

SPOT

Interactive visual data analytics tool

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netherlands

eScience center

by SURF & NWO



What can you SPOT ?

What SPOT can do for you

- Visualize and interact with high dimensional data using a variety of linked charts
- Drag and drop, no need for any programming
- Load your own data, or connect to a database
- Store and share your sessions

Programming languages

- JavaScript
- HTML

Open source license

- Apache-2.0

Active development

- First commit in 2015/05
- Close to 1.0 release



How to compare and share high dimensional datasets?

PREPARED FOR SUBMISSION TO JHEP

A description of the Galactic Center excess in the Minimal Supersymmetric Standard Model

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Abstract: Observations with the Fermi Large Area Telescope (LAT) indicate an un-

PREPARED FOR SUBMISSION TO JCAP

Implications of the *Fermi*-LAT Pass 8 Galactic Center Excess on Supersymmetric Dark Matter

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Abstract. The *Fermi* Collaboration has recently updated their analysis of gamma rays from the center of the Galaxy. They reconfirm the presence of an unexplained emission feature which is most prominent in the region of 1 – 10 GeV, known as the Galactic Center GeV

hep-ph] 31 Mar 2015

v2 [hep-ph] 10 Jan 2018



SPOT - first visit

The screenshot shows a web browser window with the URL `spot.sciencecenter.nl`. The page title is "SPOT: interactive, fast facet browser". A central dialog box titled "Welcome to SPOT!" is displayed over the main content. The dialog contains the following text:

Welcome to SPOT!

This software is being developed by the [Netherlands eScience Center](#).

SPOT is a free and an open source software. The license of the SPOT is [Apache License Version 2.0](#).

For the online tutorial of SPOT, please check [this link](#).

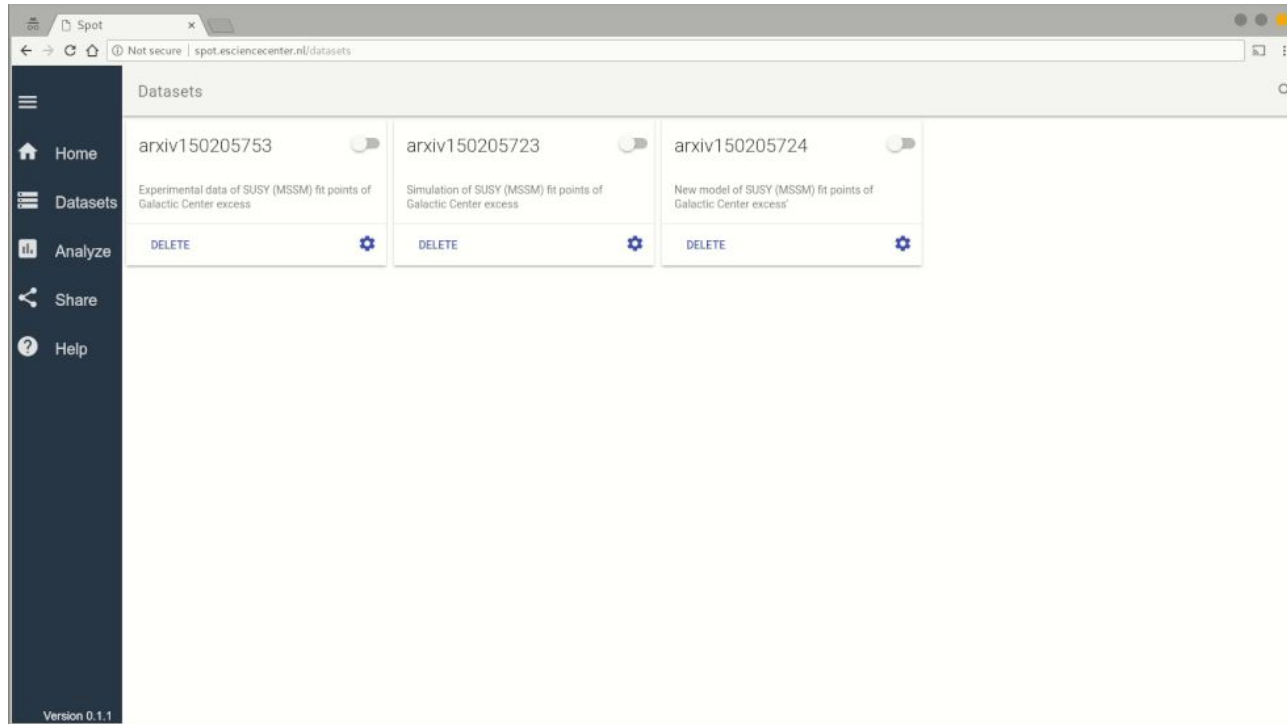
At the end of this introduction, you will have a toy data to play with.
This software works best in Google Chrome or Chromium. You can also download the desktop version of SPOT from [this link](#).

