

Particle Physics Demographics

For informal demographics group

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And

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A little history

Group has been working since about 1999

Goal:

To understand flow of young people into,
and out of field

Challenges:

Access and analyze data from LBNL data base

Collect the relevant data

Some progress

Data base ported to more modern form

New fields added to track more info

e.g. where to? gender

LBNL: Mike Ronen + BC

Error checking reviews on 2006 – 2008 data

Iowa group: UM and postdocs

find and correct common errors

suggest individual identifier #

to follow individuals

Some challenges

Definitions change as field evolves

e.g how to count particle astrophysics

System effectively relies on continuity of cooperation of individuals entering data

If community sees no feedback

–why comply?

Some frustrations

For LBNL

Incomplete response rate even after
multiple requests for compliance

Eg 2008: 20 non-complying institutions

Error checking is time consuming

Non-respondents

- University of Delaware/Bartol
- City College of New York
- Colorado State Univ.
- Duke University
- Fairfield Univ.
- Harvard University
- Howard University
- Ohio State Univ.
- Oklahoma State Univ.
- Oregon State Univ.
- Univ. of Virginia
- Univ. of New Hampshire
- Univ. of Miami
- Carnegie Mellon Univ.
- Northern Kentucky Univ.
- NASA Goddard Space Flight Center
- Hobart and William Smith Colleges
- Mississippi, University of
- South Carolina, University of

Some frustrations (cont.)

For committee:

