

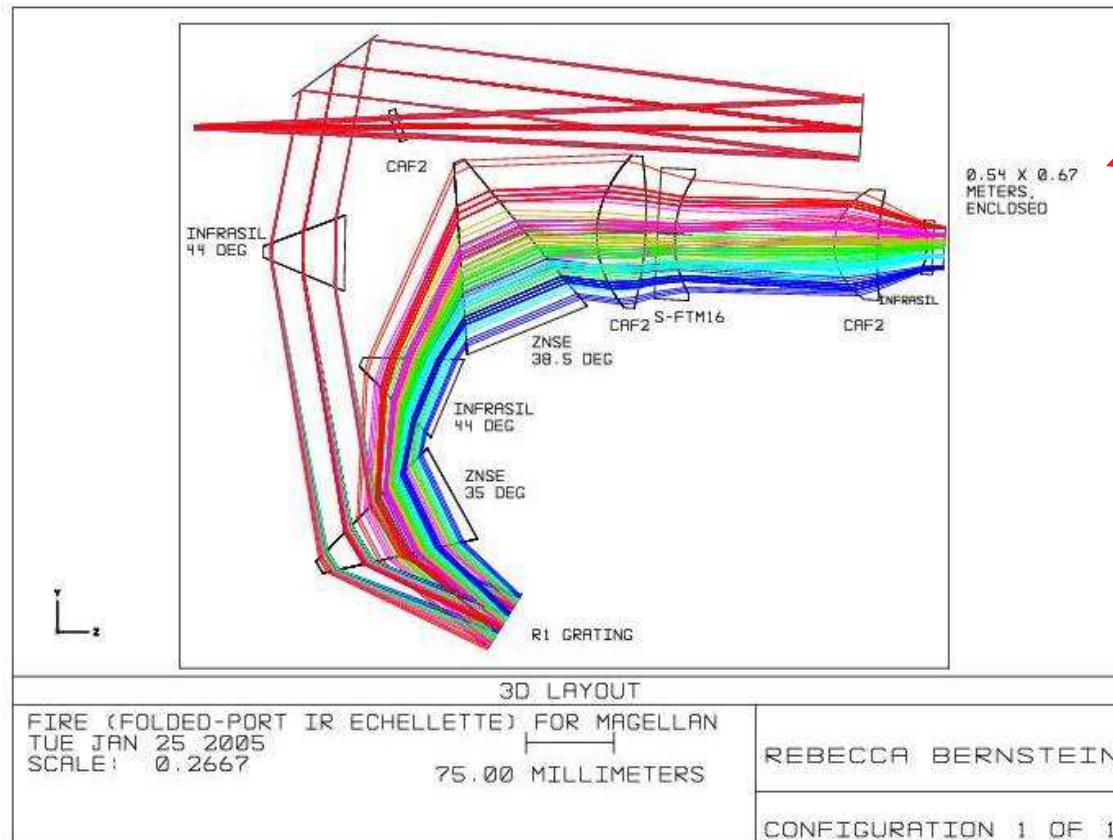
Progress Report on FIRE (Folded-Port Infrared Echellette)

