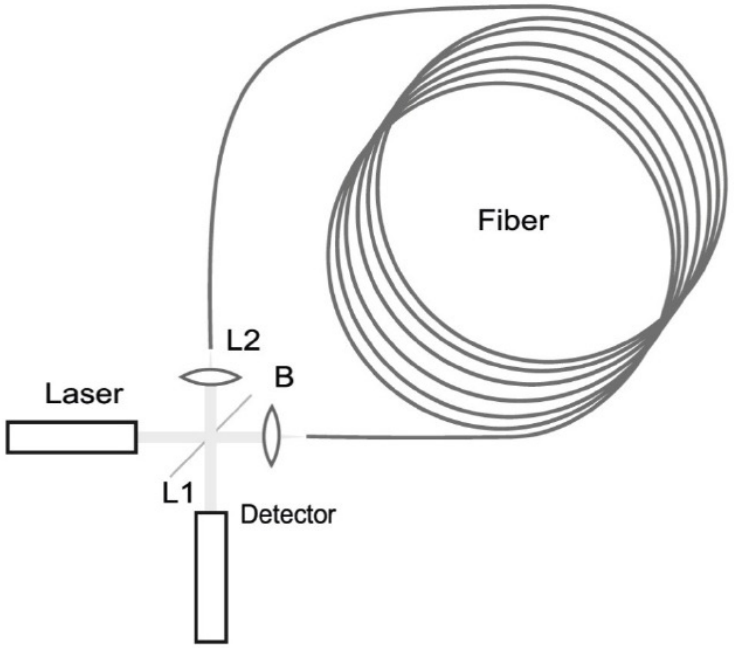


Mulitpurpose Earth & Space Ultra Sensitive Photonic Sensor

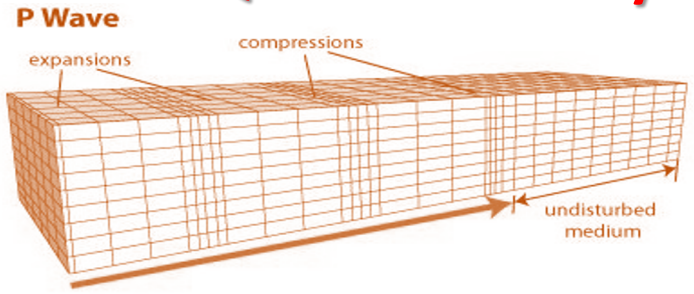
- Unique high-tech technology available from 2 countries only
- Uses "**Sagnac Effect**" independent of Earth gravity force as well as existing reference frame in Einstein's time space

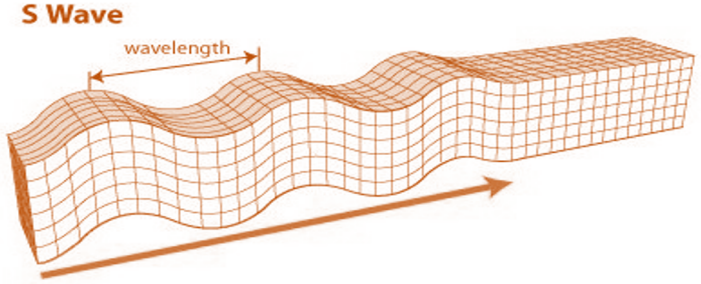
- Operates as a result of the measurement of a difference between two interfering beams propagating around closed (very long) optical path, in opposite direction, with the nanoradian phase resolution

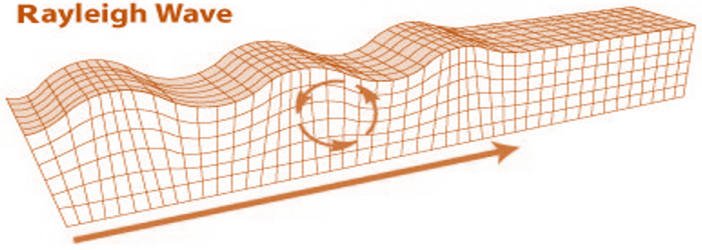
- **3-Axis** and synchronized networking sensors – functionality:
  Gyroscope for Autonomous Vehicles & Autonomous Cargo Ships / Harbours
  Seismograph sensing a **New Rotational Forces** (incl. buildings & industry security)
  Spin measurement (yet uncleared at present) in physics precisely in continuum mechanics, it is the antisymmetric part of the velocity gradient tensor and may also be used for the proper kinetic moment of particles.

