



**Dr. Randell L. Mills**

Washington, DC  
**Roadshow**

# Safe Harbor Statement

This presentation contains forward-looking statements, including statements regarding the company's plans and expectations regarding the development and commercialization of our technology. All forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. The forward-looking statements speak only as of the date of this presentation. The company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statements to reflect any change in the company's expectations or any change in events, conditions or circumstances on which any such statements are based.

- Introduction to Brilliant Light Power, Inc.
- An Introduction to the SunCell® Power Generator and the Hydrino® reaction based power source
- The SunCell® engineering & product launch plan
- Brilliant Light Power's Go-To-Market plan
- The commercial opportunity for customers & partners
- Q&A with Dr. Mills

## Speakers



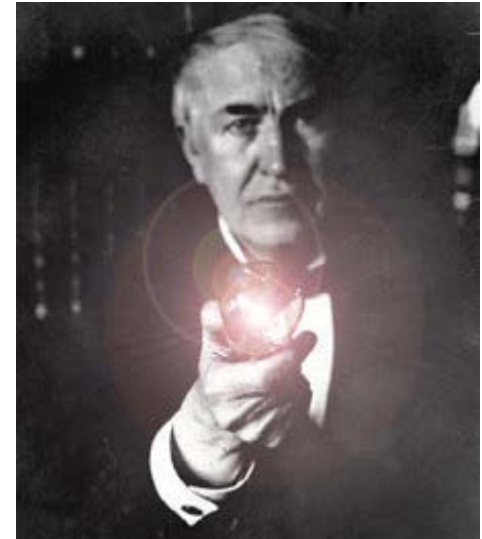
**Dr. Randell L. Mills** - Brilliant Light Powers founder, President & CEO. Dr. Mills groundbreaking theoretical work in classical physics to solve the major problems of chemistry and physics over a span of subatomic to cosmological scales lead to the prediction and confirmation of the Hydrino® power source upon which he invented the SunCell® Generator to harness the corresponding enormous clean power.



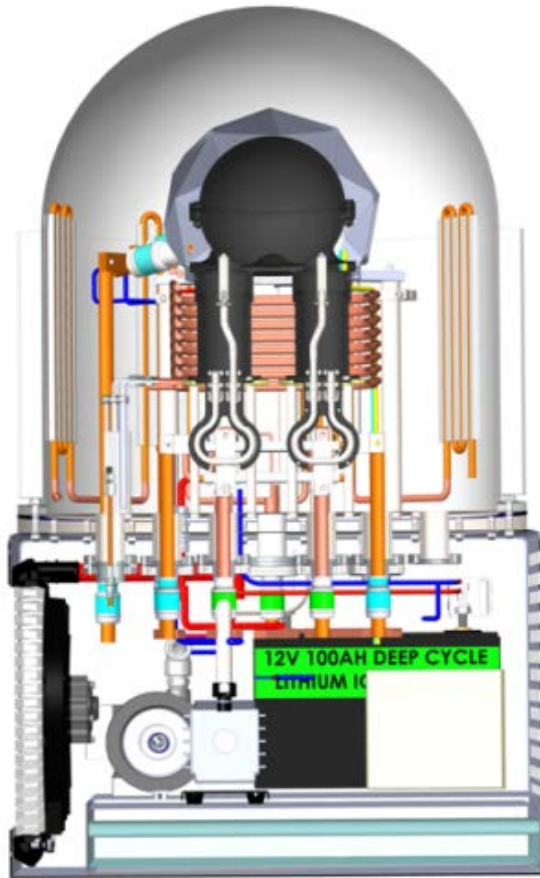
**Dominic Jones** - Responsible for Business & Corporate Development, Dominic Jones has held key executive positions in product management, strategy and corporate development for large enterprises including Cable&Wireless and Vodafone.

# About Brilliant Light Power

- Reinventing electricity, independence of being completely off grid
- New, sustainable, nonpolluting energy
- Technology and science validated by independent third parties
- Extensive proprietary methods and systems
- Electricity company, sales via lease agreement, no metering
- Partnership & outsource business model
- Transitioning from research to reality
- Profound implications for electric power – accessible, affordable, clean



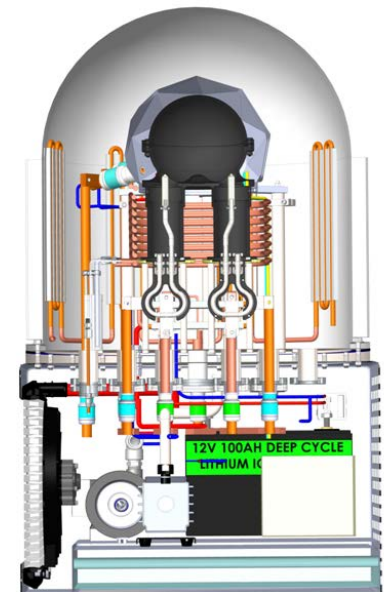
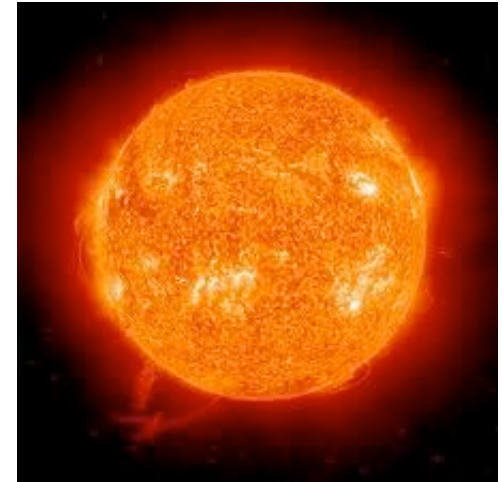
# SunCell® - Water Fueled Generator



Feature	Est.
Power Output	150 kW DC or AC
DC Voltage	~380 or ~760
AC Inverter for 50/60 Hz	Option
SunCell dimensions (L,W, H)	0.5x0.5x0.5m
Photovoltaic Power Density	2000 Suns
Blackbody Radiator Power Density	5 MW/m <sup>2</sup>
Weight	100 kg
Warm-up Time	<1 min
Self-consumption power	<3 kW
Response Time (standby to peak)	~100ms
Service Life	15 years
Noise Emission	Sound Proofed
Degree of protection (per IEC 60529)	
Climatic category (per IEC 60721-3-4)	

# The Energy Solution: SunCell®

- Continuous power source, developed with proprietary technology
- Non-polluting: by-product is harmless lower energy state of hydrogen called Hydrino®, lighter than air, vents to space
- System is sealed with H<sub>2</sub>O fuel injected with nonreactive, recirculated silver, absolutely safe materials and operation
- Capital cost estimated at **\$50** to **\$100** per kW at production power & scale, versus **\$3,463** for solar
- No Metering: Electricity sold at about \$0.05 per kWh via a per diem lease fee.
- Low operating cost, only consumable is minimal amounts of water
- Scalable from 10kW to 10 MWs
- Initially stationary, developing to motive
- Field test in 1H 2017
- Commercial launch in 1H 2018



# SunCell Economics

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Current Annual Gross Earning Capacity of  
Any Electrical Generator:

- \$1/W

Capital Cost:

- \$60/kW

Life Span:

- 20 years

Capital Cost Annually:

- \$3/kW

Solar Capital Cost (2013):

- \$3,463/kW<sup>a</sup>

Maintenance Cost:

- \$1.20/kW

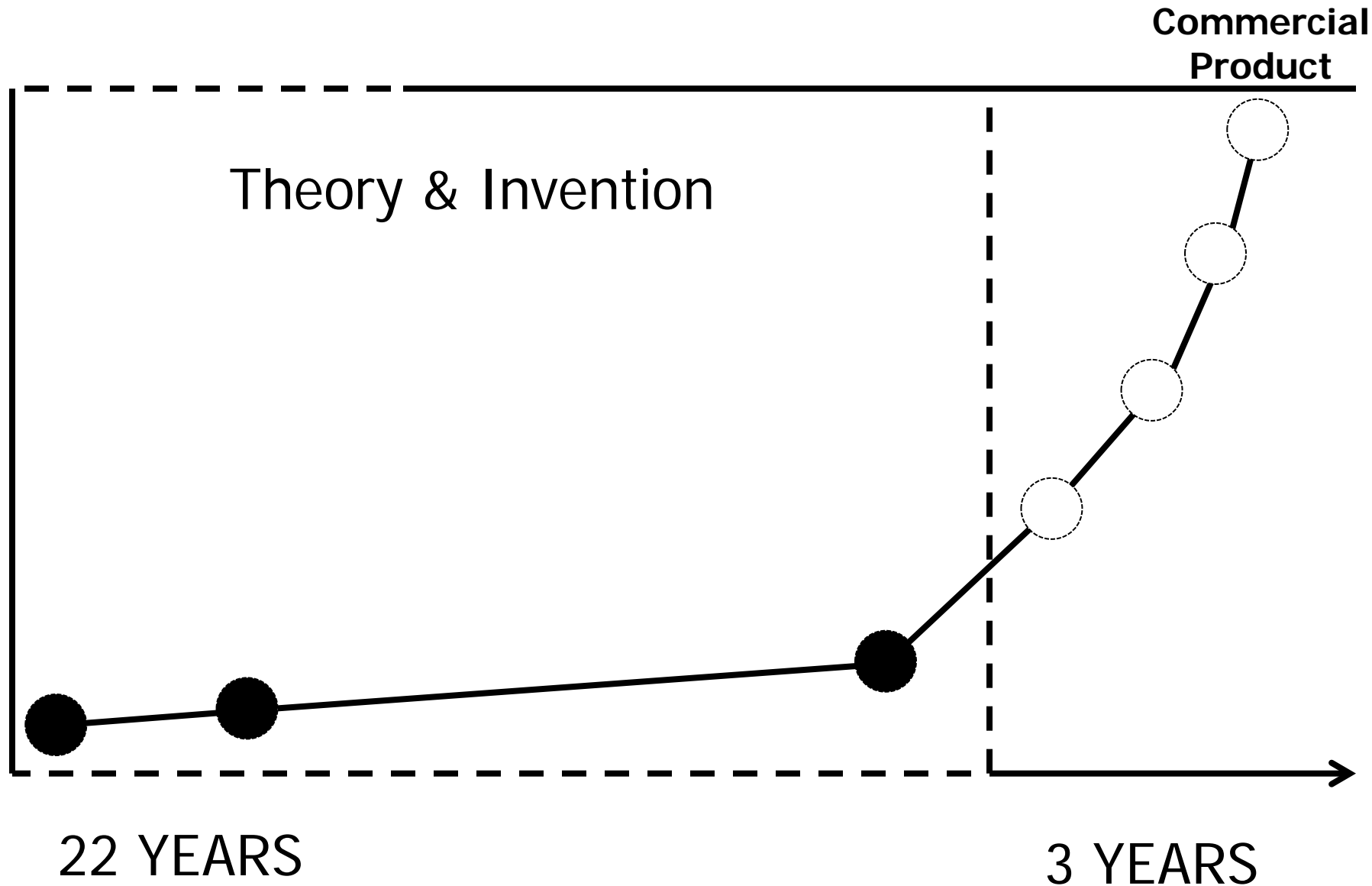
Generation Cost:

- \$0.001/kWh



<sup>a</sup>[http://www.nrel.gov/analysis/tech\\_lcoe\\_re\\_cost\\_est.html](http://www.nrel.gov/analysis/tech_lcoe_re_cost_est.html)

# The SunCell® Development Timeframe





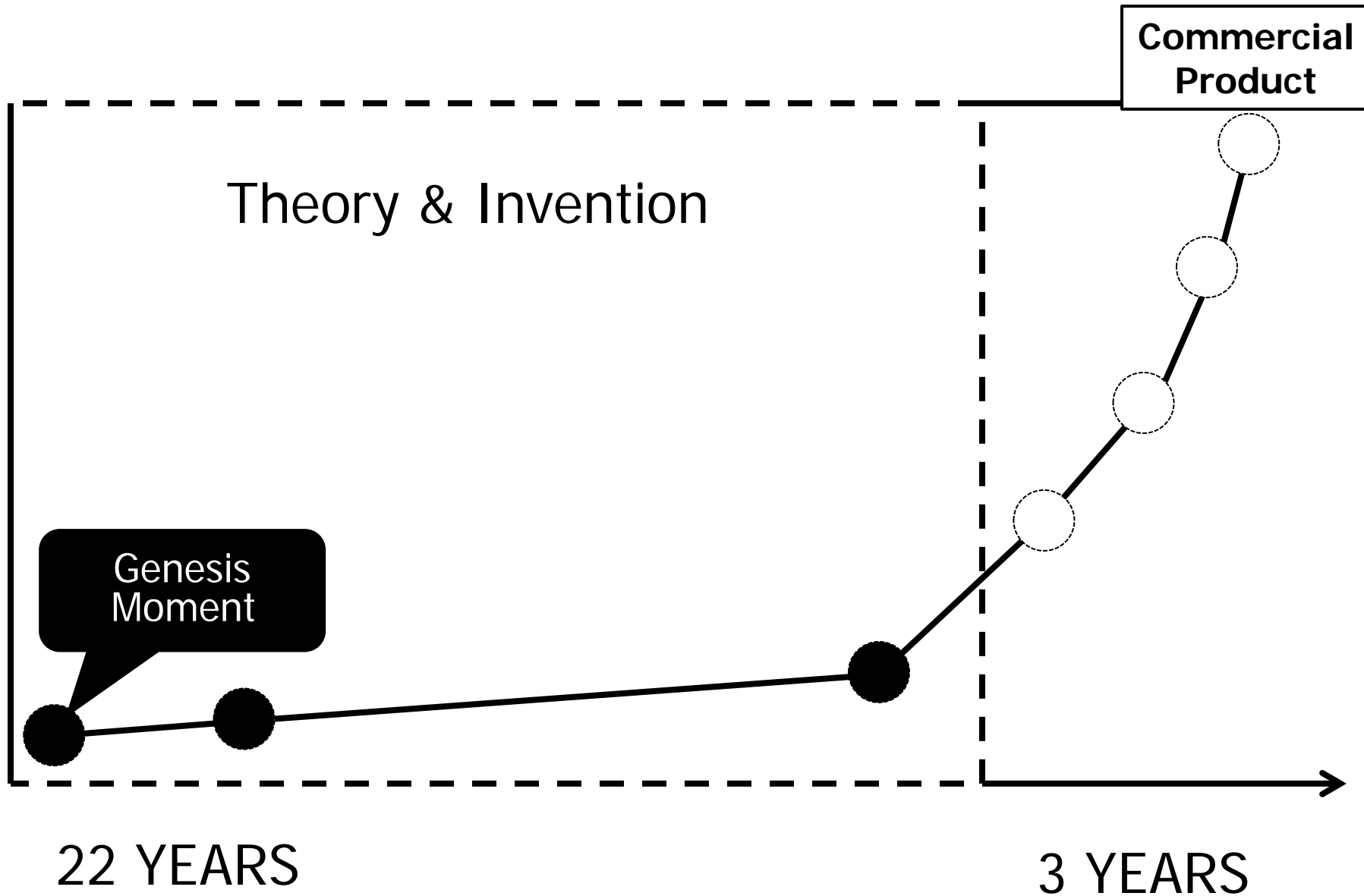
**"....it's extremely unlikely that this is real...."**

"...there is no state of hydrogen lower than the ground state..."

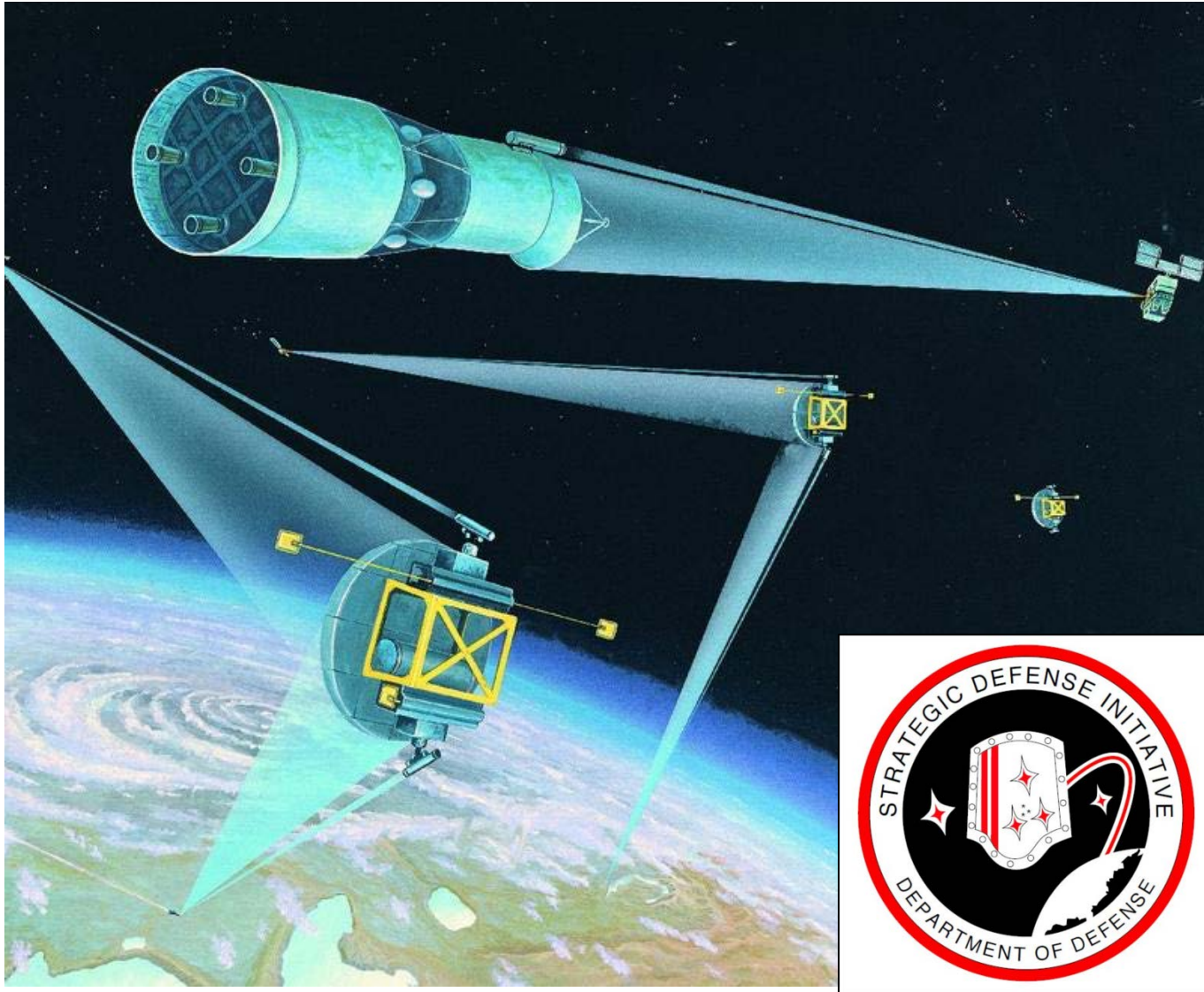
***"If you could fuck around with the hydrogen atom, you could fuck around with the energy process in the sun. You could fuck around with life itself."***

