



## Summary Part 2: Culture/Diversity

Harry Cheung for the Scientist Advisory Council

Fermilab All Scientist Retreat

7 February 2017

# Introduction

- This half of the summary is on Culture/Diversity, specifically
  - Meeting Etiquette
    - Provide ideas from scientists for a “Meeting Etiquette” proposal that would be one part of a Fermilab Code of Conduct that would apply to everyone including Users
  - Diversity in recruitment, hiring, and retention
    - Provide data and ideas from scientists on diversity at Fermilab
- A lot of the material in this talk is from the survey data
  - We are physicists but this is not discovering SUSY
    - There were comments that this is a biased survey (e.g. “good/no problem” responses take less work and so expect more “good/no problem” responses)
    - The data we collected do not tell the whole story, we did not split into responses for minorities
    - Fortunately many people wrote specific comments which helps us understand what they are thinking

## Meeting Etiquette

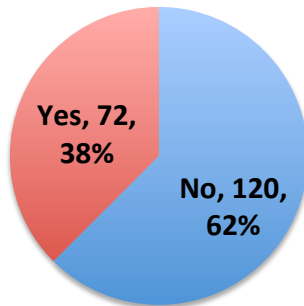
- The Directorate asked the Resource Groups to work on a proposal as part of “Nurturing a Positive Workplace Environment”
  - The RG’s were approached with this, but this is NOT specifically regarding African American/Black, Hispanic/Latino, Women, Spectrum, or Chinese, it is for everyone at the lab including Users
    - They were approached to work on something that would appeal to all types of people
  - Variety of experiences and opinions were shared during multiple brainstorming sessions (men and women, from roles across the org):
    - “There is no positive workplace statement prominently displayed or discussed
    - There is no code of conduct outlining expectations regarding treating each other with dignity and respect
    - Some employees yell, scream, use an unprofessional tone when communicating (in-person or email) with peers and/or subordinates
    - The culture of a unit is set by upper and mid-level managers. When managers exercise inappropriate behavior, raised voices, etc., subordinates are enabled to do the same. Managers have big impact on morale.”
    - ...

## Meeting Etiquette Proposal as Presented to SAC

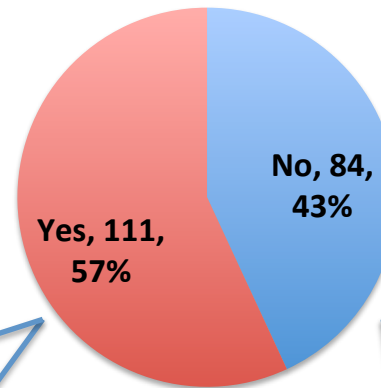
- Create a set of ground rules that express the expectations for a positive workplace environment.
- Tie the ground rules to the One Lab philosophy.
- Prominently display the ground rules in meeting rooms as well as other common employee gathering places.
- Scientists were not widely consulted on this proposal
  - Meant to appeal to non-scientists as well as scientists
  - Meeting room posters not a full solution just a starting point
  - After this was presented to the SAC we wanted to get your feedback and input on this proposal:
    - What ground rules do you want to have?
    - How do you want these to be communicated?

# Meeting Etiquette Survey Responses

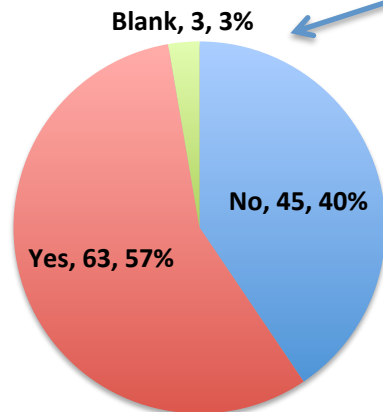
Do you think there is a problem with meeting etiquette at Fermilab (192)?



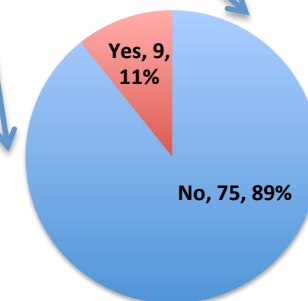
Have you personally experienced or witnessed a problem with meeting etiquette at Fermilab (195)?



Do you think there is a problem with meeting etiquette at Fermilab (111)?



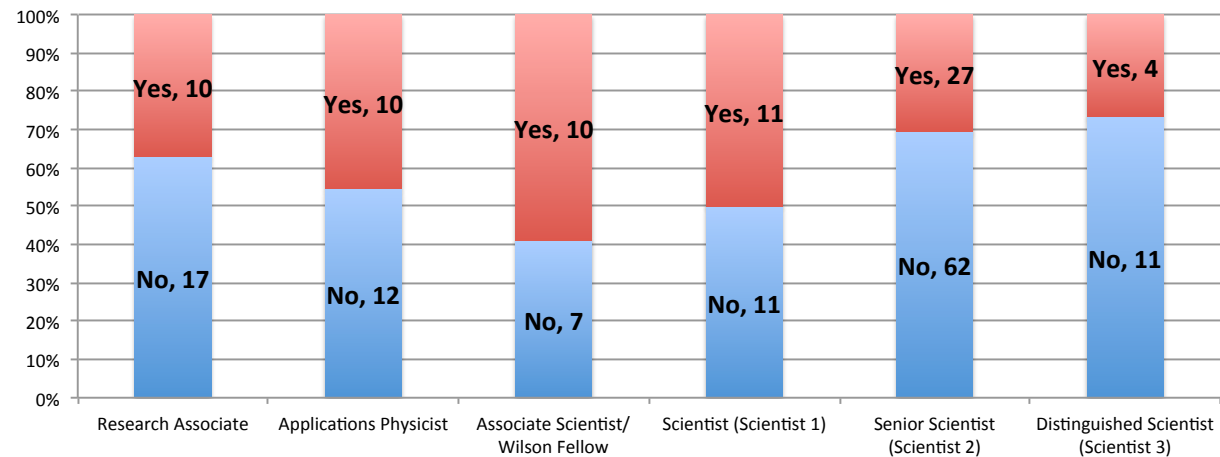
Do you think there is a problem with meeting etiquette at Fermilab (84)?



