

MOTIVATION



TOVA HOLMES, UNIVERSITY OF TENNESSEE
CMS JOB MATCHING EVENT
OCTOBER 13, 2021





✦ ✦ ✦ SOME OPINIONS ✦ ✦ ✦



TOVA HOLMES, UNIVERSITY OF TENNESSEE
CMS JOB MATCHING EVENT
OCTOBER 13, 2021



MY PATH

ATLAS

CMS

UNDERGRAD

GRADUATE

POSTDOC

FACULTY

MY PATH

ATLAS

CMS

UNDERGRAD
2007-2011

HARVARD

GRADUATE
2011-2016

BERKELEY

POSTDOC
2017-2020

CHICAGO

FACULTY
2020-

TENNESSEE

MY PATH

ATLAS

CMS

UNDERGRAD
2007-2011

HARVARD

PRIVATE SCHOOL
MEDIUM-SIZED GROUP

GRADUATE
2011-2016

BERKELEY

LAB
GIANT GROUP

POSTDOC
2017-2020

CHICAGO

PRIVATE SCHOOL
LARGE GROUP

FACULTY
2020-

TENNESSEE

PUBLIC SCHOOL
SMALL → MEDIUM GROUP

MY PATH

ATLAS

CMS

UNDERGRAD
2007-2011

HARVARD

MUON SPECTROMETER

GRADUATE
2011-2016

BERKELEY

PIXELS

POSTDOC
2017-2020

CHICAGO

HW TRACK FINDER

FACULTY
2020-

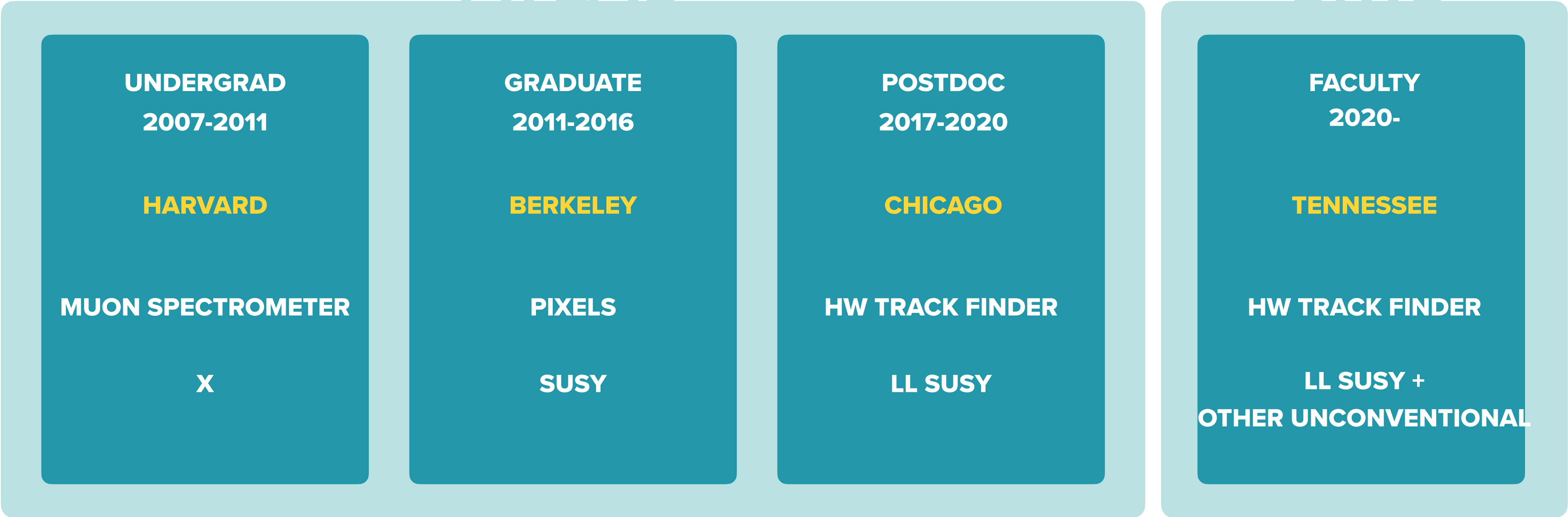
TENNESSEE

HW TRACK FINDER

MY PATH

ATLAS

CMS



IS ACADEMIA FOR YOU?

