

SALT FOUNDATION (PTY) LTD



Southern African Large Telescope

*Africa's Giant Eye on the Sky:
Inspiring society by exploring the Universe*

SALT Gravitational Wave follow-up Policy (December 2018)

Version 1.0

Executive Summary

This document sets out the policy for the usage of SALT to follow-up gravitational wave events triggered from LIGO/Virgo.

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2. Introduction

The gravitational wave (GW) event called GW170817 and the identification and follow-up of its optical counterpart, resulted in the birth of a new scientific discipline: multi-messenger astronomy. Many researchers at various SALT partner institutions were already involved in this exciting field and triggered crucial SALT follow-up observations of the Kilonova explosion, leading to several high-impact papers featuring SALT data.

Following this event, the LIGO detectors went offline to undergo several upgrades and they are scheduled to turn back on on the 3rd February 2019. The current expectation is that there may be one potential GW optical follow-up alert per month.

Given its geographical location and its large aperture, it is clear that SALT has a key role to play in world-wide GW follow-up campaigns - SALT must be involved in this field. It is also clear that we must coordinate such follow-up observations to maximize SALT's scientific output to the benefit of our entire community – after all, there will only be ONE single GW alert at a time for SALT to follow-up and every single GW researcher in the partnership will need/want access to these data.

The following document aims at providing a simple framework to ensure openness and fairness across the SALT community.

3. A Gravitational Wave follow-up policy for SALT

The following policy applies for the 2018-2 semester (1st November 2018 to 30th April 2019). This policy may remain as is or be reviewed and updated for subsequent semesters.

The following rules apply:

- We have created a new proposal type/category: a Gravitational Wave Program (GWP).
- For 2018-2, no partner will specifically contribute time for this program: if there is an alert, the time for a GWP will be taken from the SALT DDT allocation. This may be reviewed in future semesters, as needed.
- A GWP proposal will not need pre-approval. A phase 2 GWP submission will be automatically accepted and will be granted P0 time. It will become the most important block for that night, and the SALT team will do their best to ensure it is observed and that excellent quality data are acquired.
- There will be a single GWP proposal per event. Multiple GWP proposals for the same event will be consolidated into a single proposal before observing.
- To simplify the process, we will create a GWP username: (*saltgw*)
 - The user *saltgw* will be set automatically as the PI and PC of the proposal.
 - There will be no way to add co-Is to a GWP proposal.

- A *personal* SALT Web Manager username and password will be required in order to submit a GWP proposal. This will be used to record who submitted each version of the proposal.
- Only people registered and in a SALT partner institution will be able to submit a GWP proposal.
- *saltgw* email address will be a mailing list, to which everyone in the SALT partnership can **subscribe**. This will ensure:
 - timeous alerts of submissions to the entire community, preventing duplication of effort at a very time-critical period and opening the doors for discussion, communication and collaboration.
 - all subscribed users will have access to the proposal with the chosen instrument and telescope set-up and are able to communicate and discuss strategies.
 - in the unlikely event of unsolvable disagreements regarding instrument setup(s) or strategies, the custodians of the SALT DDT time, i.e. the SAAO Director and the Head of SALT Astronomy Operations, will have the **final** word. Complaints in this regard must be forwarded to salthelp@salt.ac.za to ensure a timeous response eg. during the night.
- Subscription to the *saltgw* mailing list will be handled via the Web Manager. Instructions on how to submit a proposal, where to locate the data and the *saltgw* password will be shown in the WM to registered users.
- All SALT GWP data will become immediately available to the subscribed SALT community using the *saltgw* username/password.
 - Full access to the SALT GWP data is authorized only for members of the SALT partnership in the mailing list. These users may however share their data freely with whomever they choose (within and without the SALT partnership), although collaborations within the partnership are strongly encouraged.
- Co-authorship of any papers resulting from the SALT GWP data will be decided exclusively by the specific members of the collaboration **contributing** to a specific paper. To further clarify expectations:
 - Subscription to the mailing list does **not** ensure co-authorship.
 - Triggering the GWP observations does **not** ensure co-authorship.
 - Observation of the GWP block does **not** ensure co-authorship.
- Papers arising from these observations *must* quote the GWP proposal code and follow the official SALT acknowledgement requirements, as stated on the SALT Website: <http://astronomers.salt.ac.za/data/acknowledgements/>

SALT expects ALL researchers to behave in a respectful, ethical and professional manner. Ethics and/or professionalism complaints may be addressed initially to the SALT Head of Astronomy Operations, who will investigate the complaint and may escalate the issue as needed.

4. Relevant contact details

Follow-up strategic disagreements: SALT helpdesk (salthelp@salt.ac.za)

SAAO Director: Prof. Petri Väisänen (director@sao.ac.za)

Head of SALT Astronomy Operations: Dr. Encarni Romero Colmenero
(saltastro_head@salt.ac.za)