Not all suggested changes implemented

--particularly individual identifier

External error checking finds many errors

even after internal error checks done

Uncertainties on numbers of interest still large

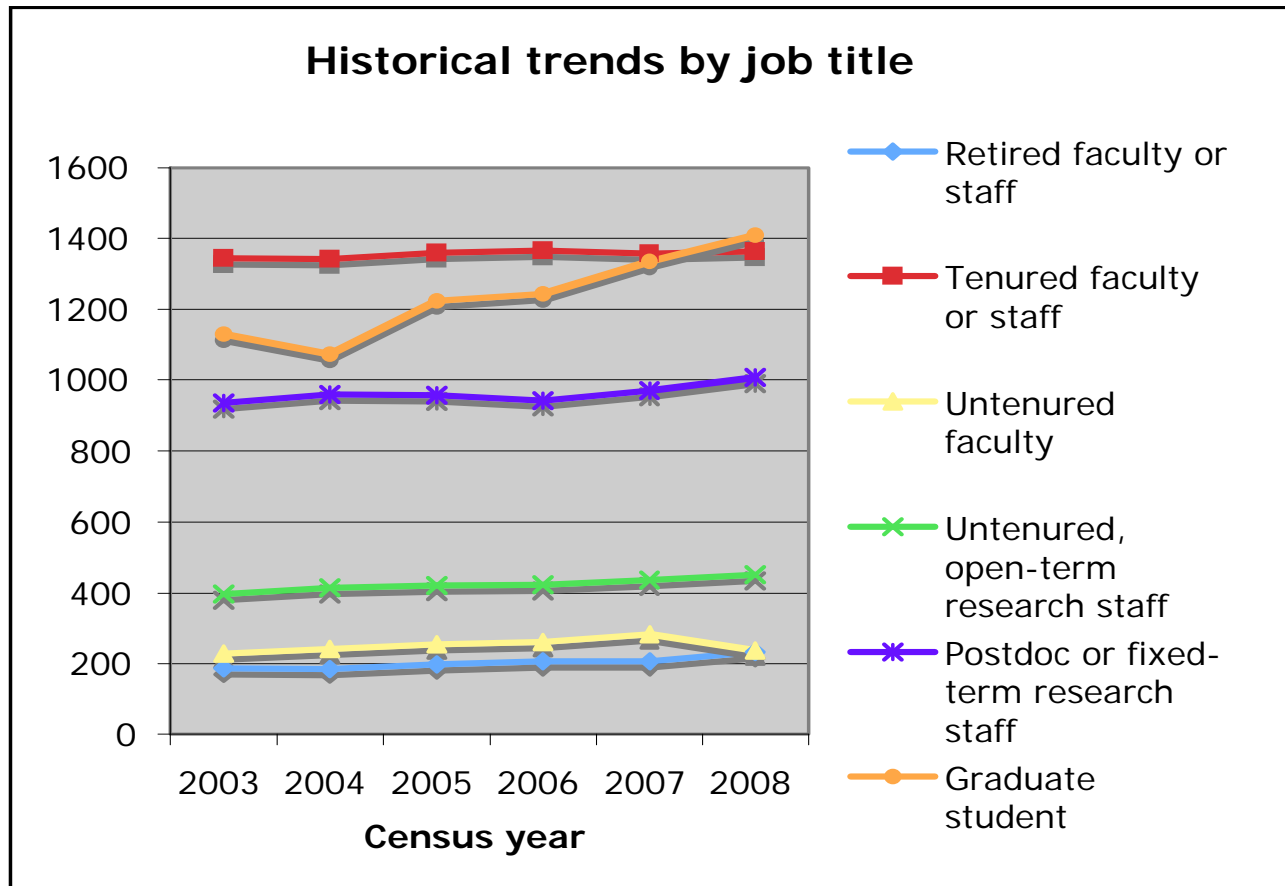
Now for some results

WARNING

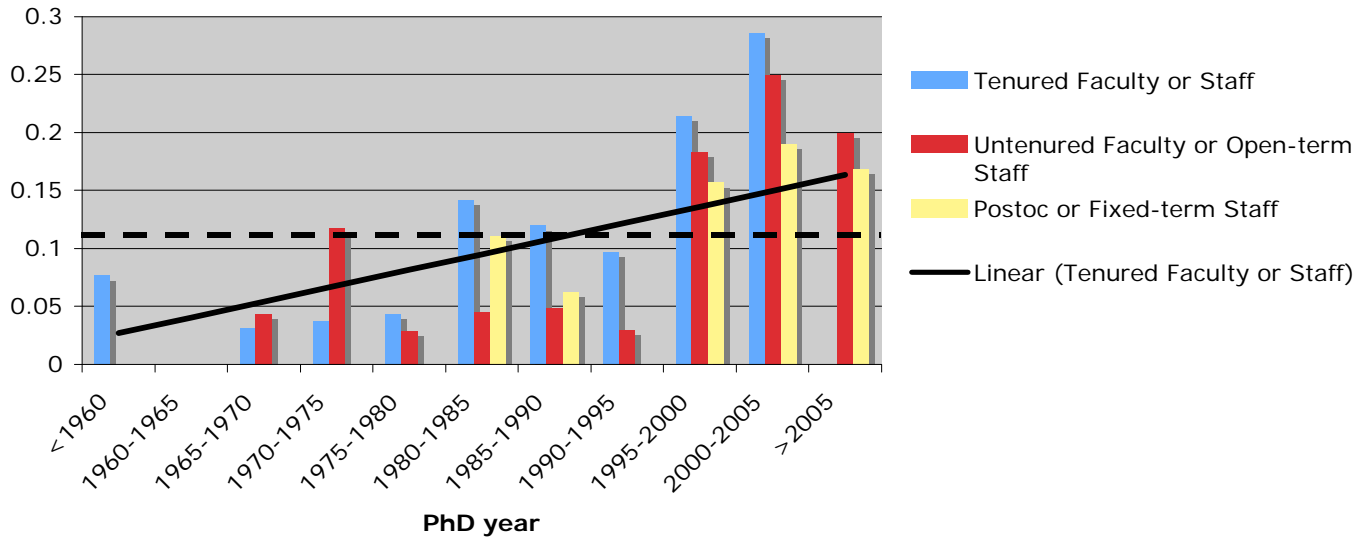
Error checking still underway

We can only guess at uncertainties in these numbers!