Buttons: Exit, ← Back, Next →

The background page features a dark theme with a starry space background. On the left is a navigation menu with items: Home, Datasets, Analyze, Share, and Help. On the right, there is an "Open Source" section listing features like "Permissive Open source Licence (Apache 2.0)", "Continuous Integration", "Documented (jsdoc) and tested (jasmine)", and "Generic tool to be useful in any scientific project". At the bottom, there are links for "Demo", "Tutorial", and "Project", and the version number "Version 0.1.1" is visible in the bottom left corner.



SPOT - datasets



The screenshot shows a web browser window with the URL `spot.sciencecenter.nl/datasets`. The page title is "Datasets". On the left, there is a dark blue sidebar with navigation links: Home, Datasets (selected), Analyze, Share, and Help. The main content area displays three dataset cards, each with a title, a description, and a "DELETE" button with a gear icon for settings.

Dataset ID	Description	Actions
arxiv150205753	Experimental data of SUSY (MSSM) fit points of Galactic Center excess	DELETE, Settings
arxiv150205723	Simulation of SUSY (MSSM) fit points of Galactic Center excess	DELETE, Settings
arxiv150205724	New model of SUSY (MSSM) fit points of Galactic Center excess	DELETE, Settings

Version 0.1.1



SPOT - create dashboard

The screenshot shows a web browser window with the URL `spot.esciencecenter.nl/analyze`. The page title is "Analyze" and it displays "1309 total, 1309 selected (100%)".

The interface includes a dark sidebar on the left with the following menu items: Home, Datasets, Analyze, Share, and Help. The "Analyze" menu item is currently selected.

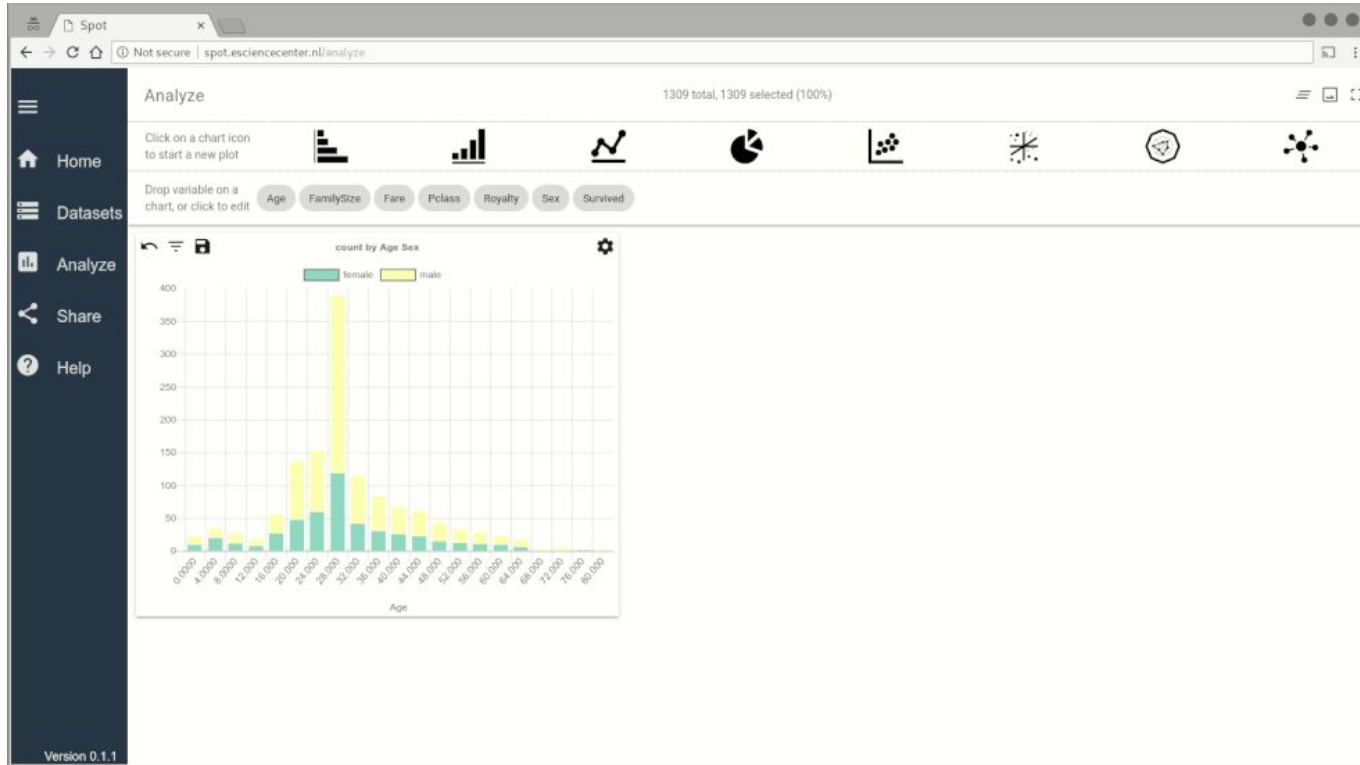
The main content area features a toolbar with the following elements:

- A text prompt: "Click on a chart icon to start a new plot"
- A row of eight chart icons: a bar chart, a grouped bar chart, a line chart, a pie chart, a scatter plot, a network graph, a funnel chart, and a radar chart.
- A text prompt: "Drop variable on a chart, or click to edit"
- A row of variable selection buttons: Age, FamilySize, Fare, Pclass, Royalty, Sex, and Survived.

