Paris-Saclay Center for Data Science

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CNRS/IN2P3 & University Paris-S{ud,aclay}

LAL, June 30, 2014

Paris-Saclay
Center for Data Science

Campus Paris Saclay
Fondation de Cooperation Scientifique

Data Science

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Design of automated methods

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to analyze massive and complex data

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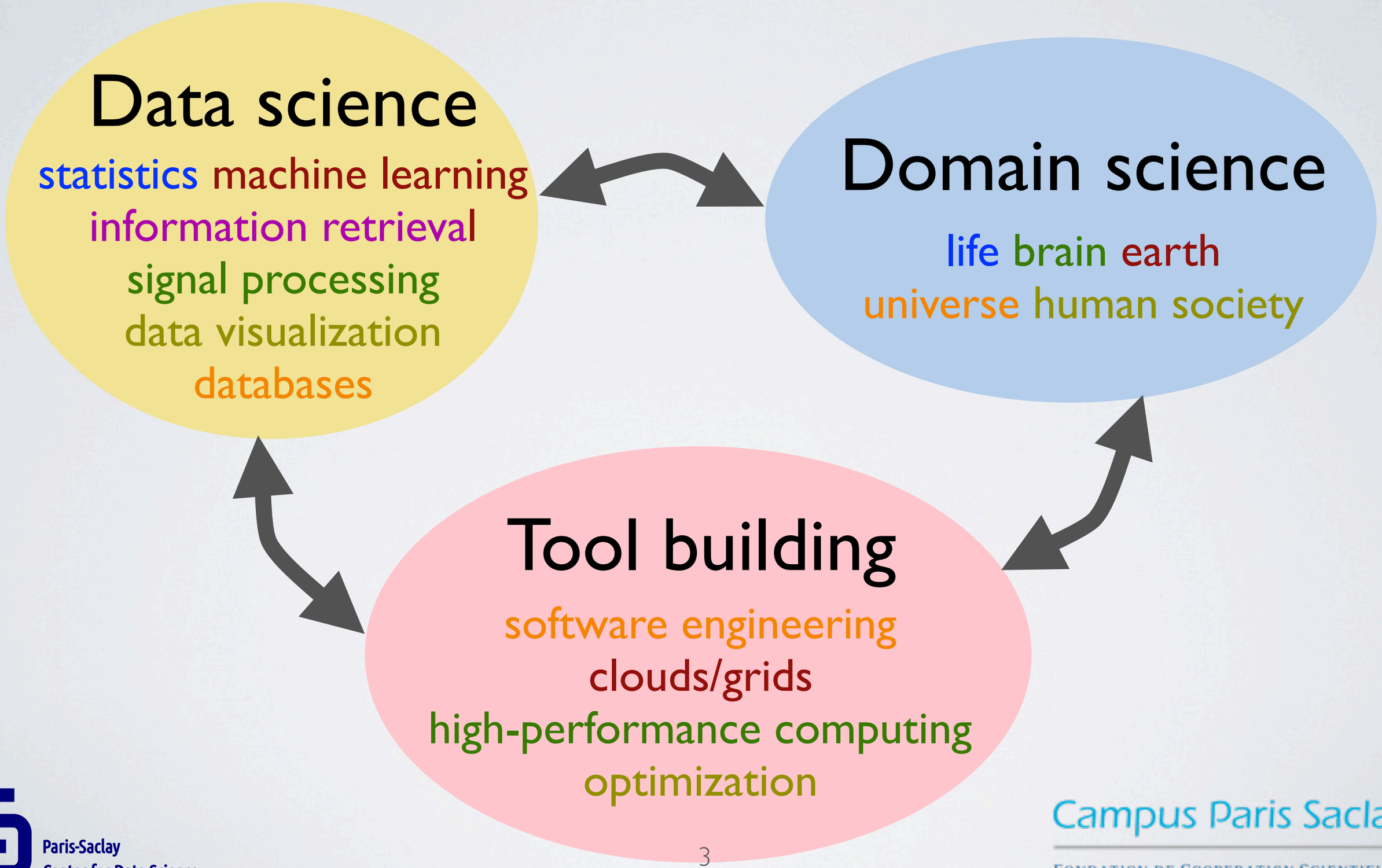
Design of automated methods

to analyze massive and complex data

in order to extract useful information from them

DATA SCIENCE - DATA IN SCIENCE



GOALS AND TOOLS

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- Build a community at Saclay around data science
  - an agora where researchers and engineers can meet and talk
  - a culture of crossing the disciplinary aisles
  - get to know each other's expertise and data analysis problems