ACADEMIA

- **Huge variety of types of work you're responsible for**
 - **Management** is a big part of your job (rarely trained for it)
 - Students/postdocs, groups in CMS, national CMS, projects, peer management/managing up
 - **Service**
 - To institution, experiment, field
 - **Writing**
 - Funding, papers — so much more than when I was a postdoc
 - **Teaching** (if you're at a University)
 - Tons of work when teaching a class for the first time
 - **Research** (most of what you do before you get a senior job)

ACADEMIA

- **What else makes an academic job unique?**

- **Pay:** ok (>> grad /postdoc, << many industry jobs)
- **Tenure:** great if you like security, “you get to do this forever” may not be an appealing prize for all
- **Academic Freedom:**
 - At a lab, has to be more the scope of the lab’s priorities
 - At a university, this is more absolute (though getting things funded can be a constraint)
- **Mission Driven:** As opposed to profit driven — also true at e.g. non-profits
- **Travel:** Especially as CERN people, we get to/have to travel a lot to participate in our field

ACADEMIA

■ **Scientist (at a Lab)**

- Paid to do research
- Lab hierarchy based on research; bosses understand your research
- Case study of an EC lab staff friend:
 - 60% research (~half hands on), 20% grant, 10% service, 10% lab-related

■ **Professor (at a University)**

- Paid to teach, main role is interacting with students
- Hierarchy based on academics/funding; bosses don't understand your research
- Case study of me:
 - 20% teaching, 10% email, 10% grants, 15% supervising, 10% service, 10% university-related meetings, 25% research (including meetings)

NOT ACADEMIA

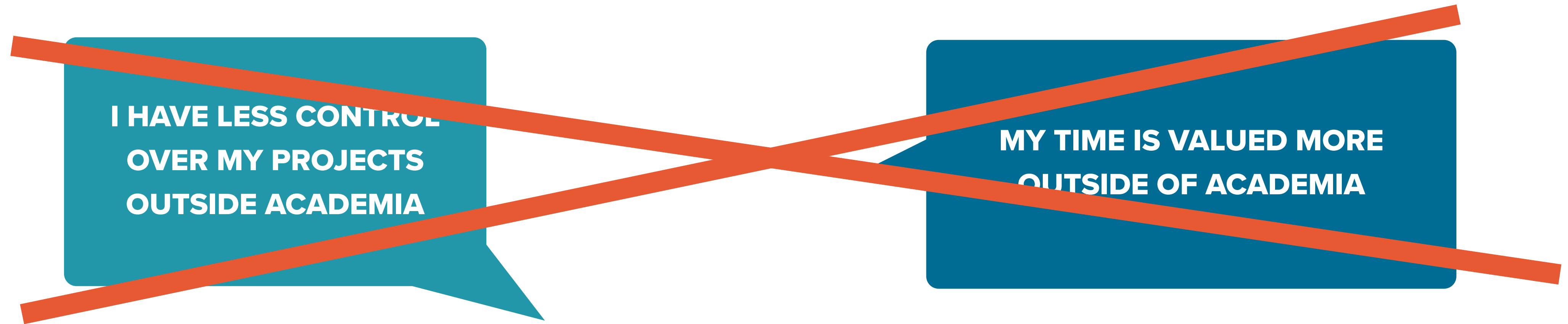
**MY TIME IS VALUED MORE
OUTSIDE OF ACADEMIA**

NOT ACADEMIA

**I HAVE LESS CONTROL
OVER MY PROJECTS
OUTSIDE ACADEMIA**

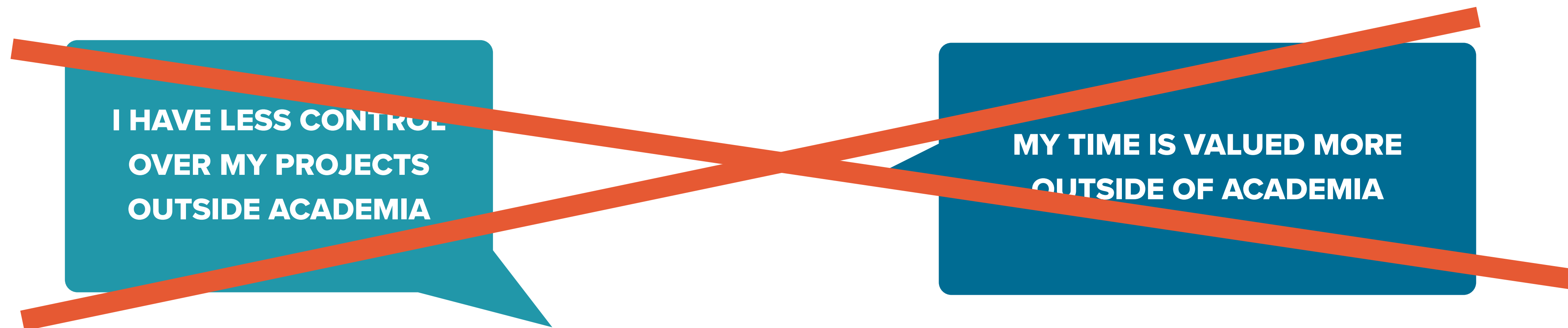
**MY TIME IS VALUED MORE
OUTSIDE OF ACADEMIA**

