



The Challenges of a Public Data Release behind the scenes of SDSS DR13

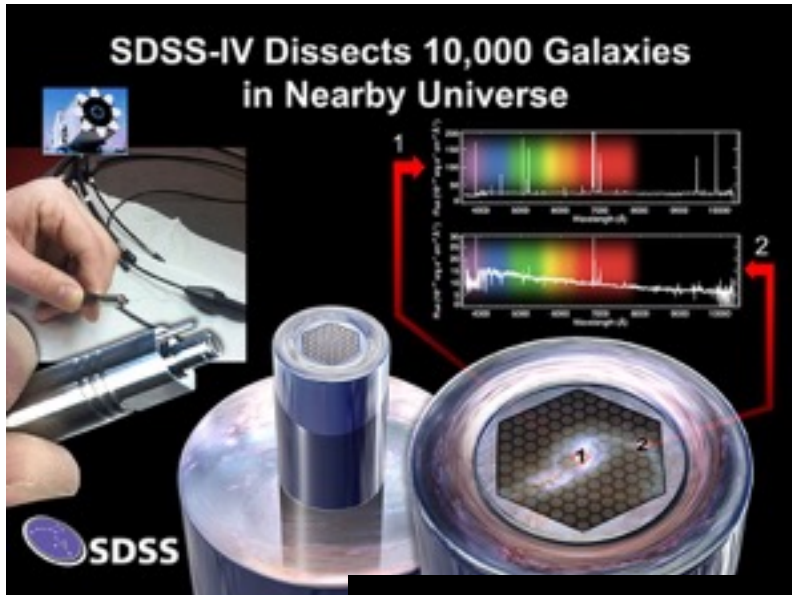
Anne-Marie Weijmans
University of St Andrews

Michael Blanton, Adam Bolton, Joel Brownstein,
Jordan Raddick, Ani Thakar & SDSS team

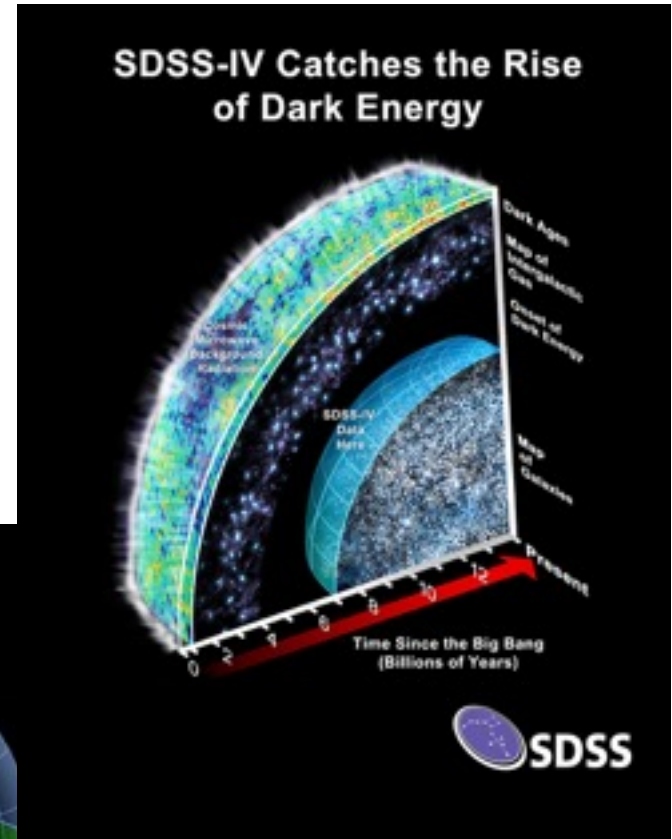
The Sloan Digital Sky Survey

- Started in 1998 with imaging survey
 - dedicated 2.5m Sloan telescope, APO
- Continued with SDSS-II, III and now SDSS-IV
 - add optical, infrared and integral-field spectra
 - soon: also observations from LCO
- More than 50 member institutes and groups
 - spanning 4 continents and almost all time zones
 - almost 1000 active scientists

Current surveys in SDSS-IV



MaNGA



eBOSS



APOGEE-2

The SDSS Data Team



Joel Brownstein (Utah)
Science Archive Scientist



Anne-Marie Weijmans (St Andrews)
Data Release Coordinator



Ani Thakar (JHU)
Catalogue Archive Scientist



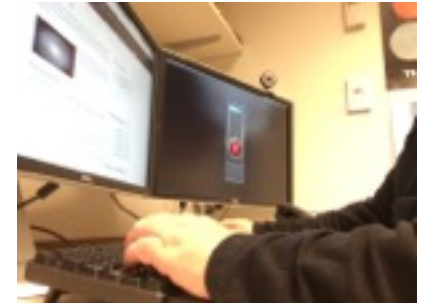
Adam Bolton (NOAO)
Senior Advisor



Jordan Raddick (JHU)
Public Information Officer



Bonnie Souter (JHU)
Web Developer



Benjamin Weaver (NOAO)
Helpdesk / SDSS-III Archivist

SDSS Public Data Releases: Why?

