"This is Why We Play":
Characterizing Online Fan Communities of the NBA Teams

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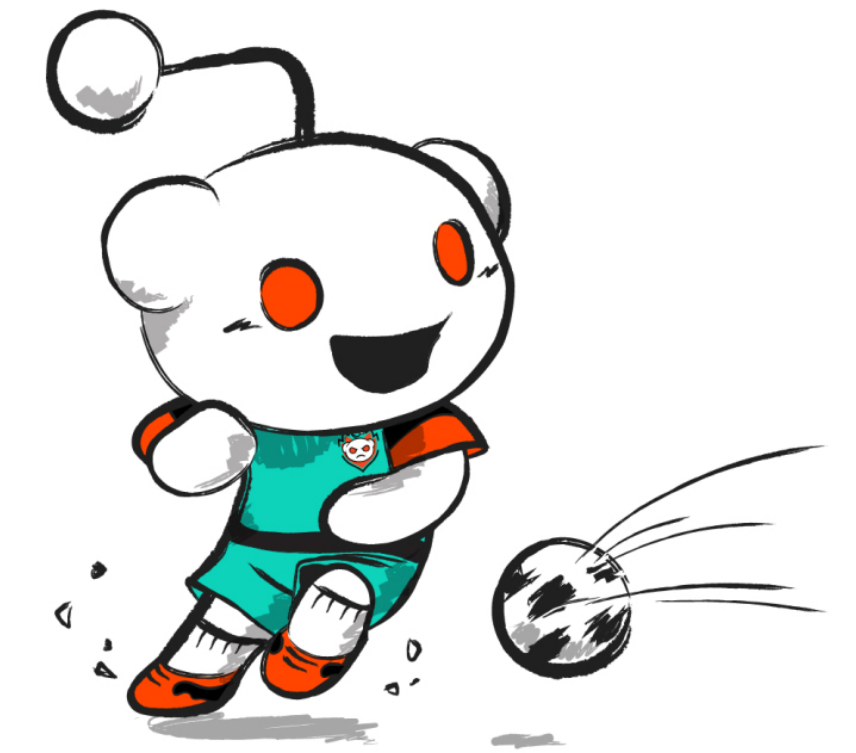jasondarkblue.com

Online communities are tightly connected with offline events

politics

movie

sports

Why Sports?

Sports is an indispensable component of modern life.
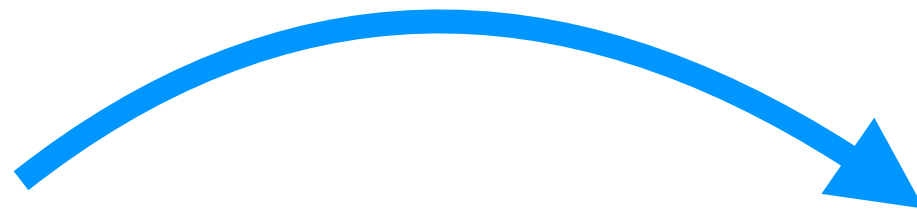

150 million viewers

$5 million/30 seconds

Why Sports?

Sports fans are driven by the team performance, and sometimes very emotional.

Celebration

Riot

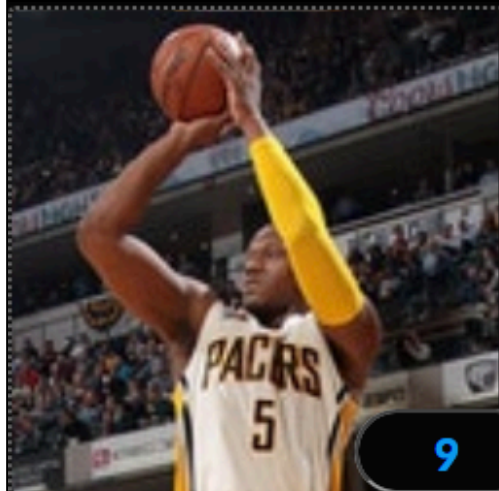# Such Excitement Extends to Online Fan Communities

Spurs 129 — Final — 81 Suns

Left column (/r/suns posts)

Book was made for TV.
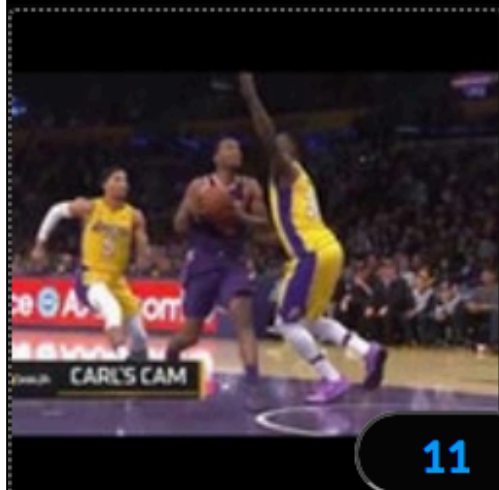8 months ago by **abeLJosh** to **/r/suns**
2