# Meeting Etiquette: Job Title

Do you think there is a problem with meeting etiquette at Fermilab (192)?

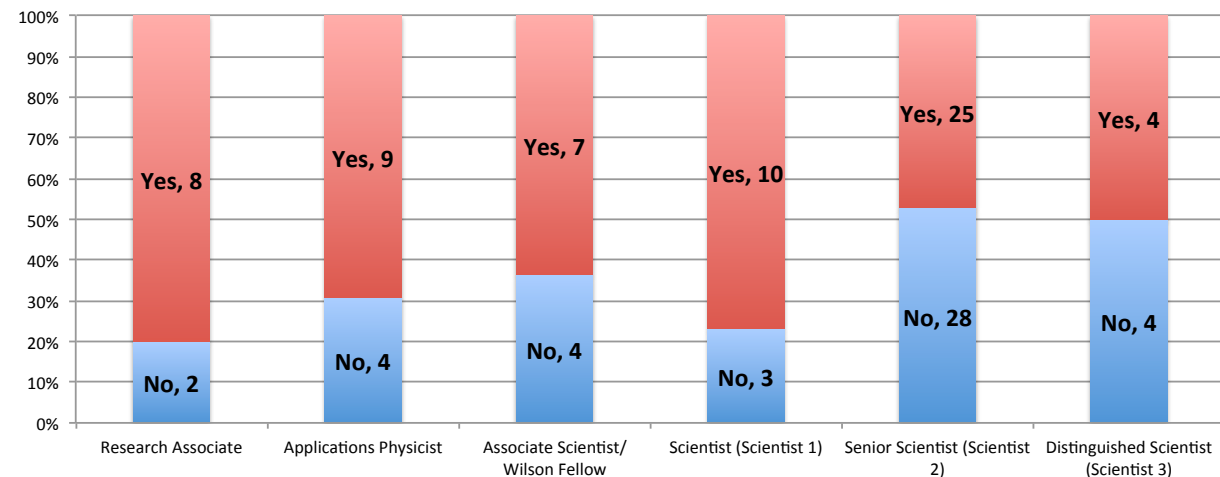
All responses



(108)?

“Experienced problem” = Yes

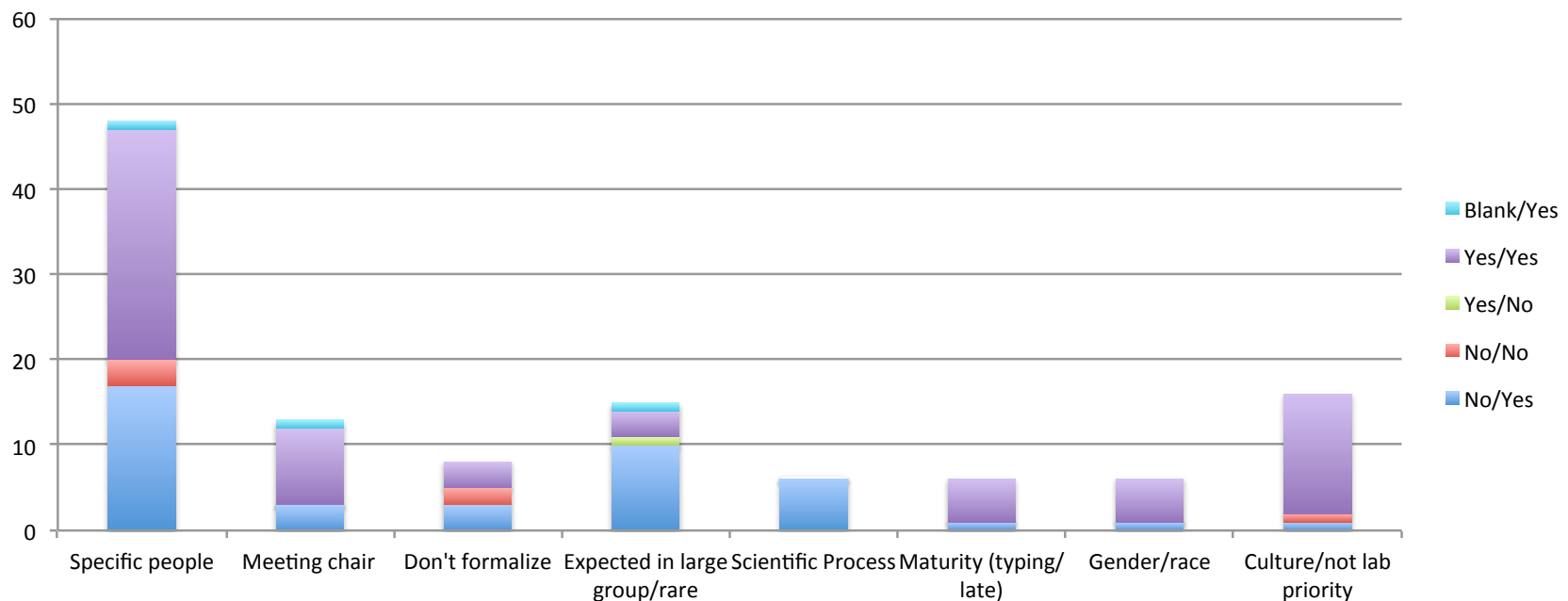
Maybe: more senior = fractionally more think there is no problem



# Meeting Etiquette: Underlying Issue (92)?

Tried to categorize comments into (multiple) generalized categories:

Comments for "Is a Problem?"/"Problems seen"



- Yes/Yes: Specific people/Culture/Meeting chair
- No/Yes: Specific people/Expected/Scientific process
- Few but strong concern about formalizing a solution for everyone

## Meeting Etiquette: Underlying Issue (92)?

- Some comments from the survey:
  - There are the occasional exceptional individuals who speak in a belligerent or demeaning tone
  - Few people have learned how to chair a meeting
  - Some people just might not understand how they are coming across, and would want to correct a bad perception if they were aware of it. A culture or mechanisms that support bringing this type of awareness to people could be helpful.
  - I see women regularly talked over, and minorities regularly talked down to. Even if a gender or racial minority, for example, is in a position of power/influence, there is still discrimination and lack of professionalism in interactions with them.



