

APOD Data Release of Social Network Footprint for 2015

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Abstract

Astronomy Picture of the Day (APOD) data for 2015 are being made freely available for download and analysis. The data include page view statistics for the main NASA APOD website at <https://apod.nasa.gov>, as well as for APOD's social media sites on Facebook, Instagram, Google Plus, and Twitter. General APOD-specific demographic information for each site is included. Popularity statistics that have been archived including Page Views, Likes, Shares, Hearts, and Retweets. The downloadable Excel-type spreadsheet also includes the APOD title and (unlinked) explanation. This data are released not to highlight APOD's popularity but to encourage analyses, with potential examples involving which astronomy topics trend the best and whether popularity is social group dependent.

Do you like to analyze data?

Please analyze APOD access data! You do not have to collaborate with APOD.

- What data is freely available?
 - Likes, page views, shares, text for 2015
 - Includes NASA, Facebook, Twitter, Instagram, Google Plus
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- Why would I do this?
 - To study the public's interest in astronomy imagery
 - To study the public's relative utilization of internet platforms

What types of questions might this data address?

Images: Potentially answerable queries include:

- Do different groups of people prefer the same images?
- What types of images are most popular (galaxies, nebula, etc.)?
- Does image type preference change with user age?
 - This assumes different demographics for different social platforms
 - Example: Are galaxies more popular with teenagers than others?

What types of questions might this data address?

Social Media: Potentially answerable queries include:

- Which social media platforms are becoming relatively more popular?
- Are space images in general becoming more or less popular?
- Which platform popularities are most text dependent?

What types of questions might this data address?

Text: Potentially answerable queries include:

- Does starting the explanation with a question increase popularity?
 - Do long explanations depress popularity?
 - Do the number of links affect popularity?
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- Please think up your own!

Current APOD Popularity

- Facebook: 246K Likes; Median Age: 25-34
 - Lead administrators: Paul Connelly & Alice Allen
- Google Plus: 1.2M Followers; Median Age: 25-34
 - Lead administrator: Ralf Haring
- NASA GSFC: ~900K Page Viewers; median age 50-59 (9/2012 data)
 - Lead NASA Contacts: Robert Nemiroff & Jerry Bonnell
- Instagram: 164K Followers; Median age: 18-29
 - Lead administrator: Sydney Petz
- Twitter: 1.11M Followers; Median age: 18-29
 - Lead administrator: Stuart Lowe

Some Age Data taken from: <http://www.pewinternet.org/2015/08/19/the-demographics-of-social-media-users/>

Popularity Numbers recorded on 2016 December 26

Relative Popularity of APOD within NASA

Data from Alexa.com via Wolfram Alpha

Web statistics for all of nasa.gov:

Hi

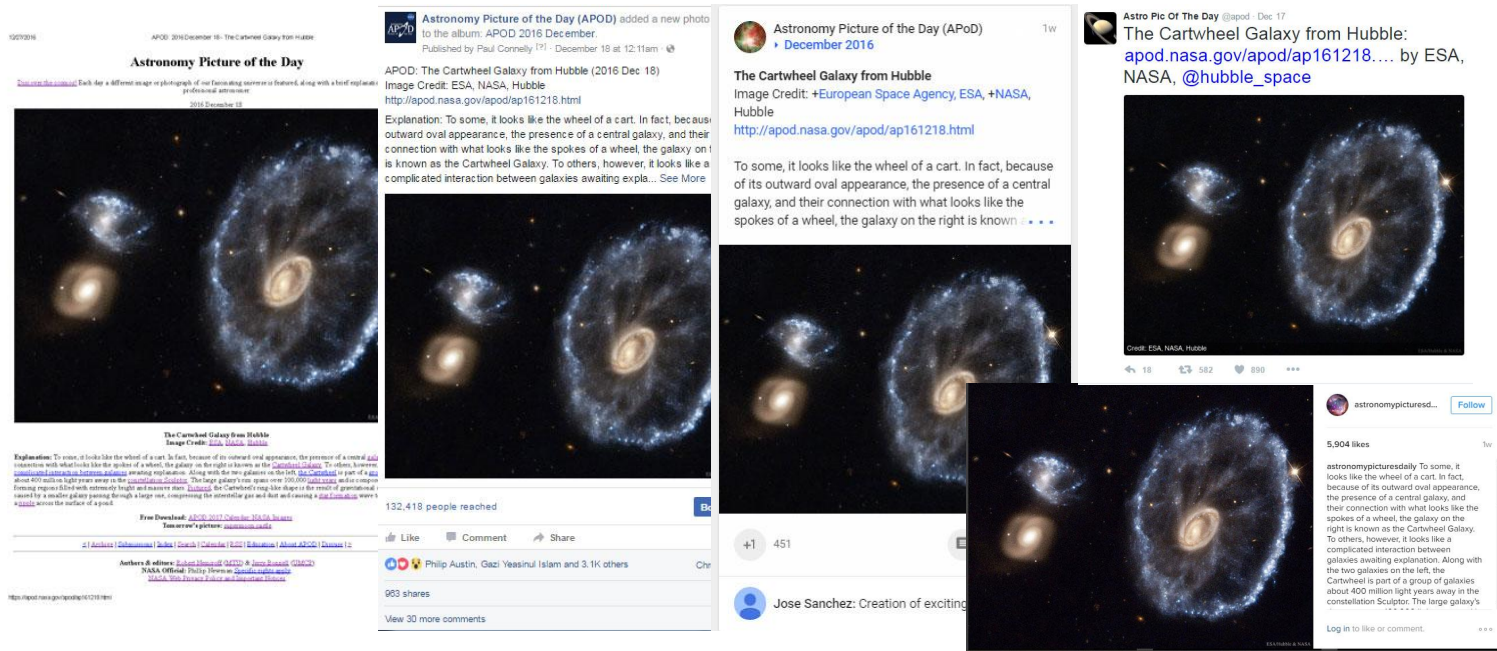
daily page views	≈ 10 million hits/day (hits per day) (based on Alexa estimates, as of December 5, 2016)
daily visitors	≈ 4 million visits/day (visits per day) (based on Alexa estimates, as of December 5, 2016)
site rank	≈ 918 th

(based on Alexa estimates, as of
December 5, 2016, and assuming 3.577 billion global internet users)

subdomain	daily visitors	fraction
nasa.gov	1 514 000	32.07%
apod.nasa.gov	469 800	9.95%
jpl.nasa.gov	458 200	9.71%
gsfc.nasa.gov	372 200	7.88%
earthobservatory.nasa.gov	187 500	3.97%
grc.nasa.gov	152 500	3.23%
climate.nasa.gov	133 800	2.83%
ntrs.nasa.gov	118 600	2.51%
solarsystem.nasa.gov	102 300	2.17%
spaceplace.nasa.gov	93 200	1.97%
jsc.nasa.gov	80 000	1.69%
mars.nasa.gov	75 600	1.6%
nascom.nasa.gov	74 000	1.57%
nasasearch.nasa.gov	68 900	1.46%
science.nasa.gov	66 900	1.42%
earthdata.nasa.gov	65 300	1.38%

