

# Neutrino pillar

## progress toward the roadmap input

# The neutrino pillar

- The Swiss community primary focus is on
  - Accelerator based (and atmospheric) oscillation experiments (which are also observatories including e.g. physics goals on proton decay, SN physics)
  - Onubb
- Ties to other pillars
  - Astroparticle neutrino (HE, absolute mass) handled/motivated in Pillar 3, mentioned in the neutrino pillar
  - Heavy/Right-handed/Dark neutrino -> pillar 1 infrastructure
- Strong emphasis on detector developments and theoretical aspects
- Baseline unchanged from the SWICH1 workshop summary:  
<https://indico.cern.ch/event/687183/contributions/2870462/attachments/1628278/2594464/Neutrino-Summary.pdf>
- Baseline largely unchanged from the 2015 Whitepaper:  
[https://naturalsciences.ch/uuid/2f2800a4-9289-5329-a65b-81430935532c?r=20180809175703\\_1527108861\\_2d1ae7e1-4070-51d2-921a-66a522b8b317](https://naturalsciences.ch/uuid/2f2800a4-9289-5329-a65b-81430935532c?r=20180809175703_1527108861_2d1ae7e1-4070-51d2-921a-66a522b8b317)

# Timelines, plans

Year blocks as defined by the CHIPP EB

- Now: operation of present experiments (T2K, SBN, GERDA, ICECUBE)
- **Next FLARE periods investment (2019/2020 and 2021-2024)**
  - Preparation for forthcoming large experiments (ProtoDUNE, ArgonCUBE, DUNE approved; HK funding initiated)
  - Upgrades of T2K (in collaboration with CERN)
  - LEGEND-200
  - Possible ICECUBE upgrades
- **2025 to 2035**
  - Complete construction for long baseline experiment(s), near and far detectors
  - Operation of LBL experiment(s)
  - LEGEND-1t (acquiring funds)
- **Future beyond 2036**
  - Pending results of current and planned facilities