



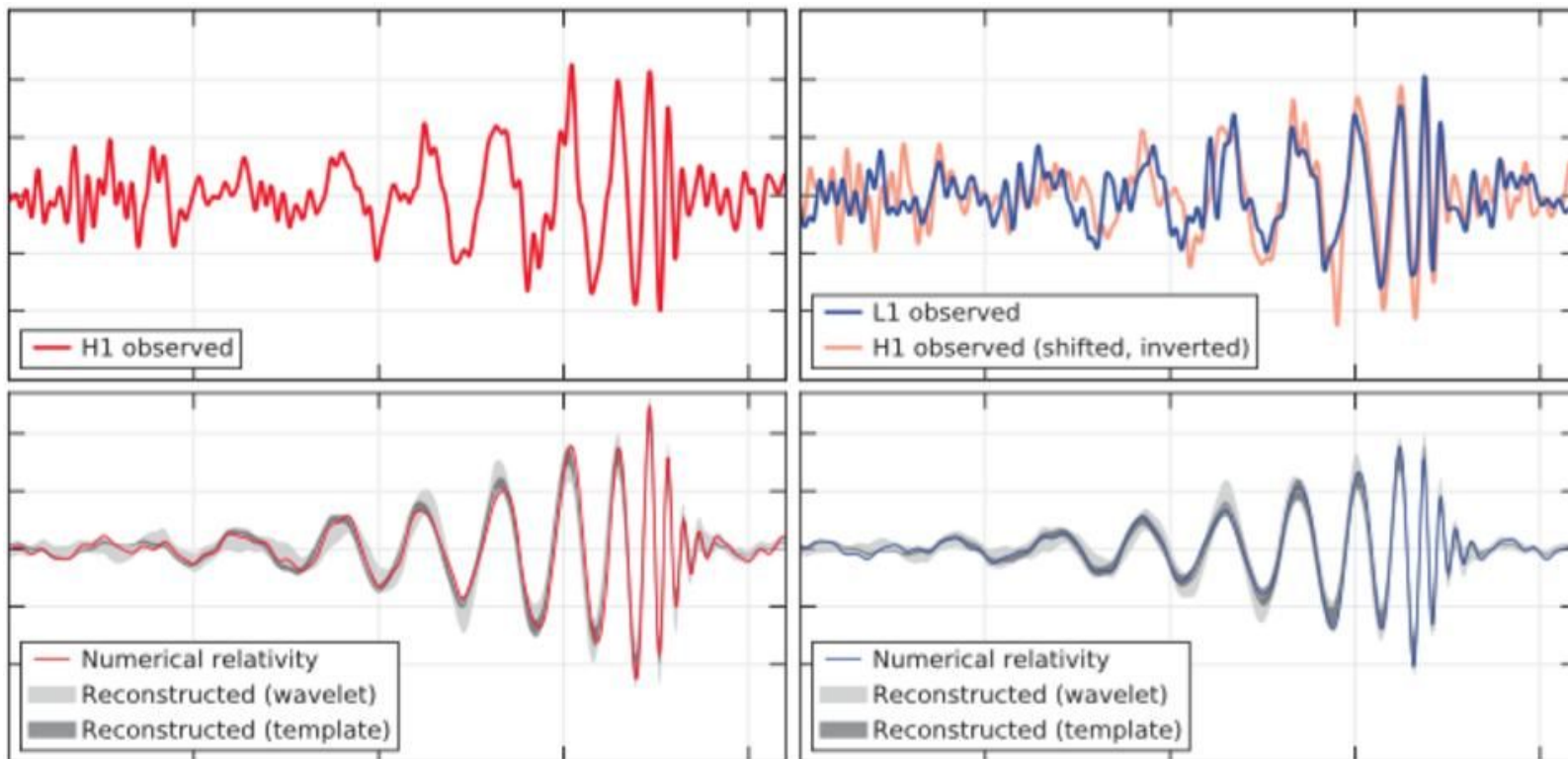
# LIGO IdM Update

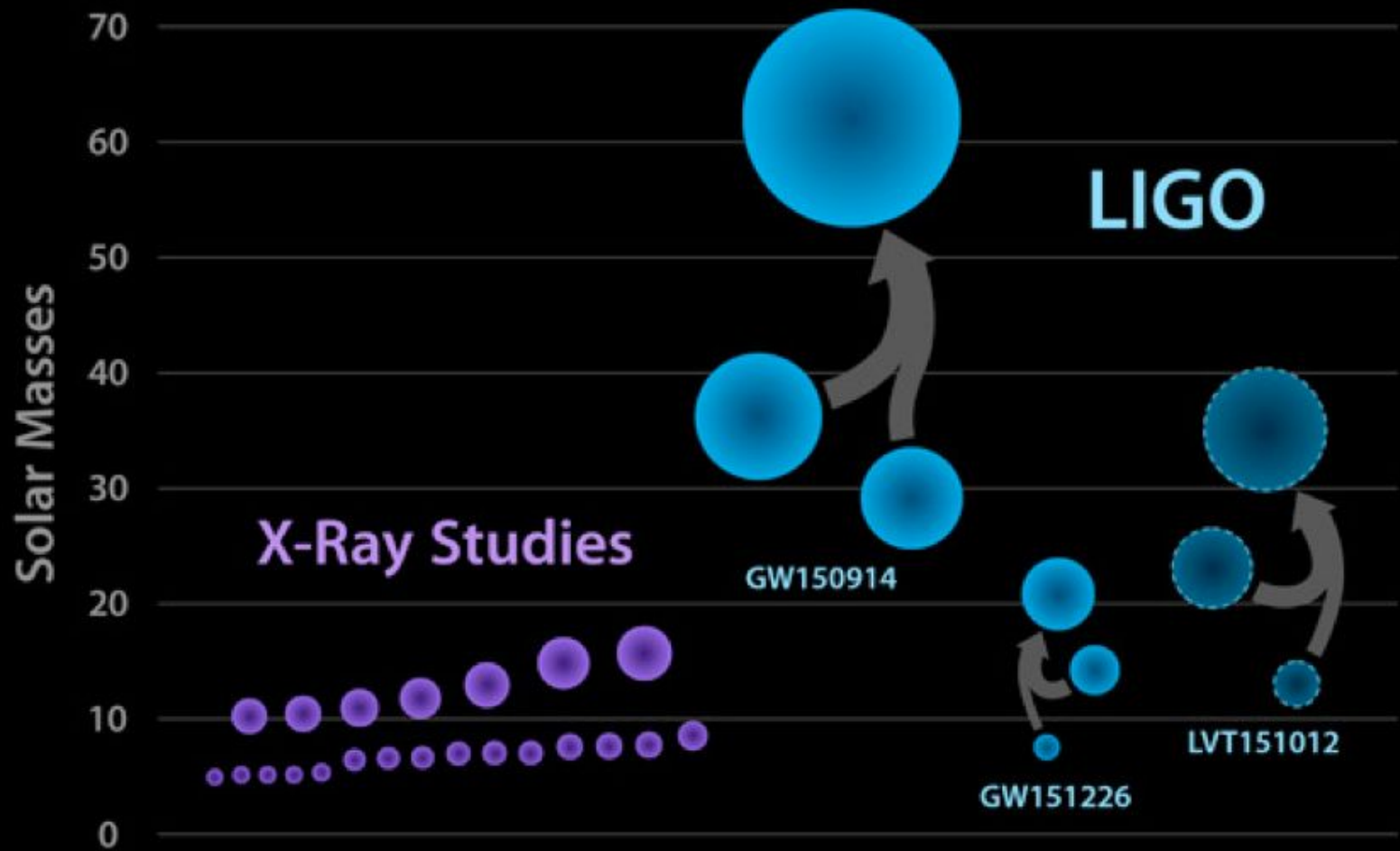
Scott Koranda  
10th FIM4R Workshop  
Vienna  
20 Feb 2017



What's New?

September 14, 2015 9:50:45 UTC







Onto important matters like identity  
management...



# LIGO Identity and Access Management

Two theaters of engagement for LIGO IdM:

1. Enabling collaboration for the broad gravitational-wave astronomy community
2. Enabling collaboration for LIGO itself as a project



# Enabling GW Astronomy Collaboration



# Enabling GW Astronomy Collaboration

- Collaboration platform hosted at [gw-astronomy.org](http://gw-astronomy.org)
  - CManage Registry
  - Sympa email list service
  - Wiki
  - Gravitational Wave Candidate Event Database (GraceDB)



CManage Registry: Home x Scott

Secure https://gw-astronomy.org/registry/

Platform Scott Koranda (scott.koranda@ligo.org) Logout

# CManage Registry



CManage™

Collaborations ▾

Welcome to CManage Registry. Please select a collaboration.

