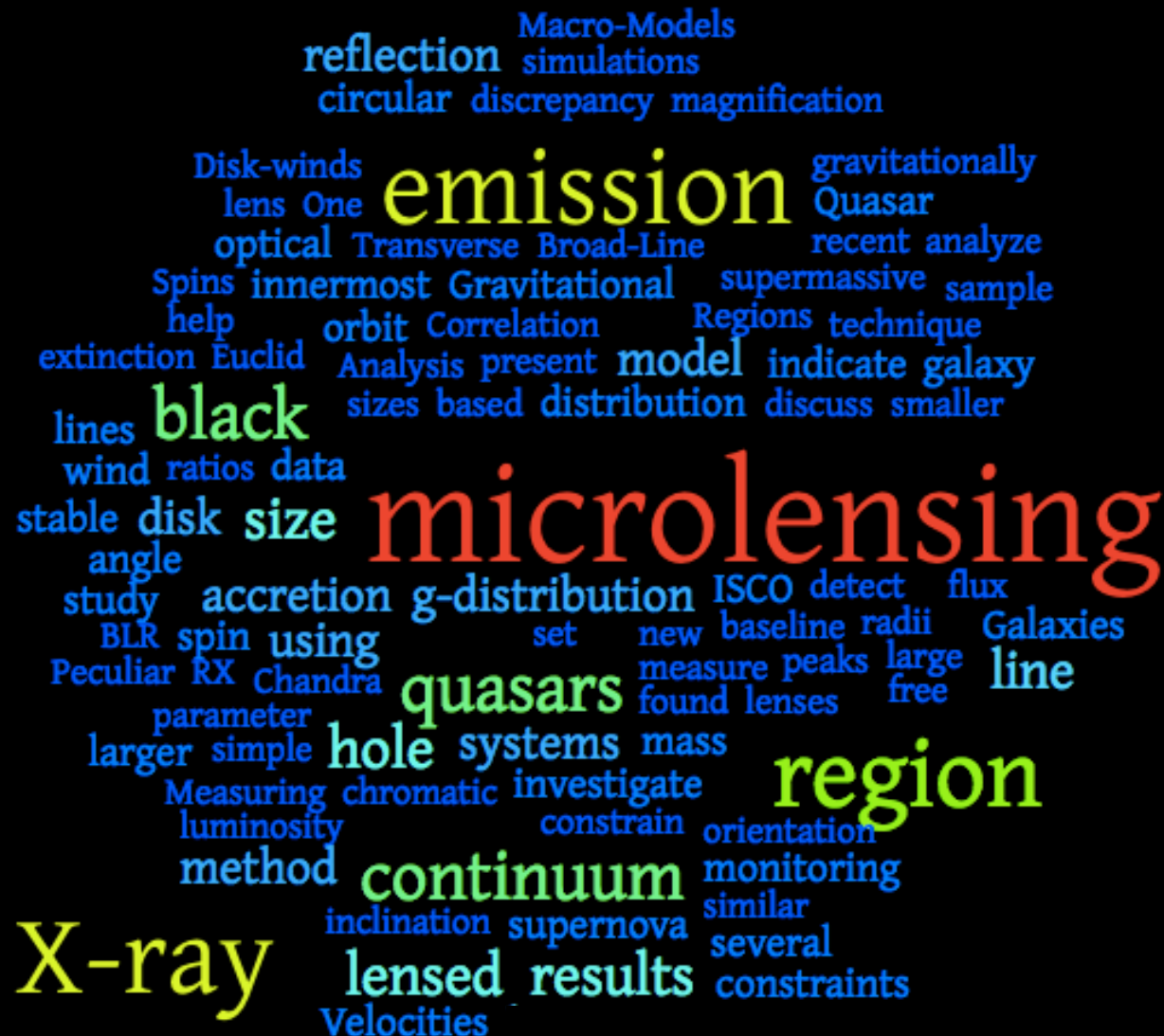


Microlensing, the Future: Lynx, OMEGA Explorer, and Memory-Driven Computing

Ana M. Mosquera



Manhattan Microlensing Workshop
June 2nd 2017



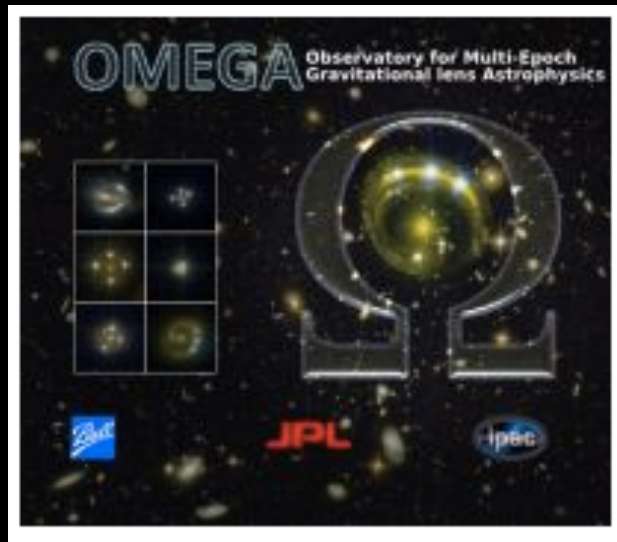
Outline

- ▶ Which are the ideal scenarios to make “order of magnitude” advances?
- ▶ X-ray Surveyor: Lynx
- ▶ OMEGA Explorer
- ▶ Memory-Driven Computing
- ▶ How do we get ready?
- ▶ What else can we plan for the Star Trek era?
(mission at 500AU, Direct Fusion Drive)
- ▶ NewSpace ↔ Academia

Future Missions!!



The Observatory for Multi-Epoch
Gravitational lens Astrophysics
PI: L. Moustakas



Submitted to the Explorer 2011 NASA
opportunity, and was ranked Category
II ("selectable")