Hmmmm...the NAZ Suns just claimed Lavoy Allen. Is there a move coming?
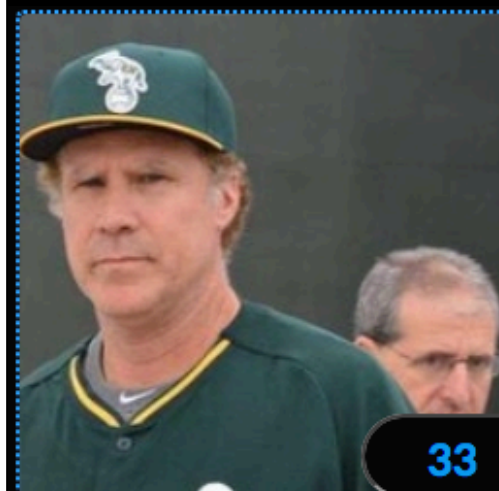8 months ago by **ORANG_DRAGIC** to **/r/suns**
9

T.J. Warren Head Hits the Court Hard after Falling / Injury / Lakers vs Suns
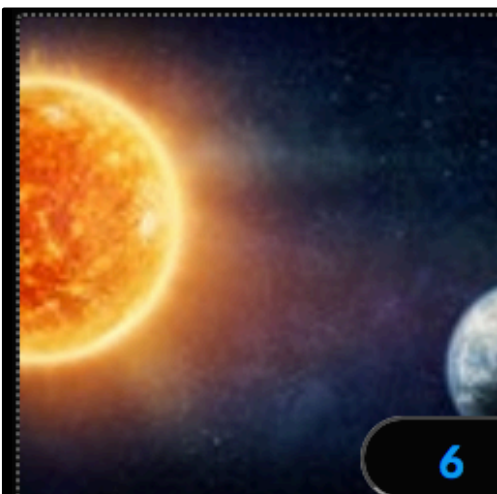8 months ago by **soccerfan159072** to **/r/suns**
11

[sbordow] Ryan McDonough is working the phones but hearing it's pretty quiet on the Suns' trade front with 48 hours to go before the deadline.
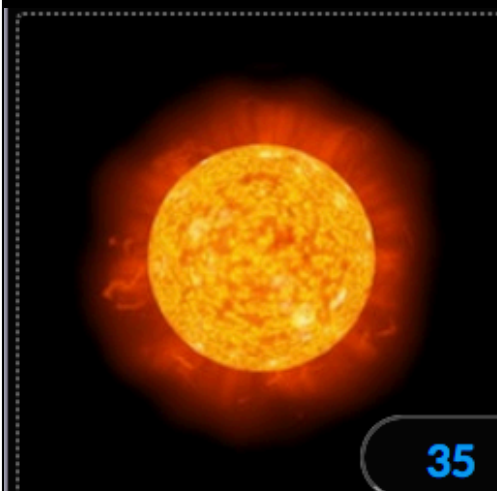8 months ago by **Slow_Jamz_** to **/r/suns**
33

Right column (/r/suns posts)

Fun Sun Fact: A million Earths could fit inside the Sun!
8 months ago by **CCCPironCurtain** to **/r/suns**
6

Did you know, the Sun contains 99.86% of all the mass in the solar system?
8 months ago by **walrus04** to **/r/suns**
35
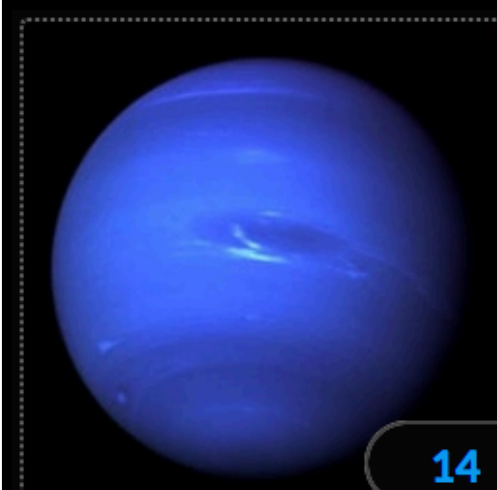
Hey guys, fan from a sun in the Andromeda Galaxy here. Would you guys be interested in a trade for your up and coming planet Neptune in exchange for our next formed planet and a comet?
8 months ago by **ZedionUltra8** to **/r/suns**
14

TIL some suns can burn up to 10 million Kelvin
8 months ago by **06_April** to **/r/suns**
13

Overview

- NBA fan communities on Reddit

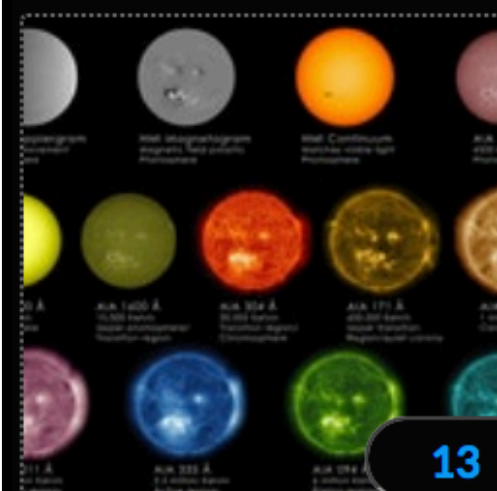- Team performance

Research Questions

- How does team performance in a single game affect associated fan activity?