- To increase impact of our science
- To enable reproducibility of our results
- To increase the longevity of the data
- To enable new projects by non-SDSS scientists
 - and provide input for EPO projects!
- To keep ourselves honest
- Because that's how we roll

31 July 2016, 19:40 BST



Sloan Digital Sky @sdssurveys · Jul 31

SDSS would like to welcome the world to our new data, Data Release 13. See the Universe in a new light at sdss.org #DR13



41



23



31 July 2016, later that day



Sloan Digital Sky @sdssurveys · Aug 1

SDSS ti invita a vedere l'Universo da una nuova prospettiva. Dai un'occhiata ai nostri nuovi dati sul sito sdss.org #DR13



Sloan Digital Sky @sdssurveys · Jul 31

斯隆数字巡天 (SDSS) 欢迎全世界使用我们最新的观测数据探索宇宙 (sdss.org) #DR13



3



3



Sloan Digital Sky @sdssurveys · Jul 31

Byddai SDSS hoffi croesawu'r byd i ein data newydd. Gweler y Bydysawd mewn goleuni newydd ar sdss.org. #DR13



Sloan Digital Sky @sdssurveys · Jul 31

SDSS te invita a ver el Universo desde una nueva perspectiva. Encuentra nuestro más reciente conjunto de datos sdss.org #DR13



8



4



31 July 2016, later that day

```
import datetime
from universe import UniverseView
from astropy.coordinates import EarthLocation
from science.astronomy.surveys import SDSS
from science.energy import electromagneticspectrum as em
from universe.localgroup.milkyway.orionarm import Sol

sdss = SDSS()
earth = Sol.planets[2]

apo_observatory = EarthLocation(latitude="32d46m49s", longitude="-105d49m13s")
survey_footprint = sdss.footprint(release="DR13")
wavelengths = list()
wavelengths = wavelengths + [em.Optical(x) for x in ['u', 'g', 'r', 'i', 'z']]
wavelengths = wavelengths + sdss.instruments.boss_spectrograph.wavelengths
wavelengths = wavelengths + sdss.instruments.apogee_spectrograph.wavelengths

# technically, a lot of the light is pretty old
new_light = UniverseView(projection_origin=apo_observatory,
                        footprint=survey_footprint,
                        wavelengths=wavelengths)

release_date = datetime.strptime('31 July 2016', '%d %B %Y')

sdss.release(label="DR13", data=new_light, to=earth.people, time=release_date)

sdss.sleep(from=release_date, to=release_date+datetime.timedelta(days=1))
```


Start Early!

- DR13 scheduled for July 2016
 - we started prepping in October 2015
- Long process involving whole SDSS team
 - identify core data products for release
 - quality control of data products to be included in release
 - call for value-added catalogs
 - identify software to be posted in SVN depository
 - identify documentation needs
 - prepare and load data into SAS → science archive
 - prepare and load data into CAS → catalog archive
 - construct DR13 website, write DR13 paper
 - mirror archive servers, back-up on HPSS tapes
 - test servers, install metric evaluations
 - organise social media
 - all the things you forgot that pop up in the last month
 - actual data release

DR13 challenges

- First data release for SDSS-IV
 - new team
 - new surveys
 - new servers
- First time SDSS releases integral-field spectrographic data (MaNGA data cubes)
 - determine suitable data format
 - place into data and documentation hierarchy
 - completely new documentation and tutorials needed!

Documentation

- Data needs to be accessible, not just available
 - documentation is essential
 - each SDSS data product has a data model
- End-users need different types of documentation
 - astronomers, students, teachers, general public
 - provide tailored documentation and tutorials
- Writing documentation is a community effort
 - requires expertise of data, science and EPO teams
 - WordPress format allows for easy editing access
 - documentation can seem a bit boring...

DocuFeest!



