Spark chamber

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Contents

1 To Do

- buy Aquarium
- buy new base plate, disruptive strength >20 kV

2 in progress

- contact to plastic spheres and domes

3 Done

- measured size
- pick up top blade from machine shop (does not fit)
- bought and checked power supply (max difference to voltmeter =2V)
- built solid works 3D model

4 Results

4.1 Size

Figure 1: size of the old aquarium

units	hight	length	depth
cm	51.5	82.5	36
inch	20.3	32.5	14.2

Figure 2: size of the old ground plate

units	thickness	length	depth
cm	3	84.5	38.5
inch	1	33.3	15

4.2 offers

size [inch]	24H x 36W x 18D thickness each 0,375
price	$399
source	https://www.customaquariums.com/glass-aquariums/all-aquarium-standard-sizes.html
material	low iron glass (aka starfire, starbrite, etc) or standard greenish hue glass
votes	

price	$320
comes with	top light and blue/black back
source	`https://www.amazon.com/SeaClear-Acrylic-Aquarium-Combo-Cobalt/dp/B000634H5K/`

price	$209
source	`http://www.fishtanksdirect.com/seaclear-30-gallon-36lx12wx16h-rectangular-acryli`

price	requested
source	`https://plastic-domes-spheres.com/?gclid=EAIaIQobChMIpdWGgZOa3AIVA7bACh0ecQFM`
advantage	might also produce a base

5 3D Model

there is a solidwors 3D model in OneDrive>Summer2018>sparkchamber

6 Links

edit this document:
https://www.overleaf.com/17020877tzfcncsfypcg

Project description:
http://www.physics.mcgill.ca/ francois/projects/spark/

7 Eqipment Check

Check log: Hussain, June 26th, Afternoon
Checked for the equipment required for spark chamber:

Equipments present:

1. Discriminator and Logic unit
2. VWR power supply x 2 : For clearing field and 206V generator
3. Spark gap
4. Spark amplifier

5. 12kV power supply for the plates

Missing stuff:

1. Power supply for the PMTs
2. 6kV supply for amplification of signal sent to spark gap