***Dr Randell L. Mills – World record for pissing-off the largest number of Nobel Laureates***

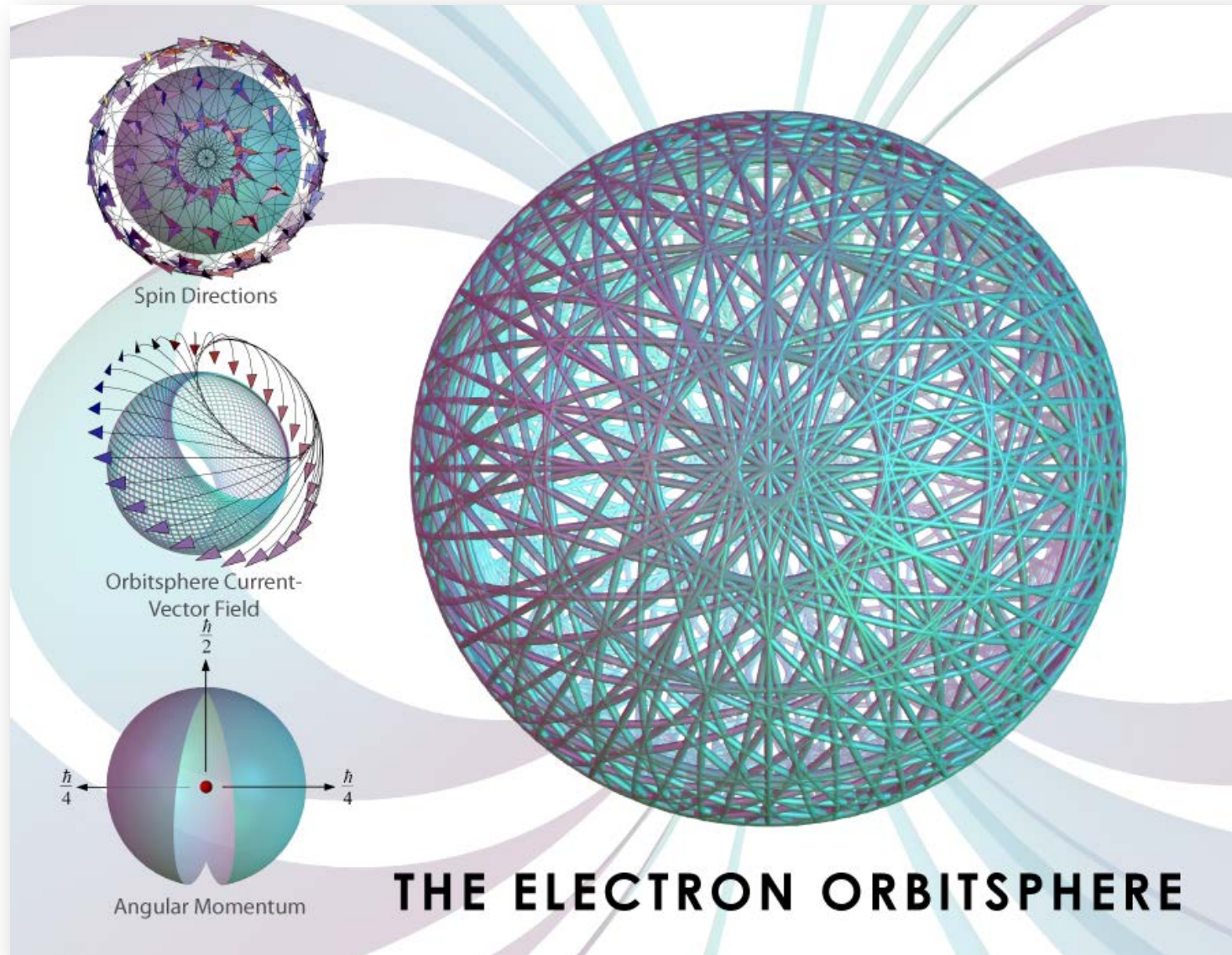
# Late 1980's



# Genesis Moment – Free Electron Lasers

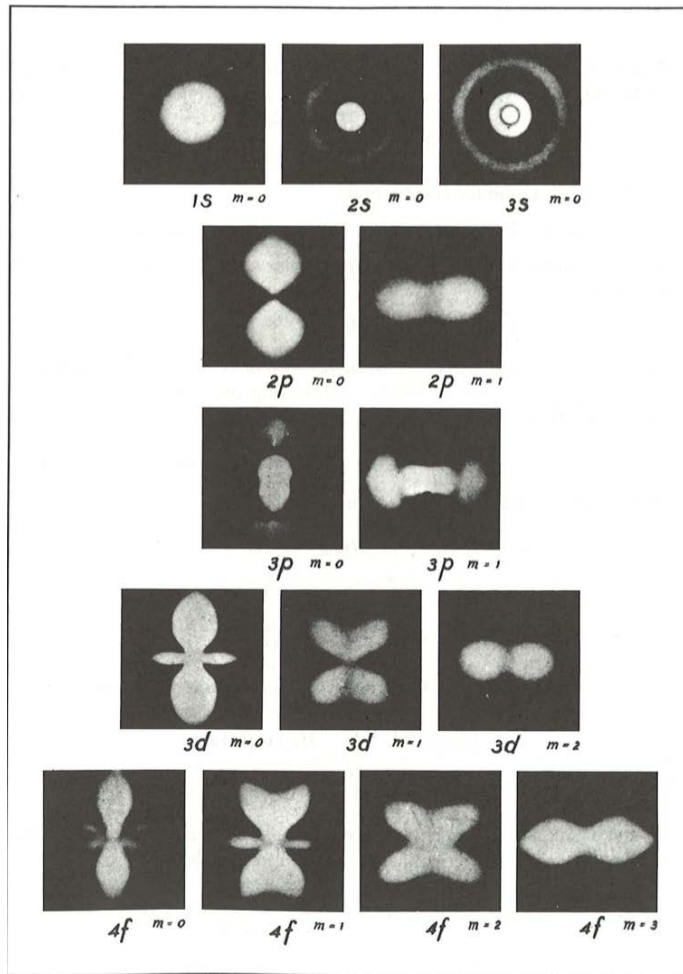


# Grand Unified Theory of Classic Quantum Mechanics

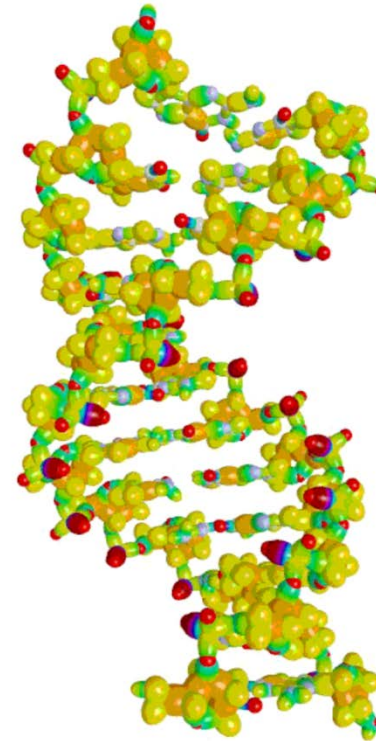




# Prediction with incredible accuracy



Quantum illustration of the probability densities in various states of the hydrogen atom



## DNA

Exact charge distribution profile generated by Millsian, Inc.

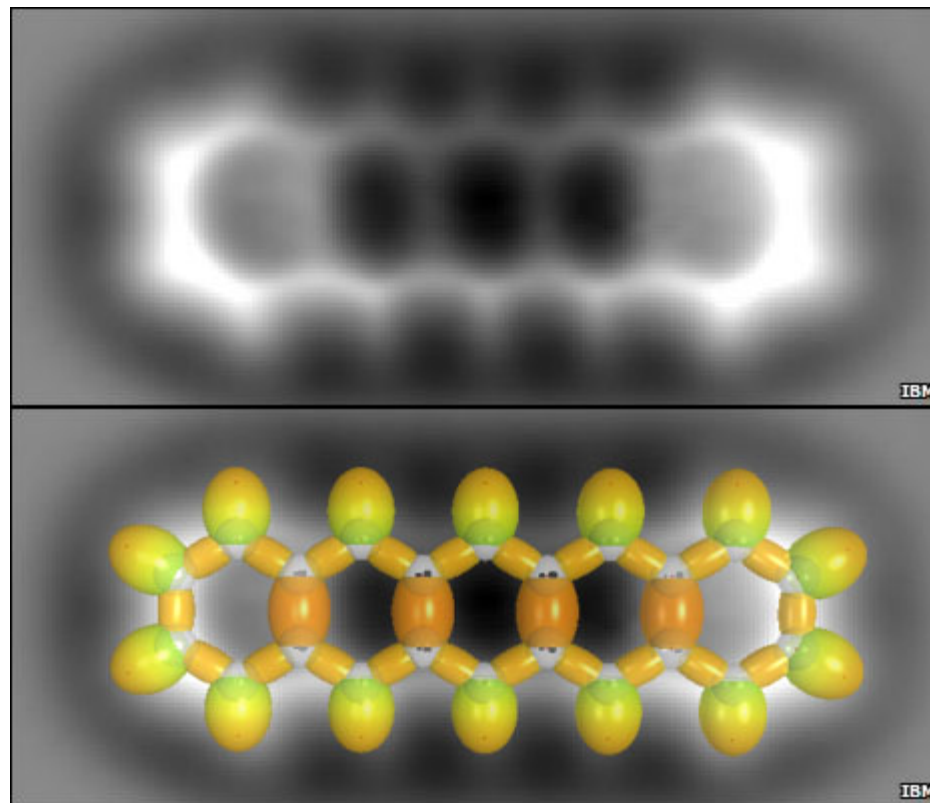


DNA (1DC0) model as generated by Millsian 2.0 Beta, and rendered with POV-ray.

# Physical Image Compared to Physical Solution

The polycyclic aromatic hydrocarbon pentacene was imaged by atomic force microscopy using a single CO molecule as the probe. The resulting breakthrough in resolution revealed that in contrast to the fuzzy images touted by quantum theoreticians as proof of the cloud model of the electron, the images showed localized bonding MOs and AOs in agreement with the classical solution.