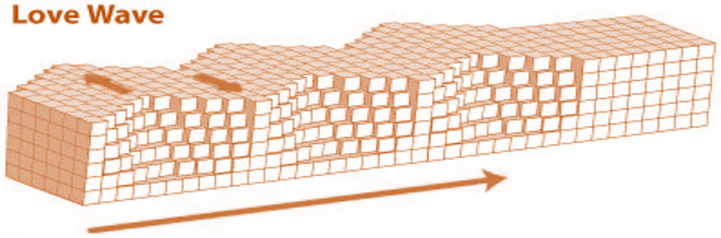
Old

Status Quo detects only:





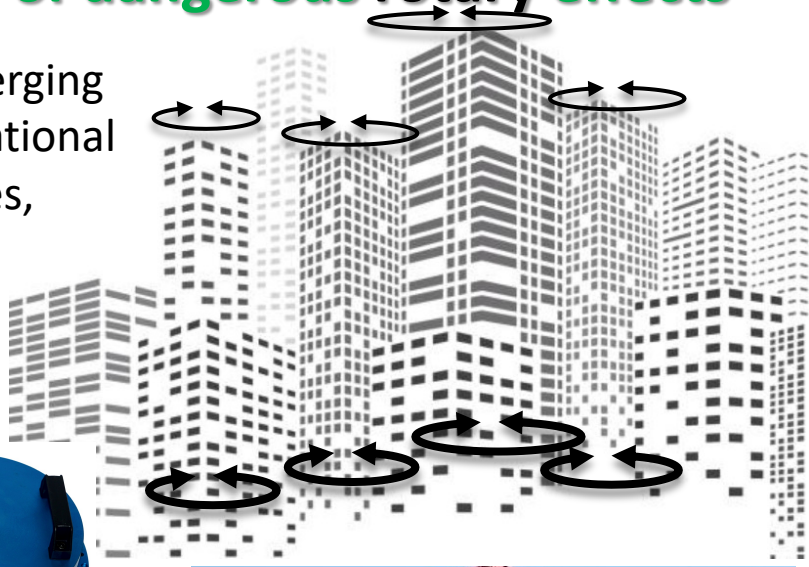




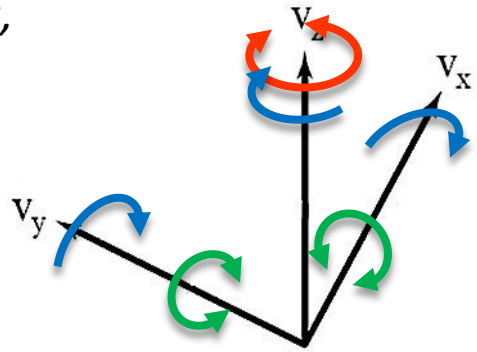
New

Seismological investigations of dangerous rotary effects

Rotational Seismography - a new, emerging field for the study of all aspects of rotational ground motion induced by earthquakes, explosions, and ambient vibrations



- *seismic behaviour of complex civil structures*
- *broadband seismology,*
- *strong-motion seismology,*
- *earthquake physics,*
- *seismic hazards,*
- *seismotectonic,*
- *geodesy,*
- *physicists*



*using Earth-based observatories for detecting **gravitational waves** (the science market)*