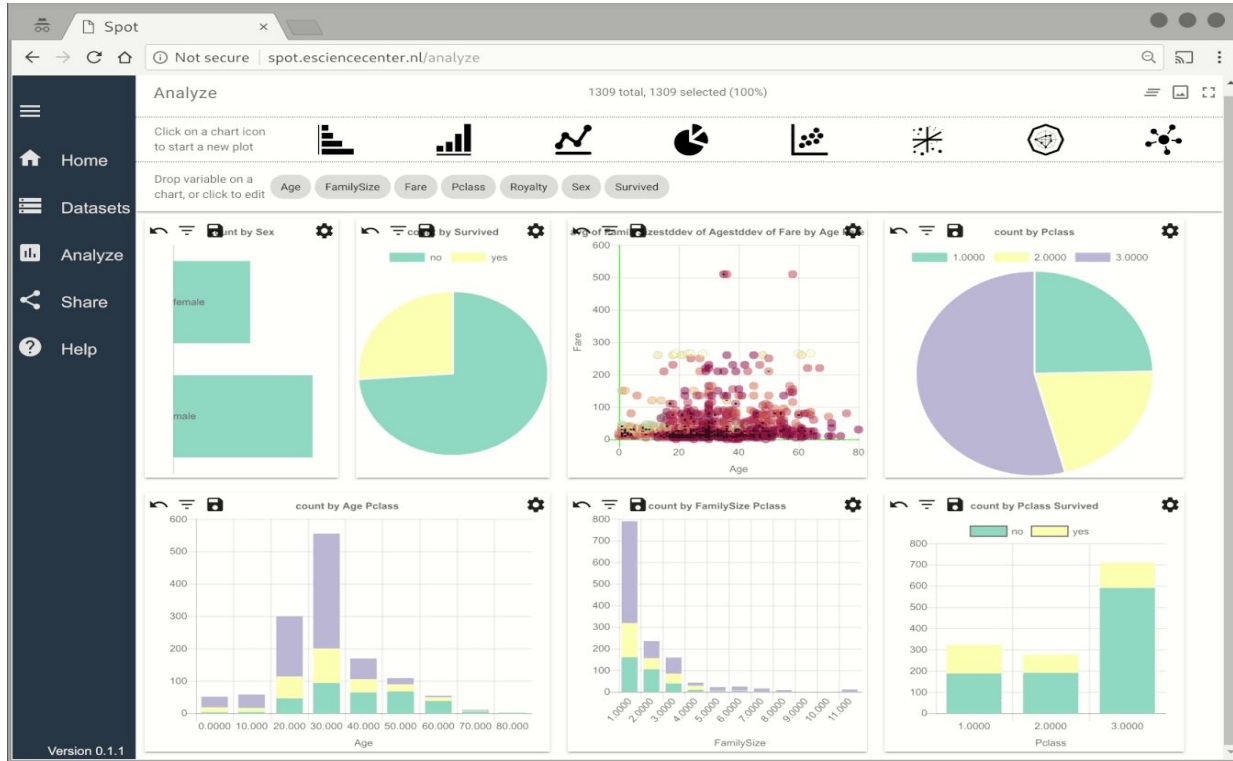
At the bottom left of the sidebar, the text "Version 0.1.1" is visible.



SPOT - add more plots



SPOT - explore



SPOT - share

The screenshot shows a web browser window with the address bar displaying "spot.esciencecenter.nl/share". The page title is "Share analysis". On the left, a dark sidebar contains navigation links: Home, Datasets, Analyze, Share, and Help. The main content area features five interactive buttons arranged in two rows. The top row includes "DOWNLOAD SESSION" (with a downward arrow icon), "UPLOAD SESSION" (with an upward arrow icon), and "DOWNLOAD DATA" (with a bar chart icon). The bottom row includes "SHARE SESSION" (with a cloud and upward arrow icon) and "GET SESSION" (with a cloud and downward arrow icon). The version number "Version 0.1.1" is visible in the bottom-left corner of the interface.



Getting started (tutorial, manual):

<https://nlesc.github.io/spot-tutorial/tutorial>

Developers (code & docs):

<https://github.com/NLeSC/spot>

Publications:

Scientific publication (iDARK, **in preparation**)

eScience publication (**to be submitted soon**)

Software DOI: 10.5281/zenodo.1003345

Presentations, Blogpost, more see the RSD:

<https://research-software.nl/software/spot>

Projects:

AA-ALERT

<http://frbcat.org>

Joeri van Leeuwen - ASTRON

Fast radio burst archive

iDARK

<http://idarksurvey.com>

Sascha Caron - Radboud University Nijmegen

The search for dark matter

Demo

<http://spot.esciencecenter.nl>

Titanic survival dataset



SPOT - finetune charts