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  - get to know each other's expertise and data analysis problems
- Tools
  - an interactive web portal
  - workshops, thematic days, and brainstorming sessions
  - summer school(s)

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- Get interdisciplinary collaborations off the ground
  - seeding larger projects for outside funding (ANR, Europe)
  - embedding data scientists in domain science labs and vice verse

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- Tools
  - financing postdoctoral projects and (incoming) sabbatical/visiting stays
  - financing data challenges

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- Tools
  - the Open Software Initiative for interns and doctoral students
  - "code consolidator" and engineering projects
  - coding sprints

GOALS AND TOOLS

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- Data science IT platform
  - open data, open access, reproducible research (see IPOL)
  - disseminating and sharing data and software
  - connecting the CDS to data centers (e.g. Virtual Data)

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  - connecting the CDS to data centers (e.g. Virtual Data)
- Tools
  - interactive web portal
  - work group on open data/data centers

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- Design strategies
  - the institutional structure to stabilize the CDS
  - the ideal structures for data science research
  - projecting it onto existing structures (e.g., hotel à projets)

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- Tools
  - work group on strategy

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- Making national and local decision-makers aware of the challenges
  - lack of incentives for interdisciplinary research and tool building
  - unprecedented brain drain into industrial research

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  - unprecedented brain drain into industrial research
- Tools
  - lobbying, explaining, thinking together

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- Creating a map of Saclay data science masters
  - making the masters transparent

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- Creating a map of Saclay data science masters
  - making the masters transparent
- Tools
  - web portal
  - work group on educational relationships
  - initiating an annual meeting on data science education

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- Making the CDS a contact point to big data industry

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- Making the CDS a contact point to big data industry
- Tools
  - web portal
  - building on existing tools (e.g. CIFRE theses, SystemX, Cap Digital)
  - work group on industrial relationships

THEMES AND PARTICIPANTS

Roughly 250 researchers in 35 laboratories

biology & bioinformatics
IBISC/UEvry LRI/UPSud
Hepatinov MIAj-MIG/INRA
CESP/UPSud-UVSQ-INSERM
IGM-I2BC/UPSud MIA/Agro
LMAS/Centrale

chemistry
EA4041/UPSud

signal processing
LTCI/Telecom LSS/Supélec
CMA/Polytechnique CMLA/Cachan
CVN/Centrale LIMSI
DTIM/ONERA

visualization
INRIA LIMSI

particle physics astrophysics & cosmology
LPP/Polytechnique DMPH/ONERA
CosmoStat/CEA AIM/CEA
IAS/UPSud LAL/UPSud

machine learning
LRI/UPSud LTCI/Telecom MIA/Agro
CMLA/Cachan LS/ENSAE CMA/Polytechnique
LIX/Polytechnique LSS/Supélec LIST/CEA
CVN/Centrale LMAS/Centrale
DTIM/ONERA IBISC/UEvry

Earth sciences
LATMOS/UVSQ GEOPS/UPSud
IPSL/UVSQ LSCE/UVSQ
LMD/Polytechnique

economy
LM/ENSAE RITM/UPSud
LFA/ENSAE

neuroscience
UNICOG/INSERM
U1000/INSERM
NeuroSpin/CEA

statistics
LMO/UPSud LS/ENSAE
LSS/Supélec MIA/Agro
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LMAS/Centrale