# Meeting Etiquette: Underlying Issue (92)? Culture?

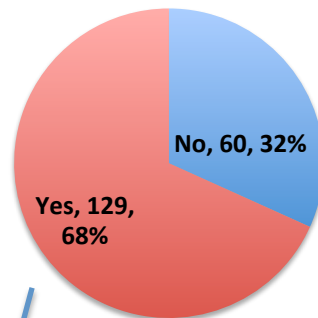
- Some comments from the survey:
  - Problems seen have been rare. Some people are bullies by nature, but overall more structure does not seem an answer
  - XXX uses getting angry as a management tool
  - I do not think that the relative frequency of such occurrences is higher than one might expect in a large group of people. As much as I dislike such a behaviour it does not represent a problem for me.
  - Sometimes interruption is just plain rude and disrespectful, but it is also sometimes necessary to give anyone besides the windbags a chance to get a word in edgewise.
  - This is a minor problem .. there will always be rude or insensitive people .. we just need to deal with it
  - Vigorous and open exchange requires some ability to handle people with strong opinions and be able to stand up and defend your own.
  - An essential ground rule of scientific inquiry is that your opinion is not, repeat not, respected. You can have a deep and abiding faith that the earth is the center of the universe, and science will not respect you at all for that. This is very much unlike how normal people operate.
  - Most of the "etiquette problems" at Fermilab are not because of our people are "bad-mannered" but because they really care about what they are doing/discussing and have strong opinions about that... more "problems" of that type – the better for organization

## Meeting Etiquette: Underlying Issue?

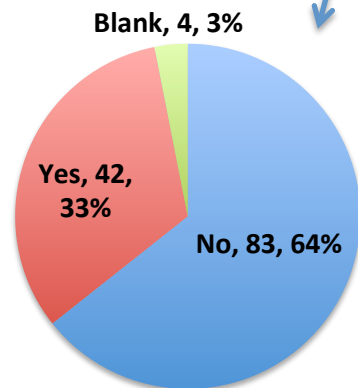
- Some comments from people:
  - There are problems with disrespectful communication that comes from racism and sexism — i.e., it's not just etiquette. There is a danger in sanitizing what people experience. “Etiquette” sanitizes the issue at hand.
  - Look at other places, e.g. corporate world to see how they address this problem
  - Issues of attribution and credit. Good ideas get shouted down but then used by other people
  - Some people seem to enjoy “taking the speaker down”

# Meeting Etiquette: Ground Rules/Posters

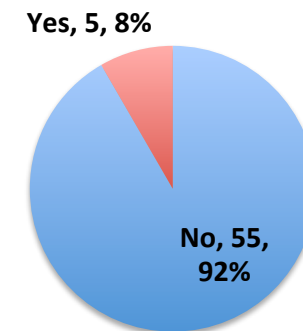
Do you support creating a set of ground rules that express the expectations for a positive workplace environment (189)?



Do you think displaying posters in meeting rooms or in public spaces would work to improve meeting etiquette (129)?



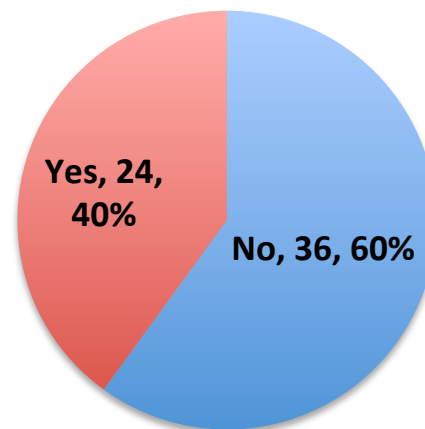
Do you think displaying posters in meeting rooms or in public spaces would work to improve meeting etiquette (60)?



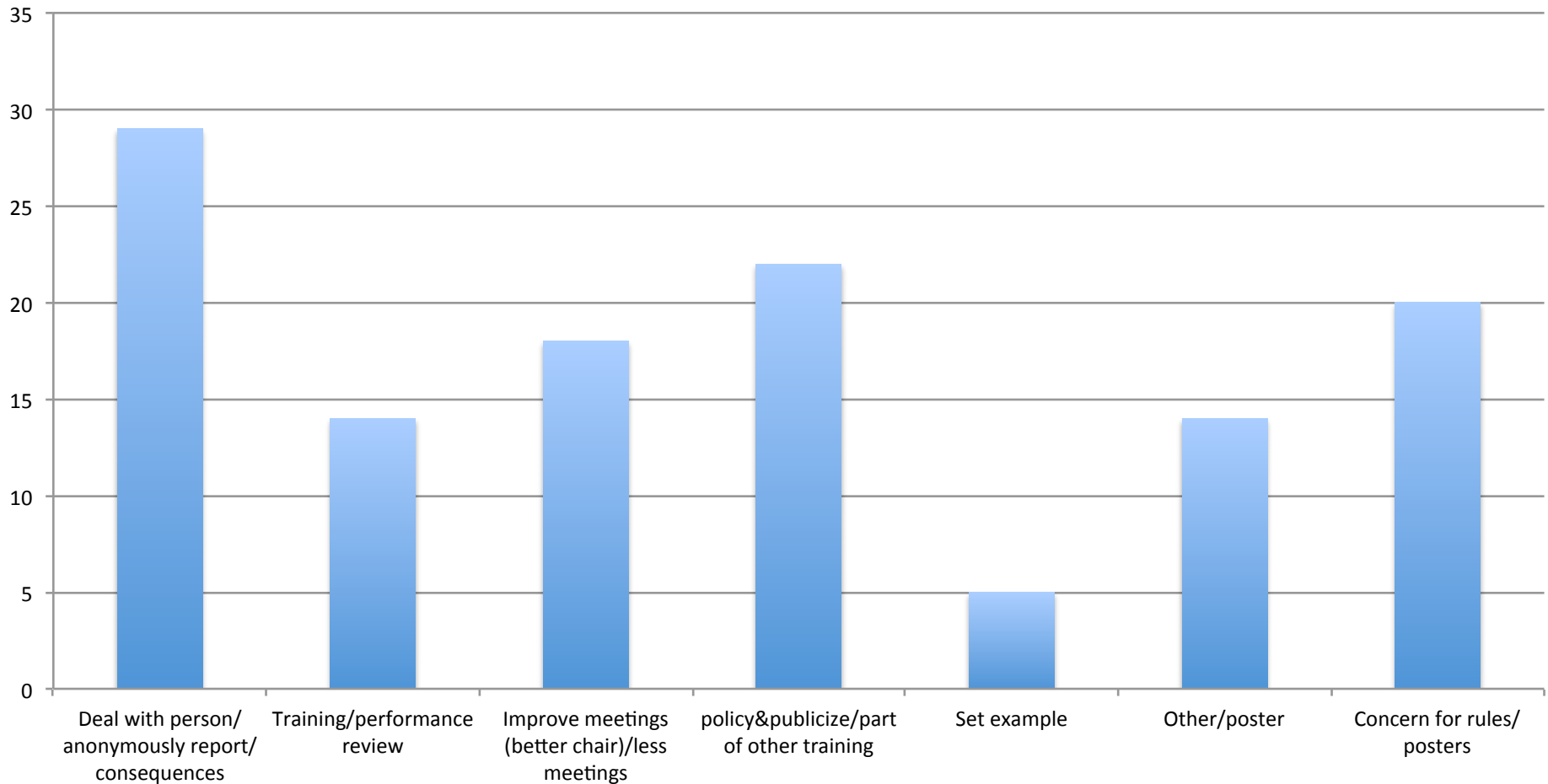
## Meeting Etiquette: Ground Rules/Posters

