Collaboration Manpower Analysis

- Estimates of available full-time-equivalent physicists (FTE's) are obtained from an analysis of the Memoranda of Understanding (MoU's) submitted by each institution on DØ
  - MoU's completed in March 2007 covered the 2007-2009 period
  - MoU's completed in April 2008 covered the 2009-2011 period
- One-year overlap in each set of MoU's gives us a means to have continuous predictions and monitor changes in expectations
- Manpower needs for 2007-2009 were estimated from a bottoms up analysis of efforts needed in each area of operations, algorithms, and computing
  - 2010 needs are based on 2009 estimates with coarse adjustments

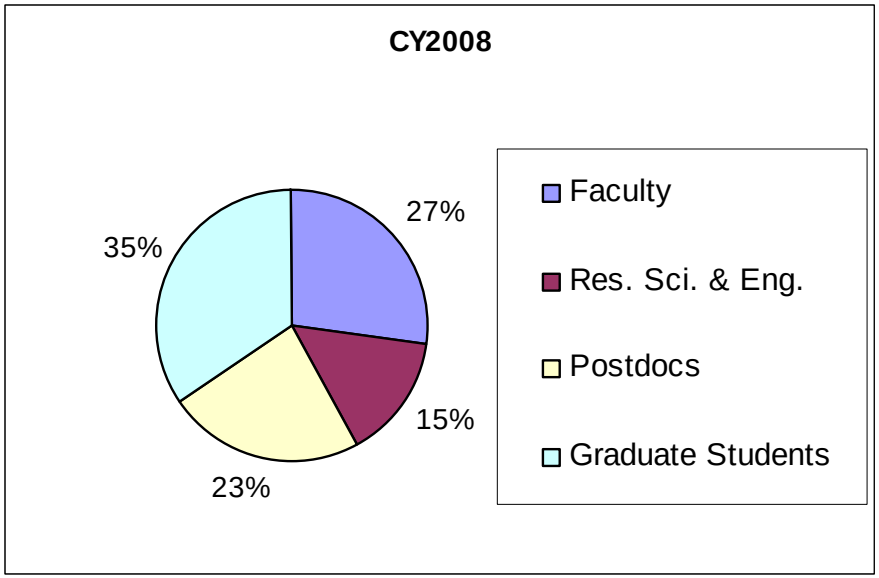
Collaboration MOUs

- Note: group leaders were asked to assume running in 2009 and 2010, but **not** 2011 in making their estimates

Physicist FTE's	2007	2008	2009	2010	2011	Assessed
Needs (excluding analysis)	165	145	124	~100		
2007-2009 MoU data	357	272	184			Mar 07
2009-2011 MoU data			240	185	119*	Apr 08

- 30% increase in 2009 FTE with respect to previous set of MoU's
  - demonstrates the strengthened commitment of the Collaboration to continuing Tevatron program
- Current FTE commitment estimates for 2010 closely match previous estimates for 2009
  - Expect sufficient but lean manpower for 2010 run
- *Current FTE commitments for 2011 assume no Tevatron operation
  - Must be re-evaluated if we run in 2011

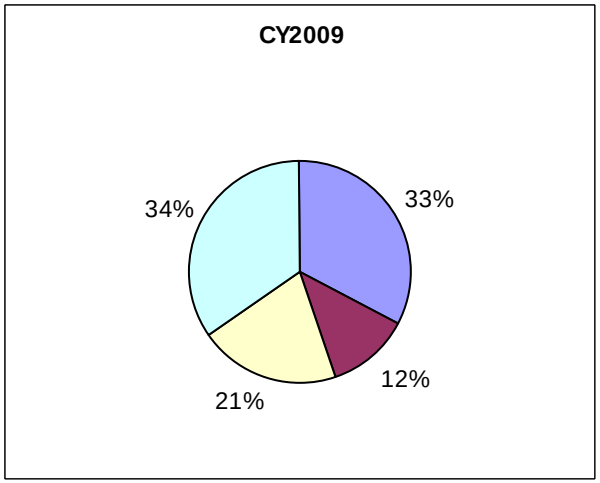
Collaboration Manpower Composition

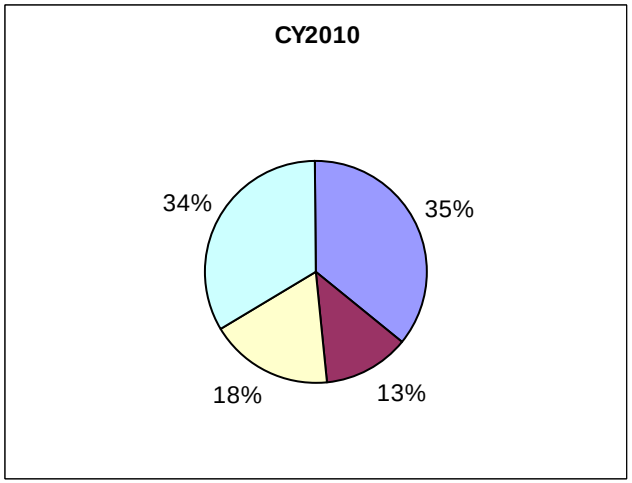


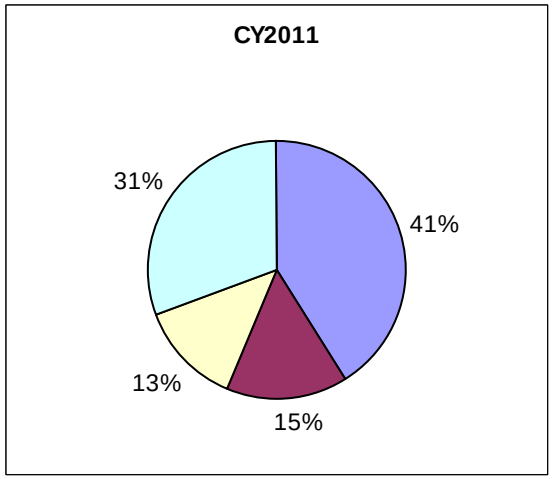
MoU's provide detailed information about composition of the DØ Collaboration manpower

- Faculty
- Research scientists
- Postdocs
- Graduate students

In FTE's







Composition is fairly stable and indicative of natural changes in the Collaboration at the current stage

Additional Statistics

- Currently 533 people on the DZero masthead
  - Compared to 573 in March 2008
  - Decreasing at about 7% per year, but many new people still joining
- Analysis of new students joining the DZero
  - 27 new students have joined since 1-Sep-2008
    - 22 are Ph.D. students, rest are bachelor, diploma, and masters students
    - 12 are from US institutions
    - At least 8 have worked on LHC experiments before joining DZero

Beyond Statistics – Some Critical Factors in Collaboration Success

- Retention of key experts for systems built many years ago
  - Ongoing institutional commitments to the systems they built
    - maintain access to experts where possible
  - Constant retraining of new experts as needed
- Interest in physics analysis is very high and collaborators are remaining involved (and getting re-involved)
- Targeted support from the laboratory – thanks
  - Fermilab International Fellows
    - Currently 5 Fellows on DZero
  - The visitors budget: an extremely useful tool in enabling collaborators to be in residence at Fermilab and focus on critical projects on DZero
    - Very good value for the money: ~40 FTE's for ~$1M
- International Support
  - October 2008 DZero International Finance Committee meeting
    - Attended by representatives from France, UK, Russia, Czech Republic, Korea, Canada, Germany
    - Many statements on long-term interest and support
    - German groups formed consortium to continue on DZero
- We will rely on more help from the lab and funding agencies in the future
  - A timely decision on 2011 running is important