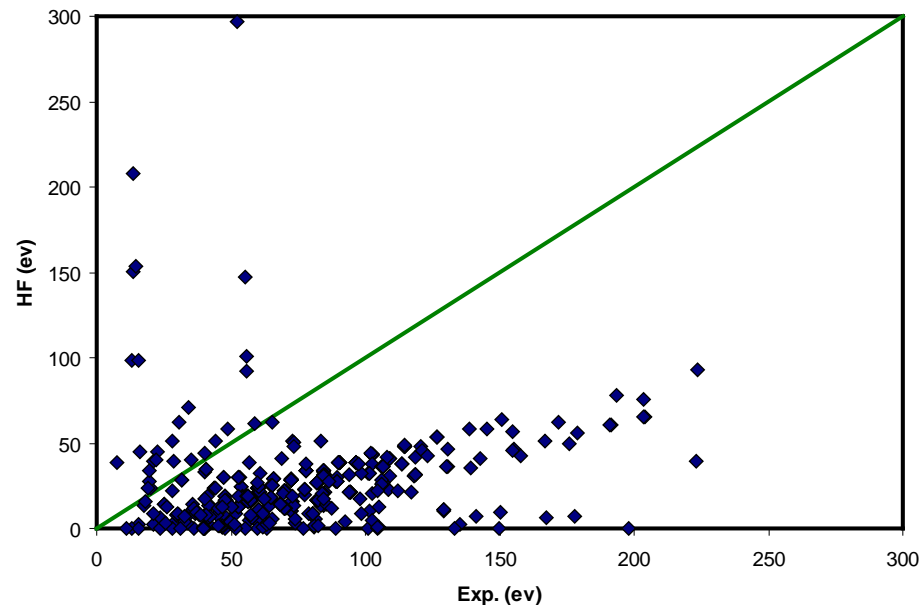
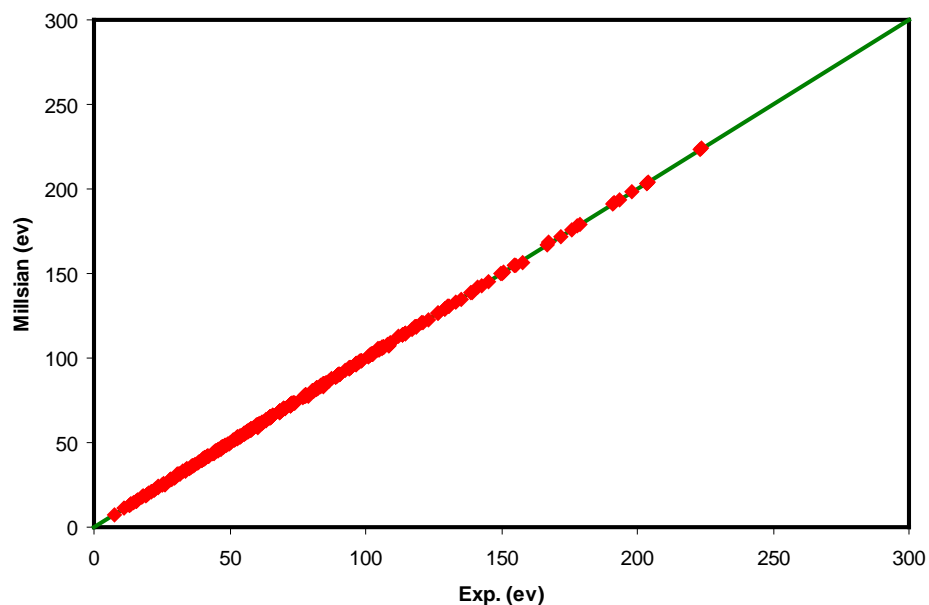
Top, atomic force microscopy image of pentacene by Gross et al. Bottom, the superimposed analytical classical solution that matches the physical structure.



[L. Gross, F. Mohn, N. Moll, P. Liljeroth, G. Meyer, "The chemical structure of a molecule resolved by atomic force microscopy", Science, Vol. 325, (2009), pp. 1110-1114.]

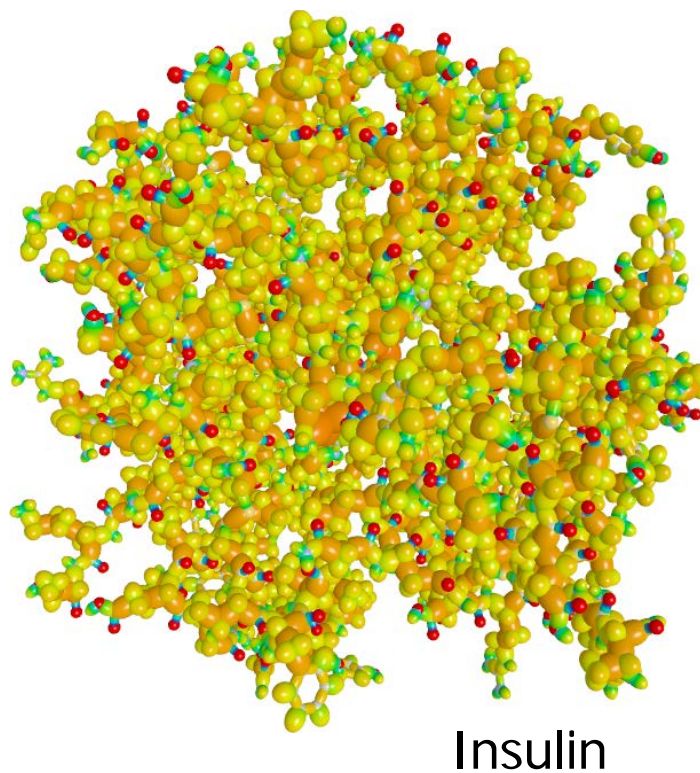
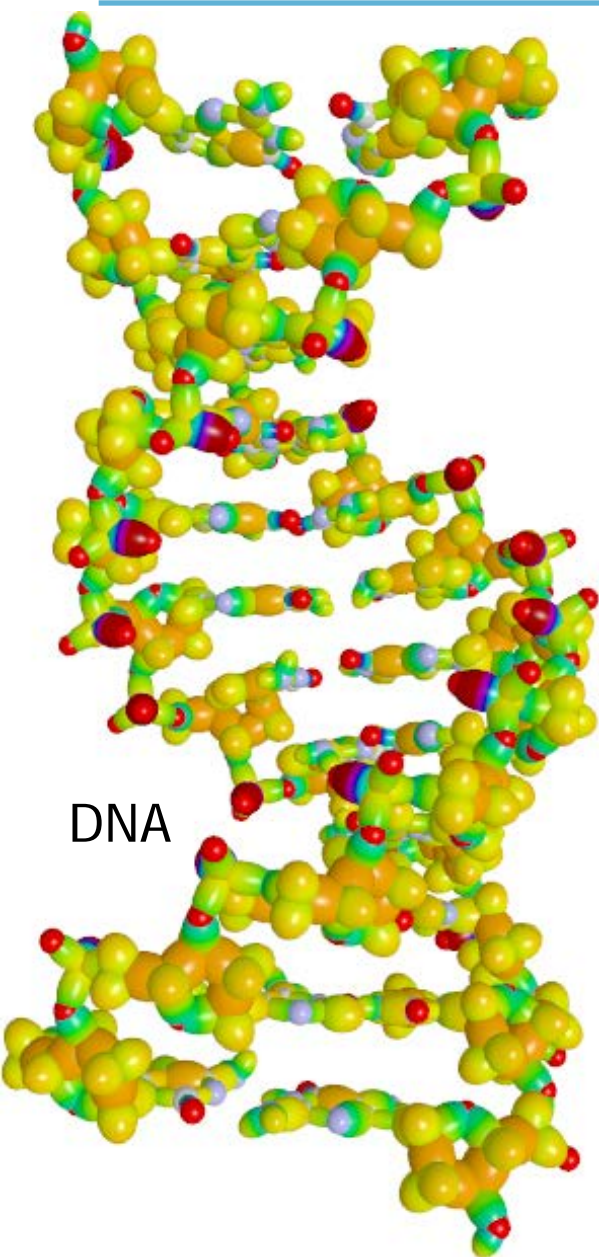
# Comparison of Classical to Quantum

## Millsian vs. 6-31G\*

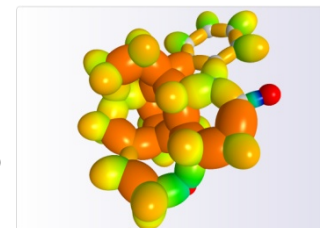


R. L. Mills, B. Holverstott, W. Good, A. Makwana, J. Paulus, "Total Bond Energies of Exact Classical Solutions of Molecules Generated by Millsian 1.0 Compared to Those Computed Using Modern 3-21G and 6-31G\* Basis Sets," Phys. Essays 23, 153 (2010); doi: 10.4006/1.3310832

