexts. These files are auxiliary to the projects described in [1] and [2].

See the cited documents for more mathematical details. The remainder of this document describes the structure of the CSV files.

2010 *Mathematics Subject Classification.* 55T15, 55Q45, 14F42.

Key words and phrases. algebraic Novikov spectral sequence, Adams spectral sequence, Adams-Novikov spectral sequence, stable homotopy group, motivic stable homotopy group, cohomology of the Steenrod algebra.

The first author was supported by NSF grants DMS-1606290 and DMS-1904241. The third author was supported by NSF grants DMS-1810638 and DMS-2043485. Many of the associated machine computations were performed on the Wayne State University Grid high performance computing cluster.

1. CLASSICAL ADAMS SPECTRAL SEQUENCE

Adams-classical-E2.csv: Each line of the file corresponds to an element in the classical Adams E_2 -page. This data is used to produce the chart appearing in [2].

name: Human-readable name of an element. (Beware that naming conventions have changed over time.)

stem: The stem of an element. This is the horizontal coordinate in a standard Adams chart.

Adams filtration: The Adams filtration of an element. This is the vertical coordinate in a standard Adams chart.

shift: Used for display purposes in reference to the chart in [2], when more than one element occurs with the same bidegree. Lower values correspond to dots on the left.

h0info: Information about special behavior of an h_0 extension.
loc means that an element is h_0 -periodic.

h0target: Value of an h_0 extension. An empty cell indicates that there is no h_0 extension.

h1target: Value of an h_1 extension. An empty cell indicates that there is no h_1 extension.

h2target: Value of an h_2 extension. An empty cell indicates that there is no h_2 extension.

drinfo: Information about an Adams differential. An integer value r indicates a d_r differential.
p means that a differential is not known to occur.

drtarget: Value of an Adams d_r differential.

Adams-classical-E3.csv: Each line of the file corresponds to an element in the classical Adams E_3 -page. This data is used to produce the chart appearing in [2]. This file takes the same format as **Adams-classical-E2.csv**.

Adams-classical-Einfy.csv: Each line of the file corresponds to an element in the classical Adams E_∞ -page. This data is used to produce the chart appearing in [2].

name: Human-readable name of an element. (Beware that naming conventions have changed over time.)

stem: The stem of an element. This is the horizontal coordinate in a standard Adams chart.

Adams filtration: The Adams filtration of an element. This is the vertical coordinate in a standard Adams chart.

shift: Used for display purposes in reference to the chart in [2], when more than one element occurs with the same bidegree. Lower values correspond to dots on the left.

h0info: Information about special behavior of an h_0 extension.

loc means that an element is h_0 -periodic.

h means that there is a hidden 2 extension.

h0target: Value of an h_0 extension. An empty cell indicates that there is no h_0 extension.

h1info: Information about special behavior of an h_1 extension.

h means that there is a hidden η extension.

h1target: Value of an h_1 extension. An empty cell indicates that there is no h_1 extension.

h2info: Information about special behavior of an h_2 extension.

h means that there is a hidden ν extension.

h2target: Value of an h_2 extension. An empty cell indicates that there is no h_2 extension.

dinfo: Information about an Adams differential. An integer value r indicates a d_r differential.

p means that the differential is not known to occur.

drtarget: Value of an Adams d_r differential.

2. \mathbb{C} -MOTIVIC ADAMS SPECTRAL SEQUENCE

Adams-motivic-E2.csv: Each line of the file corresponds to an element in the motivic Adams E_2 -page. This data is used to produce the chart appearing in [2].

name: Human-readable name of an element. (Beware that naming conventions have changed over time.)

stem: The stem of an element. This is the horizontal coordinate in a standard Adams chart.

Adams filtration: The Adams filtration of an element. This is the vertical coordinate in a standard Adams chart.

weight: The motivic weight of an element.

tautorsion: Indicates the τ module structure of an element.

0 means that an element is τ -periodic.

Any other integer k means that an element is annihilated by τ^k .

shift: Used for display purposes in reference to the chart in [2], when more than one element occurs with the same bidegree. Lower values correspond to dots on the left.

h0info: Information about special behavior of an h_0 extension.

p means that an h_0 extension is not known to occur.

t means that an h_0 extension equals τ times an element.

t followed by an integer k means that an h_0 extension equals τ^k times an element.

h0target: Value of an h_0 extension. An empty cell indicates that there is no h_0 extension.

loc means that an element is h_0 -periodic.

h1info: Information about special behavior of an h_1 extension.

p means that an h_1 extension is not known to occur.

t means that an h_1 extension equals τ times an element.

t followed by an integer k means that an h_1 extension equals τ^k times an element.

h1target: Value of an h_1 extension. An empty cell indicates that there is no h_1 extension.

loc means that an element is h_1 -periodic.

h2info: Information about special behavior of an h_2 extension.

t means that an h_2 extension equals τ times an element.

t followed by an integer k means that an h_2 extension equals τ^k times an element.

h2target: Value of an h_2 extension. An empty cell indicates that there is no h_2 extension.

drinfo: Information about an Adams d_2 differential.

free means that the target of the differential is not displayed on the chart, typically because it is h_1 -periodic.

p means that a differential is not known to occur.

t means that a differential equals τ times an element.

t followed by an integer k means that a differential equals τ^k times an element.

drtarget: Value of an Adams d_2 differential.