- How does team performance in a complete season influence fan loyalty?

- How do fan communities of top and bottom teams talk differently?

Datasets

Reddit NBA communities:	NBA Context info:
• /r/NBA and 30 team subs	• Elo rating (538)
• 0.5M users, 1.5M posts, and 43M comments	• Team and player stats (Basketball-Reference)
• Season 2014 - 2017	• Market value (Forbes)

Jason Baumgartner, https://pushshift.io

User activity is highly connected with the structure of the NBA season
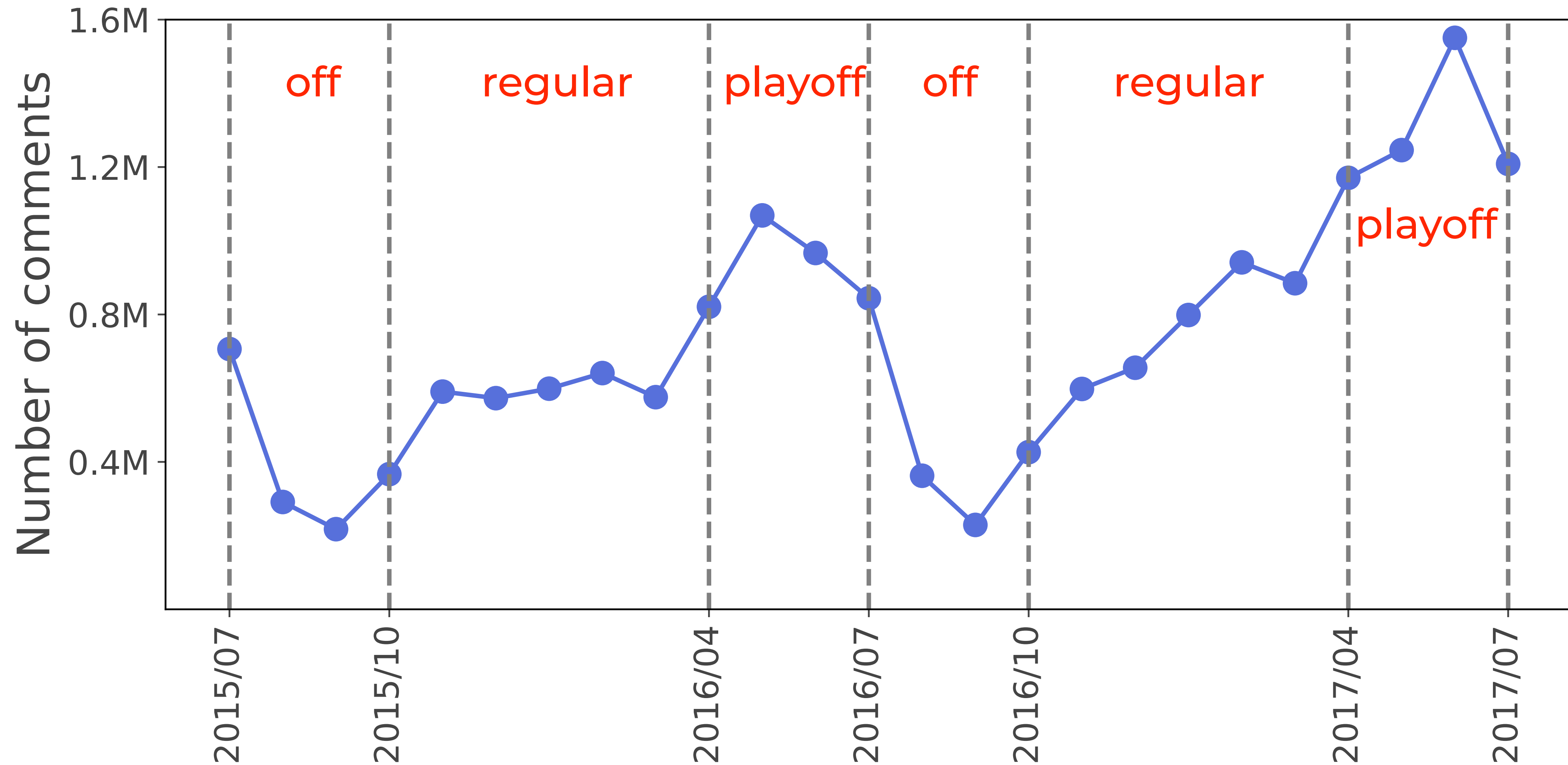
Most discussed topics

