

# IAUS 329: The Lives and Death-Throes of Massive Stars

28th November to 2nd December 2016

Takapuna, Auckland, New Zealand

Dear colleagues,

This is the first announcement of the forthcoming IAU symposium to be held in Auckland, New Zealand entitled "IAUS 329: The Lives and Death-Throes of Massive Stars".

Dates: 28th November to 2nd December 2016

Location: Auckland, New Zealand

Venue: The Spencer on Byron Hotel, Takapuna

Abstract Submission and registration to open: 30th March 2016

Abstract Submission closes: 30th May 2016

Early-bird registration closes: 30th August 2016

IAU Grant submission deadline: 30th May 2016

Conference website: <http://nzstars2016.nz>

Contact for questions about the meeting scientific program: [nztars2016@auckland.ac.nz](mailto:nztars2016@auckland.ac.nz)

The meeting will summarize recent progress and establish stronger links between the massive star community and closely-linked fields, particularly those studying end stages of massive star evolution and massive star cosmic implications. We will announce the invited speakers and a more detailed schedule before registration opens but wanted to provide useful information on the conference while it is only one year away.

Topics to be covered:

well established facts and open problems in our knowledge of massive stars, particularly in the so-thought well understood phases

challenges to present theoretical models of interior and atmospheres; connecting interior and atmospheres; wind structure; episodic mass-loss mechanisms; binaries in interaction; X-ray and gamma-ray production

short-lived phases of massive stars (LBVs, WRs and RSGs) and their characteristics as supernova progenitors

new results from large-scale surveys, observational techniques and instrumentation for massive stars and supernovae

the link between massive stars and their deaths

constraints on the nucleosynthesis production in supernovae and the production of dust

explosion mechanisms of supernovae and the parameters required for a successful explosion

massive stars as astrophysical tools: tracing galaxies' structure; tracers of star formation; feedback from massive stars; population synthesis; limits to our interpretation of the high-z Universe; cosmic reionization; first stars and galaxies.

Travel, accommodation and support

New Zealand is a significant distance to travel, particularly due to the location of the international date line causing many attendees to "lose-a-day" when travelling to the conference. We advise our most distant attendees to arrive two days early, if possible, but at least 1 day before the Monday morning, so they are able to enjoy the first full day of the conference.

We are finalizing the accommodation for the conference but have ensured that people can share rooms to reduce. Rooms in the conference venue come with kitchenette facilities. Rooms are NZ\$178.25 inclusive of GST per night including wifi we will provide details of how to book a room in the second announcement. The conference registration fee is yet to be finalized but including GST it will be around NZ\$575.

We have limited funds from the IAU to provide support for attendees that have limited travel funding. Further details of how to apply for this funding will be provided shortly.

Please contact the organizers if child care is required. We are currently in discussion with local providers.

If you require a letter of invitation to visit New Zealand, you must first register for and pay all applicable registration fees. Full details of how to apply for this letter and a list of visa-free countries are listed on the conference website.

Nationwide public symposium

In the weekend following the conference, Dec 3rd, we are planning to run a large one day public symposium with as many speakers as possible talking about their latest research. We also hope to have these talks streamed live onto the internet and recorded so there is a lasting impact of the meeting in New Zealand. If you would like to be involved, or perhaps to travel to a city within New Zealand to give a talk please email [j.eldridge@auckland.ac.nz](mailto:j.eldridge@auckland.ac.nz) and outline your previous outreach experience.

Splinter Meetings

It may be possible to run a few splinter meetings during the conference in the evenings, or during the weekend after the main conference. If you would like to run a splinter meeting please email [j.eldridge@auckland.ac.nz](mailto:j.eldridge@auckland.ac.nz) with a short outline of the topic, an estimated number of participants, and the names of organizers before the 30th March 2016.