

# SWG0 Site working group

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# Outline

1. The group
  2. The site candidate so far proposed
  3. Figures of merit
  4. The stakeholders
  5. The future
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# 1/ This group

- Work package site: **swgo-site@mpi-hd.mpg.de**
  - To join send an empty email to **swgo-site-join@mpi-hd.mpg.de**
  - 39 email list members!
- Slack:
  - #site-selection: 8 members → will invite other soon
- Wikipage: [https://www.swgo.org/SWGOWiki/doku.php?id=site\\_wg](https://www.swgo.org/SWGOWiki/doku.php?id=site_wg)
  - Starte collecting material

## Site Working Group

Coordinators: Michael Schneider, ✉ [Michele Doro](mailto:Michele.Doro), Arthur Marques Moraes

The work package mailing list of site is **swgo-site@mpi-hd.mpg.de** To join send an empty email to **swgo-site-join@mpi-hd.mpg.de**

### Meetings

Date	Indico link	Connection link
2019.12.05	<a href="https://agenda.infn.it/event/21108/">https://agenda.infn.it/event/21108/</a>	Will be communicated

[Edit](#)

### Useful links

- Google maps of candidates sites: [https://drive.google.com/open?id=1fvnI\\_\\_6-VkAYBXmGEs8y-RS9q3gbpQwx&usp=sharing](https://drive.google.com/open?id=1fvnI__6-VkAYBXmGEs8y-RS9q3gbpQwx&usp=sharing)

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# 2/ Candidates sites



- Abra del Acay (Argentina)
- LLAMA Site (Argentina)
- Lake Sibinacocha (Peru)
- Atacama ALMA site (Chile)
- Imata (Peru)
- Atacama Desert (Chile)
- Chacaltaya (Bolivia)
- Cerro Armazones (CTA-S site)

Preliminary shareable link:

<https://www.google.com/maps/d/edit?mid=1fvnl6-VkAYBXmGEs8y-RS9q3gbpQwx&ll=-16.305944665942512%2C-69.22338092500001&z=5>

## 2b/ Further sites

- Those above may not be the only sites. We should open now – that SWGO has formed - a period in which host sites can be represented.
  - We propose this period to end on February 15<sup>th</sup>.
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# 3/ Figure of merit of site

There are several class of merits that must be evaluated, which we classify in Natural, Access, Politics, Feasibility

- Natural

- Altitude
- Location S/W
- Day with  $T < 0$
- Earthquake
- Storms/Rain/Lightning
- ...

- Political/Administrative

- Owner of the site
- Other instruments at the site
- Support from authorities
- Support from research institutes
- Support from local research institutes
- Support from local companies
- Environmental protection groups
- Labour conditions
- Politics in state

- ...

- Access

- Sleep/Eat/Shop facility
- Distance/time to closest large town
- Distance/time to closest airport
- Distance/time to closest main airport
- Distance/time to closest hospital
- Distance to asphalt road
- ...

- Feasibility

- Suitable for lake?
  - Distance/time to closest town
  - Internet distance/speed
  - Water/ distance/ reach (kl/d)
  - Power: distance/kW
  - Politics
  - ...
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# 4/ Stakeholders & contacts

- We should declare our specific interests for sites in a cooperative matter, at least convenors should be informed
  - We are aiming at finding supporters outside SWGO for specific sites. If you know interested parties, let us know
  - If you have any interest, stand up (also privately).
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# 5/ Future

## Year 1

- Setup of the collaboration and working groups
- Establishing core requirements and science benchmarks
- Setup of the simulation and analysis framework
- Identification of critical elements for prototyping
- Shortlisting of site candidates

When	What
Feb 2020	Accept new candidates
March 2020	Define figure of merit
April 2020	Gather sites interest and contact
June 2020	Gather data for figure of merit on sites
Summer 2020	Access to site?
September	Data discussion
November	Shortlist of ~3 sites + 1 lake



## Year 2

- Perform a detailed evaluation of the shortlisted sites
- Fixing key elements of the design: *base unit dimensions, photosensor technology, read-out and control architecture, calibration concept*
- Establishing a baseline detector concept to serve as reference
- Refine detector models for simulations
- Optimisation of the detector unit
- Prototyping of key elements
- Developing concepts for deployment and operations
- A decision or recommendation on the preferred site

## Year 3

- Finalise the baseline array design and define staging options
  - Finalise the electronics design
  - Refine the construction and operation phase plans
  - Continued prototyping and prototype evaluation
  - Negotiations to secure the site
  - Prepare proposal for construction and operation
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