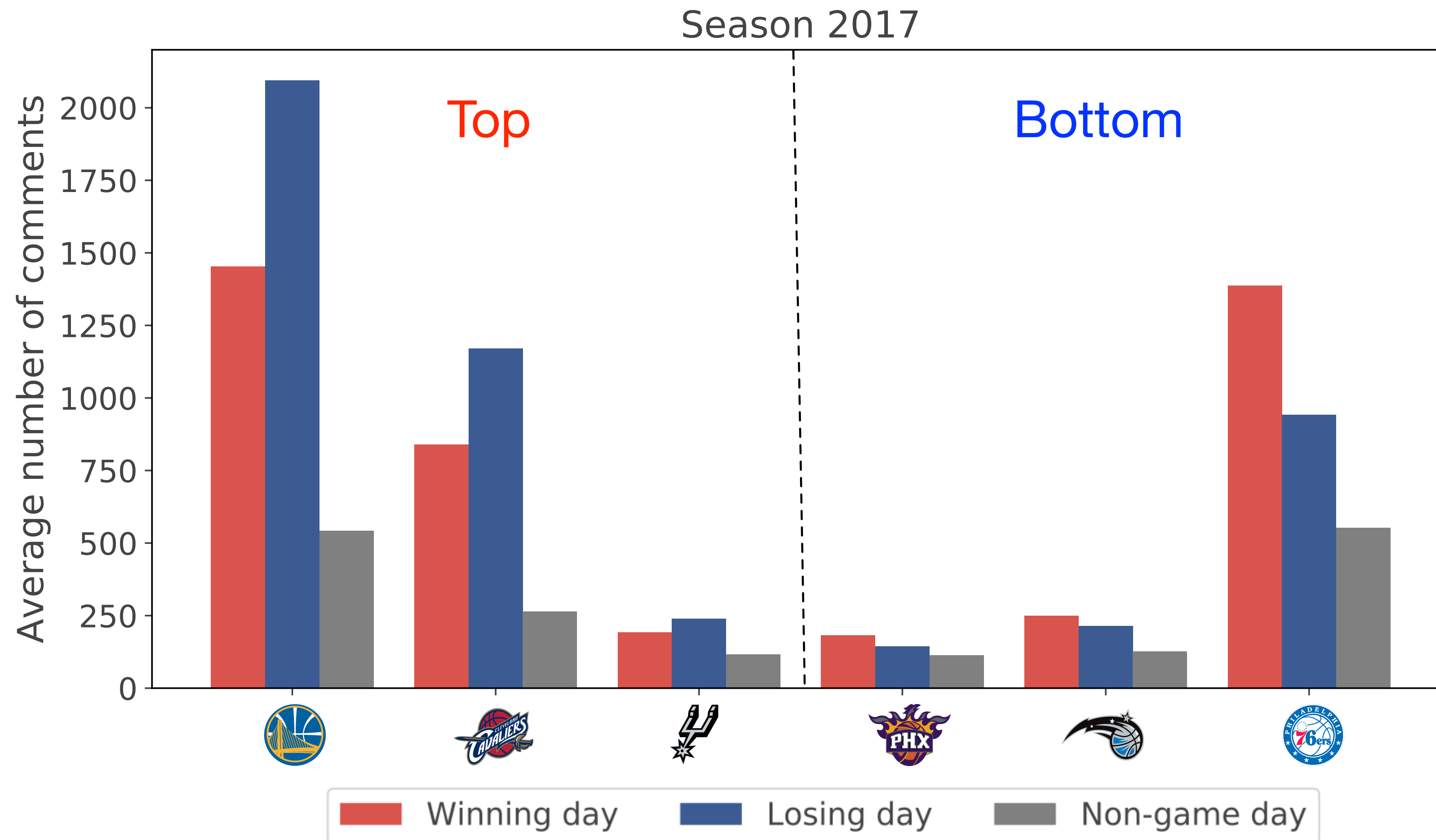| Top-5 topics	Top words
"personal opinion"	opinion, fact, reason, agree, understand
"game strategy"	defense, offense, defender, defensive, shooting
"season prospects"	final, playoff, series, won, championship
"future"	pick, trade, star, top, chance
"game stats"	top, number, league, stats, map

- **Game performance and fan activity**

- Season performance and fan loyalty

- Season performance and discussion topics

Top team fans active after losses, bottom team fans active after wins

	Winning	Top team Win	Top team lose	Bottom team win	Bottom team lose
#Comments in game thread	0.003**	-0.006***	0.006***	0.007***	-0.011***

Controlled factors: market value, average age, # star players, average offense and defense points, # turnovers

