



NEWS



European Commission



H2020-MSCA-RISE-2016 - Grant Agreement N° 734303



POLITECNICO MILANO 1863

EGO - Virgo



UNIVERSITÀ DI PISA



Stockholm University



UNIVERSITÀ DEGLI STUDI DI GENOVA



SAPIENZA UNIVERSITÀ DI ROMA



GW Physics

Massimiliano Razzano, Ettore Majorana
WP-2 - Jan 19, 2018

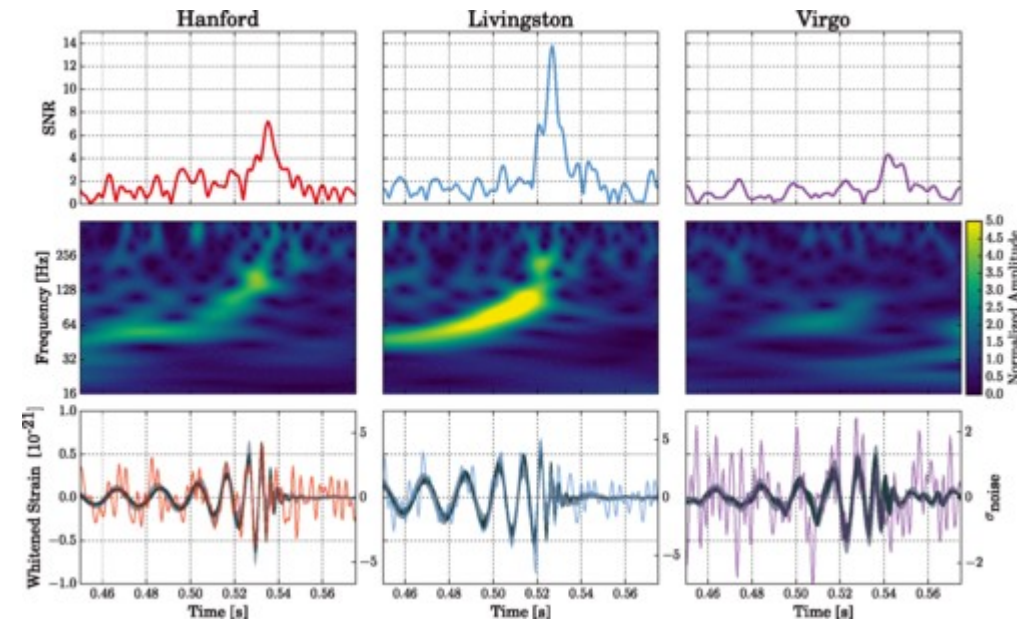
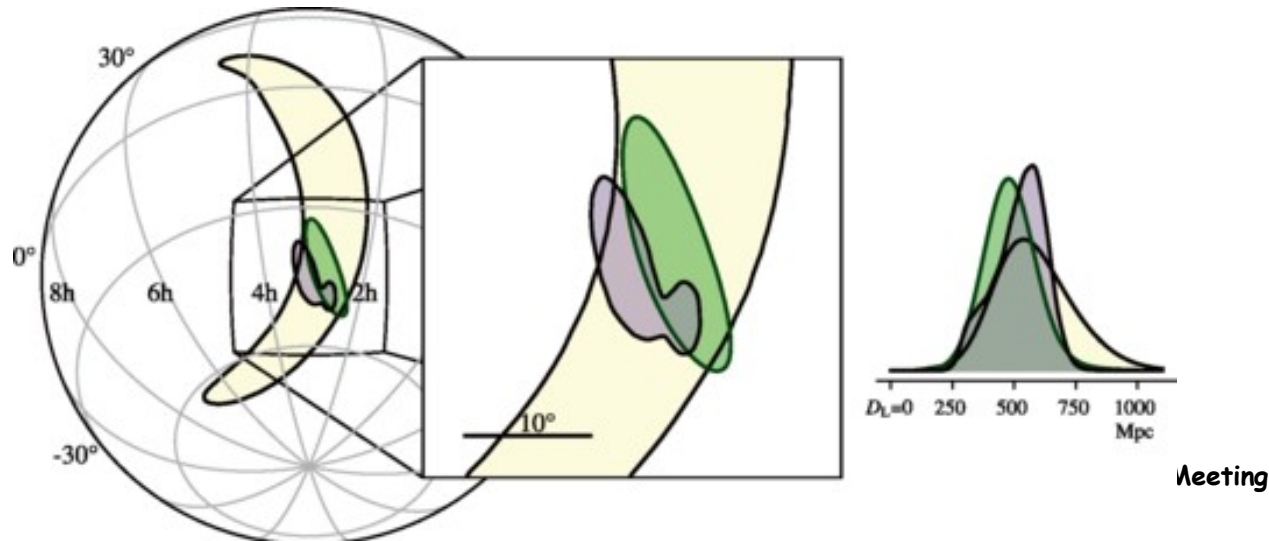