Example Day of APOD Across Platforms

APOD screenshots from NASA, Facebook, G+, Twitter, & Instagram



Example Month of Data: 2015 January: Basic

	A	B	C	D	E	F	G	I
1		Instagram	Facebook	Facebook	Twitter (Total)	Google Plus	NASA log files	
2	Metric	Hearts	Likes	Post Message	Likes	"+1"s	astropix+ap15MMD0	
3	1/1/2015		1059	APOD: Vela Supernova Remnant (2015 Jan 01)	172	461	419728	
4	1/2/2015		1376	APOD: At the Heart of Orion (2015 Jan 02)	217	539	483486	
5	1/3/2015		438	APOD: Apollo 17: A Stereo View from Luna	170	247	464607	
6	1/4/2015		3514	APOD: Crescent Rhea Occults Crescent Sa	300	507	465347	
7	1/5/2015		1079	APOD: A Fox Fur, a Unicorn, and a Christm	136	403	522844	
8	1/6/2015		1214	APOD: 100 Million Stars in the Andromed	421	499	491579	
9	1/7/2015	909	1972	APOD: In the Arms of NGC 1097 (2015 Jan	839	660	417844	
10	1/8/2015	727	1508	APOD: Hubble 25th Anniversary: Pillars o	184	500	484908	
11	1/9/2015	596	3040	APOD: Stars and Dust in Corona Australis	125	892	498795	
12	1/10/2015		1057	APOD: The Windmill's Moon (2015 Jan 10)	154	633	436347	
13	1/11/2015		1244	APOD: Cataclysmic Dawn (2015 Jan 11) II	141	591	460182	
14	1/12/2015		439	APOD: Super Planet Crash (2015 Jan 12) C	178	74	1437312	
15	1/13/2015	595	2812	APOD: The Soap Bubble Nebula (2015 Jan	198	1384	518810	
16	1/14/2015		1260	APOD: The Hunter, the Bull, and Lovejoy (129	351	540427	
17	1/15/2015	568	1162	APOD: Venus and Mercury at Sunset (201	184	358	517645	
18	1/16/2015		655	APOD: Huygens Lands on Titan (2015 Jan	392	269	477934	
19	1/17/2015	704	3182	APOD: Comet Lovejoy's Tail (2015 Jan 17)	215	613	430336	
20	1/18/2015	545	1425	APOD: The Galactic Core in Infrared (2015	371	588	430583	
21	1/19/2015	746	NOT		184	630	481047	
22	1/20/2015		398	APOD: Approaching Asteroid Ceres (2015	256	317	537546	
23	1/21/2015	666	3022	APOD: The Complex Ion Tail of Comet Lov	168	871	523742	
24	1/22/2015		1959	APOD: Launch to Lovejoy (2015 Jan 22) Im	175	772	513836	
25	1/23/2015		400	APOD: Interior View (2015 Jan 23) Image	192	268	494123	
26	1/24/2015		1887	APOD: Light from Cygnus A (2015 Jan 24) I	579	427	468943	
27	1/25/2015		1898	APOD: A Twisted Solar Eruptive Prominer	465	365	480607	
28	1/26/2015	953	2393	APOD: The Milky Way over the Seven Stro	215	1034	524134	
29	1/27/2015		2315	APOD: Our Galaxy's Magnetic Field from F	154	534	493662	
30	1/28/2015	689	2123	APOD: Comet Lovejoy in a Winter Sky (20	539	597	519704	
31	1/29/2015	485	1077	APOD: Close Encounter with M44 (2015 Ja	100	316	487613	
32	1/30/2015		856	APOD: A Night at Poker Flat (2015 Jan 30)	302	392	470607	
33	1/31/2015		1171	APOD: Yellow Balls in W33 (2015 Jan 31) I	522	542	403917	
34	2/1/2015	647	2565	APOD: NGC 4676: When Mice Collide (20	685	870	420286	

Data Release: Two Files

There are two Excel spreadsheet files in this 2015 data release

- Basic release file
 - Includes: Facebook Likes, Facebook Text,
 - Instagram Hearts, G+ +1s, NASA Page-views & Twitter Likes
 - Download the file(s) with these QR codes:
 - Alternatively, send email to nemiroff@mtu.edu
 -
- Full release file also includes
 - Facebook: Shares
 - Twitter: Retweets, URL Clicks
 - G+: Comments (number), Shares
 - NASA Log Files: Views to [astropix.html](#), Views to [ap15YYMMDD.html](#)
 - All Files: No personal or IP information is ever provided



Interested in APOD? Town Meeting Saturday 2 pm

- Session 421: Astronomy Picture of the Day: Creative Uses in the Classroom & Beyond
 - SATURDAY, JANUARY 07, 2017
 - 2:00 PM - 3:30 PM; Grapevine 2
 - Anyone can attend
- Topics include
 - Can My Image Appear on APOD?: How APOD Really Works
 - APOD Images in the Classroom: News and contemporary
 - Teaching Astronomy with Podcasts of the APOD
 - Example Release: APOD and LIGO
 - How to Spot Fake Astronomy Images (and some that have appeared on APOD)
 - Beyond APOD