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2700 mails

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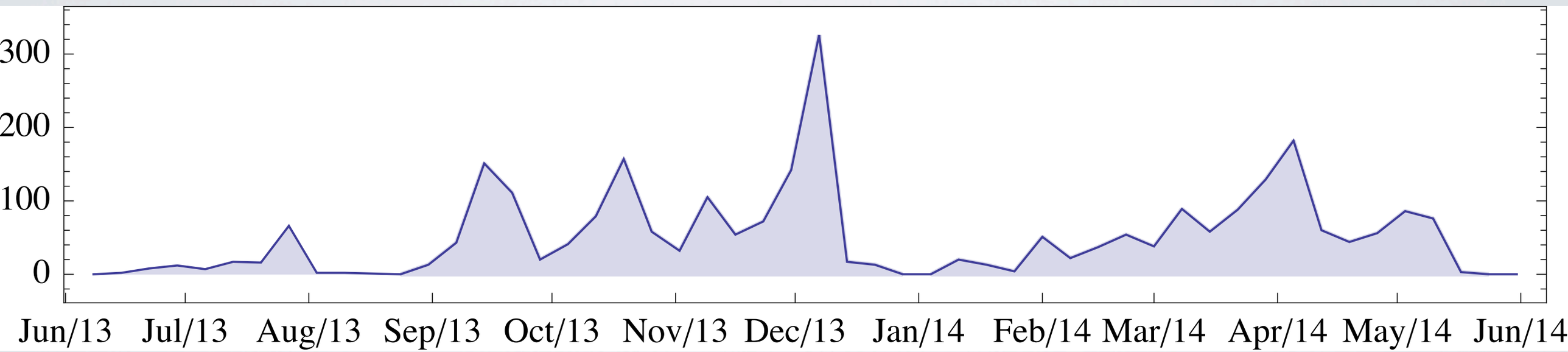

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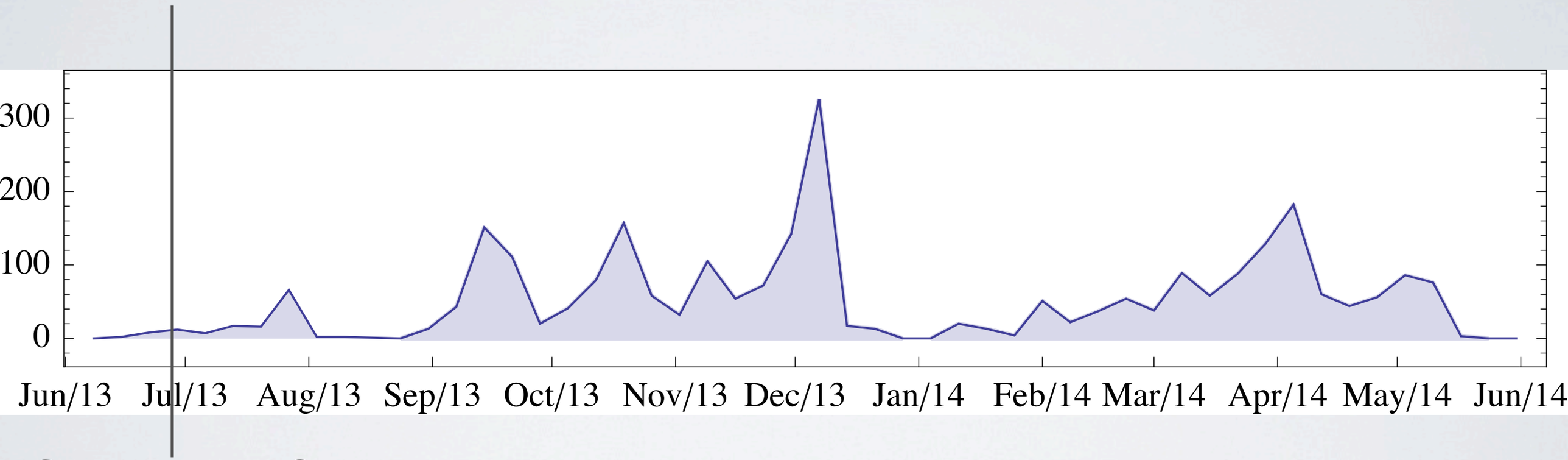