Top team fans active after losses, bottom team fans active after wins

Season 2017

Top   Bottom

Average number of comments

2000
1750
1500
1250
1000
750
500
250
0

Winning day   Losing day   Non-game day

'Surprise' may play a considerable factor

- **Top teams**, Avg. win percentage: **69%**

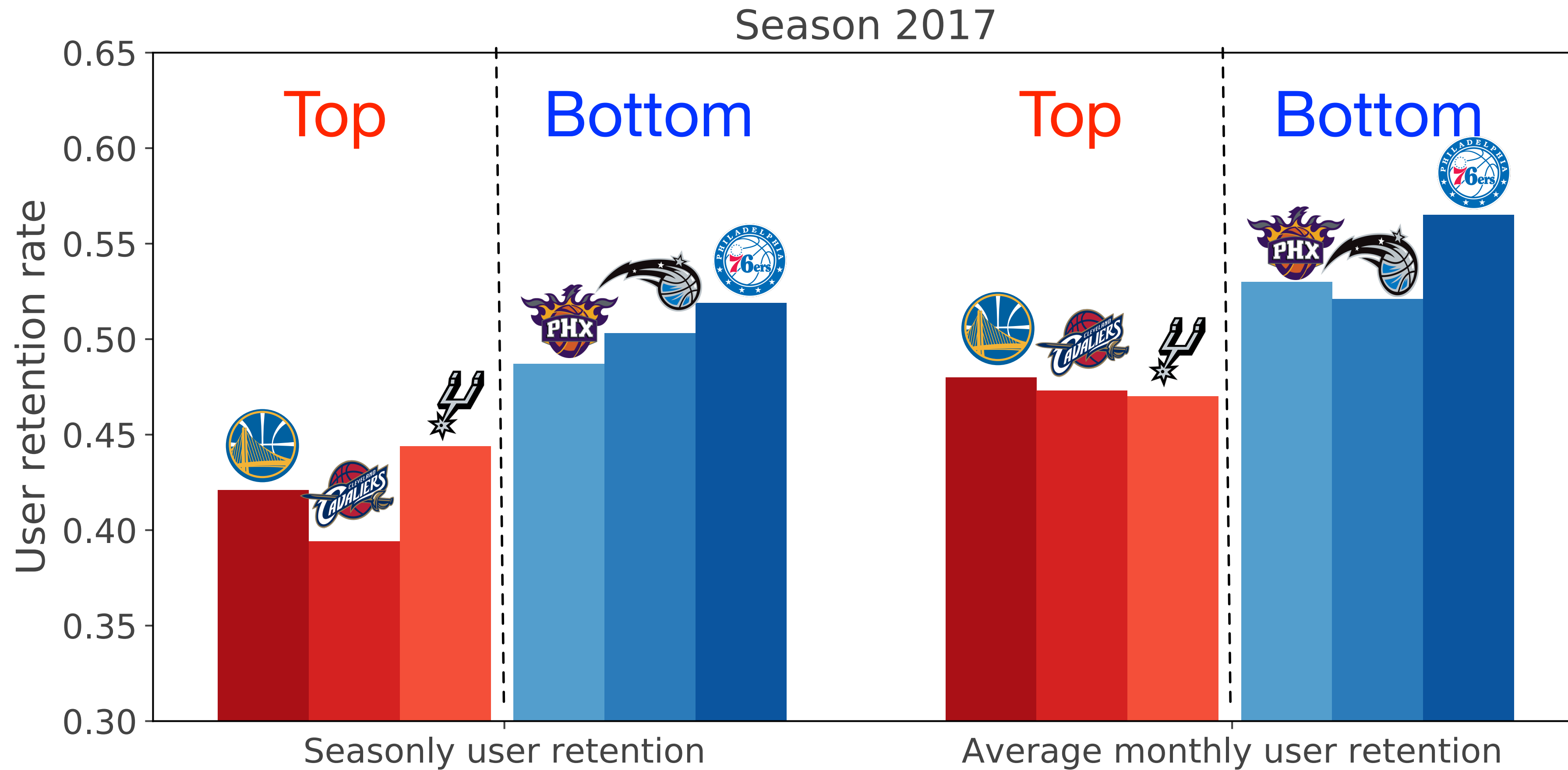- **Bottom teams** Avg. win percentage: **31%**

- Game performance and fan activity

- **Season performance and fan loyalty**

- Season performance and discussion topics

Bottom team fans stay, top team fans are less loyal

	Season elo	Season elo difference	Month elo	Month elo difference
Season user retention rate	-0.370**	0.229***		
Monthly user retention rate			-0.170**	0.032**

Controlled factors: market value, average age, # star players, average offense and defense points, # turnovers

# Bottom team fans stay, top team fans are less loyal

Season 2017

User retention rate

Top   Bottom   Top   Bottom

0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30

Seasonly user retention   Average monthly user retention

- Game performance and fan activity

- Season performance and fan loyalty

- **Season performance and discussion topics**

# Top team fans talk about "trophy," bottom team fans talk about "future"

	Season elo	Average age
"Season prospects"	0.410***	0.149 ***
"Future"	-0.415**	-0.189***