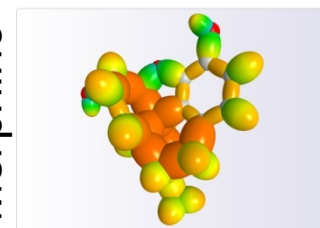
# Millsian 2.0: Modeling Molecules



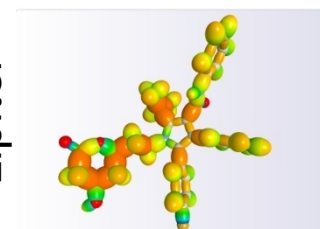
Strychnine



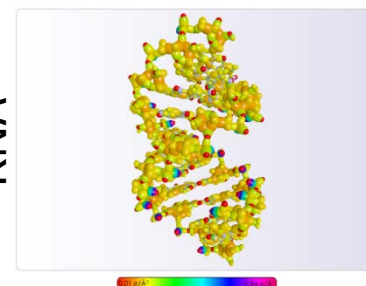
Morphine



Lipitor

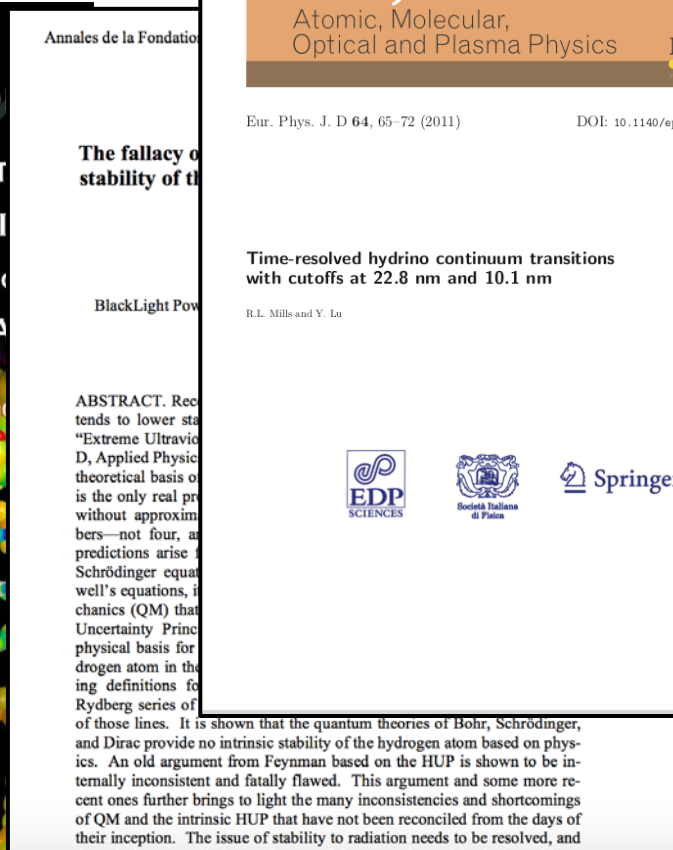
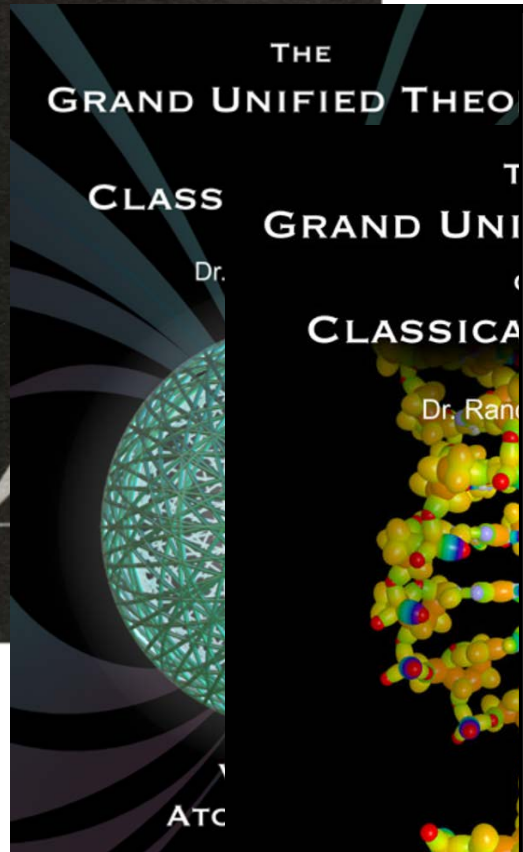
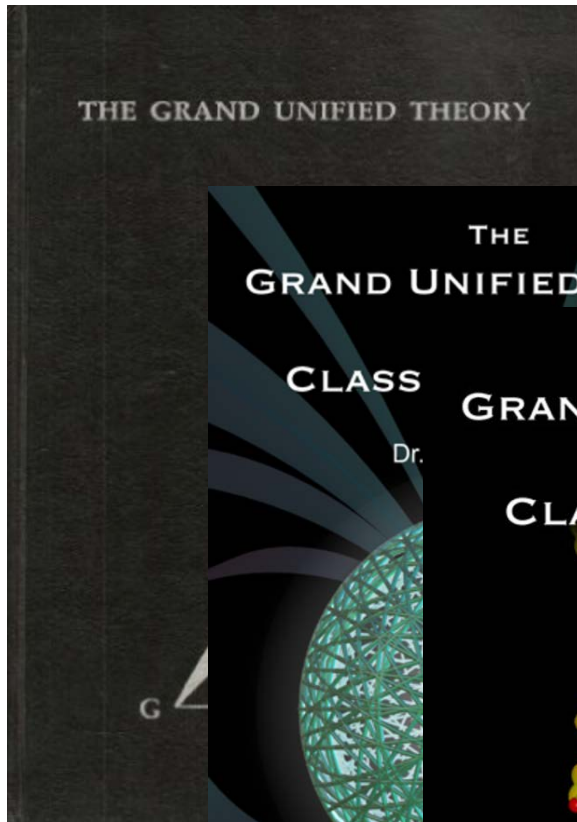


RNA





# Over 100 peer reviewed publications



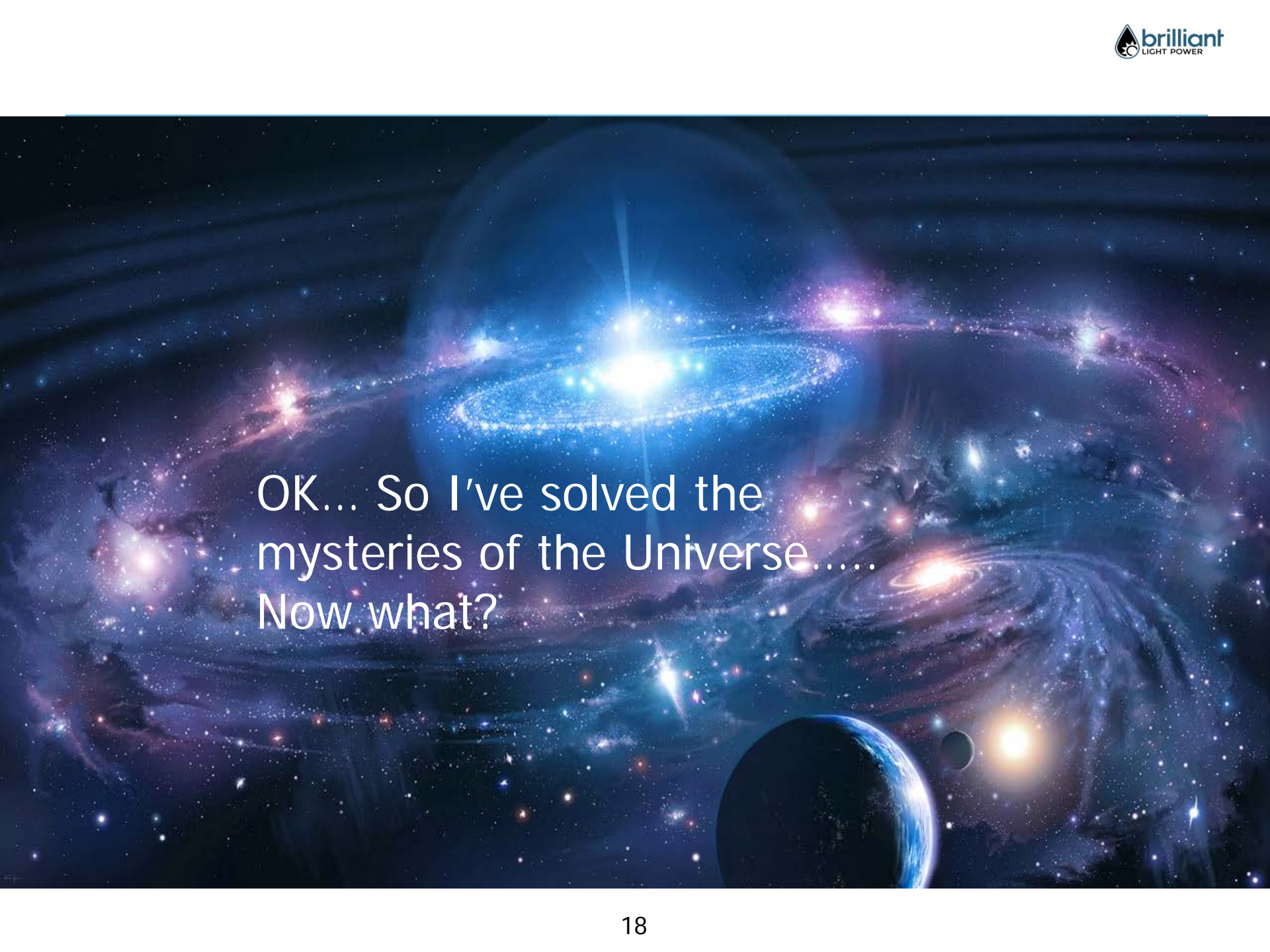
Annales de la Fondation

The fallacy of  
stability of the

BlackLight Power

ABSTRACT. Recent  
tends to lower sta  
"Extreme Ultravio  
D, Applied Physic  
theoretical basis o  
is the only real pr  
without approxima  
bers—not four, as  
predictions arise  
Schrödinger equat  
well's equations, i  
chanics (QM) that  
Uncertainty Princ  
physical basis for  
hydrogen atom in  
ing definitions fo  
Rydberg series of  
of those lines. It is shown that the quantum theories of Bohr, Schrödinger,  
and Dirac provide no intrinsic stability of the hydrogen atom based on physics.  
An old argument from Feynman based on the HUP is shown to be internally  
inconsistent and fatally flawed. This argument and some more recent ones  
further brings to light the many inconsistencies and shortcomings of QM  
and the intrinsic HUP that have not been reconciled from the days of their  
inception. The issue of stability to radiation needs to be resolved, and



The background of the slide is a vibrant cosmic scene. It features several spiral galaxies with glowing blue and purple cores and arms, set against a dark blue space filled with stars. In the bottom right foreground, a portion of the Earth is visible, showing its blue oceans and white clouds. The text 'OK... So I've solved the mysteries of the Universe..... Now what?' is centered in the middle of the image in a white, sans-serif font.

