

11th BONN workshop on – Formation and Evolution of Neutron stars –



Welcome!

Rationale:

To bring together *observers* and *theoreticians* to exchange and discuss *new ideas* related to neutron star binaries or single *neutron stars* in a one-day workshop hosted twice per year

.....2017 a two-day workshop!

Summary of first 10 meetings:

Starting in February 2012, all meetings reached full capacity of ~60 people.

Each meeting had *three sessions*:

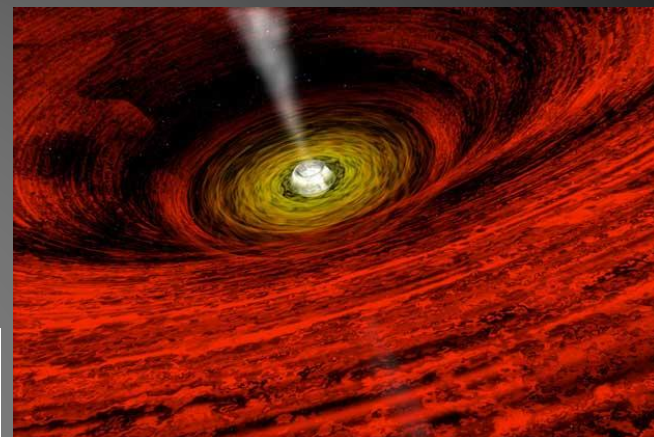
- One session dedicated to *general news* in the broad field of neutron stars
- Two sessions focusing on a more *specific subtopic*



Historic note



- 1962.** Sco X-1: LMXB
(Giacconi, Aerobee 150 rocket)
- 1967.** PSR B1919+21
- 1971.** Cen X-3: pulsations (P=4.84 sec)
- 1971.** Cyg X-1: BH HMXB
-
- 2017.** GW170817



$1 M_{\odot}$ accretor and $L_x = 10^{37} \text{ erg s}^{-1}$

Stellar object	Radius (km)	$\Delta U/mc^2$	$\Delta U/m$ (erg g ⁻¹)	dM/dt (M _{sun} yr ⁻¹)	Column density (g cm ⁻²)
Sun	7×10^5	2×10^{-6}	2×10^{15}	1×10^{-4}	140
White dwarf	10000	2×10^{-4}	1×10^{17}	1×10^{-6}	16
Neutron star	10	0.15	1×10^{20}	1×10^{-9}	0.5
Black hole	3	0.1-0.4	4×10^{20}	4×10^{-10}	0.3

Note: X-rays are stopped at column densities larger than a few g cm⁻²

Scientific focus for this meeting: *“Neutron Stars in Future Research”*

Two-day meeting: invited talks (30 min.) and contributed talks (15 min.)

- Highlights and General News
- Accreting Neutron Stars
- Millisecond Pulsars and their Applications I. and II.
- Supernovae, Young Neutron Stars and the Equation-of-State
- Neutron Stars as Gravitational Wave Sources



SOC

Michael Kramer

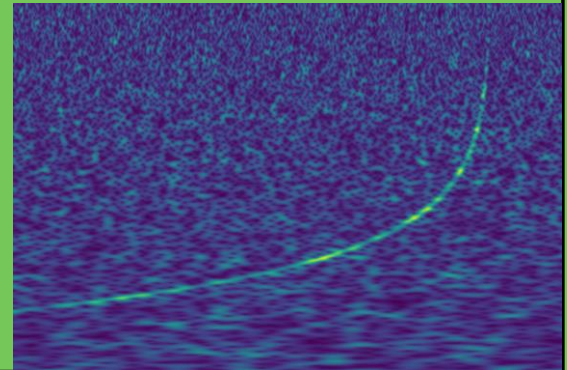
Norbert Langer

Philipp Podsiadlowski

Thomas Tauris

Werner Becker

John Antoniadis (2018)



Program:

11:00-12:30 Session I: *Highlights and General Neutron Star News*

Lunch

13:30-15:30 Session II: *Accreting Neutron Stars*

Coffee

16:00-18:00 Session III: *Millisecond Pulsars and their Applications – I.*

19:00 Dinner at *Harmonie*

09:00-10:30 Session IV: *Millisecond Pulsars and their Applications – II.*

Coffee

11:00-13:00 Session V: *Supernovae, Young Neutron Stars and the EoS*

Lunch

14:00-16:00 Session VI: *Neutron Stars as Gravitational Wave Sources*