Image Credit: Jennifer Johnson

DocuFeest!

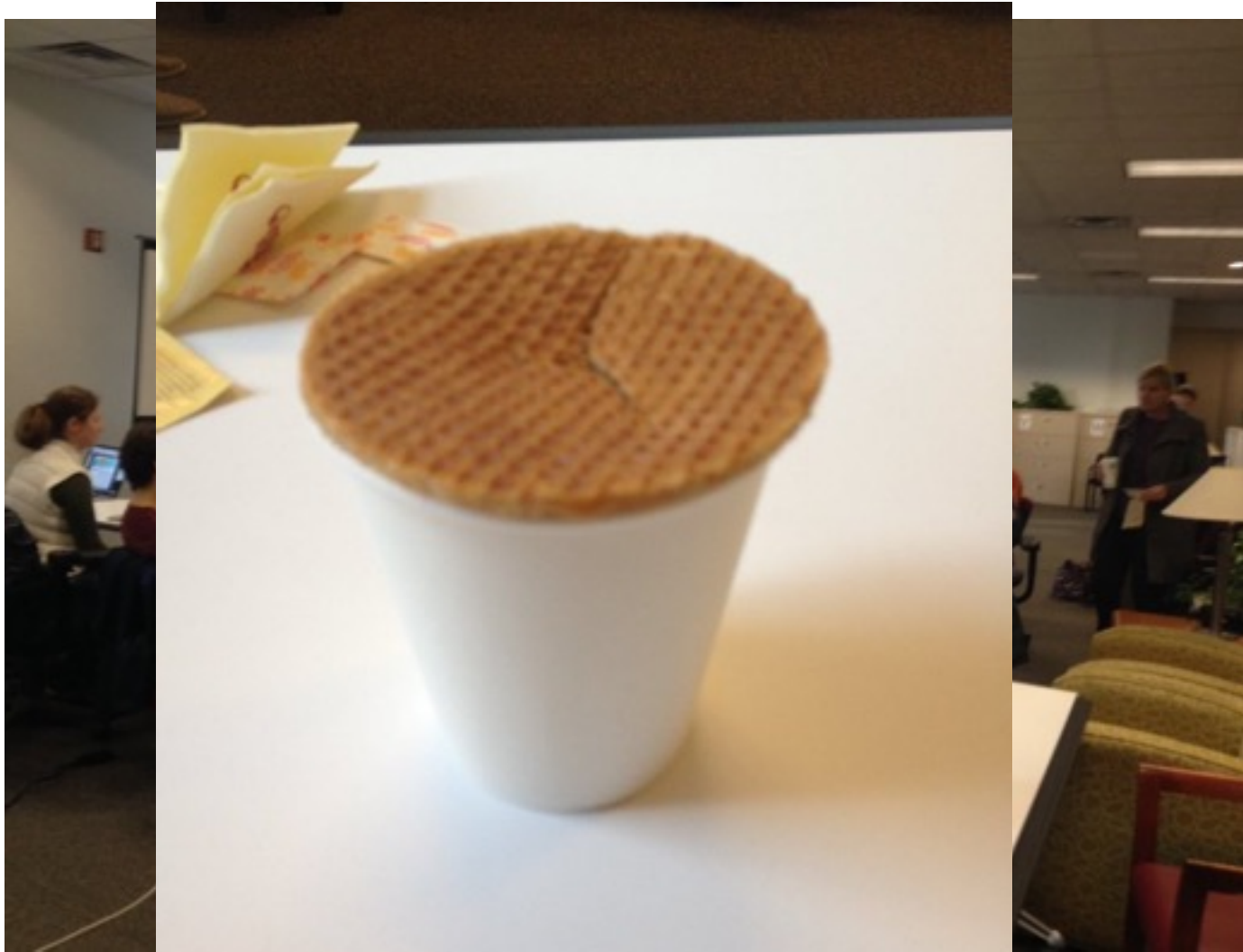


Image Credit: Jennifer .

DR13 webpage



Data Surveys Instruments Collaboration Results Education Future Contact

SDSS WWW SITE

Search

Datasets Imaging Data Optical Spectra APOGEE IR Spectra MaNGA IFU Spectra MARVELS Spectra Algorithms Help Tutorials

Data Release 13

Data Release 13 (DR13) is the first data release of the fourth phase of the Sloan Digital Sky Survey (SDSS-IV). DR13 contains SDSS observations through July 2015.