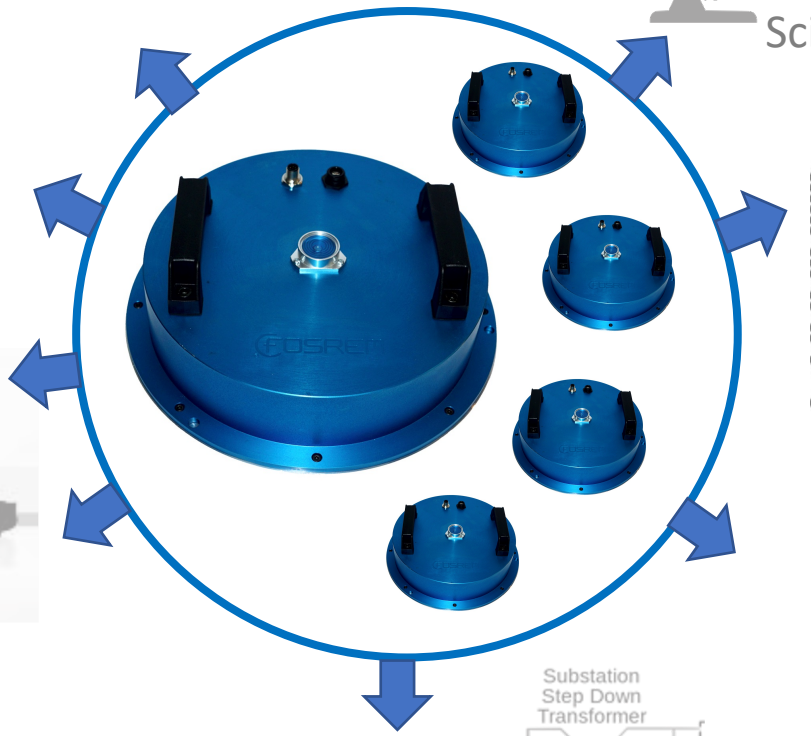
Rotational seismology monitoring applications