NEWS from GW Physics

- Second observing run (O2) finished successfully this summer
- Now moving toward O3
- Improving detectors and data analysis infrastructures
- Both search pipelines and detector characterization activities
- Higher event rate expected
- Aiming at lowest latency possible

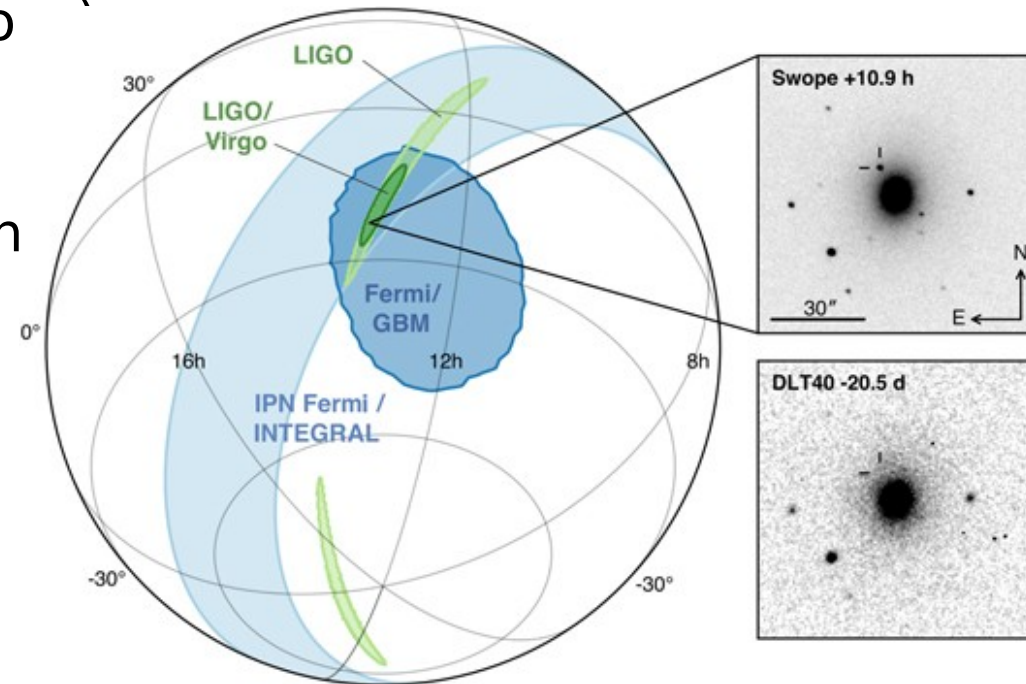
NEWS from 02

- GW170814 was the first event observed by LIGO AND Virgo
- Binary Black hole merger like the previous events
- BUT higher localization accuracy thx to Virgo (from 1160 deg² to 60 deg²)



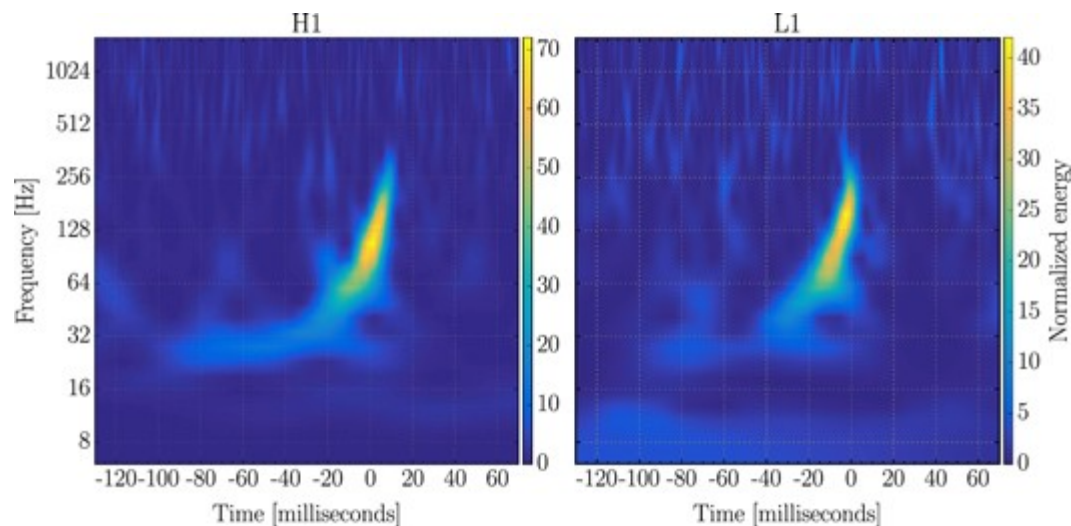
GW170817 and the birth of multimessenger astronomy