DR13 includes the following:

- ☆ Optical spectra of galaxies and quasars from the SDSS component Baryon Oscillation Spectroscopic Survey (BOSS), as part of the Sloan Extended Quasar, ELG, and LRG Survey (SEQUELS)
- ☆ Newly reduced optical spectra of galaxies from the SDSS component Baryon Oscillation Spectroscopic Survey (BOSS)
- ☆ Newly reduced stellar infrared spectra from the SDSS component Apache Point Observatory Galaxy Evolution Experiment (APOGEE)
- ☆ Updated stellar abundance determinations for additional elements from the SDSS component Apache Point Observatory Galaxy Evolution Experiment (APOGEE)
- ☆ Data cubes from integral field unit (IFU) spectroscopic observations of nearby galaxies from the new component survey Mapping Nearby Galaxies at APO (MaNGA)
- ☆ Reprocessed imaging from the SDSS legacy survey

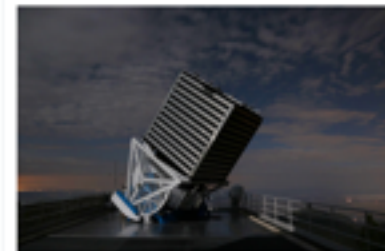
DR13 directly follows DR12. As always, SDSS data releases are cumulative, so DR13 includes all the sky coverage of prior releases. Data Release 12 is still available on this website ([DR12](#)), and prior data releases are available from [www.sdss3.org](#) (for DR8 through DR10) or [classic.sdss.org](#) (for DR1 through DR7).

DR13 Highlights

Data Access

What's New in DR13

Scope of DR13



The SDSS telescope at night
Image Credit: Patrick Galame

Finding the data

the [AVAILABLE 10015](#) page.

Data Access Sites

| Website | Purpose |
|---|---|
| www.sdss.org/dr13 | DR13 Documentation (this site) |
| dr13.sdss.org <small>Coming Soon</small> | Science Archive Server (SAS): interactive spectra and image mosaics |
| data.sdss.org/sas/dr13 | Direct download access to DR13 data files for experts |
| data.sdss.org/datamodel | Details of the SAS directory structure, file formats, and the contents of each file |
| skyserver.sdss.org/dr13 | SkyServer: Browser-based access to the Catalog Archive Server (CAS) database, with resources for learning SQL and projects to teach science |
| skyserver.sdss.org/casjobs | Flexible advanced SQL-based interface to the CAS, for all data releases |

How to find...

The sections below are organized by type of data. Each section includes a table that describes a common task you might perform with that type of data, along with a link to the best tool for that task.

If your question isn't addressed here, please look at the [Frequently Asked Questions](#) and/or [Tutorials](#) help pages.

If you are having difficulty connecting to any data server, please check the [status page](#) for announcements about planned outages.

[↑ Back to Top](#)

Science Archive Server (SAS)

- File system
- Download data with e.g. rsync, wget, globus

Index of /sas/dr13/

| File Name ↓ | File Size ↓ | Date ↓ |
|-------------------|-------------|-------------------|
| Parent directory/ | - | - |
| apo/ | - | 08-Apr-2016 03:13 |
| apogee/ | - | 01-Apr-2016 16:41 |
| casload/ | - | 30-Jun-2016 06:41 |
| eboss/ | - | 27-Apr-2016 13:21 |
| env/ | - | 28-Jul-2016 13:54 |
| manga/ | - | 22-Mar-2016 16:26 |
| marvels/ | - | 07-May-2015 10:53 |
| sdss/ | - | 27-Jul-2016 09:27 |

SDSS-IV Science Archive Server (SAS)

<https://dr13.sdss.org/sas/dr13/>

SkyServer and CASJobs

- Inspecting individual images/spectra
- Searches and SQL Queries
- Use CASJobs to retrieve data from SAS



