

CompStar Working Group 3 (gravity) meeting

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WG3: Gravity

- Welcome!
- Reminder of 'big picture': "The main objective of the Action is to provide an innovative connection between the micro- and macrophysics of compact stars".
- Objectives: Coordination, European Leadership, Training, Gender Issues, and Dissemination of Results.

From the MoU: Scientific Workplan for WG3

- Three working groups:
 - 1 Astrophysics (Jose Pons)
 - 2 Nuclear Physics (Jérôme Margueron)
 - 3 Gravity (Ian Jones)
- Scientific Workplan for WG3:
 - 1 “Produce accurate models for the inspiral and merger of binary neutron stars.”
 - 2 “Correlate the gravitational-wave signal to the neutron star equation of state.”
 - 3 “Establish properties of electromagnetic counterparts to binary neutron star merger/GRBs.”
 - 4 “Quantify efficiency of gravitational-wave emission mechanisms from individual stars.”

Personnel for WG3 (Gravity):

- Working Group Leader: Ian Jones
- Topic Leaders:
 - 1 Numerical modelling in binary inspiral: Bruno Giacomazzo (University of Trento, Italy)
 - 2 Influence of EoS on gravitational wave signal from inspiral: Tanja Hinderer (AEI, Golm, Germany)
 - 3 Binary inspiral electromagnetic counterparts/ejecta: Andreas Bauswein (Aristotle University of Thessaloniki, Greece)
 - 4 Gravitational wave emission from individual stars: Leonardo Gualtieri (Sapienza Università di Roma, Italy)
- Synergy agents:
 - ▶ Gravity-astrophysics: Valeria Ferrari (Sapienza Università di Roma, Italy)
 - ▶ Gravity-nuclear: Pawel Haensel (Nicolaus Copernicus Astronomical Center, Poland)

What do we want from today?

- Broad overview of state of the art in WG3 science.
- Identification of key open problems.
- Lots of **DISCUSSION**.
- Some ideas about how to make the most of CompStar, while it lasts!

From the MoU: “Coordination and organisation”

- **Work Group Leaders (WGL):** “The WGLs will preside over the coordination of the different WGs, ensuring that the scientific goals are met and that the recommendations of the SAs are implemented and pursued. They will meet face-to-face twice a year during the “hands-on” workshops and at least every two months via teleconferencing together with the SAs.”
- **Synergy Agents (SA):** “The SAs will be responsible for the synergy between two or more WGs and will provide recommendations to the WGLs. They will meet face-to-face twice a year during the “hands-on” workshops and at least every two months via teleconferencing together with the WGLs.”
- **Topic Leaders (TL):** “Each WGL will nominate a TL to supervise one of the several activities in its WG. As a result, there will be a TL for WG1a, one TL for WG1b, and so on . . . (see Section D.2). They will meet face-to-face twice a year during the “hands-on” workshops and at least once a month via teleconferencing.”

MoU: “Coordination and organisation” cont ...

- **“Hands-on (scientific strategic) workshops.** WGLs and/or SAs will meet in short, concentrated, smaller-scale meetings with the TLs to ensure active collaboration within WGs and among WGs. Together with meetings at the time of the general Workshop, WGLs, TLs and SAs will also meet at least once more a year (preferably 6 months after the main Workshop). These additional meetings can take place at different times and places depending on the agendas of the different WGs. WGLs and SAs will also have monthly meetings via teleconferencing facilities.”
- **Format.** For 2015, the WG meetings will probably be attached to other (partially) CompStar-sponsored meetings.
- **Travel grants.** There are also STSMs: Short Term Scientific Missions; see CompStar website.

Provisional plans for 2015 ...

... with an emphasis on *provisional*

- School; Bucharest September 2015
- Conference Budapest June 2015
- (Non-)Universal Properties of Neutron Stars, Bremen, May (WG3)
- Binary neutron star mergers, Thessaloniki, May (WG1 & WG3)
- “Observation & theory in the dynamics of neutron stars”, Trento, January, (WG2)
- “Pulsars and their environments, recent developments in radio-astronomy”, Orleans, May, (WG1 & WG2)

The future: things to think about

- CompStar has three years left.
- What can we *realistically* expect to achieve? Remember, we have money for meetings and visits, not to employ people!
- How best to organise the 2015 WG meetings?
- How best to exploit the diversity of skills?
- Ideally, identify a project involving someone outside of your area, discuss it with them, and apply for an STSM to follow it up.