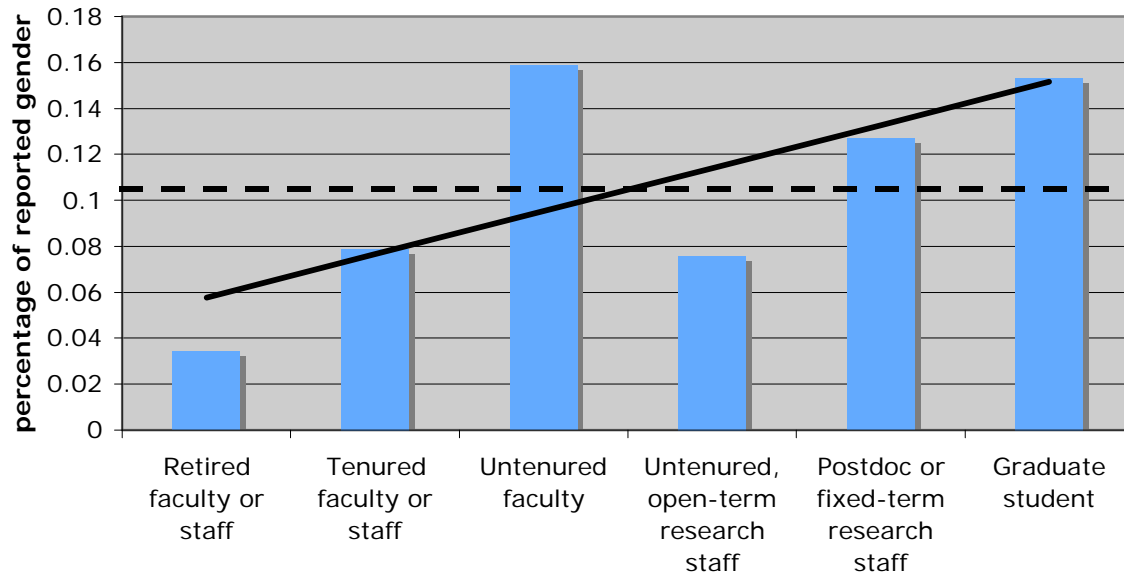
Faculty populations relatively stable



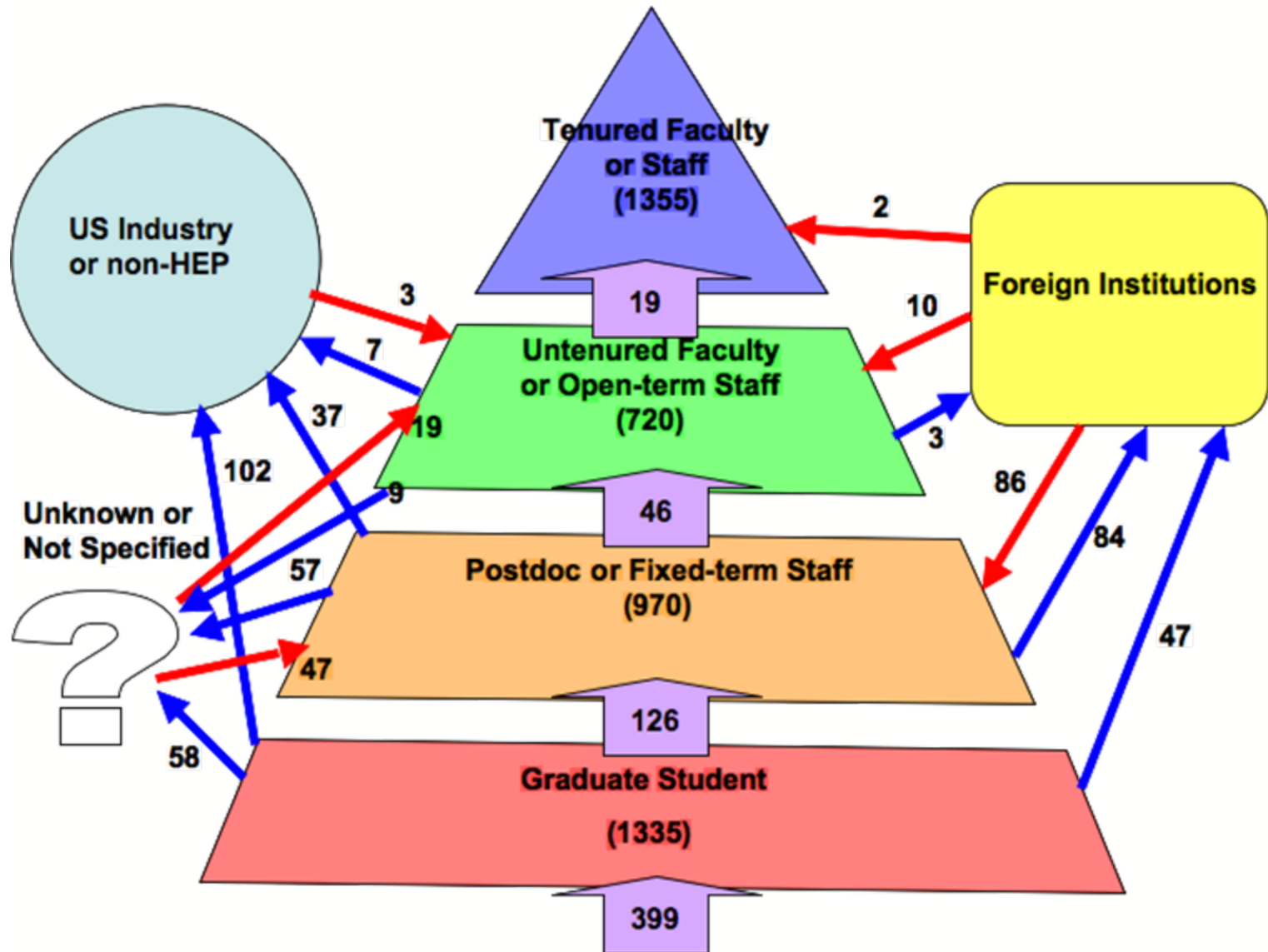
Female percentage by PhD year

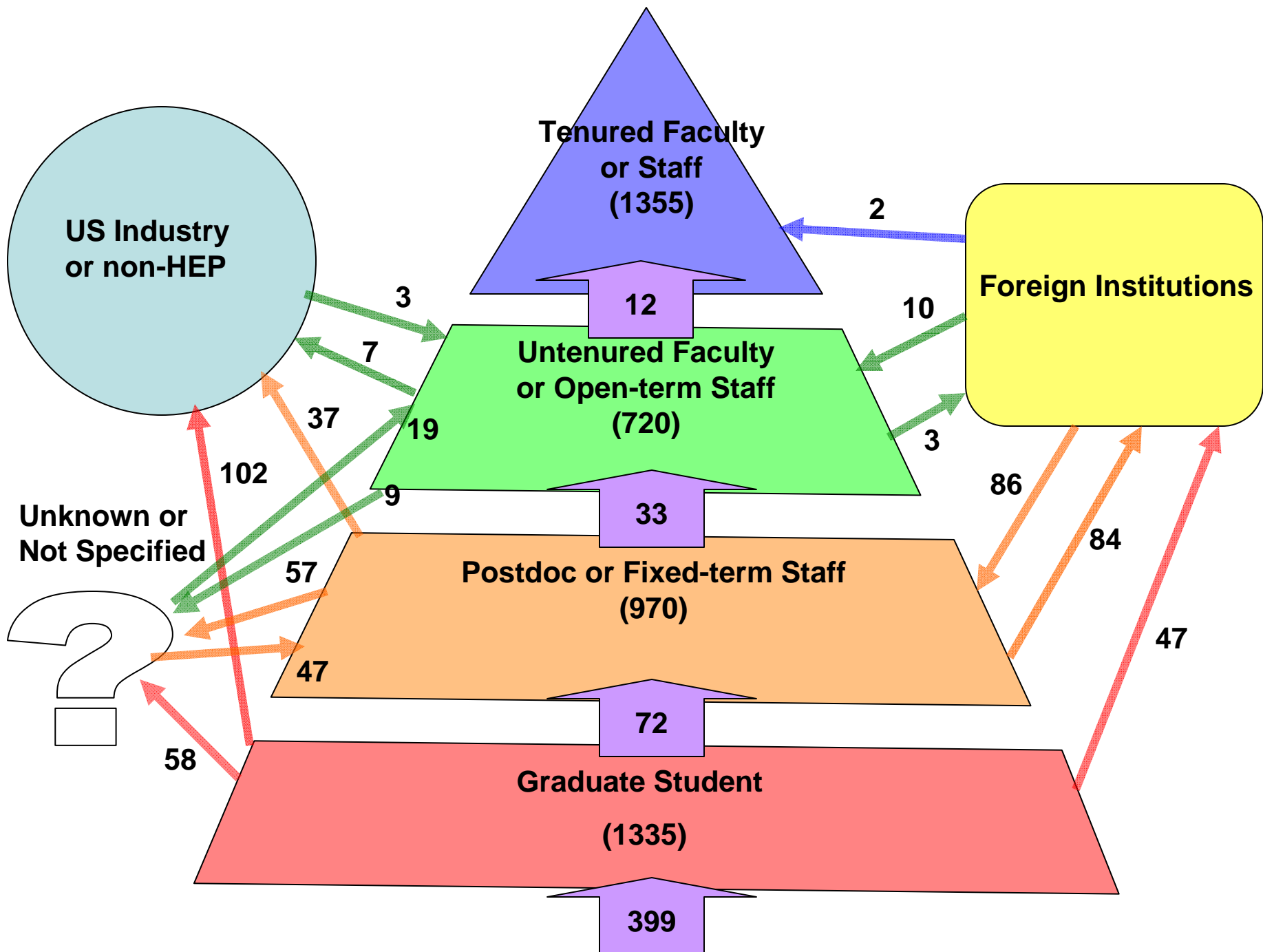


Female percentage by job title



2007





Error Checking results 2007

Big numbers have uncertainties of order few %

BUT