Adams-motivic-E3.csv: Each line of the file corresponds to an element in the motivic Adams E_3 -page. This data is used to produce the chart appearing in [2]. This file takes the same format as **Adams-motivic-E2.csv**.

Adams-motivic-E4.csv: Each line of the file corresponds to an element in the motivic Adams E_4 -page. This data is used to produce the chart appearing in [2]. This file takes the same format as **Adams-motivic-E2.csv**.

Adams-motivic-E5.csv: Each line of the file corresponds to an element in the motivic Adams E_5 -page. This data is used to produce the chart appearing in [2]. This file takes the same format as **Adams-motivic-E2.csv**.

Adams-motivic-E6.csv: Each line of the file corresponds to an element in the motivic Adams E_6 -page. This data is used to produce the chart appearing in [2]. This file takes the same format as **Adams-motivic-E2.csv**.

Adams-motivic-Einfy.csv: Each line of the file corresponds to an element in the motivic Adams E_∞ -page. This data is used to produce the chart appearing in [2].

name: Human-readable name of an element. (Beware that naming conventions have changed over time.)

stem: The stem of an element. This is the horizontal coordinate in a standard Adams chart.

Adams filtration: The Adams filtration of an element. This is the vertical coordinate in a standard Adams chart.

weight: The motivic weight of an element.

tautorsion: Indicates the τ module structure of an element.

0 means that an element is τ -periodic.

Any other integer k means that an element is annihilated by τ^k .

shift: Used for display purposes in reference to the chart in [2], when more than one element occurs with the same bidegree. Lower values correspond to dots on the left.

tauxtn: Value of a hidden τ extension. An empty cell indicates that there is no hidden τ extension.

h0info: Information about special behavior of an h_0 extension.

t means that an h_0 extension equals τ times an element.

t followed by an integer k means that an h_0 extension equals τ^k times an element.

h0target: Value of an h_0 extension. An empty cell indicates that there is no h_0 extension.

loc means that an element is h_0 -periodic.

h1info: Information about special behavior of an h_1 extension.

t means that an h_1 extension equals τ times an element.

t followed by an integer k means that an h_1 extension equals τ^k times an element.

h1target: Value of an h_1 extension. An empty cell indicates that there is no h_1 extension.

loc means that an element is h_1 -periodic.

h2info: Information about special behavior of an h_2 extension.

t means that an h_2 extension equals τ times an element.

t followed by an integer k means that an h_2 extension equals τ^k times an element.

h2target: Value of an h_2 extension. An empty cell indicates that there is no h_2 extension.

dinfo: Information about an Adams d_r differential.

p means that a differential is not known to occur.

t means that a differential equals τ times an element.

t followed by an integer k means that a differential equals τ^k times an element.

drtarget: Value of an Adams d_r differential.

3. MACHINE GENERATED DATA

Adams-motivic-E2-machine.csv: Each line of the file corresponds to an $\mathbb{F}_2[\tau]$ -module generator of the \mathbb{C} -motivic Adams E_2 -page.

name: An arbitrary name of the form $\{\mathbf{a-b}\}$ assigned by machine to a generator. The value of \mathbf{a} is the Adams filtration of the generator, while the value of \mathbf{b} is an arbitrary number.

stem: The stem of an element. This is the horizontal coordinate in a standard Adams chart.

Adams filtration: The Adams filtration of an element. This is the vertical coordinate in a standard Adams chart.

weight: The motivic weight of an element.

tautorsion: Indicates the τ module structure of a generator.

0 means that an element is τ -periodic.

Any other integer k means that a generator is annihilated by τ^k .

h0info: Information about special behavior of an h_0 extension.

An integer k means that an h_0 extension equals τ^k times a generator.

h0target: Value of an h_0 extension. An empty cell indicates that there is no h_0 extension.

h1info: Information about special behavior of an h_1 extension.

An integer k means that an h_1 extension equals τ^k times a generator.

h1target: Value of an h_1 extension. An empty cell indicates that there is no h_1 extension.

h2info: Information about special behavior of an h_2 extension.

An integer k means that an h_2 extension equals τ^k times a generator.

h2target: Value of an h_2 extension. An empty cell indicates that there is no h_2 extension.

h3info: Information about special behavior of an h_3 extension.

An integer k means that an h_3 extension equals τ^k times a generator.

h3target: Value of an h_3 extension. An empty cell indicates that there is no h_3 extension.

REFERENCES

- [1] Daniel C. Isaksen, Guozhen Wang, and Zhouli Xu, *More stable stems*, preprint, available at [arXiv:2001.04511](https://arxiv.org/abs/2001.04511).
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