- For people who said “Yes” to “Do you think there is a problem with meeting etiquette at Fermilab?”

**Do you think displaying posters in meeting rooms or in public spaces would work to improve meeting etiquette (60)?**



# Meeting Etiquette: Suggestions to Improve (100)



## Meeting Etiquette: Suggestions to Improve (100)

- Some comments from the survey:
  - Certainly not posters or other similar childish efforts. There should be a lab policy that is read and acknowledged by all employees, not only scientists, and a committee that can take and investigate complaints
  - Deal with each person individually first ... Remember: They think they are normal and are usually trying to help, or to entertain. But usually they are the ones needing help.
  - I think it is more effective to train people in how to run a meeting. This includes having agendas issued in advance, advice on how to control disruptive people, making sure everyone is appropriately engaged, etc.
  - If you cannot handle the etiquette, do not attend the meeting. This problem should be up to the individual to solve
  - Message to ID holder and reminder to visitors
  - This is a delicate subject, worthy of hours of discussion, and I think it is unfair to ask for detailed input in a "short survey."
  - I rather like the poster idea.
  - Increasing the fraction of women has been empirically demonstrated to create a more congenial meeting environment. Also, many people may legitimately not realize their tendencies to interrupt others, so raising awareness can help.

## Meeting Etiquette: Suggestions to Improve

- Some comments from people:
  - In matters of diversity and equity, it is best practices for those with privilege to listen first to minorities, without trying to fix, explain or excuse behavior. Scientists think this is the antithesis of skepticism. That is a problematic dynamic.
  - helpful hits are good in things like 'how to give a good talk' wouldn't these things also be good for how to listen?
  - An inclusive culture can/should be fostered in the same way that the safety culture was built. The additional challenge for the inclusive culture is that steps for improving safety are more obvious. How do we educate well meaning people that their behavior is unwittingly reducing inclusivity?

## Meeting Etiquette: Concerns

- Some comments from the survey:
  - I support tacit rules of civility in meetings enforced by competent chairs, but I firmly oppose to set Fermilab mandated rules that express expectations for a positive workplace environment. A "good" idea like this could easily degenerate in "intellectual safe spaces" for people who fear to be intellectually challenged. I personally prefer to tolerate some instances of loud and unruly behavior than to promote self-censorship and fear reprisal. Of course, statements or actions expressing gender, racial, etc discrimination or bias must not be tolerated.
  - I am worried that imposing a set of etiquette rules could effectively introduce censorship. Such a change would cause an obstruction of a free exchange of ideas due to people being afraid of speaking their mind. I find that the free environment currently in place in Fermilab is one of the reasons of its success, and I believe that the instances when people clearly cross the line of professional conduct should be dealt with on a case-by-case basis.
  - I don't think there is a serious problem. Mandating behaviour is scary and should be avoided. It takes all kinds, even belligerent people, to do science.
  - The lab has had plenty of hotheads who made essential contributions to the lab's development
  - Also, not all meetings are equal



# Diversity

Table from Joe's slides on % diversity statistics for engineers from National Labs

	Engineers		
	Women	Under-represented Minorities	Other People of Color
Overall	18.0	7.8	13.4
Ames	0	0	0
Argonne	17.9	3.8	10.9
Brookhaven	15.5	7.7	15.5
Fermilab	8.8	5.8	11.5
Idaho	9.8	3.3	4.2
Jefferson	21.2	15.2	3.0
Berkeley	26.9	6.5	23.7
Livermore	14.8	5.1	13.4
Los Alamos	13.2	32.7	5.0
NETL	16.3	5.3	3.7
NREL	16.2	3.2	12.4
Oak Ridge	10.2	7.1	1.6
Pacific Northwest	23.5	6.7	19.5
Princeton	11.9	3.6	20.2
Sandia	29.6	22.8	5.5
Savannah River	16.9	n/a	n/a
SLAC	13.8	6.75	16.1
Fermilab Rank	16	9	9

OPC: other people of color (Asian/Asian American, Middle Eastern/Southwest Asian/North African, Pacific Islanders)  
 URM: underrepresented minorities (African American/Black, Hispanic/Latino, American Indian/Alaskan Native)

## Diversity

- We scored low in diversity in the DOE SC annual lab appraisal process (PEMP score) – need to improve
- DOE Labs asked to provide workforce demographics, so far only 3 of the 17 labs have posted their data, what does the data show for scientists?
- Numbers from data posted on labs’s web site, for “scientists and engineers” (LBNL, ANL) and separately S/E for FNAL

Lab	Women	OPC	URM
LBNL (2015)	15%	22%	3%
ANL (2015)	16.6%	21.8%	2.2%
FNAL (2016)	12%/9%	13%/15%	4%/7%

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**What should be our goal?**