first draft

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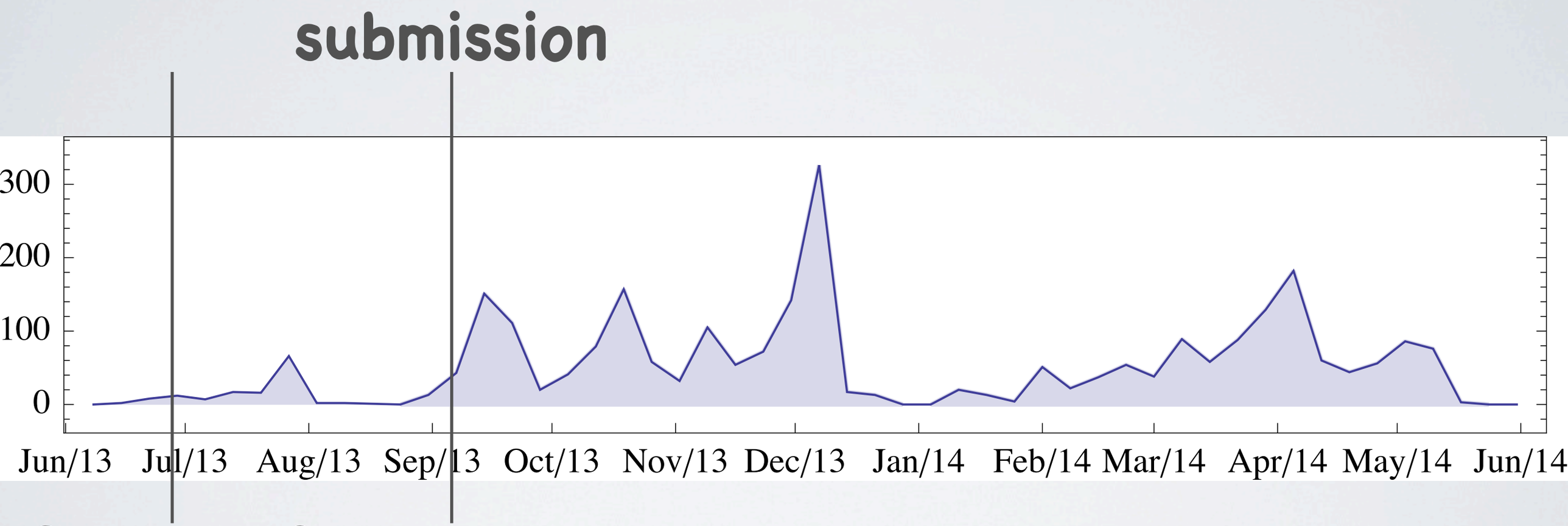

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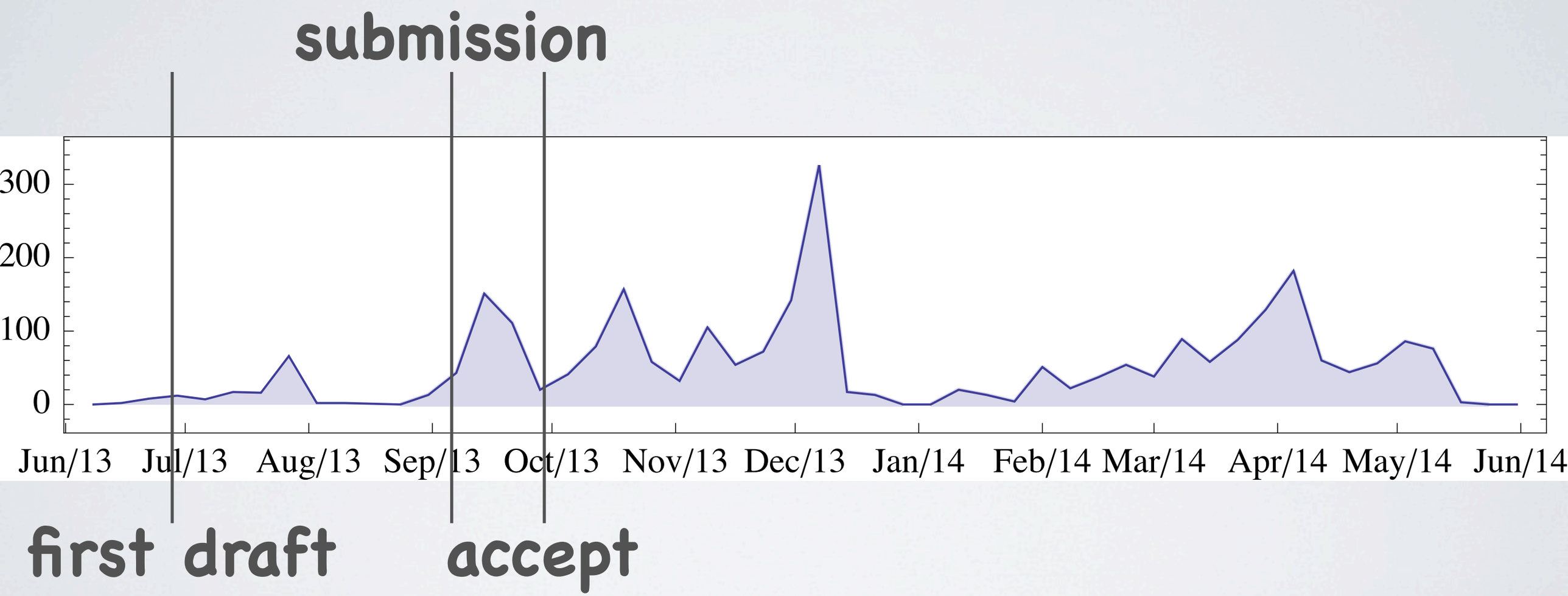