- First observation of a neutron star neutron star coalescence
- Observed as short GRB from *Fermi*-GBM 1.7 sec after the GW signal
- Electromagnetic counterpart found in IR/optical/UV/X/radio
- Complementary studies (multimessenger, GW+photo)
- The era of multimessenger astronomy has begun
- GW170817 signal interpreted as sGRB+kilonova even
- Proof of neutron star merger-GRBs and heavy nuclei nucleosynthesis



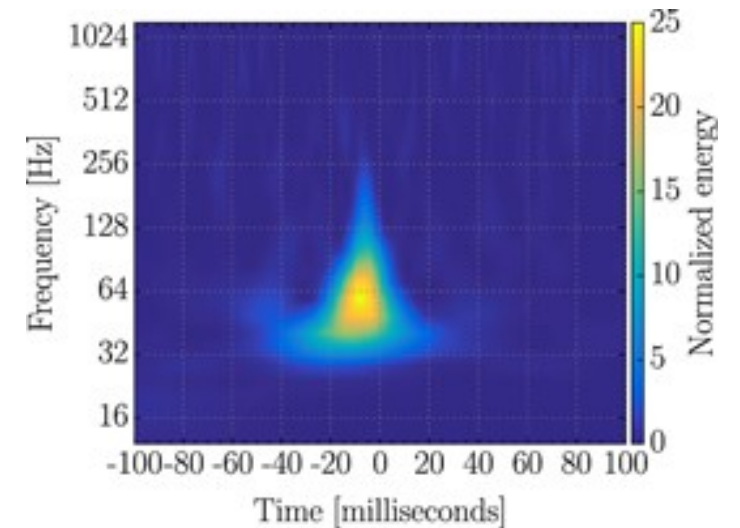
Study on detector characterization

- Focused on the analysis of transient noise (glitches) and on automatic monitoring and classification of them
- Developed automatic, low-latency analysis based on deep learning
- Tests on simulations and O1 and O2 data
- Working toward full implementation for O3



signal

“blip” glitch



WP2 Outline (webpage by M. Razzano)

Gravitational Wave Physics

Two main themes

- 1) Joint GW Science
- 2) 3G Detector Roadmap

Collaborating Partners

INFN (leading)	7 researchers 15 m
CNRS	2 researchers 2 m
UNIPG	2 researchers 8 m
UNIRO	1 researcher 1 m
UNINA	2 researchers 3 m