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FNAL (2016)	12%/9%	13%/15%	4%/7%
BA US Physics/population	20%/20%/50%		2.5%/7%/15%

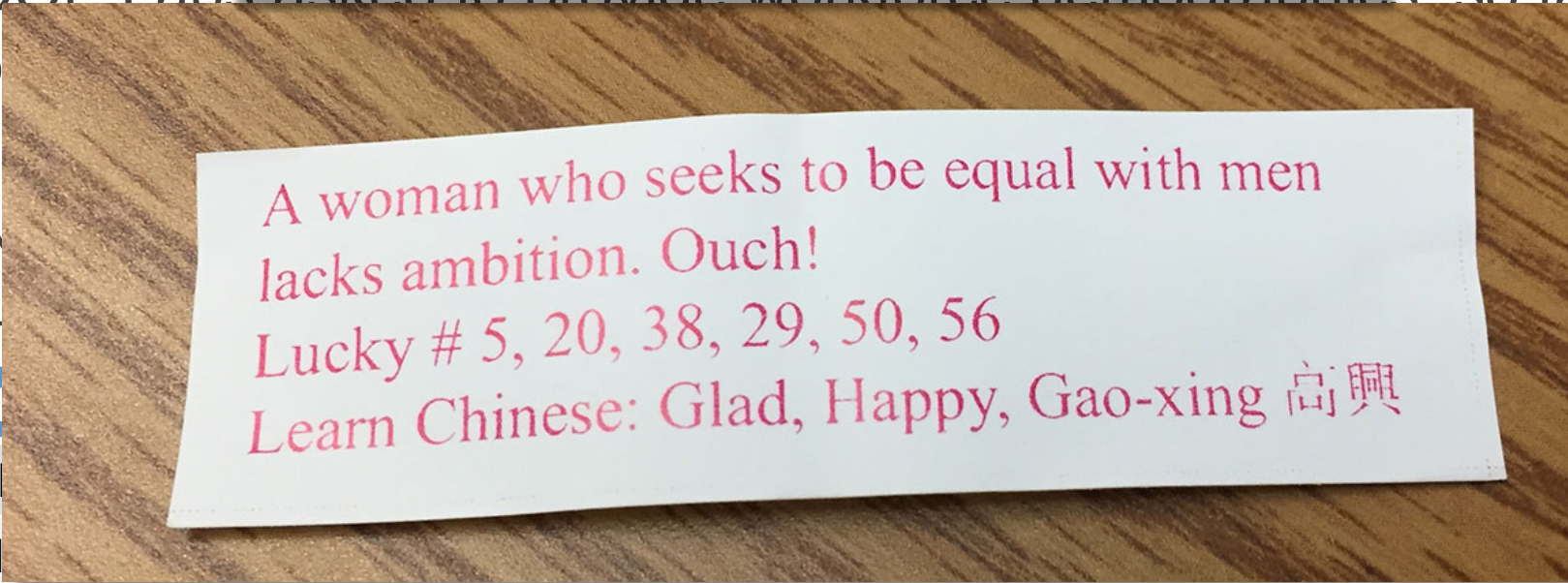
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# Diversity

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**What should be our goal?**

- DOE Lab ... so far
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FNAL (2016)	12%/9%	13%/15%	4%/7%
BA US Physics/population	20%/20%/50%		2.5%/7%/15%

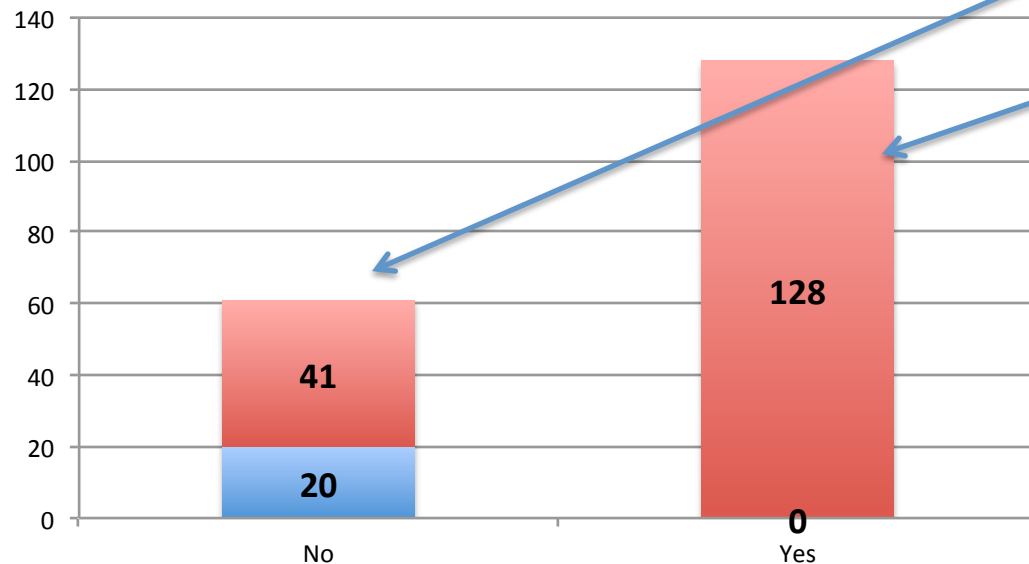
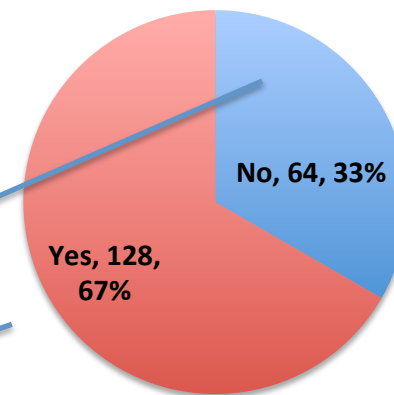
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# Diversity Survey Responses (Hiring/Recruitment)

- Do you think there is a problem with low diversity at Fermilab?

Strong support for increasing diversity but less strong appreciation that low diversity is a problem

Do you think there is a problem with low diversity at Fermilab?