Controlled factors: market value, season elo difference, # star players, average offense and defense points, # turnovers
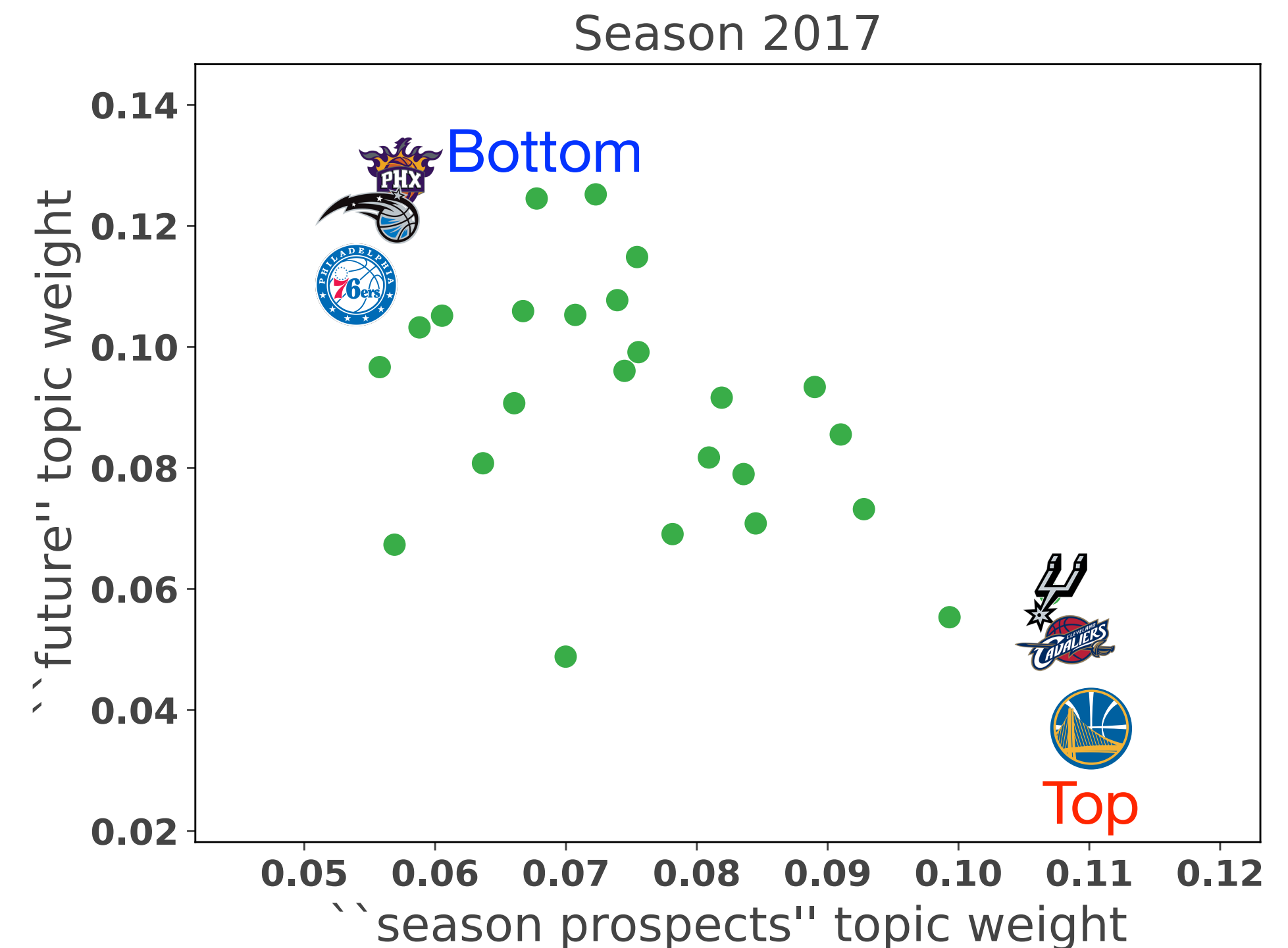
Top team fans talk about "trophy," bottom team fans talk about "future"