#### Available Collaborations

Name	Description
<a href="#">CManage</a>	CManage Gears Internal CO
<a href="#">CALICO (Not a Member)</a>	
<a href="#">GWHEN (Not a Member)</a>	
<a href="#">GWIC (Not a Member)</a>	Gravitational Wave International Committee
<a href="#">GWNW (Not a Member)</a>	Combined search for core-collapse supernovae using neutrino and gravitational waves
<a href="#">HTCondor-LIGO (Not a Member)</a>	HTCondor LIGO Working Group
<a href="#">KAGRA-LIGO (Not a Member)</a>	KAGRA LIGO Working Group
<a href="#">LSC-OSC (Not a Member)</a>	
<a href="#">LV-EM (Not a Member)</a>	LIGO Virgo Electromagnetic Followup
<a href="#">TechX (Not a Member)</a>	TechX



# Enabling GW Astronomy Collaboration

- Formally hosted and operated by University of Wisconsin-Milwaukee
  - SAML SPs registered in InCommon by UWM
  - Google, UnitedID, NCSA (soon XSEDE) IdPofLR
- Increasing role and importance in era of GW Astronomy
  - Facilitating KAGRA and LIGO collaboration
  - Facilitating collaboration with electromagnetic and neutrino astronomers



# gw-astronomy.org Challenges and Future

- Deliver more with less
  - Mature research collaboration capabilities with less FTE effort
  - Specifically less FTE effort on identity infrastructure
  - Focus effort at application layer (GraceDB and similar)
- Plan: Move much of IdM infrastructure to CILogon
  - CILogon2 project marries CILogon and CManage
  - Move gw-astronomy.org registry to CILogon
  - Move LDAP as the "attribute backplane"
  - Move SAML attribute authority
- What of applications?
  - Non-domain applications (wiki, email list server,...) take much of the effort
  - If not move then focus on delivering higher level of service





# gw-astronomy.org Challenges and Future

- Do the SPs consume SAML or OIDC?
  - SAML cost is NOT the technology
  - SAML cost is working within the higher ed and research federations
  - CILogon delivers federated identity as a consumable service
- If SAML then is it time to proxy?
  - Entity categories did not and will not solve attribute release
  - Consent did not and will not solve attribute release
  - Progress requires a proxy
  - Promising technology stacks

# gw-astronomy.org Challenges and Future



- SIRTFI on hold for SPs
  - InCommon requires C level campus engagement for SIRTFI pilot
  - Wait for now, seek other eduGAIN route later if necessary
- Seeking more participation from some eduGAIN partners
  - KAGRA project in Japan will drive needs
  - Growing important effort Korea
  - Immediate collaboration needs in Australia
  - LIGO-India is breaking ground
- Of Governance?
  - National identity federations and eduGAIN as critical infrastructure
  - Yet no role for research in governance (completely IdP dominated today)
  - Can/should IGTF be the "science federation" that joins eduGAIN?





# Enabling the LIGO Scientific Collaboration



# LIGO Scientific Collaboration





# LIGO Scientific Collaboration

- LIGO Laboratory operated by Caltech and MIT
  - Research groups sign MOUs with LIGO Laboratory to create LSC
  - Full data sharing agreement with French & Italian Virgo project
  - Roughly 1200 scientists worldwide that are "LIGO" from IdM perspective
- 
- LIGO has operated its own SAML IdP since 2008
  - SSO for the LIGO collaboration





# LIGO IdM Challenges and Future

- Can LIGO move to an entirely federated IdM infrastructure?
  - 75% of institutions in LIGO are members of InCommon
  - 95% of US researchers in LIGO at InCommon institutions
  - 75% of nations participating in LIGO in eduGAIN
  - 93% of LIGO researchers are in nations in eduGAIN
    - Thanks to Warren Anderson for gathering statistics...
- Proposal submitted to US National Science Foundation
  - If funded project will begin to move LIGO to entirely consuming federated identity
  - Expected 5 year project



# LIGO IdM Challenges and Future

- Over 100 SAML SPs need to be pushed into eduGAIN
  - Many not in ligo.org URL space
  - ac.uk, caltech.edu, iucaa.in, mit.edu, mpg.de, re.kr, res.in, syr.edu, uni-hannover.de, uwm.edu
- Federations needs a broader sense of "SP"
  - Biased by vendor model of one org == one domain == one server
  - Campuses control their own DNS space and do not federations to help them "protect" it
- LIGO really operates its own SAML federation
  - Perhaps LIGO should join eduGAIN directly?



# LIGO IdM Challenges and Future

- SIRTFI adoption by campus IdPs will be critical
  - Eventually will be required for accessing LIGO resources
  - Will start flagging IdPs during discovery that are not compliant
- "A" baseline "LOA" will be critical
  - Must be demonstrable
  - That does not necessarily mean audits
  - It does not mean the FedOps just declare it either
- Ready the Help Desk...scientist users will be coming for you...