FRANCO D. ALBARETTI^{1,2,3}, CARLOS ALLENDE-PRISTO^{1,2}, ANDRÉS ALMEIDA⁴, FRIEDRICH ANDERS⁵, SCOTT ANDERSON⁶,
BRETT H. ANDREWS⁷, ALFONSO ARAGÓN-SALAMANCA^{8,9}, MARIA ARGÜERO-FERNÁNDEZ^{10,11}, ERIC ARMENTA¹²,
ERIC AUGER¹³, VLADIMIR AVILA-REYES¹⁴, CARLOS BADENIS¹⁵, STEPHEN BARLEY¹⁶, BEATRICE BARRETT^{17,18},
KAT BARBER¹⁹, JORGE BARRERA-SALGADO²⁰, CURTIS BARTON²¹, SARAANI BAYL²², DOMINIC BATES²³,
GONTHIER BATTAGLIA²⁴, PAUL BAUMGARTEN²⁵, JULIAN BAIR²⁶, JULIAN BAUTISTA²⁷, TIMOTHY C. BEARD²⁸,
FRANCISCO BELFIORE^{29,30}, MATTHEW BERNHARD³¹, SARA BERTIN DE LIS³², JONATHAN C. BIRD³³,
DMITRY BELYUK^{34,35}, GUILLERMO A. BLANCO^{36,37}, MICHAEL BLANTON³⁸, MICHAEL BLOIS^{39,40}, ADAM S. BOLDT^{41,42},
J. BOHRA⁴³, JO BOVILL⁴⁴, WILLIAM NIELSEN BRANTY⁴⁵, JONATHAN BREKMAN⁴⁶, JOEL R. BROOKHUIS⁴⁷,
KEVIN BUNDY⁴⁸, ETIENNE BURTON⁴⁹, NICOLAS G. BUSCA⁵⁰, HUGO OLANO CAMACHO CHAVEZ^{51,52}, M. CANDI DAI⁵³,
MICHELLE CAPPILLARI⁵⁴, RICARDO CARRERA⁵⁵, YANTING CHEN⁵⁶, BRIAN CHENKHA⁵⁷, EDHONG CHENG⁵⁸,
CRISTINA CHIAFFIN⁵⁹, DAVID CHODURA⁶⁰, CHIA-HUN CHIUANG⁶¹, HAIYU CHUNG⁶², RAFAEL FERNANDO CIRIOLO^{63,64},
NICOLAS CLERC⁶⁵, ROGER E. COHEN⁶⁶, JULIA M. COMBERFORD⁶⁷, JORIAN COMPAGNON⁶⁸, MARIE-CLAUDIE COUSINS⁶⁹,
KEVIN COVEN⁷⁰, JEFFREY D. CRANE⁷¹, RUPERT CROFT⁷², KATIA CUNHA⁷³, LUIZ DA COSTA⁷⁴,
GABRIELE DA SILVA ELIA^{75,76}, JEREMY DARLING⁷⁷, JAMES W. DAVIDSON JR.⁷⁸, KYLE DAWSON⁷⁹, NATHAN DE LEE^{80,81},
ARIEL DE LA MACORRA⁸², STEPHAN DE LA TORRE⁸³, ALICE DECONTO MACHADO^{84,85}, TIMOTHÉE DELBAC⁸⁶,
ALEXANDER M. DIAMOND-STANIC⁸⁷, JOHN DONOH⁸⁸, JUAN JOSE DOWNES^{89,90}, NIV DROTH⁹¹,
HÉLON DU MAS DES BOUCHONS⁹², CHENG DU⁹³, TOM DWELLY⁹⁴, GABRIELLE EISELKE⁹⁵, ARTHUR EGENSHOF⁹⁶,
DANIEL J. EISENSTEIN⁹⁷, YVONNE P. ELWORTH^{98,99}, ERIC EMERLE¹⁰⁰, MICHAEL EMERLE^{101,102},
STEPHANE ENOCHET¹⁰³, MICHAEL L. EVANS¹⁰⁴, JENIS FALCÓN-BARRERO¹⁰⁵, XIAOMI FAN¹⁰⁶, GINEVRA FIORELLI¹⁰⁷,
EDMA FERNÁNDEZ-ALBA¹⁰⁸, J. G. FERNÁNDEZ-TRINIDAD¹⁰⁹, DIANE FIEUILLAT¹¹⁰, SCOTT W. FLAHERTY¹¹¹,
ANSELMO FONT-REBERA¹¹², GORDON FRECHLAD¹¹³, PETER FRINGARDY¹¹⁴, HUI FU¹¹⁵, YANG GAO (高杨)¹¹⁶,