Season 2017

"future'' topic weight

``season prospects'' topic weight
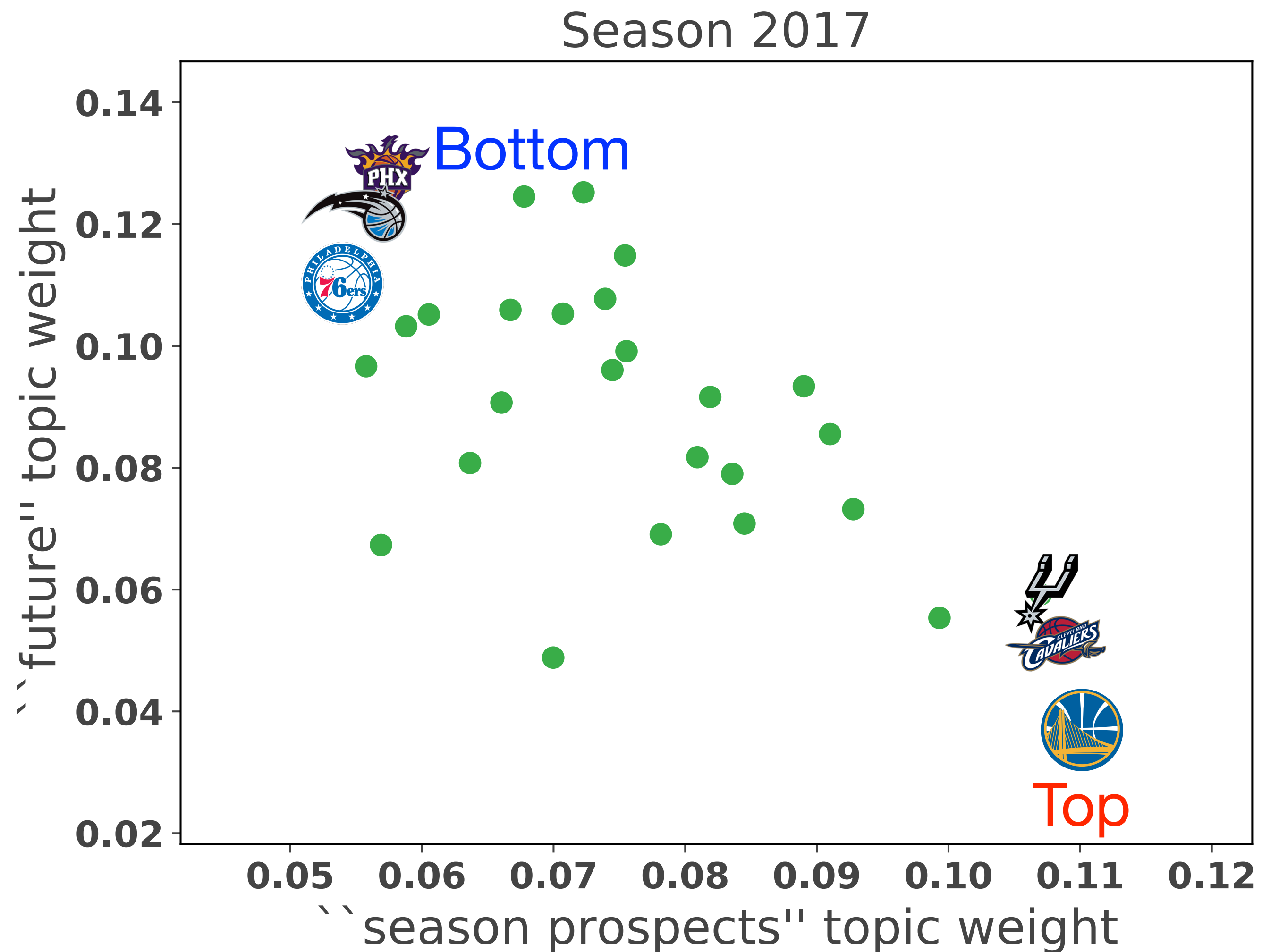
A Large-scale Characterization of Sports Fan Communities
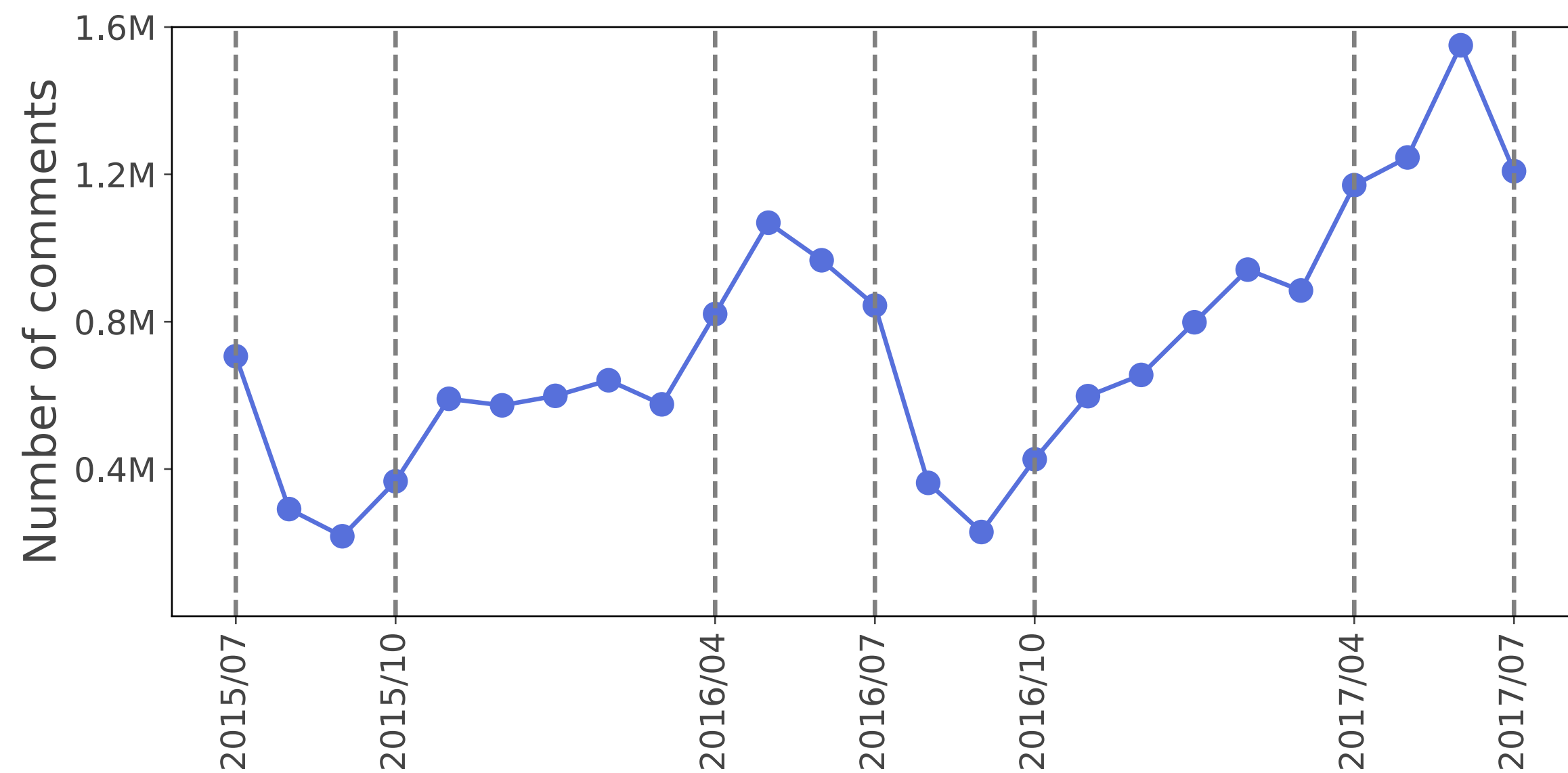
User activity fellows the structure if the NBA season.

