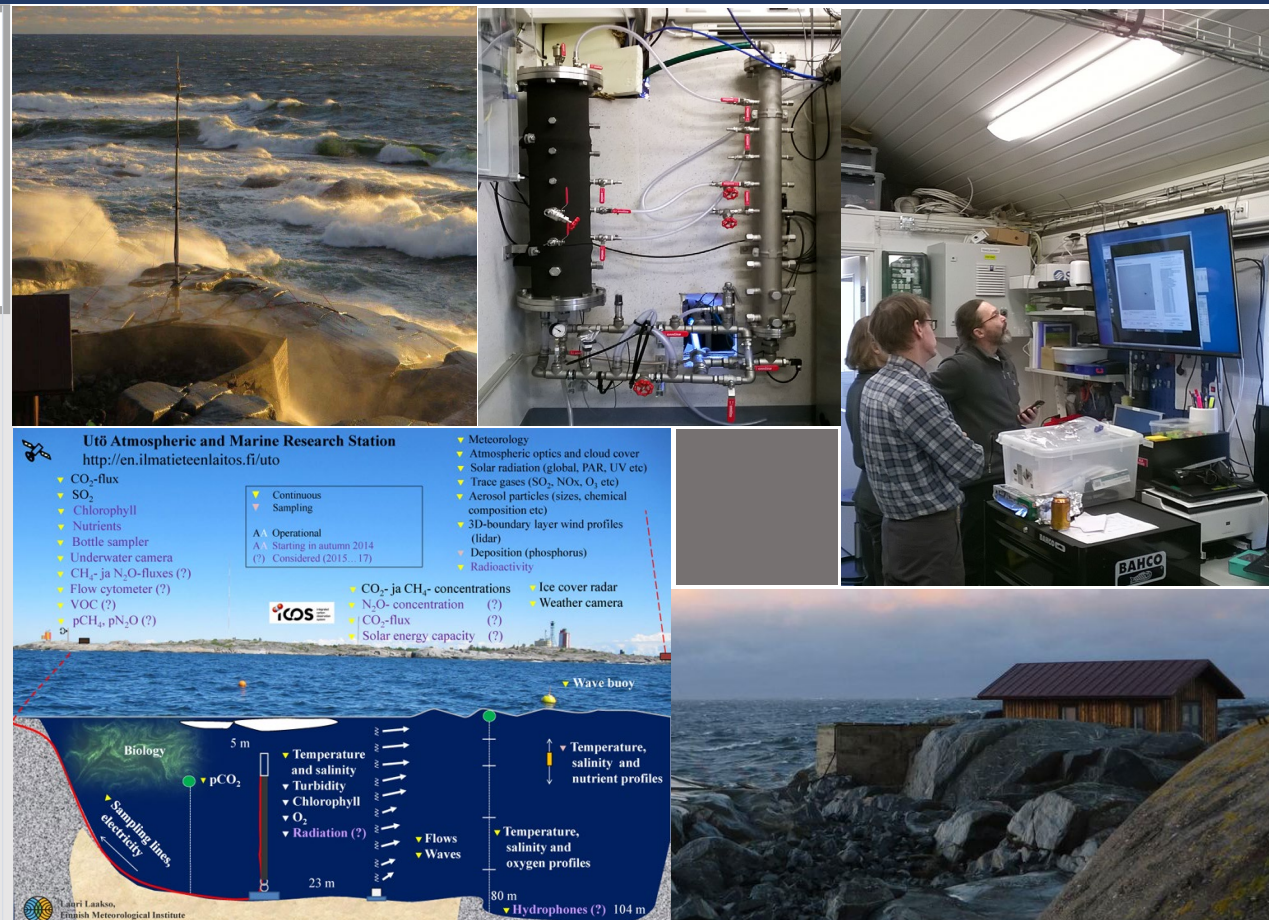


Utö automated station

Atmospheric and Marine Research Station

Meteorological observations and marine observations since 1881 and 1900, respectively. Automatic observations since 2014. Today, multidisciplinary measurements from the sea (see figure)

- Fixed platform for flow-through autonomous instruments and cabled measurements
- Continuous water flow from the sea, possibility to attach equipment for intensive field campaigns
- Laboratory with basic instrumentation (for 3-4 pers)
- Measurements: carbon cycling, bio-geochemical interactions, coupling of physics and biology, plankton observations and imaging
- Test and pilot site for emerging technologies
- Links: <https://www.jerico-ri.eu/va-service/uto/>
<https://en.ilmatieteenlaitos.fi/uto>
<https://swell.fmi.fi/Uto/>
- Contact at SYKE: Jukka Seppälä, Pasi Ylöstalo (firstname.surname@syke.fi)



Utö Atmospheric and Marine Research Station
<http://en.ilmatieteenlaitos.fi/uto>

- CO₂-flux
- SO₂
- Chlorophyll
- Nutrients
- Bottle sampler
- Underwater camera
- CH₄- ja N₂O-fluxes (?)
- Flow cytometer (?)
- VOC (?)
- pCH₄, pN₂O (?)

Continuous Sampling

Operational
 A) Starting in autumn 2014
 (?) Considered (2015-17)

- Meteorology
- Atmospheric optics and cloud cover
- Solar radiation (global, PAR, UV etc)
- Trace gases (SO₂, NO_x, O₃ etc)
- Aerosol particles (sizes, chemical composition etc)
- 3D-boundary layer wind profiles (lidar)
- Deposition (phosphorus)
- Radioactivity

- CO₂- ja CH₄- concentrations
- N₂O- concentration (?)
- CO₂-flux (?)
- Solar energy capacity (?)
- Ice cover radar
- Weather camera

Temperature and salinity profiles
 Turbidity
 Chlorophyll
 O₂
 Radiation (?)

Flows
 Waves

Temperature, salinity and oxygen profiles
 Hydrophones (?) 104 m

Wave buoy

Temperature, salinity and nutrient profiles

5 m
 23 m
 80 m
 104 m

Sampling lines, electricity

Lahti Laakso, Finnish Meteorological Institute

Finnish
Meteorological
Institute



Finnish
Environment
Institute



S Y K E