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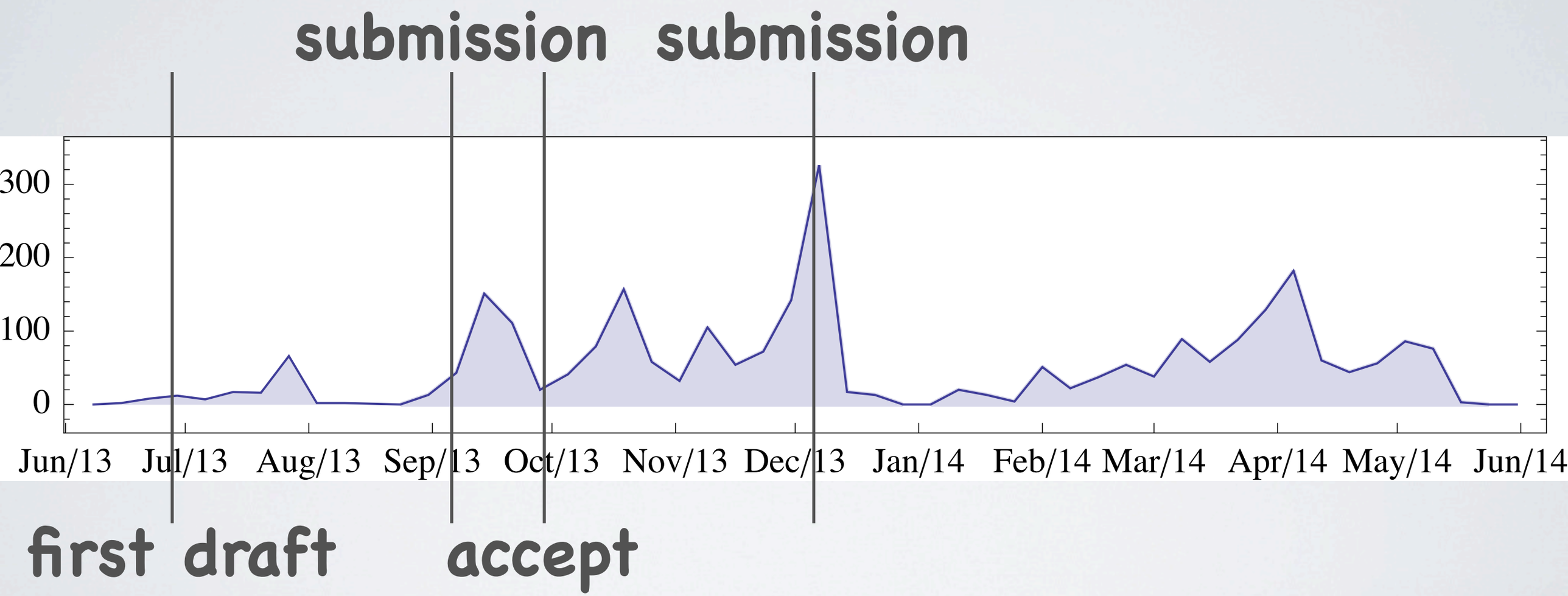