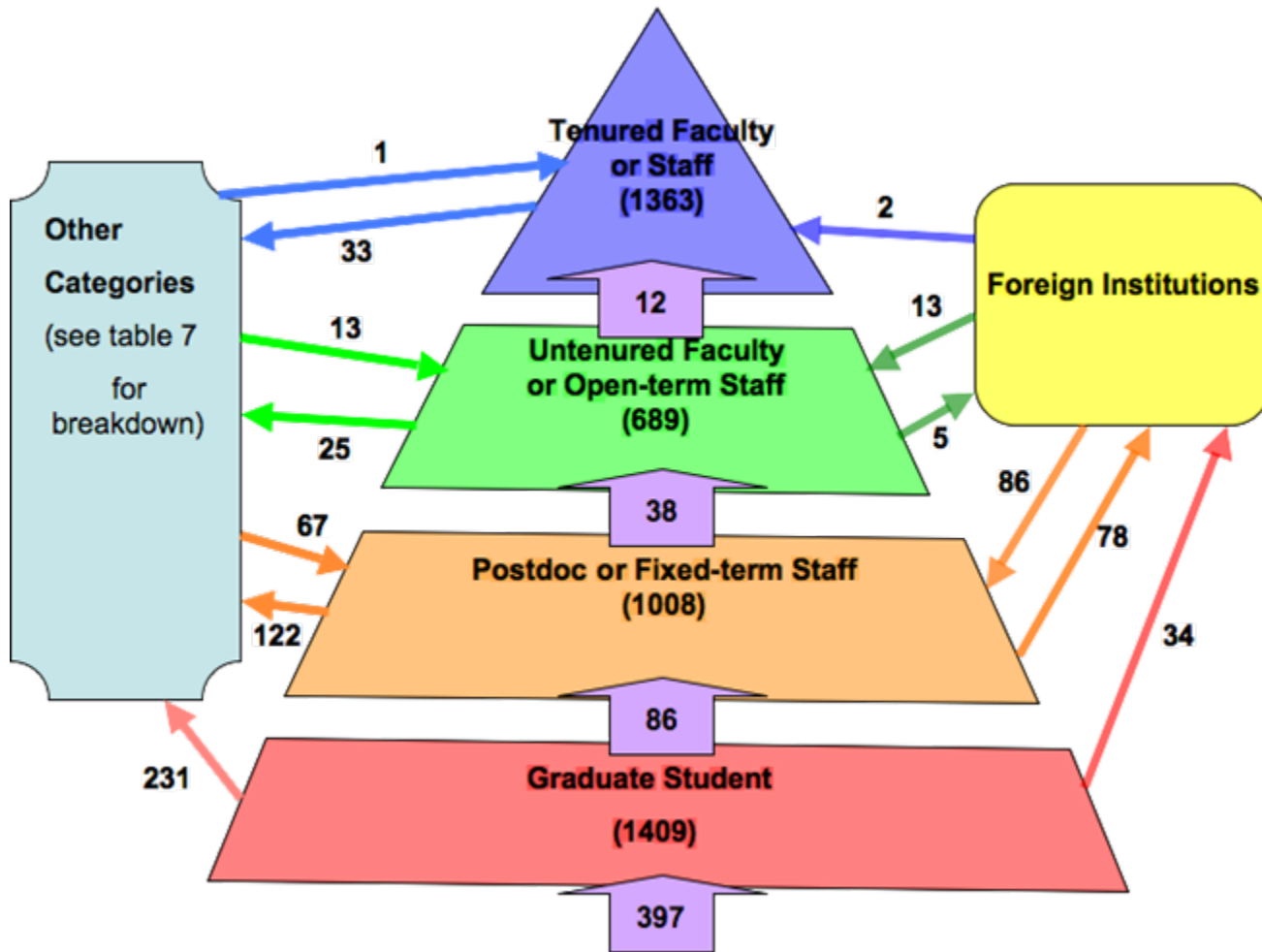
Uncertainties on who went where

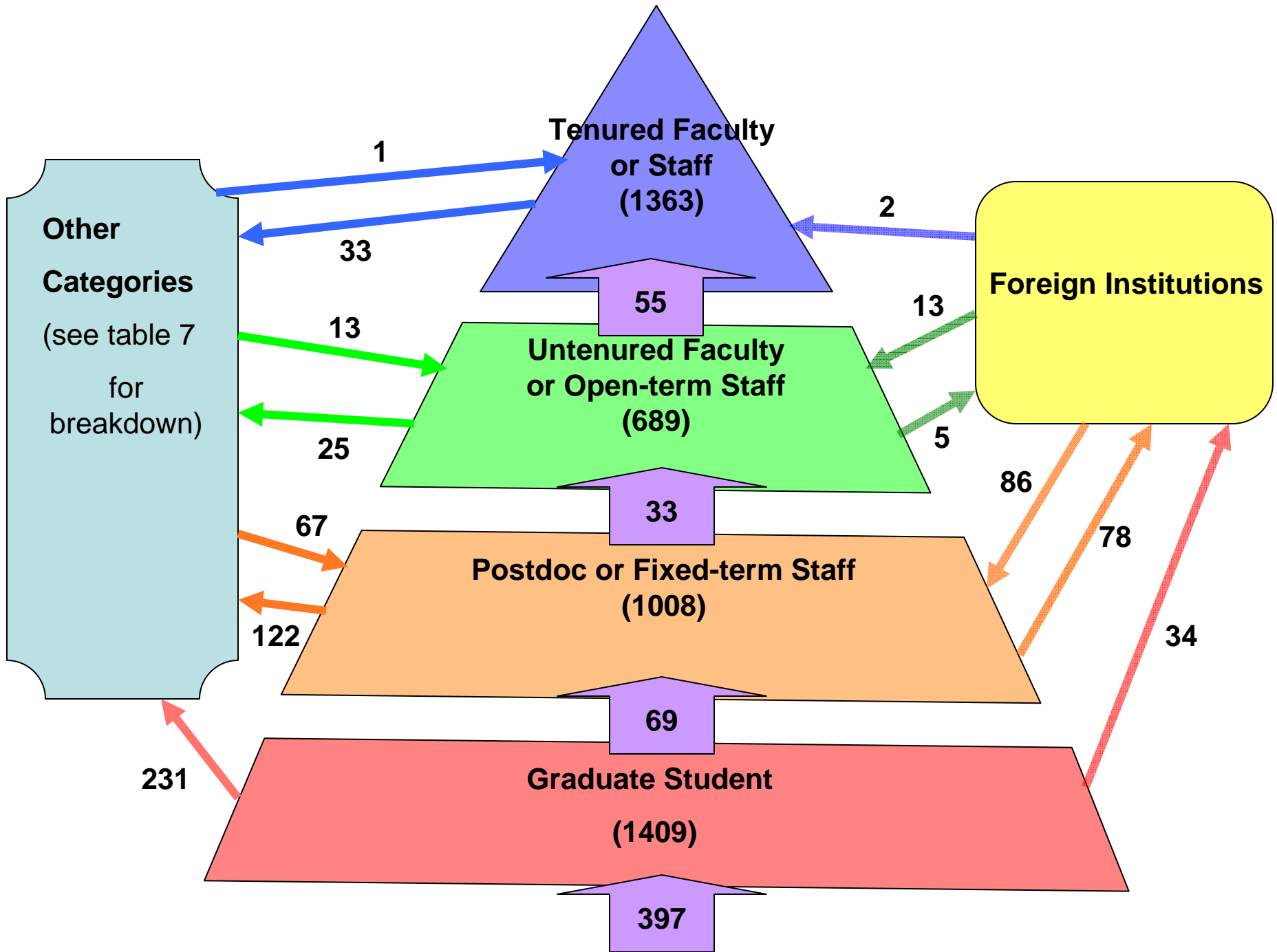
1st pass ~50% **external check required**

second pass, maybe down to order 5-10%

Pattern continues in 2008

2008





Staying in HEP -2008

	Theory	Experiment
Grad Student	45%	40%
Postdoc	61%	53%

Uncertainty?

Is this a good pattern?

Where did they go? Grad students

WARNING –large Uncertainties

- Other physics 13
- Life sciences 11
- Teaching 13
- Industry 39
- Engineering 2
- Other science 9
- Other 23
- Don't Know 121
- HEP 155 in table 120 on chart ??35??

Story similar for postdocs.

After 10 years of “oversight”

Still can't really answer the original questions

Is this work valued?

By whom? For what?

What would it take to do it right?

Clearly needs ongoing external oversight

Whose responsibility is this?

—we are only an “ad-hoc” group

What's still needed? some personal opinions

Better data collection

- responsibility to respond

Data cleaning (including individual identifiers)

second level of “cleaned” info maintained year to year
facilitates retrospective look back,
reduces duplicative checks

Formal oversight and cross-check responsibility

Report circulated to community every year

--not just to HEPAP but to all respondents