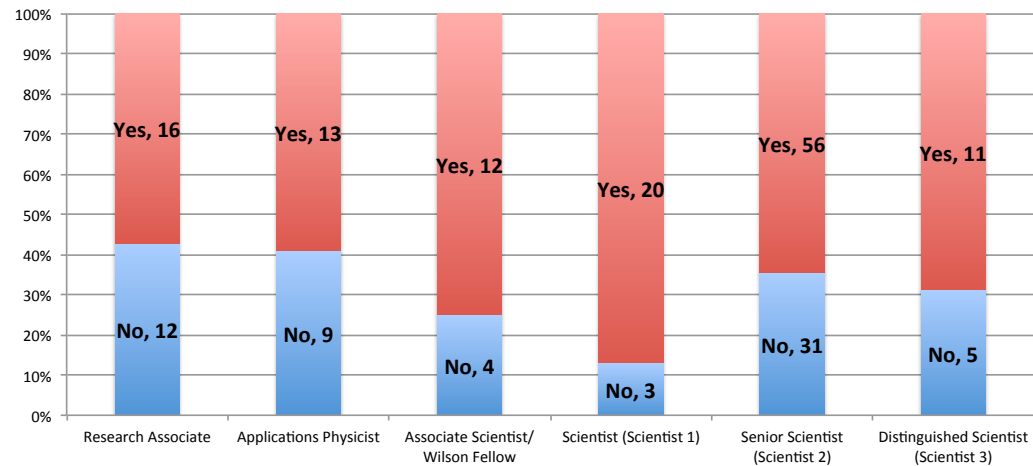


Do you support increasing diversity at the Lab?

# Diversity Survey Responses

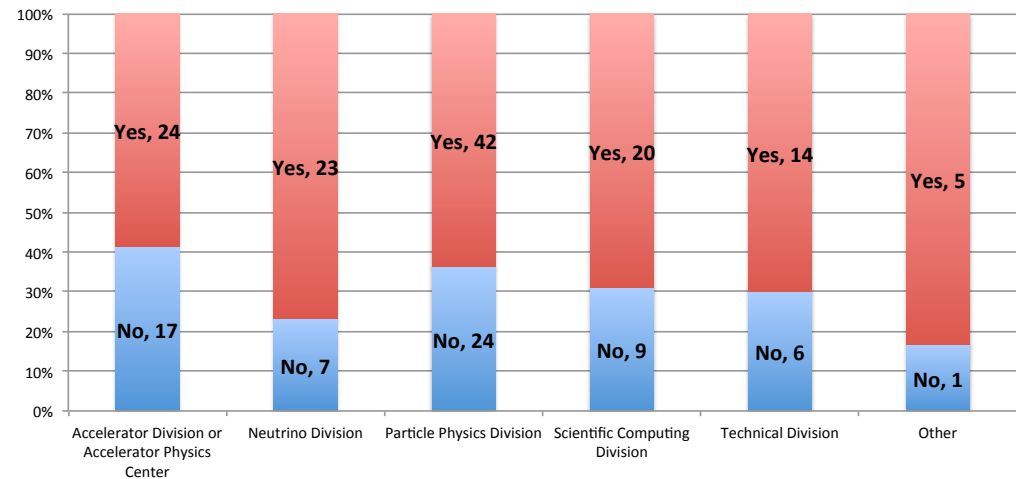
Maybe stronger sense in S that there is a low diversity problem

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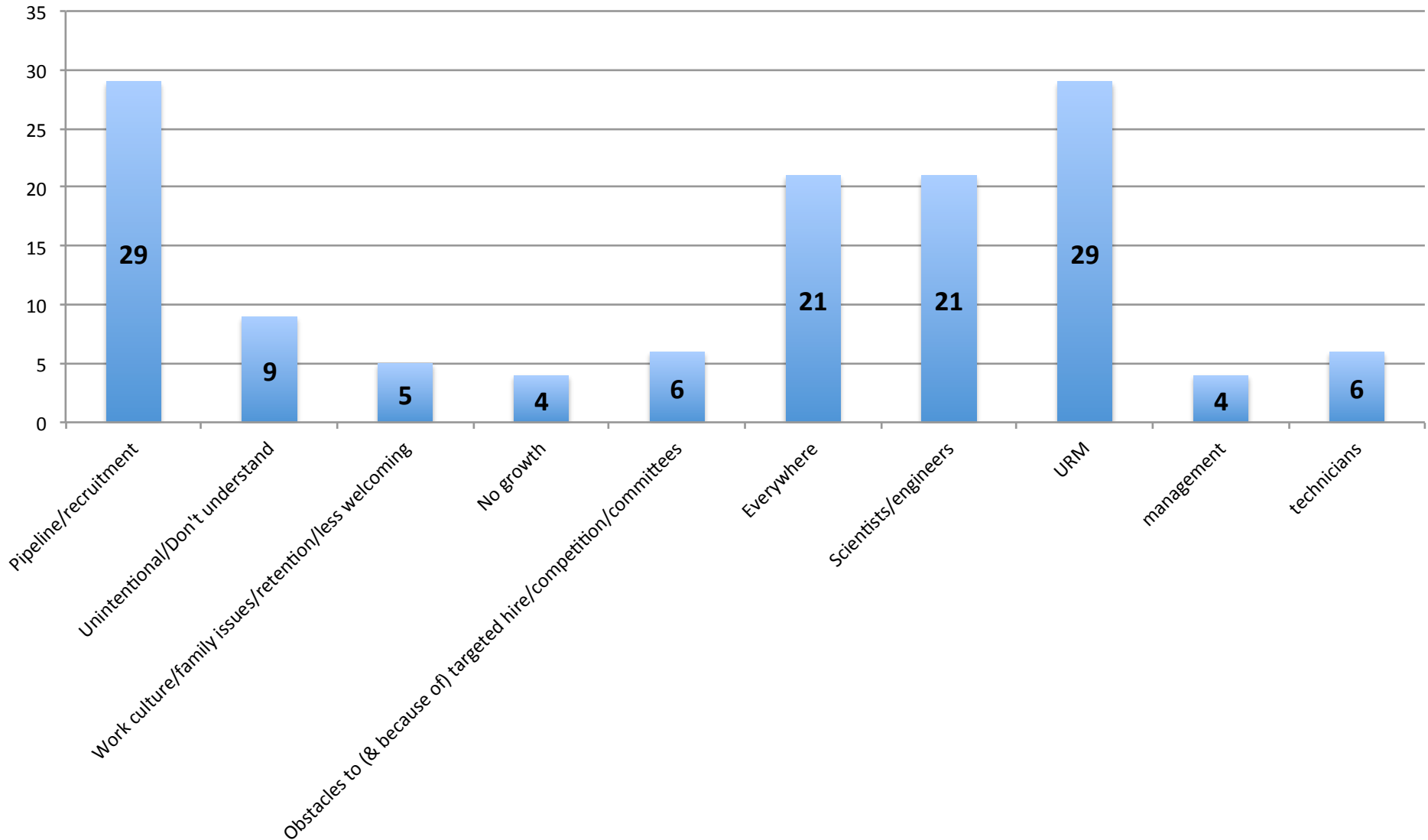