Magellan SAC, April 2005

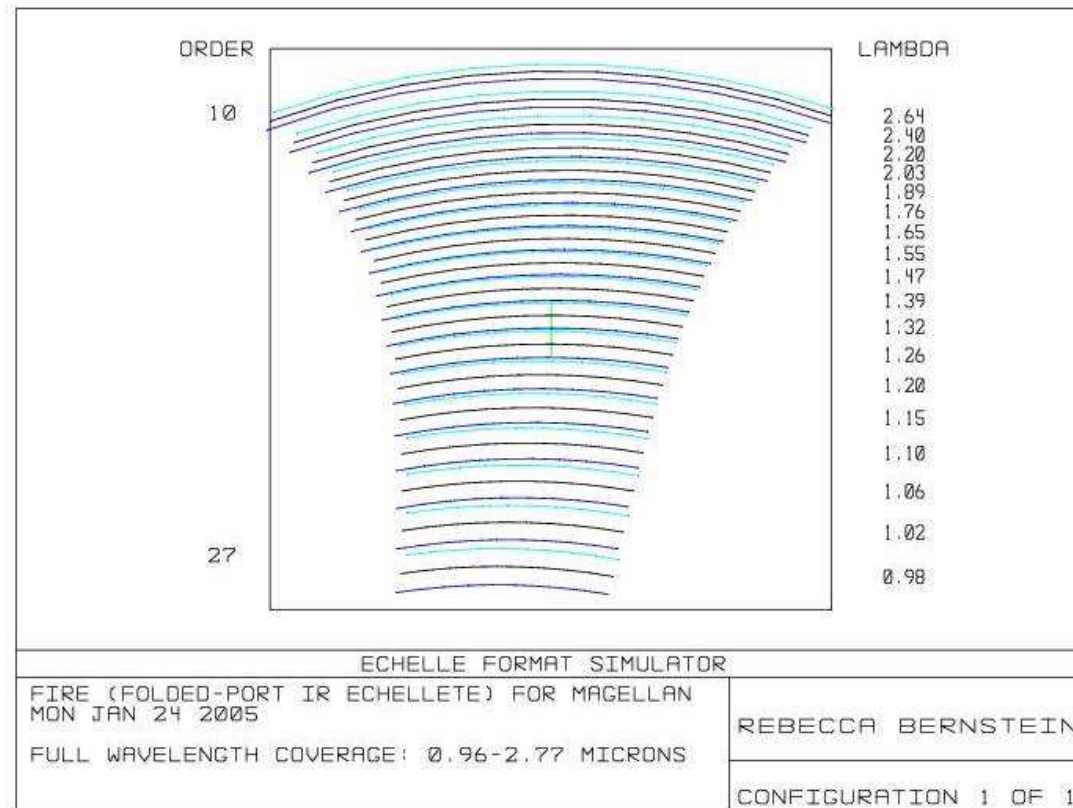
Review

- R ~ 6000 echellette (50 km/s)
- Nominal 0.6" slit, sample to 0.3"
- Prism XD, high throughput
- Single-shot JHK
- Lo-res prism-only mode (R~1000-1700)