hosting  CALIFORNIA INSTITUTE OF TECHNOLOGY CORP

Secondments

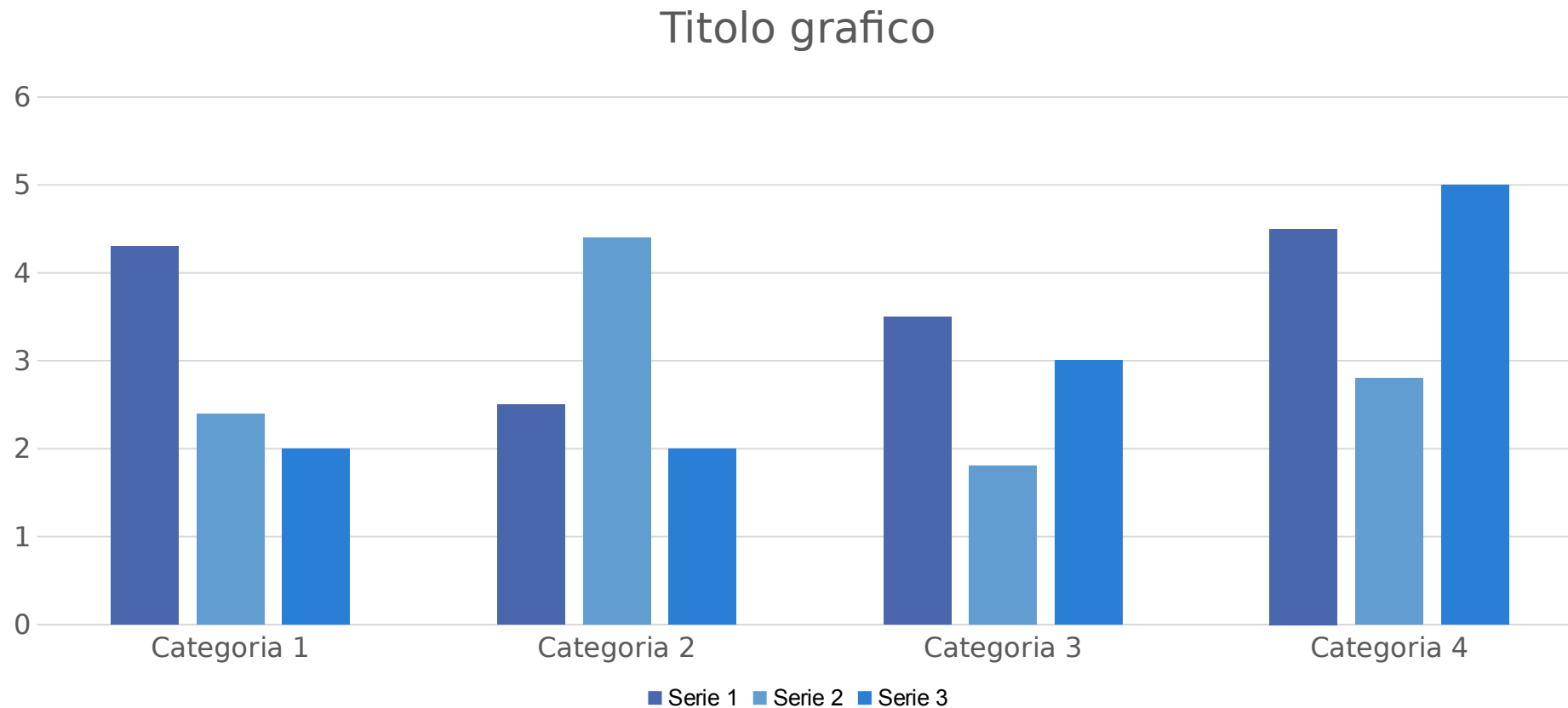
Beneficiary	DT	SITE	Month (nom)	When (effective)	LVC included	NAME
UniRoma1	1m	CALTECH	15	19/March/18	LVC +work	(93) Intini PhD
UniNa	1m	CALTECH	2			(83)
UniNa	1m	CALTECH	14			(83)
UniNa	1m	CALTECH	26			(83)
UniNa	1m	CALTECH	38			(83)
UniNa	2m	CALTECH	21			(84)
UniNa	2m	CALTECH	33			(84)
UniNa	2m	CALTECH	45			(84)
UniPg	1m	ICRR	6			(47)
UniPg	1m	ICRR	18			(47)
UniPg	1m	CALTECH	30			(47)
UniPg	1m	CALTECH	42			(47)
UniPg	1m	CALTECH	7			(48)
UniPg	1m	CALTECH	19			(48)
UniPg	1m	CALTECH	31			(48)
INFN RM	1m	CALTECH				(90) La Rosa PhD
INFN UNDEF1	4x2m	CALTECH	2,14,26,38			(81) (PI)
INFN UNDEF2	1m	CALTECH	8			(112) (NA,PI)
CNRS	1m	CALTECH	8			(101) (APC)
CNRS	1m	CALTECH	16			(101) (APC)

GW polarization studies
(network,CW,CBC)
contact with the host
starting now

We must start as soon as possible exploring the secondment slots, only one planned in the next months



Layout titolo e contenuto con grafico



Layout di due contenuti con tabella

- Primo punto elenco qui
- Secondo punto elenco qui
- Terzo punto elenco qui

	Gruppo A	Gruppo B
Classe 1	82	95
Classe 2	76	88
Classe 3	84	90

Layout di due contenuti con SmartArt

- Primo punto elenco qui
- Secondo punto elenco qui
- Terzo punto elenco qui