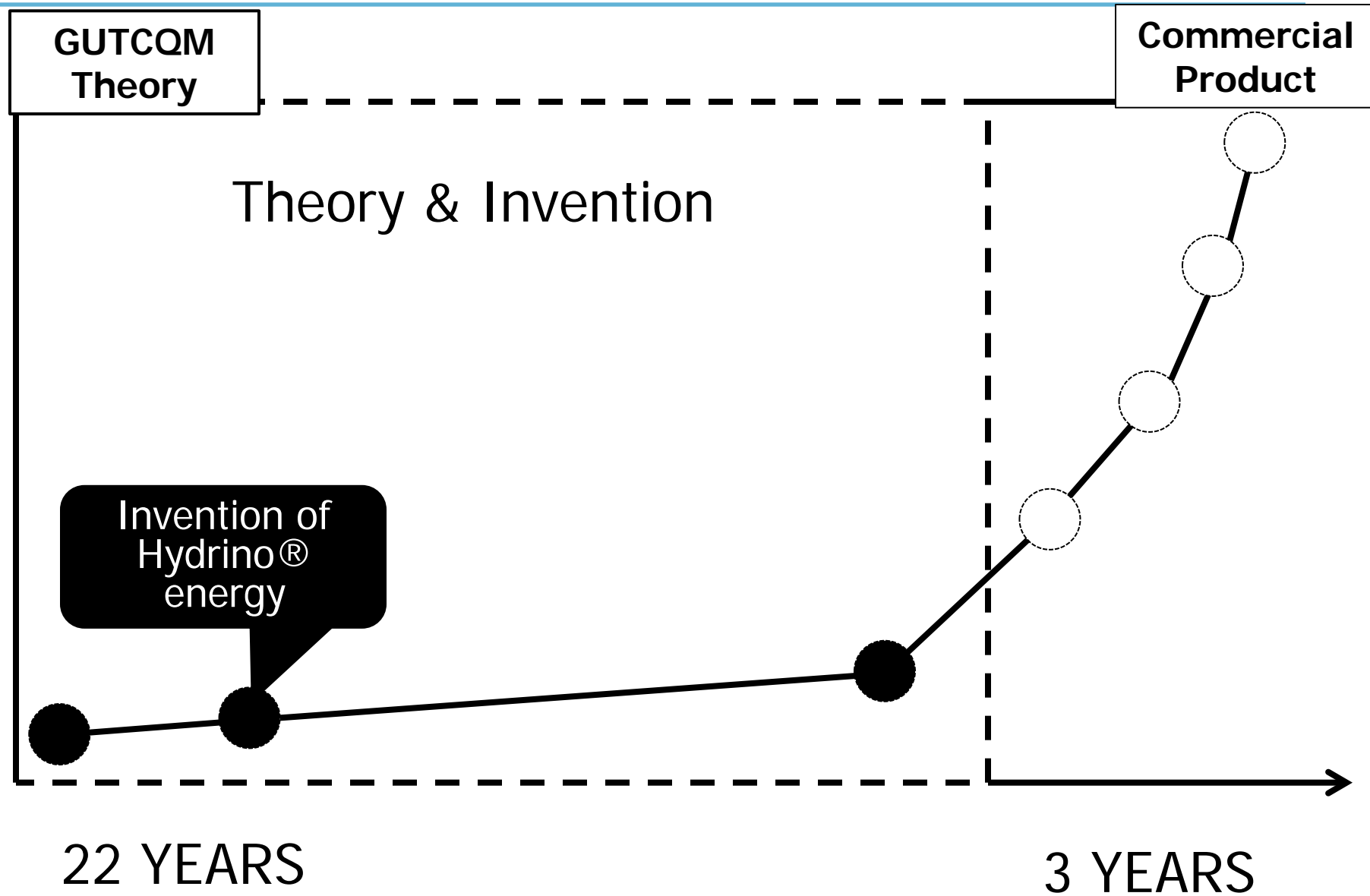
OK... So I've solved the  
mysteries of the Universe.....  
Now what?

# Lets create energy from water....

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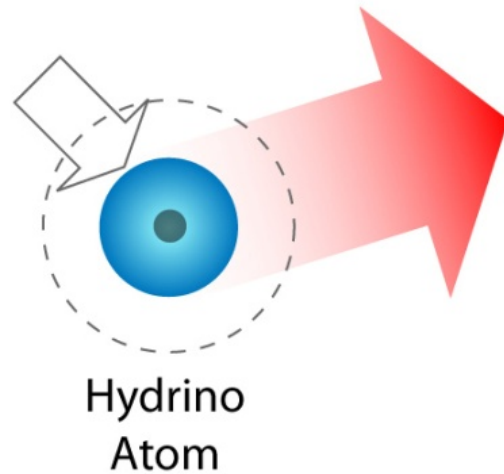
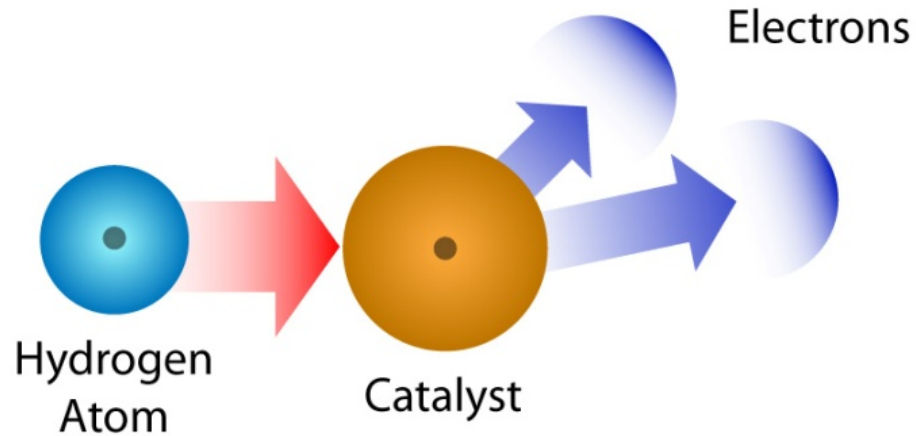


1991-1995



# Invention of the Hydrino® energy

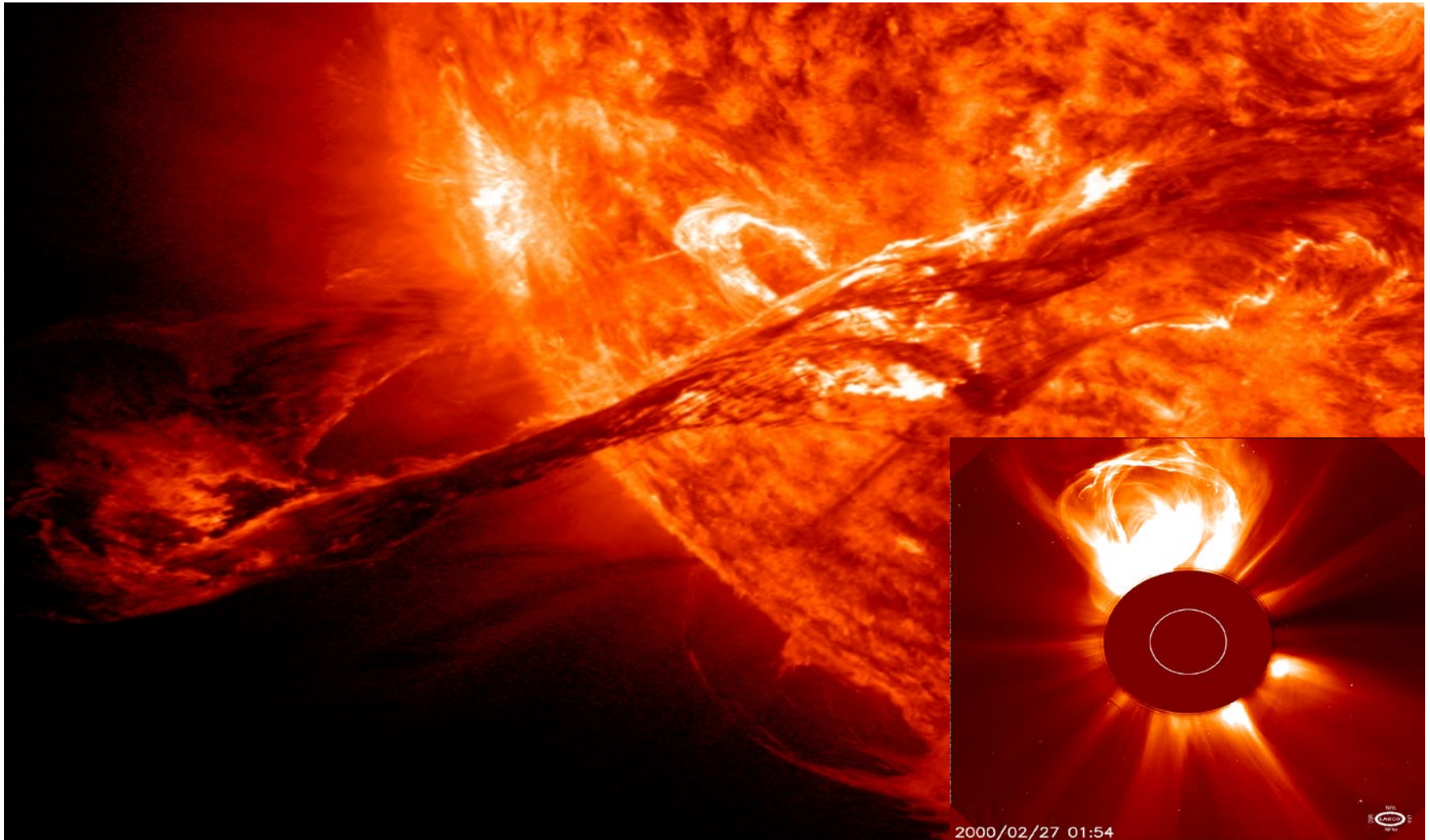
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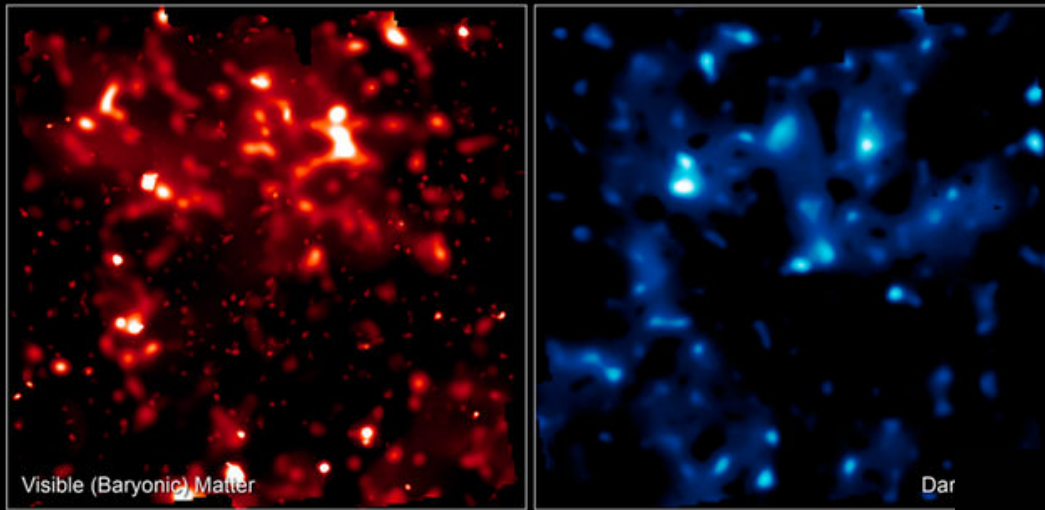