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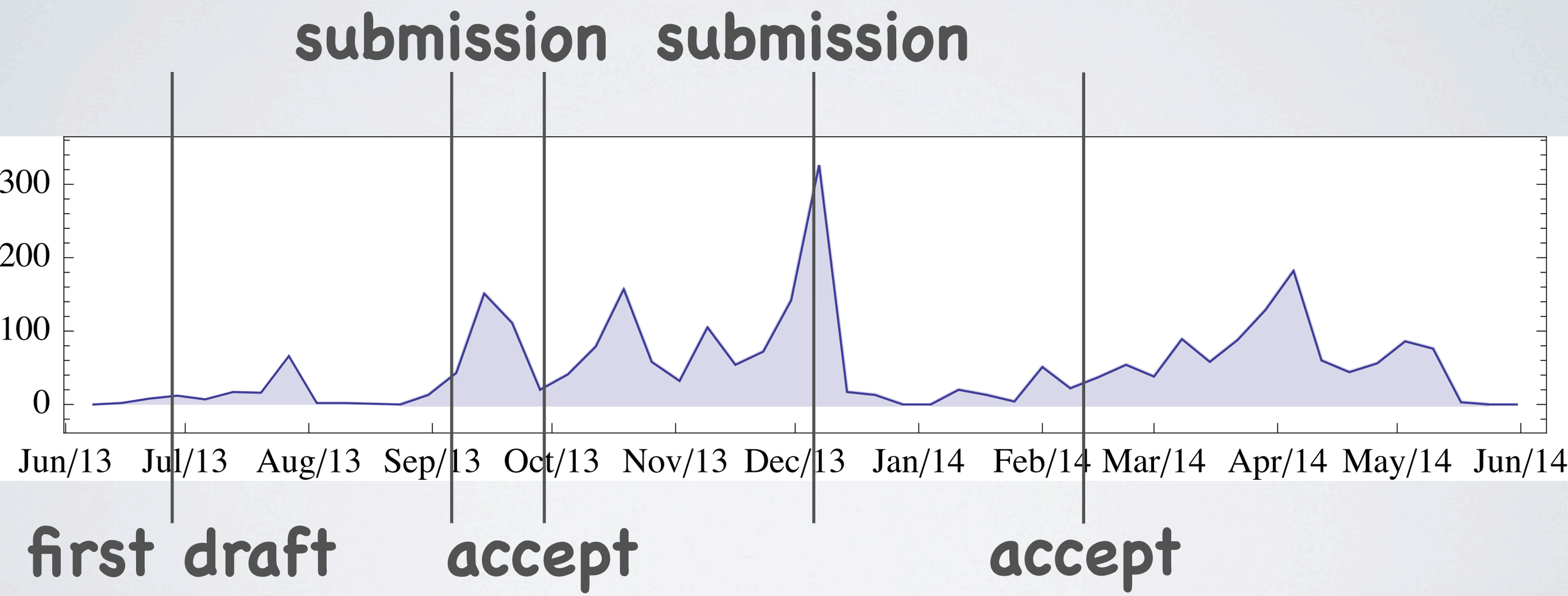

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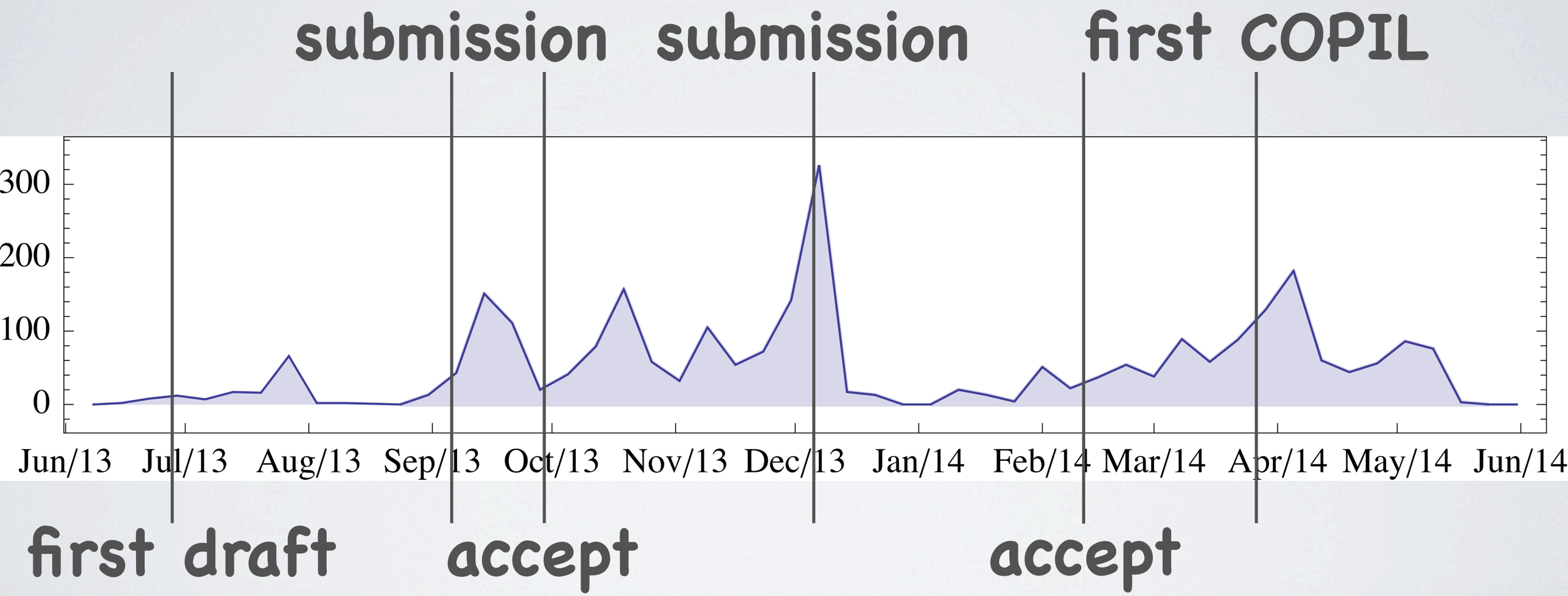