D. A. GARCÍA-HERNÁNDEZ¹¹⁷, ANA E. GARCÍA PÉREZ¹¹⁸, RAFAEL A. GARCÍA¹¹⁹, R. GARCÍA-DÍAZ¹²⁰, PATRICK GAULME¹²¹,
JUNGLANG GE¹²², DOUGLAS GEBLER¹²³, HECTOR GE. MARIN¹²⁴, BRUCE GELLER¹²⁵, LEO GERARD¹²⁶,
DAVID GORDAN¹²⁷, YILDER GÓMEZ MARGUERITE GÓMEZ-PÉREZ¹²⁸, VIKTORIA GRABOWSKA^{129,130},
PAUL GREEN¹³¹, THOMAS GRUBB¹³², CATHERINE J. GRUBB¹³³, HONG GUO¹³⁴, JULIAN GUY¹³⁵, ALEX HADEN¹³⁶,
MARY HALL¹³⁷, PING HANSEN¹³⁸, R. E. HANLEY¹³⁹, STEN HANSEN¹⁴⁰, SUZANNE HANLEY¹⁴¹, CHRISTIAN R. HAVES¹⁴²,
FRID HANZ¹⁴³, SARKIS HANSEN¹⁴⁴, HECTOR HERNÁNDEZ TOLDO¹⁴⁵, SHIRLEY HO¹⁴⁶, DAVID W. HOGG¹⁴⁷,
KELLY HOLLEY-BOCKEMUELLER¹⁴⁸, JON A. HOLTEMAN¹⁴⁹, PARKER H. HOLZER¹⁵⁰, JIAN HU (胡健)¹⁵¹, DANIEL HUBER^{152,153},
TIMOTHY ALAN HUTCHINGS¹⁵⁴, HO SHONG HWANG¹⁵⁵, HÉCTOR J. IBARRA-MEERL¹⁵⁶, INSEI I. IVANO¹⁵⁷, KISHORNI IVORY¹⁵⁸,
KURT JAEKING¹⁵⁹, TREY W. JENSEN¹⁶⁰, JONNIFER A. JOHNSON^{161,162}, AMY JONES¹⁶³, ERIC JULIO¹⁶⁴, T. KALLINGER¹⁶⁵,
KAREN KIMMELT^{166,167}, DAVID KIRKBY¹⁶⁸, MARK KLAENE¹⁶⁹, JEAN-PAUL KNEIS¹⁷⁰, JUNA A. KOLLMEIER¹⁷¹, JUAN LACERDA¹⁷²,
RICHARD R. LANE¹⁷³, DUSTIN LANG¹⁷⁴, PIERRE LAURENT¹⁷⁵, DAVID R. LAM¹⁷⁶, JEAN-MARC LE GOFF¹⁷⁷,
ALEXIE LEAUTEAUD¹⁷⁸, CHENG LI¹⁷⁹, HAN LI¹⁸⁰, CHEN LI¹⁸¹, XU LI¹⁸², FU-HENG LIANG (梁富恒)¹⁸³, YU LIANG¹⁸⁴,
MARCON LIMA¹⁸⁵, LIHWAI LIN (林煥偉)¹⁸⁶, LIN LIN (林琳)¹⁸⁷, YEN-TING LIN (林衍廷)¹⁸⁸, DIAN LONG¹⁸⁹,
SARA LUCIFERELLO¹⁹⁰, NICOLAS MACDONALD¹⁹¹, CHELSEA L. MACLEOD¹⁹², J. TED MACKEWORTH¹⁹³, SUVRATHI MARRADHAN¹⁹⁴,
MARCO ANTONIO-GUERRA MATA¹⁹⁵, ROBERTO MAGLINO¹⁹⁶, STEVEN R. MAJEWSKI¹⁹⁷, OLGA MALANUSHEVICH^{198,199},
NICOLAS DALLUS MALLMANN²⁰⁰, ARIFUO MANCHADO^{201,202}, CLAUDIA MARATHON²⁰³, RUI MARQUES-CHAVES²⁰⁴,
INMA MARTÍNEZ VALPUESTA²⁰⁵, KAREN L. MASTERS²⁰⁶, SAVITA MATHUR²⁰⁷, IAN D. MCGREER²⁰⁸, ANDREA MERLOLO²⁰⁹,
MICHAEL H. MORRISFIELD²¹⁰, SARAOLIS MONEARON²¹¹, ANDRÉS MORA²¹², ANDREA MORGAN²¹³, IVAN MONTEN²¹⁴,
KARAN MSHVETSKIAN²¹⁵, ANTONIO D. MONTEIRO-DORTA²¹⁶, BENJAMIN MÖHR²¹⁷, DENNIS MORA²¹⁸, ADAM MYERS²¹⁹,
PHILIPPE NACH²²⁰, KIRPAL NANDIA²²¹, MELISSA NEWMAN²²², JEFFREY A. NEWMAN²²³, ROBERT C. NEUBER²²⁴,