NOT ACADEMIA



- **Both kind of nonsense — there's no way to generalize**
 - A million different jobs with different up- and down-sides
 - Impossible to compare academia to the vague idea of not academia
 - More realistic: learn about some specific jobs and see if those appeal to you

NOT ACADEMIA



■ Specific things I investigated:

- Data science at a big company like facebook (nope)
- Urban informatics, like [CUSP](#) (not enough jobs)
- Analysis at the CIA (ethics...? but was interested)
- A postdoc (got offered the one I most wanted)

**“NO JOB ON ITS OWN WILL
GIVE YOU JOB SATISFACTION –
IT’S ABOUT THE PEOPLE”**

MY UNDERGRAD ADVISOR

**"ONLY ONE OF MY STUDENTS
NEEDS TO BECOME A
PROFESSOR TO REPLACE ME"**

MY GRAD ADVISOR

IN ACADEMIA: SETTING YOURSELF UP FOR SUCCESS

**"EVERY TALK IS A JOB
TALK"**

ANONYMOUS

**"BECOME INDISPENSABLE
TO SOMETHING"**

MY POSTDOC ADVISOR

**"MAKE SURE YOU CAN
TELL A STORY"**

MY POSTDOC ADVISOR

PUTTING TOGETHER AN APPLICATION

**“LEARN TO TRUTHFULLY
BRAG”**

ME

DIFFERENT ADVICE FOR DIFFERENT LEVELS

**"A POSTDOC DOESN'T
HURT"**

MY GRAD ADVISOR

**"YOUR THESIS DOESN'T HAVE
TO BE GOOD; IT HAS TO BE
DONE"**

MANY PEOPLE

WHAT DO WE (I) WANT IN POSTDOCS?

- **Some of our job to be handled for us**

- My postdoc is my deputy: she *leads* portions of my research, so that I don't have to manage them

- **How to break this down?**

- Ability to think creatively about physics problems
- Interest/experience in mentoring students
- Desire to work on problems I'd like my group to work on
- Ability to lead (keep on schedule, organize others, identify+solve problems)
- Knowledge relevant to the things they'd work on

- **Postdoc candidates need to fit into an existing group**

- It makes sense to tailor your application to a school/advisor

WHAT DO WE (I) WANT IN FACULTY?

- **An independent, constructive member of our department**
 - You drive your research program, and contribute to the health of our department
- **How to break this down?**
 - Strong record of research + realistic, promising 5-10 year research plan
 - Demonstrated ability to train and mentor students
 - Interest/experience in teaching students
 - Record of leadership in your field
 - Interest in the department: teaching & service energy and ideas
- **Faculty candidates are driving their own program**
 - I think here you can tailor less: what are YOU best suited to do?

**“PEOPLE ARE LOOKING
FOR A COLLEAGUE”**

MANY PEOPLE

“IT’S A CRAPSHOOT”

EVERYONE WHO’S EVER BEEN ON A SEARCH COMMITTEE

SOME THOUGHTS ON PROFESSORDOM

**"I WAS SURPRISED BY HOW
MUCH MORE RESPECT I GOT
AS A FACULTY MEMBER"**

A FRIEND / CURRENT ATLAS PROF

**“WHEN I GOT TENURE, IT WAS
THE FIRST TIME I DIDN'T FEEL
IMPOSTER SYNDROME”**

A FRIEND / CURRENT CMS PROF

“AHHHHHHHH 🌀/😭/😬”

ALL NEW FACULTY

**“LEARN HOW TO SAY NO
TO THINGS”**

EVERYONE

**"BE THE KIND OF PERSON YOU
WANT TO BE IN THIS FIELD"**

A FRIEND / CURRENT ATLAS PROF

THANK YOU!