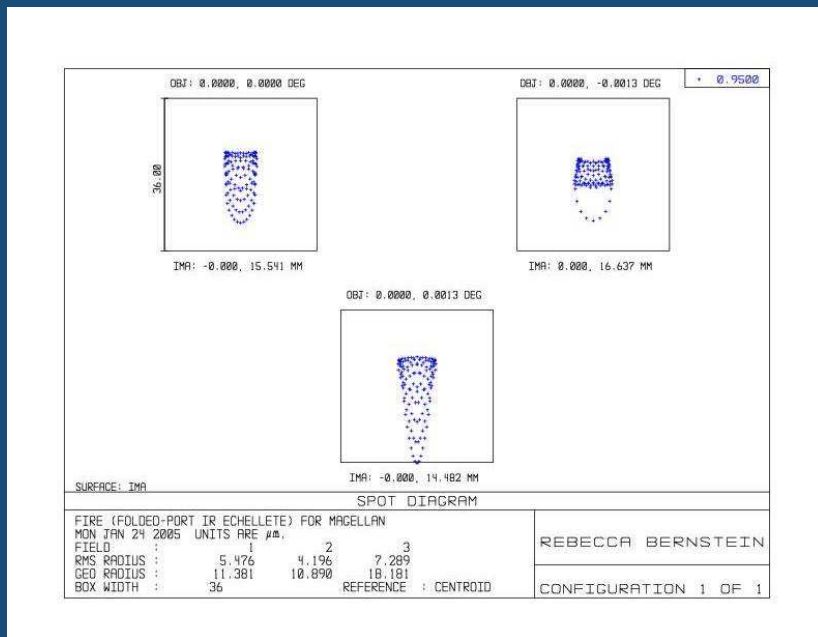
Optical Layout



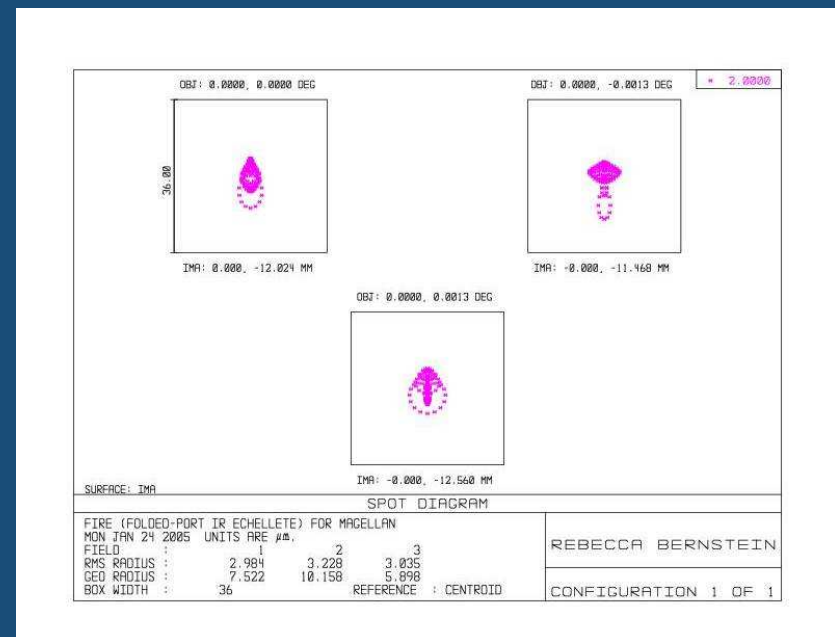
Spectral Format



Spots

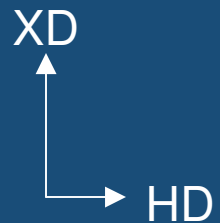


0.95 microns

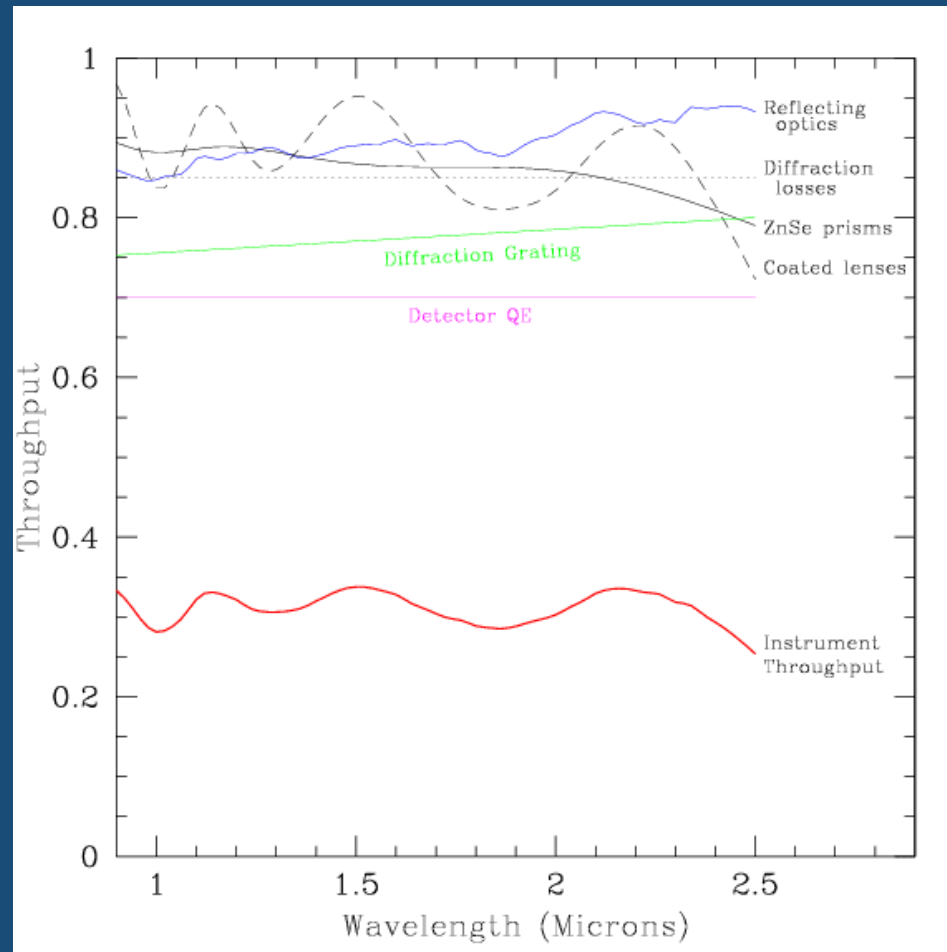


2.0 microns

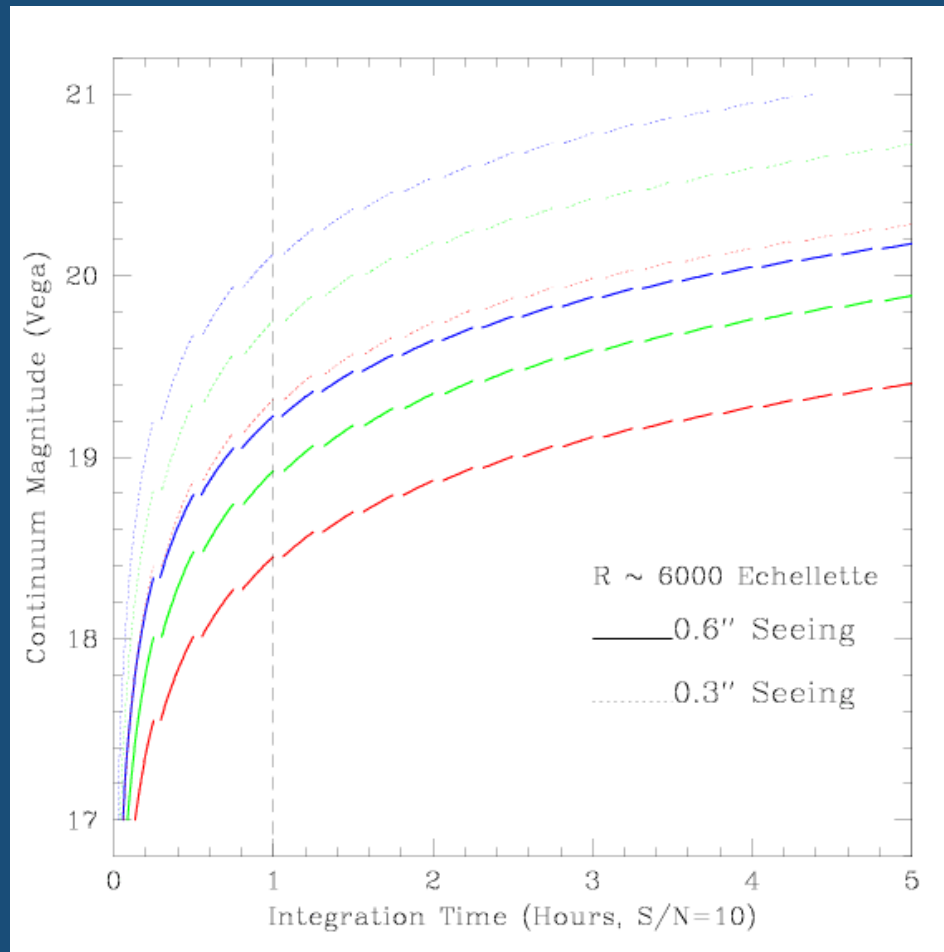
Reference Boxes are 2 x 2 pixels



Theoretical Throughput



Theoretical Integration Times (assumes $\epsilon=15\%$, 15 min exposures)



Team

- MIT
 - PI: Adam Burgasser
 - Co-PIs: Rob Simcoe, Paul Schechter
- Michigan
 - Optical design: Rebecca Bernstein
 - Opto-mechanical: Mario Mateo
 - Design/engineering oversight: Bruce Bigelow
- University of Rochester
 - Detector/electronics: Judy Pipher, Bill Forrest
- Arizona
 - Science definition: Xiaohui Fan

Status

- Submitted NSF/MRI proposal through MIT for \$1.9M
- Renovations approved for MIT lab space
- Contingency funding
- Should hear from NSF in June/July
 - Mechanical designs pending
- Target delivery 2007