DAVID L. NICHOLS²²⁵, CHRISTIAN NITZBERG²²⁶, JULIA O'CONNELL²²⁷, ANDREY ORSHVET²²⁸, NICHOLAS PAGELLA²²⁹,
NATHALIE PALANQUE-DOLANDELLA²³⁰, KAREN PAUL²³¹, JOHN PASEKID²³², DANIELLE PARKER²³³, JOEY A. PEACOCK²³⁴,
SEBASTIEN PERDAN²³⁵, MARCON PELLEGRINO-IBARRA²³⁶, SAMANTHA PENNY²³⁷, WILL J. PERICHAL²³⁸,
JEFFREY W. PERICHAL²³⁹, ISHAEL PEREZ-FUCON²⁴⁰, PATRICK PETITJEAN²⁴¹, MATTHEW PIERS²⁴²,
MARIO H. PINKONENKALE²⁴³, ALICE PRINCE²⁴⁴, FRANCISCO PRADA^{245,246}, ARBEEER PRASANN²⁴⁷, NATALIE PRICE-JONES²⁴⁸,
M. JORDAN RADDOCK²⁴⁹, MURDO RAIMAN²⁵⁰, ANAND RADHAKR²⁵¹, SANDRO BARBARA REINHOLD²⁵², A. M. REYNA²⁵³,
JAMES REID²⁵⁴, HANNAH REICHSTEIN²⁵⁵, JETHRO REID²⁵⁶, ROGERIO RIFFEL²⁵⁷, ROGERIO A. RIFFEL²⁵⁸,
HANS-WALTER RIX²⁵⁹, ANNE C. ROBIN²⁶⁰, CONSTANCE M. ROCKWELL²⁶¹, SERGIO RODRÍGUEZ TORRES²⁶²,
THOMAS S. RODRÍGUEZ^{263,264}, NATALIE ROE²⁶⁵, A. ROMAN LÓPEZ²⁶⁶, CARLOS ROMÁN-ZÚÑIGA²⁶⁷, ASHLEY J. ROSE²⁶⁸,
GRAZIANO ROSSI²⁶⁹, JOHN REAN²⁷⁰, ROHANA RUGGERI²⁷¹, JORGE C. RUIZ²⁷², SALVADOR SALAZAR-ALBORNOZ²⁷³,
MARIA SALVATO²⁷⁴, ARIEL G. SÁNCHEZ²⁷⁵, SEBASTIÁN F. SÁNCHEZ²⁷⁶, JOSÉ R. SÁNCHEZ-GALLEGO^{277,278},
BASILIO XAVIER SANTALHO²⁷⁹, RICARDO SCHIRANO²⁸⁰, JADERSON S. SCHIRANO²⁸¹, EDESSA SCHLAFY²⁸²,
DAVID J. SCHLEGEL²⁸³, DONALD P. SCHNEIDER²⁸⁴, RALPH SCHNEIDER²⁸⁵, MATTHEW SCHULTZ²⁸⁶, ARIEL SCHWOF²⁸⁷,
HEE-JONG SEO²⁸⁸, ALEJO SERNIGALLA²⁸⁹, IBRAHIM SHAK²⁹⁰, ZHENGTI SHAO²⁹¹, MATTHEW SHETHON²⁹², MICHAEL SHELL²⁹³,
VICTOR SILVA ARIAS²⁹⁴, M. F. SKOTCHDOPOLE²⁹⁵, ANNE SLOAN²⁹⁶, MICHAEL SMITH²⁹⁷, VIKTOR V. SMITH²⁹⁸,
JONATHAN STERN²⁹⁹, GARRETT SCHUCH³⁰⁰, DIOGO SOUTO³⁰¹, DAVID V. STERN³⁰², KERNAN G. STINECK³⁰³,
MATTHEW STINNETT³⁰⁴, DENNIS STELLATO³⁰⁵, THOMAS STORCHI-BERGMANN³⁰⁶, MICHAEL A. STRAUSS³⁰⁷,
ALINA STREIBLYANSKA³⁰⁸, GUY S. STRINGFELLOW³⁰⁹, GONARDO SUÁREZ³¹⁰, JING SUN³¹¹, MANUCHER TAGHIZADEH-POOT³¹²,
BAUTIAN TANG³¹³, CHARLIE TAO³¹⁴, JANEE TAYAN³¹⁵, MIYA THOMAS³¹⁶, DANIEL THOMAS³¹⁷, JEREMY TINKER³¹⁸,
RITA TOREIRO³¹⁹, CHRISTY TREMONTI³²⁰, NICOLAS TROUP³²¹, JONATHAN H. TRUMP^{322,323}, EDUARDO UNDA-SANZANA³²⁴,
O. VALENTELLA³²⁵, REMCO VAN DEN BOSCH³²⁶, MARIANA VARGAS-MAGALHAES³²⁷, JOSÉ ALBERTO VÁZQUEZ³²⁸