# The Hydrino® and the Suns corona

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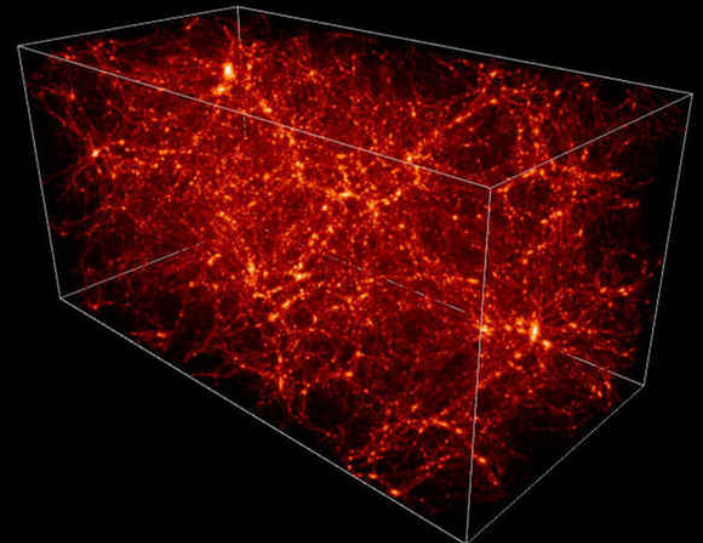
# Dark Matter: The Hydrino® observed in nature



**Distribution of Visible and Dark Matter • Cosmic Evolution Survey**  
*Hubble Space Telescope • Advanced Camera for Surveys*

NASA, ESA, and R. Massey (California Institute of Technology)

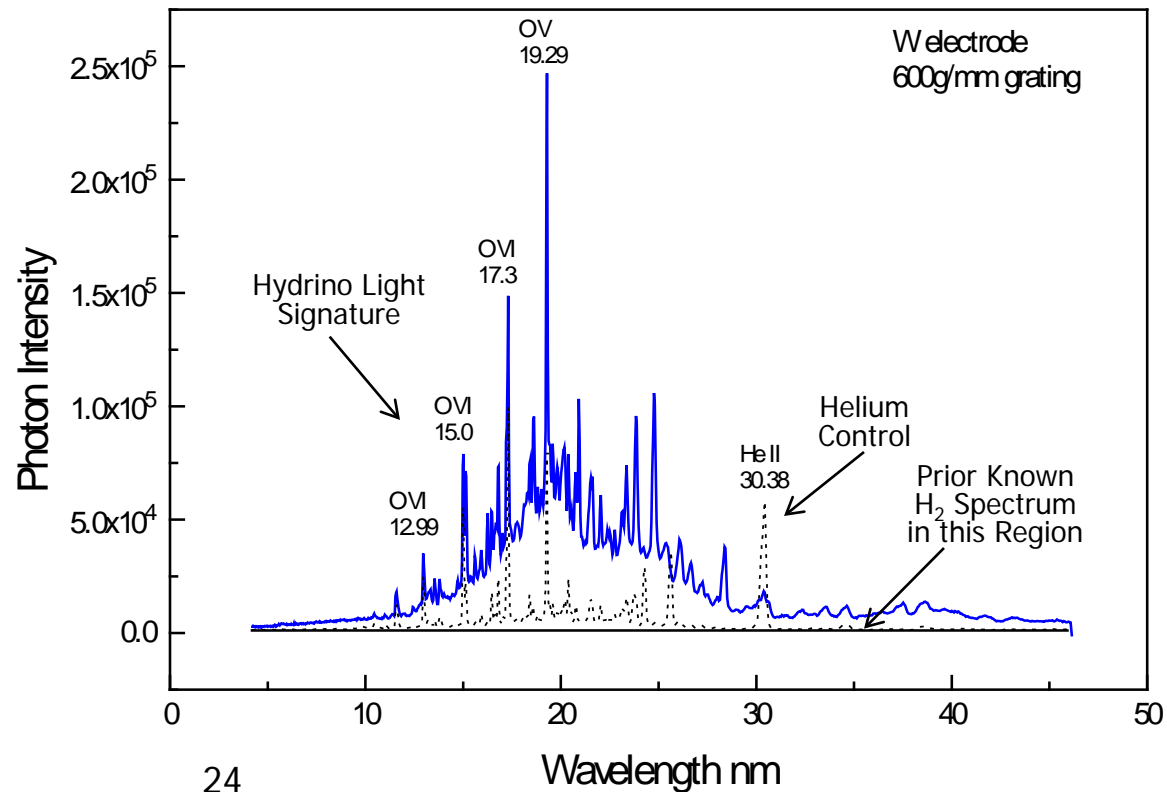
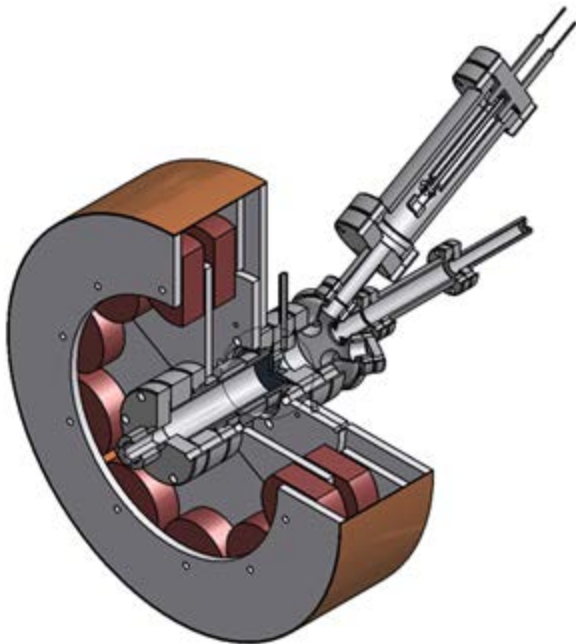
STS



Distribution of Dark Matter in the Universe

# Hydrino Light Signature

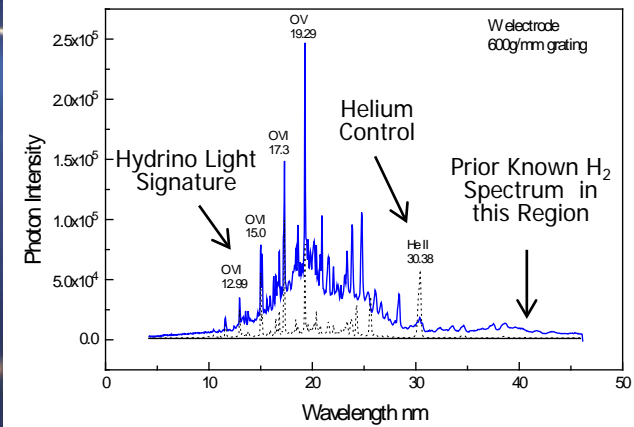
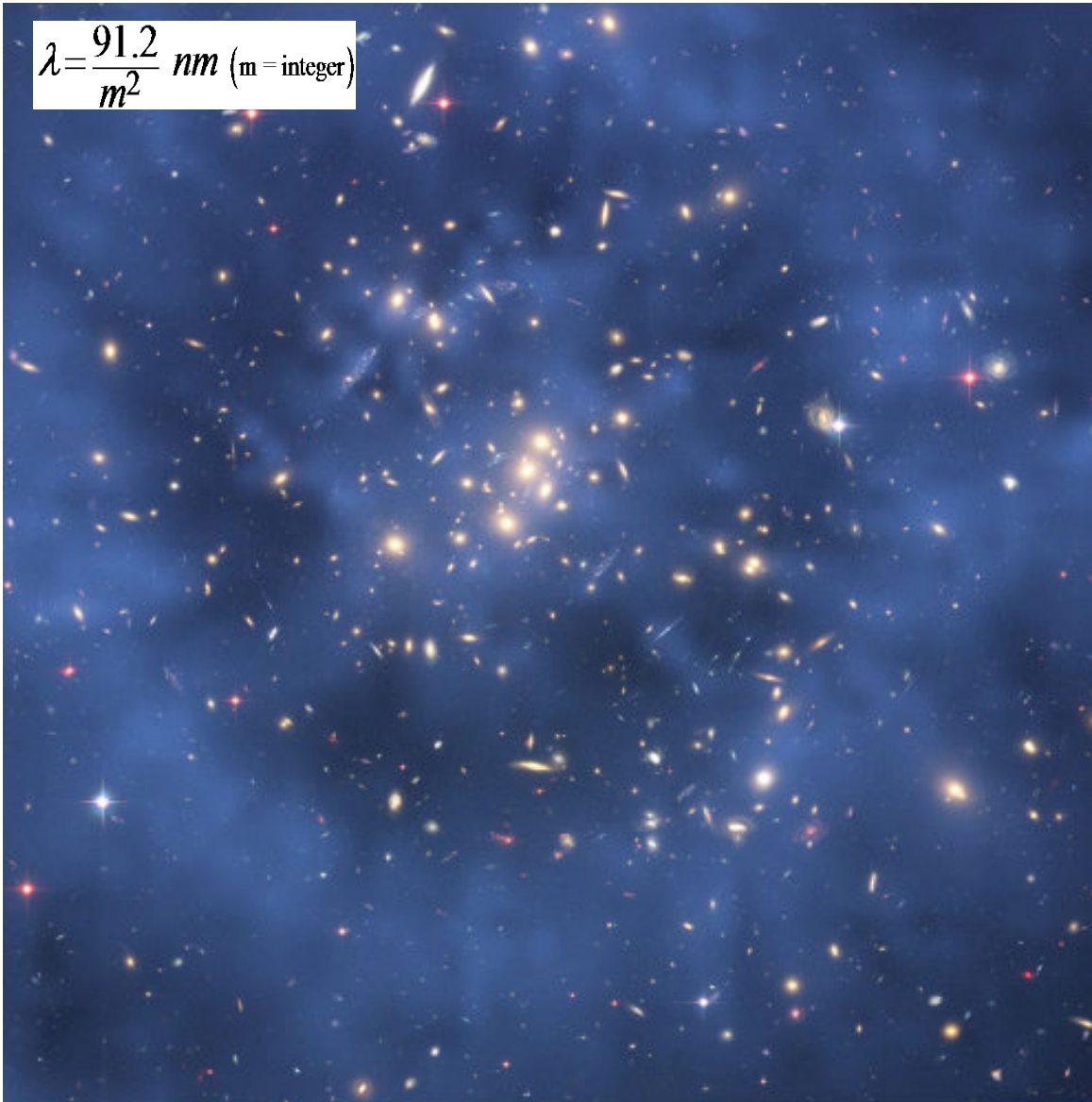
- Experimental Setup for the Observation of the Hydrino Light Signature
  - Light signature from pure hydrogen at much higher energy than deemed possible for this element in any known form
  - Continuum radiation showing H going below the level previously thought to be the "Ground State"