Maybe stronger sense in ND that there is a low diversity problem

Do you think there is a problem with low diversity at Fermilab?



# Diversity: Where is the Problem (113)?



## Diversity: Where is the Problem (113)?

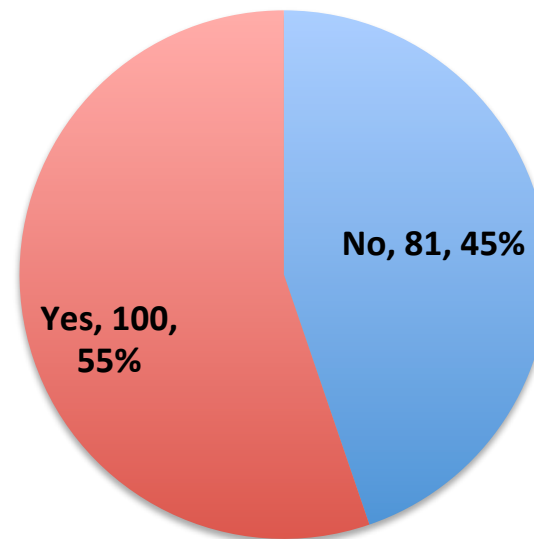
- Some comments from the survey:
  - I think more of the problem is with the "supply chain" than with hiring at the lab
  - Recruitment of under-represented minorities
  - Fermilab is not hiring enough new people. There is no growth
  - Retention and promotion of female engineers and scientists
  - The problem is widespread: first of all CV/letters are often phrased differently depending on gender or race, secondly hiring committees tend to hire people like themselves, thirdly we all seem to have the idea that superstars are aggressive and interview well.
  - Management does not reflect diversity of lab
  - If women are 50% of citizens, 20% of engineers in the US, and 10% of the lab engineers, then I would support efforts to attract more women engineers to apply, and having a goal (not a quota) of reaching 20%. I am OK with working on getting the 20% to 50% at the outreach activity level. At all times we must hire the most qualified – this is the only ethical choice, in many respects. Under-representation could be used to break a tie



## Diversity: Is your Division doing anything special?

- Maybe feedback to Division Heads? (Though “special” might have threw some people off)

**Do you think your division/section is doing anything special to increase diversity in their division/section?**



## Diversity: What is your Division doing (83)?

- Some comments from the survey:
  - Coop and student hiring is available and works well when encouraged.
  - Ensure diverse staffing of selection committees. Engage with groups representing underrepresented groups
  - Very deliberately reaching out to female graduate students and postdocs and encouraging them to apply for Fermilab positions. Providing mentoring opportunities.
  - We have recently tried to draft job ads that avoid some of the implicit selection bias that recent research has revealed.
  - We have had a pipeline from Italy with a good mix of male and female engineers
  - You really don't want me to answer this. (Also other “push back” comments)

## Diversity: What are you doing personally (121)?

- This was partly to capture your good ideas
- Some comments from the survey:
  - There are not many avenues of which I am aware, however, one small contribution is being a mentor for SIST students
  - Through hiring committees and encouraging young collaborators with diverse backgrounds to apply.
  - Outreach/mentorship of students from underrepresented groups
  - I feel that participating in outreach is very important because it gives young women a chance to meet a woman scientist and learn from her experiences
  - In management roles, I try to be especially conscious of the opportunities afforded to women in our experiment and make sure they are on par with men. I try to listen to encourage the work of all contributors in our experiment.
  - Really fixing our problem requires steps to be taken in high school and undergraduate programs and so I try to interface with those students when possible. We have some nice programs at the lab, but we don't get "credit" for participating in them, making it hard to invest time.

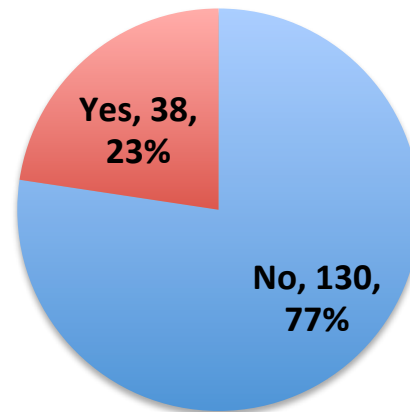
## Diversity:

- Some comments from people:
  - Trying to create links with universities. Cryo is an example
  - We need to do a better job at getting people to truly understand the advantages of diversity
  - It takes so long to get a permanent job - this issue might be daunting for people who do not come from financially well off families, who can fall back on parental support