DR13 data paper

- Describes all data that is part of DR13
- 338 authors
- <https://arxiv.org/abs/1608.02013>
- Additional technical papers:
 - www.sdss.org/science/technical_publications

SANDRO VILLANOVA³²⁹, M. VIVIER³³⁰, NICOLE VOGT³³¹, DAVID WARR^{332,333}, RENE WALTERSDORF³³⁴, YUTING WANG³³⁵,
ENCI WANG³³⁶, BENJAMIN ALAN WEAVER³³⁷, ANNE-MARIE WEIGAND³³⁸, DAVID H. WEINGERG^{339,340}, KYLE B. WESTFALL³⁴¹,
DAVID G. WHIRLAN³⁴², ERIC WILCOTY³⁴³, VIVIANNE WILD³⁴⁴, ROB A. WILLIAMS³⁴⁵, JOHN WILSON³⁴⁶, W. M. WOOD-VASEY³⁴⁷,
DOMENIKA WYLERALEK³⁴⁸, TING XIAO (肖婷)³⁴⁹, HENSON YAN³⁵⁰, MENG YANG³⁵¹, JASON E. YANBAK^{352,353},
CHRISTOPHE YELCH³⁵⁴, FANG-TING YUAN³⁵⁵, NAIRA ZAKARSKA³⁵⁶, OLGA ZAMORA³⁵⁷, GAI ZANOWSKI³⁵⁸, KAI ZHANG³⁵⁹,
CHENG ZHANG³⁶⁰, GONG-BO ZHANG³⁶¹, ZHENG ZHANG³⁶², ZHENG ZHANG³⁶³, ZHI-MAN ZHOU³⁶⁴, GUANGTUN ZHU^{365,366},
JOEL C. ZUCK³⁶⁷, HU ZOU³⁶⁸

Announcing DR13

- Social media
 - twitter, facebook, blog
 - multi-lingual, with help from volunteers in team
 - coordinate beforehand
- Mailing lists



@sdssurveys

SDSS THIRTEENTH DATA RELEASE

JULY 31, 2016 / ZHENG ZHENG

This post is now in four languages: English, Chinese, Spanish and Portuguese! It is originally written by Anne-Marie Weijmans in English and translated by Zheng Zheng (to Chinese) , Andres Meza (to Spanish) and Ricardo Ogando (to Portuguese).

SDSS DR13 blog post

<http://blog.sdss.org/2016/07/31/sdss-thirteenth-data-release-2/>



DR13: two months later

- Monitoring data usage
 - over 1.4 million DR13 SQL queries on SkyServer
 - total of 17,000 GB retrieved from SkyServer
- Monitoring help desk requests
- First paper based on public MaNGA data appeared five days after DR13

SDSS Public Data Releases so far

- Accessible data increases impact of survey!
 - more than 7000 papers based on SDSS data
 - 30% of US community reports using SDSS data
 - resource for teachers and general public
- DR1 was in 2003, we're now at DR13
 - 267 TB available through SDSS servers
- Large effort from data, science and EPO teams
 - data reduction, analysis and vetting
 - value added catalogues (VACs)
 - software development
 - documentation!!! (including data models, tutorials)

Future Data Releases

- We're already working on DR14!
 - will contain new data formats
- Documentation is a priority
 - developing tutorials for new data formats
 - enable development of new EPO activities
- Development of web apps and tools
 - web app for DR13 available soon
 - integration with Python Notebook in SciServer (Jordan Raddick, demo booth 6)
 - exploring MaNGA data: poster 2.6 by Brian Cherinka

Conclusions

- Public data releases are *hard work*
 - keeping track of data, catalogues, etc
 - ensuring data and documentation quality
 - providing tutorials, examples, etc. for all audiences
- Public data releases are *worthwhile*
 - increasing impact of survey
 - allowing for more science
 - input for EPO projects → Voyages (voyages.sdss.org)
- Public data releases are *team work!!!*