Season performance and discussion topics.

Jason Zhang, jasondarkblue.com, @JasonZDarkBlue

Activity by hour in team subreddits driven by a game
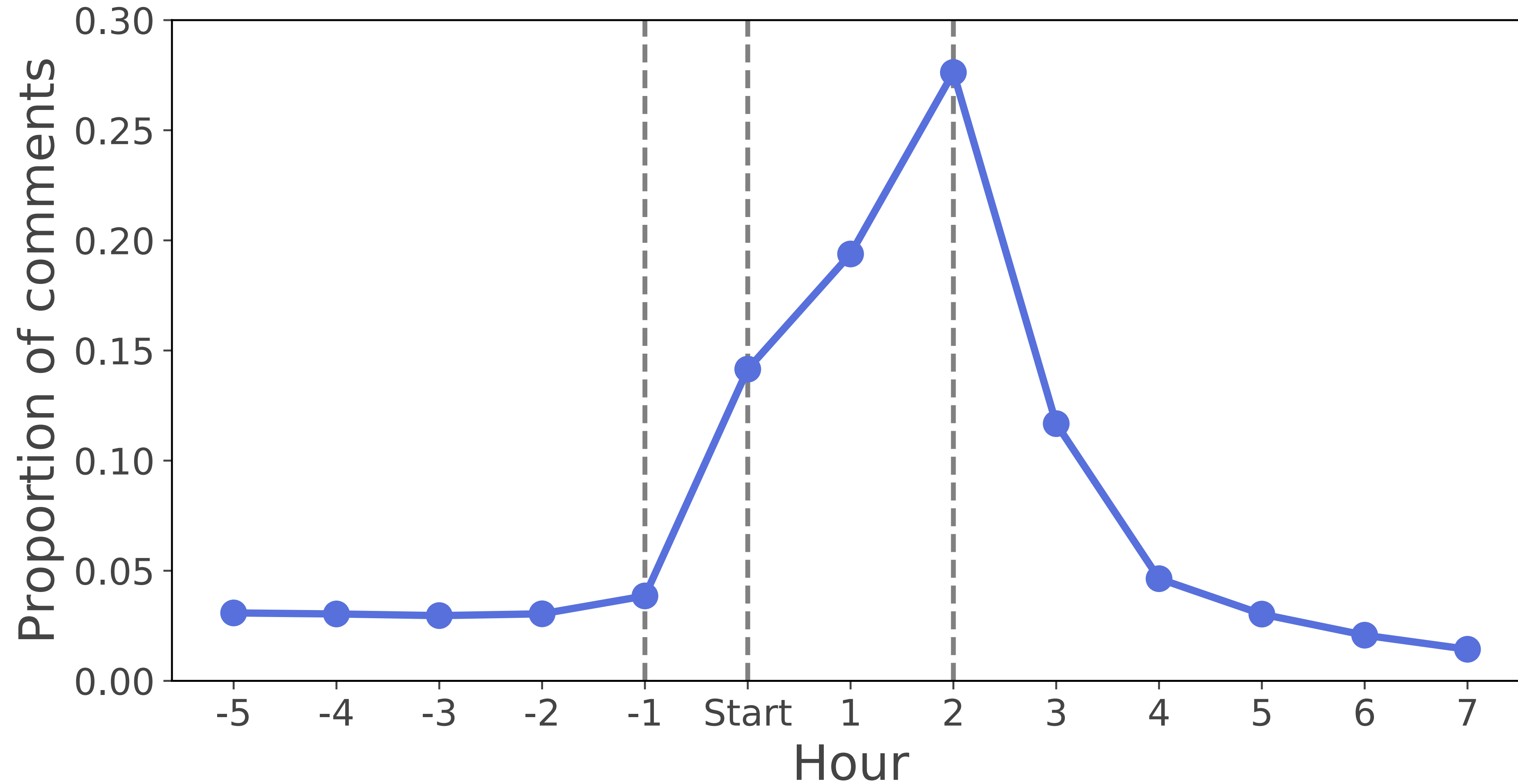
Number of users in team subreddits

Posting
Commenting