## Diversity: Retention affecting diversity?

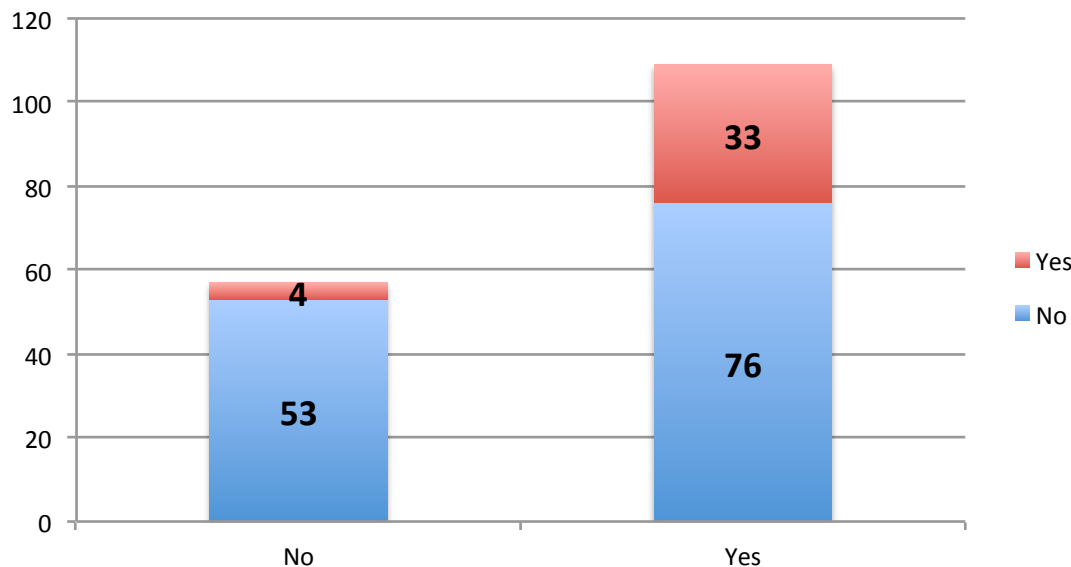
- What is the evidence?
  - Not a strong sense this is an issue for scientists

**Do you think there is an issue with retention of scientists at Fermilab that affects diversity?**



## Diversity: Retention affecting diversity?

- What is the evidence? We are still getting data from WDRS
  - Even for scientists that think there is a low diversity problem, they do not have a strong sense that retention affects diversity



Do you think there is an issue with retention of scientists at Fermilab that affects diversity?

Do you think there is a problem with low diversity at Fermilab?

## Diversity: What issues with Retention (50)?

- Some comments from the survey:
  - We are below a critical mass where there are so few minorities that when one or two come in, it is a very lonely place for them.
  - It's hard to feel part of a team when the diversity is so low that you stand out like a sore thumb
  - Solve two body problems
  - Small pool makes everyone compete for the few candidates.
  - Regular weekend meetings are corrosive to families
  - If you have a family to support, and don't have anyone to fall back on, being a postdoc can look like a pretty risky proposition. This must affect people from different backgrounds differently.

## Diversity: What issues with Retention (50)?

- Some comments from people:
  - The emphasis on recruitment in the survey and discussion overshadows issues of inclusivity. By and large, scientists do not understand how deep the problems of racism in our country. Moreover, the preferred method of contending with it is to intellectualize, philosophize and then take little action. Inclusivity is about understanding how an environment welcomes and supports minorities equitably. We won't be able to keep people at Fermilab, nor attract them to the lab, if we don't foster an inclusive environment, much less if we don't understand the need for one.



## Conclusion for Diversity and Culture

- Huge Range of (and sometimes conflicting) opinions found in the survey
- Meeting Etiquette:
  - Somewhat strong support for creating ground rules, poster idea less popular with scientists (but we did not split according to minorities)
  - Problem seen as due to specific people, culture, meeting chair
  - Some do not know or do not see certain behavior as a problem
  - Suggestions to deal with specific people but also publicize, and improve meetings/ chair/training
  - Strong concern that formalizing rules would lead to obstruction of free exchange of ideas, and “intellectual safe spaces”
- Hiring/recruitment:
  - Strong support to increase diversity, though many unaware of what their division is doing; and personally they feel like they cannot do much unless they are on a hiring committee. Even then many think it’s a pipeline issue. There is clearly some push back (could be addressed by having transparent guidance and being fair?)
- Retention:
  - People did not have a strong sense that retention affects diversity, this may speak to a lack of understanding of what it’s like for minorities; some good ideas given

## Example of a Solution for Pipeline Problem?

- From article published in the October, 1969, issue of the Bulletin of the Atomic Scientists, written by Dr. Edwin L. Goldwasser, deputy director, National Accelerator Laboratory
  - “In another pilot program, a group of young men between the ages of 18 and 30 were recruited from the inner city and trained for skilled technical jobs. After an initial orientation course at NAL, the men were sent to Oak Ridge, Tenn., where they were enrolled in the Training and Technology Program conducted by Oak Ridge Associated Universities. Representatives of NAL's Personnel Office, acting as guidance counselors, kept in close touch with the trainees, who compiled an outstanding record in the training program. On completion of the 30 week course, the men returned to NAL to take up positions as machinists, draftsmen and mechanical and electronic technicians.
  - In the screening process, overriding emphasis was placed on the apparent motivation of the interviewees. No criteria were imposed concerning previous school or job achievement, police or prison records”

# Training and Technology (TAT) Program



First group of TAT at O'Hare flying to Oak Ridge on 2 Jan 1969 for a 30 week course and to take up jobs at NAL as machinists, draftsmen and mechanical and electronic technicians

## Perspective on hiring “the best”

- From article published in the October, 1969, issue of the Bulletin of the Atomic Scientists, written by Dr. Edwin L. Goldwasser, deputy director, National Accelerator Laboratory
  - **“A Unique Opportunity:** The National Accelerator Laboratory clearly provides a unique opportunity to contribute to one of the most important activities of man - the discovery of the true nature of the world in which he lives. In the pursuit of that activity, however, we must not ignore, and have not ignored, other urgent problems which are pressing upon our society today. The traditional stance for an organization such as ours, attempting to do a difficult job on a tight schedule, is to "play it safe." On a matter like open housing, for example, it is tempting not to antagonize the anti-open-housing interests. In large construction projects, it is tempting not to impose a stiff non-discrimination policy and thus risk the loss of potential contractors. In purchasing it is easier to use only the well-established and better known vendor. In employment it is tempting to hire the trained rather than to train the ready and eager underemployed.
  - But the condition of our society demands a longer-range view, and, in fact, we have found that this is also the best short-range approach. We have been willing to accept whatever incremental cost might have been associated with the implementation of these programs, but we believe, in fact, that such a cost has not materialized. In any case, we are convinced that the cost to society of solving these problems through adaptation of its normal activities to these goals is ultimately much less than the cost of initiating special activities, ad hoc, to provide crash solutions which are likely to be of only temporary value.”