<https://science.jpl.nasa.gov/projects/OMEGA/>



Community Chairs of the STDT:
Feryal Özel – UA
Alexey Vikhlinin – SAO

<https://wwwastro.msfc.nasa.gov/lynx/>

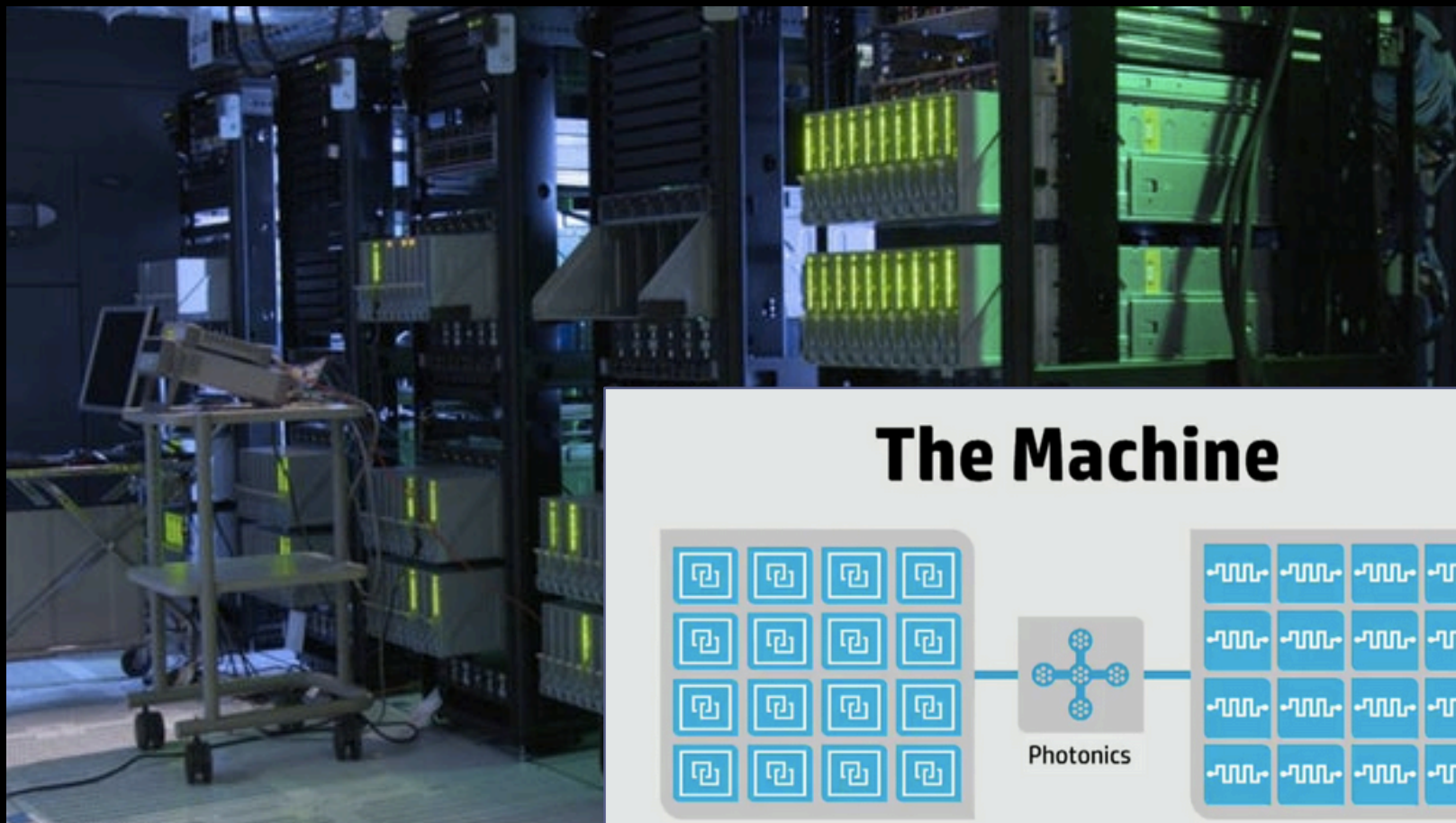
The Machine – HP



Kirk Bresniker (Chief Architect at Hewlett Packard Labs)

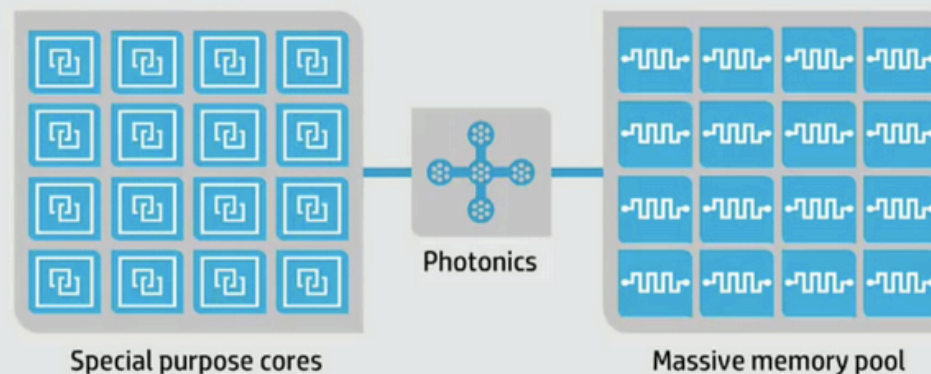
A.M. Mosquera – Manhattan ML workshop – June 2nd, 2017

Memory-Driven Computing



Credit: HP

The Machine



Direct Fusion Drive – is real!!

- ▶ Check out Princeton Satellite Systems!!
- ▶ They got NASA NIAC funding to continue working on DFD
- ▶ Expected timeline is less than 10 years!
- ▶ Fantastic missions including:
 - 500 AU gravity lens telescope ++
 - We can give them more ideas!!

NewSpace ↔ Academia



There are many reasons....

Beyond being merely cool....



Conclusions

- ▶ Star Trek era is around the corner
- ▶ We have done amazing things in the ML field during the past years
- ▶ We can do great things in the next decade
- ▶ But let's think BIG!! And get ready for that!!

Thank you!!!

If interested in asteroid mining...