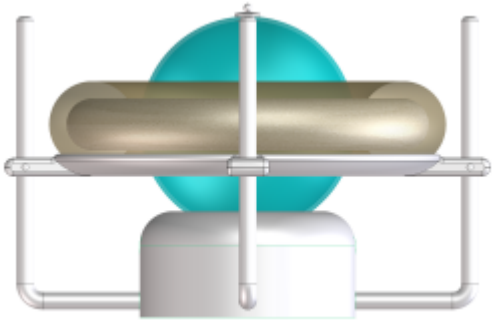
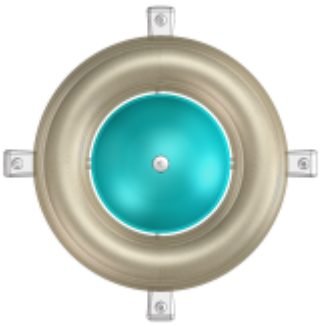
Design PIR 1

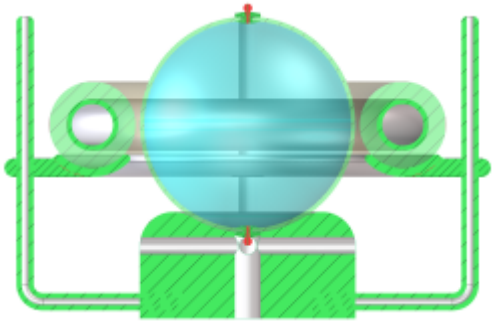
Design of the prototype plasmatic implosion reactor (PIR) 1



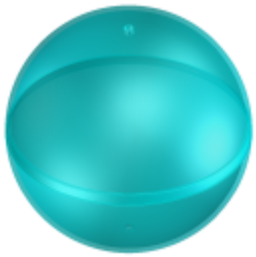


- First version of the prototype doesn't have to have so many sensors. At first the vortex control must be done right
- Later more sensors can come
- Usage of more rotors
  - two in both poles (like a galaxy) rotating opposite direction
- Find a way how to use implosive vortex flow for motor drive
  - If we will achieve self-sustaining vortex, then it will have wide use
  - It would ve nice to start the flow manually from outside

Parts



Chamber

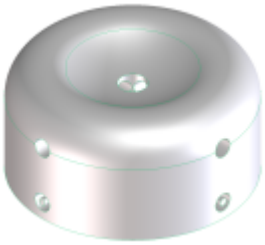


- spcherical (later it is possible to try egg-shaped for single motor system)
- inner diameter 12 cm

- two filling openings in poles of the chamber against each other able to close the opening
  - by by cork
  - by conductor for monitoring or excitation of liquids
- possible solution: plastic sphere two-piece

Chamber stand

Used for



- storing chamber
- anchor base of the coil
- storing control unit
- chamber lighting
- bringing contacts out of the chamber

Rotor - liquid

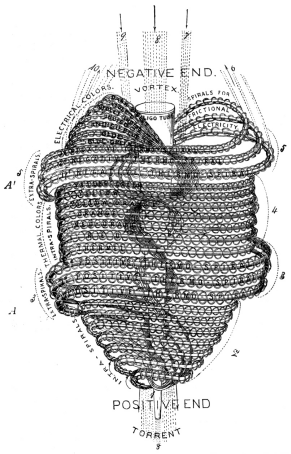
Magnetic fluid.

- ferofluid
  - iron nanoparticles
    - Nanopowder Nanofer Star
- ormus/gans fluid

Stator - coil

Rotor drive. toroidal coil out of the chamber.

- double coil pair(bifilar) windings
  - one windings can be used for exciting and second for monitoring and connection to oscilloscope
  - both windings can be used for exciting and monitoring at the same time
  - try concurrent and counterblow current int the windings
  - copper stranded wire
    - SCY 2x0,75mm2 - transparent pair - S8307
  - way of winding
    - along small perimetr of toroid
      - we can try supertoroidal coil with more order spirals
    - along big perimetr of toroid
      - we can try more order spirals as it is atsubatomic particles ANU even tracks of plants/stars/galaxies…



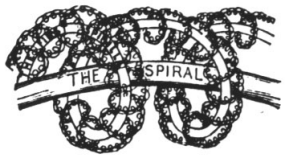
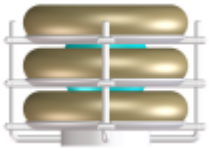
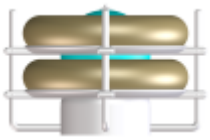


Fig 133. Piece of Atomic Spiral with 1st 2nd and 3rd Spirillæ.

- exciting
  - signal generator
    - (arbitrary wave generator) controled by PC with the voltage waveform
      - pulse
    - PWM (pulse width modulation)
      - Power Pulse Modulator - PWM-OCXi v2
        - příručka
        - DC up to 1,5 MHz
        - duty cycle 0% - 100%
        - current up to 9 A
        - voltage up to 500 V
    - frequency up to several MHz
  - suitable amplifier, if needed

- possible coil core: styrofoam wreath

Coil pedestal

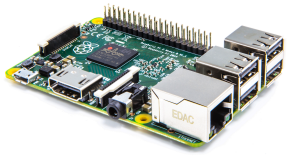
- Enables vertical positioning horizontaly centered coil
-   Enables holding and positiong of several coils at once.

Senzors

- Magnetic field near the chamber
  - ideally several magnetic sensors
    - atleast 3 in n-gon in equator
    - 2 in every pole
- temperature
  - inside at 3 different places
    - 2 sensors near poles
    - 1 sensor in equator parallel
  - around the chamber
    - 1 sensor in equator
      - ideally in line with center of the chamber and inner equator sensor
- current
  - conectors for monitoring voltage between them
    - several parallel thin metal strips on inner wall of the chamber
    - in poles of axis of rotation of vortex
    - ideally connector in center of the chamber
      - Must not brake vortex flow
      - wire of pole

Control unit

Raspberry Pi 2:



- Manufacturer
- Seller
- Dimensions 85 x 56 x 17 mm
- Windows 10 IoT Core

96 Boards:

- Web
- Specifications
- Models

Stand of the chamber is designed to hold both types of the units.

3D model

PC 3D model of the reactor made in PTC Creo Direct Modeling Express, in which it is possible to view and edit it.

I exported each part for 3D printing(STL format):

- Chamber
  - Upper part
  - Lower part
  - Bushing - 2 sets for upper and lower part of the chamber
    - Tenon
    - Pojistka
    - Cork
    - Cork for contact
- Chamber stand
  - Upper part
  - Lower part
- Coil - 4 parts forming toroid
  - 1 part
- Coil stand - 4 parts forming circle
  - 1 part
- Coil stand holder - 4 parts plugged in coil stand
  - 1 part

Materials and production of the prototype

- Chamber and rotor print on 3D printer from plastics at first
- Chmaber will be ideally transparent
- Silicon seal, if needed