Protecting people, complex civil structures, business & peace

Gas & Oil

Tsunami warning

Geology
Science

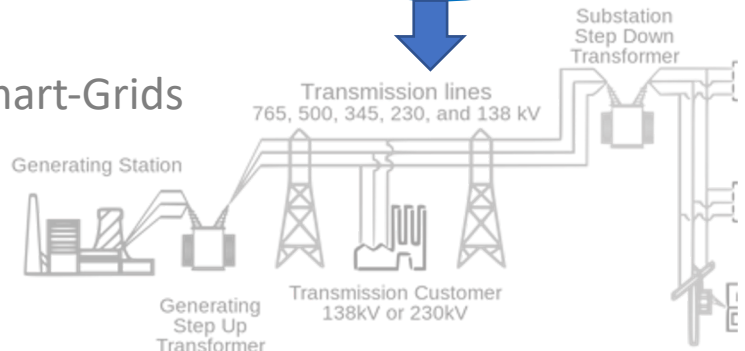


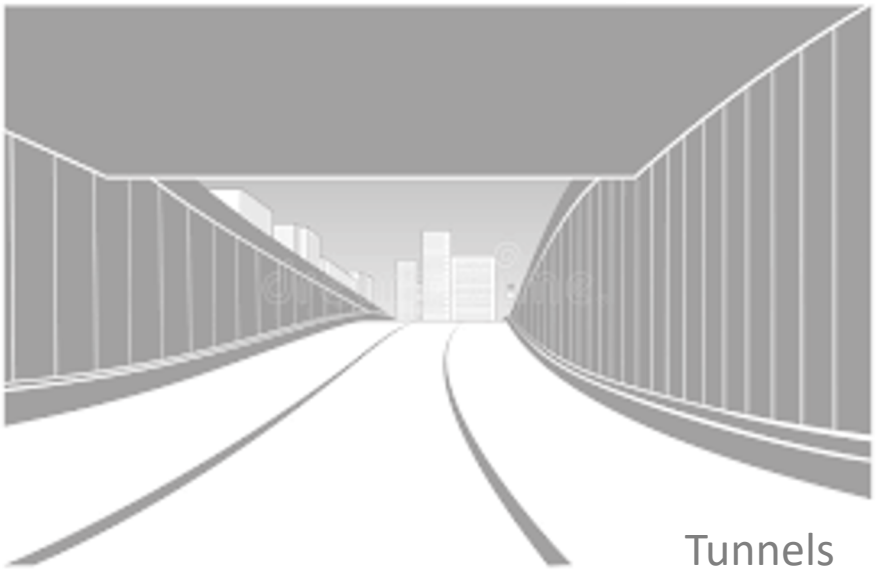
Skyscrapers

Cargo harbours

Power Grids

Smart-Grids



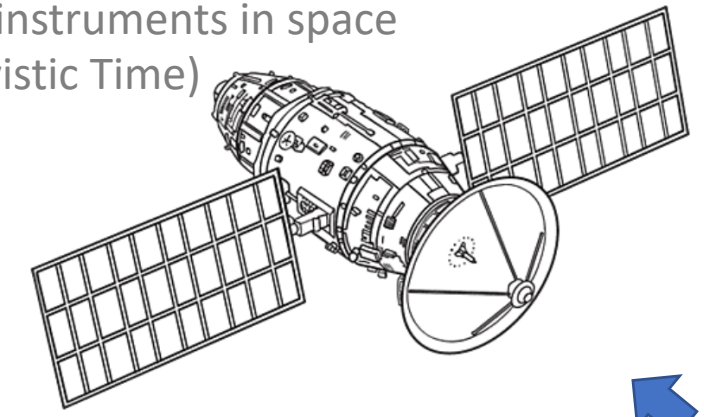


Tunnels

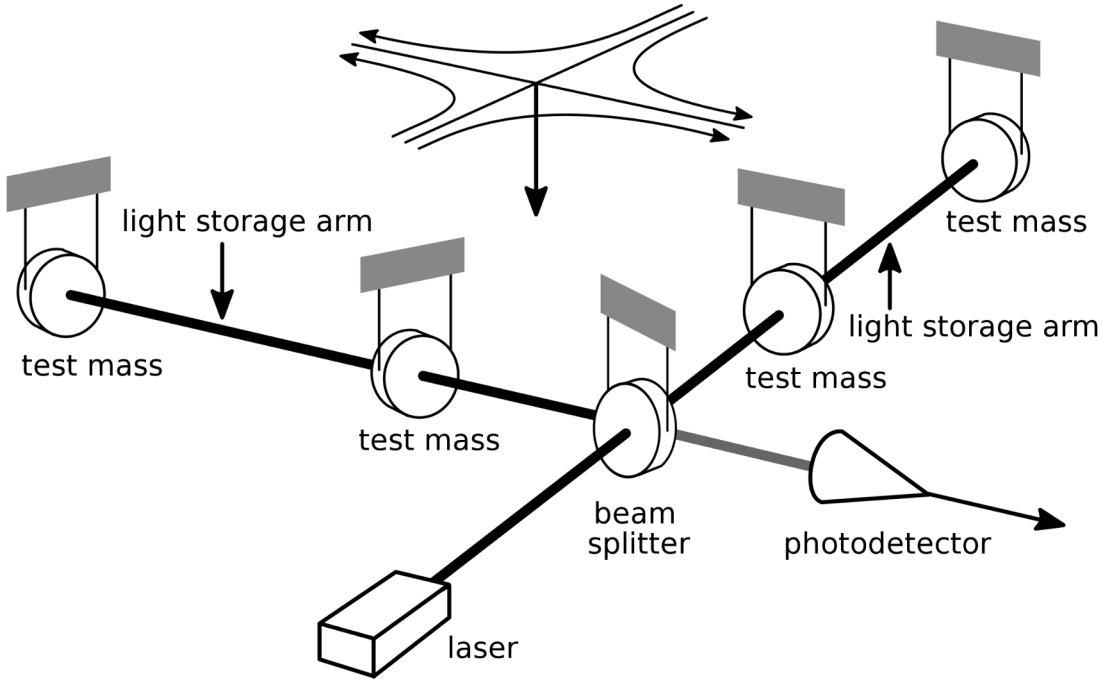
3-Axial Gyroscope for autonomous vehicles & space industry

From calibration to inertial navigation & angle metering

Calibrating instruments in space
(e.g. Relativistic Time)



*Earth-based observatories for detecting **gravitational waves***



Autonomous CARGO ships
(innertial navigation)