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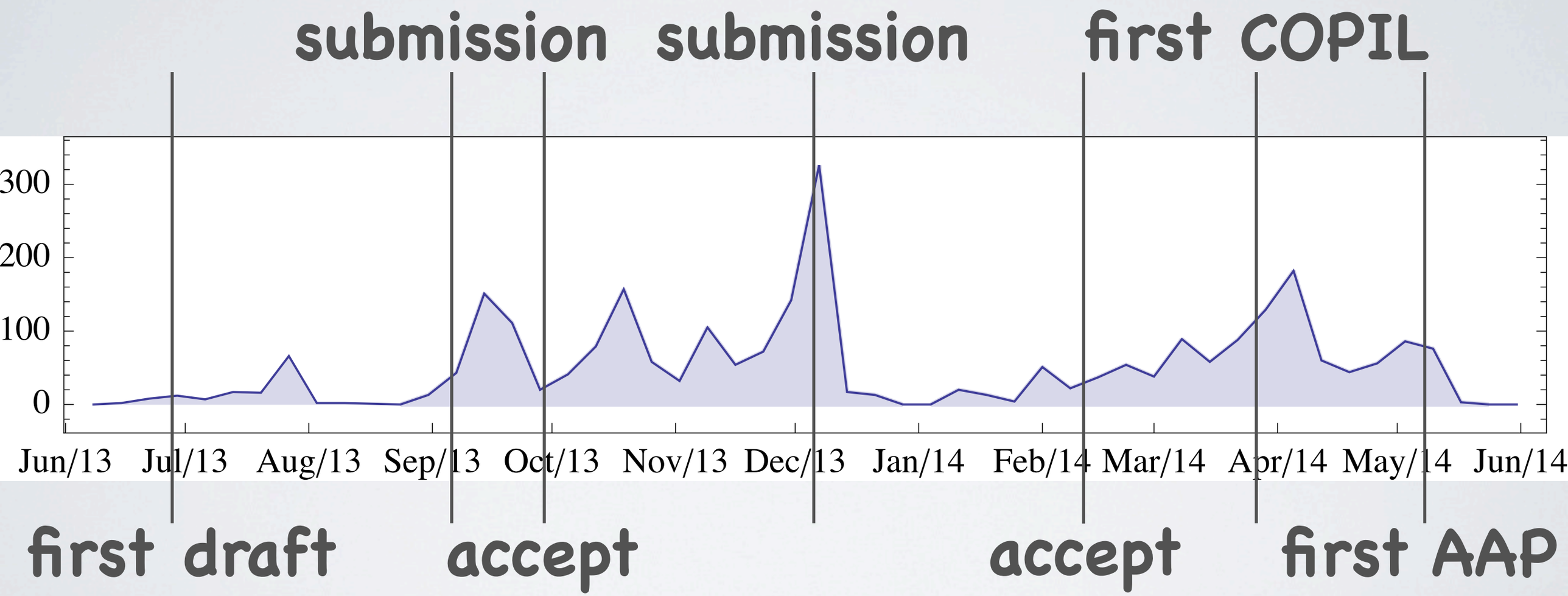

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- 3-6 theses, without candidates, september 2014
- Second postdoc/engineer call, february 2015
- We may leave the code consolidator and sabbatical/visiting researcher calls permanently open

THANK YOU

- Kick-off organizers:
  - A. Dalalyan, A. Gramfort, B. Kégl
- LAL team:
  - V. Brouillard, G. Dreneau, S. Soullard, D. Benbouzid, S. Mishra
- FCS comms team:
  - A. Dacosta, M-P. Gacoin

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