# Dark Matter ring in galaxy cluster

$$\lambda = \frac{91.2}{m^2} nm \quad (m = \text{integer})$$



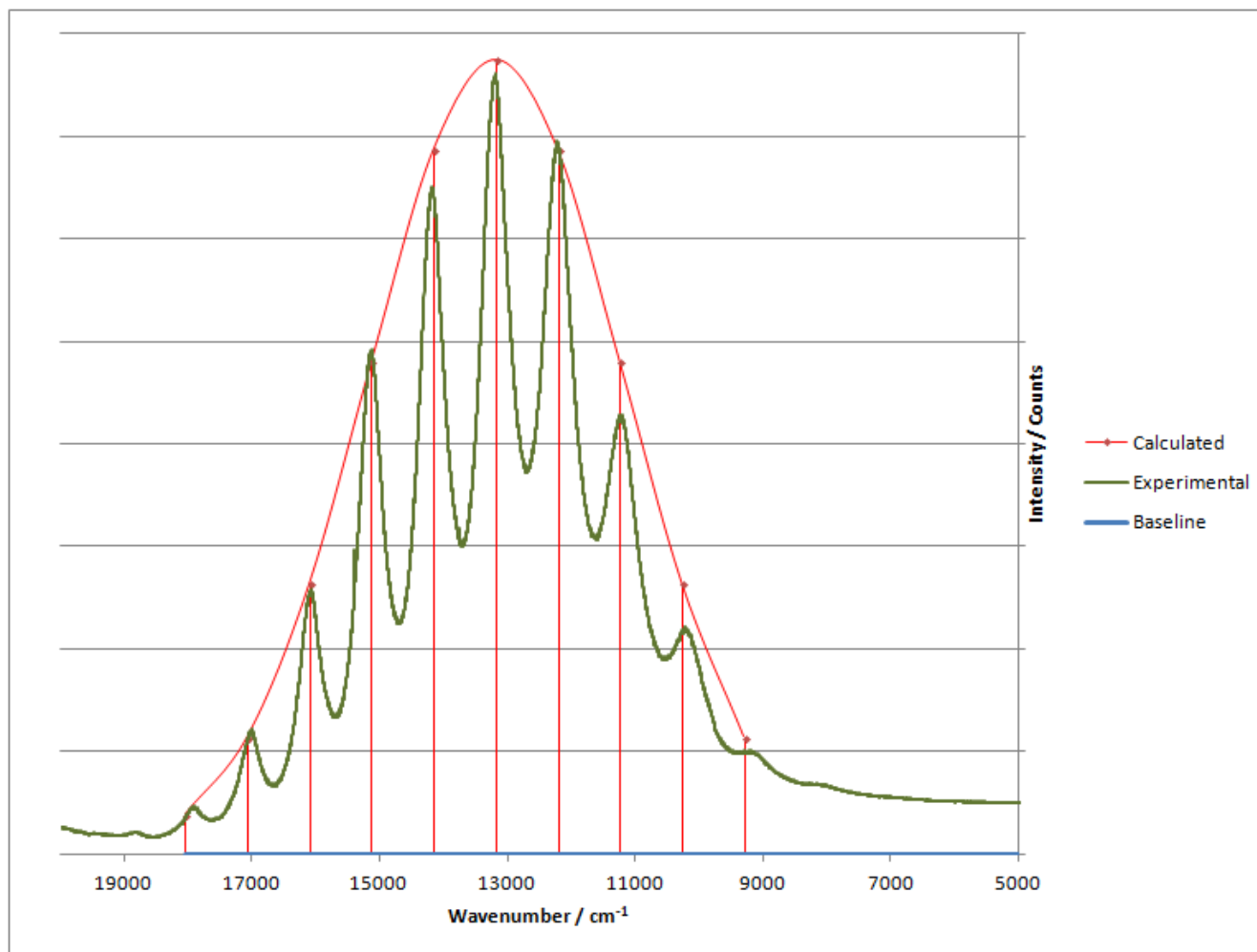
# Hydrino Identification

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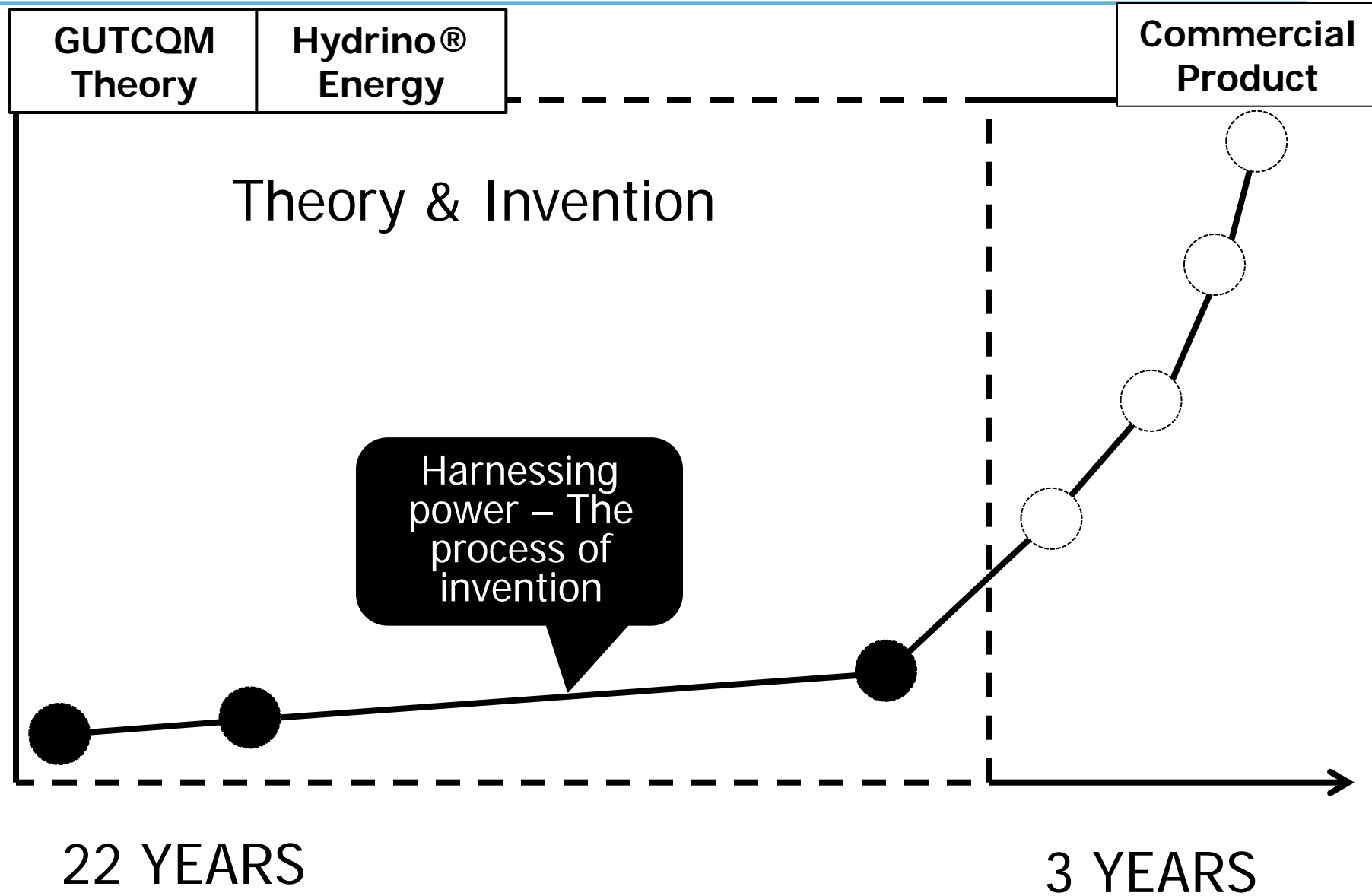
- GUT
- Molecular modeling
- $H(1/2)$  and  $H(1/4)$  hydrino transitions observed by continuum radiation
- Astronomy data verifying hydrinos such as  $H(1/2)$ ,  $H(1/3)$ , and  $H(1/4)$  hydrino transitions
- $H(1/2)$  hyperfine structure
- $H_2(1/4)$  XPS binding energy
- $H_2(1/4)$  ro-vib spectrum in crystals by e-beam excitation
- $H_2(1/4)$  FTIR
- $H_2(1/4)$  Raman
- $H_2(1/4)$  Photoluminescence spectroscopy
- Fast H in plasma including microwave and rt-plasmas
- Rt-plasma with filament and discharge
- Afterglow
- Highly pumped states
- H inversion
- Power with multiple solid fuels chemistries
- SunCell energetic plasma
- ToF-SIMS and ESI-ToF identification of hydrino hydride compounds
- Solid H NMR
- $H(1/4)$  spin-nuclear hyperfine transition
- Electricity gain over theoretical in CIHT cells

# Data Comparison

A plot comparison between the theoretical energies and assignments given on the previous slide with the observed Raman spectrum.



1995-2013





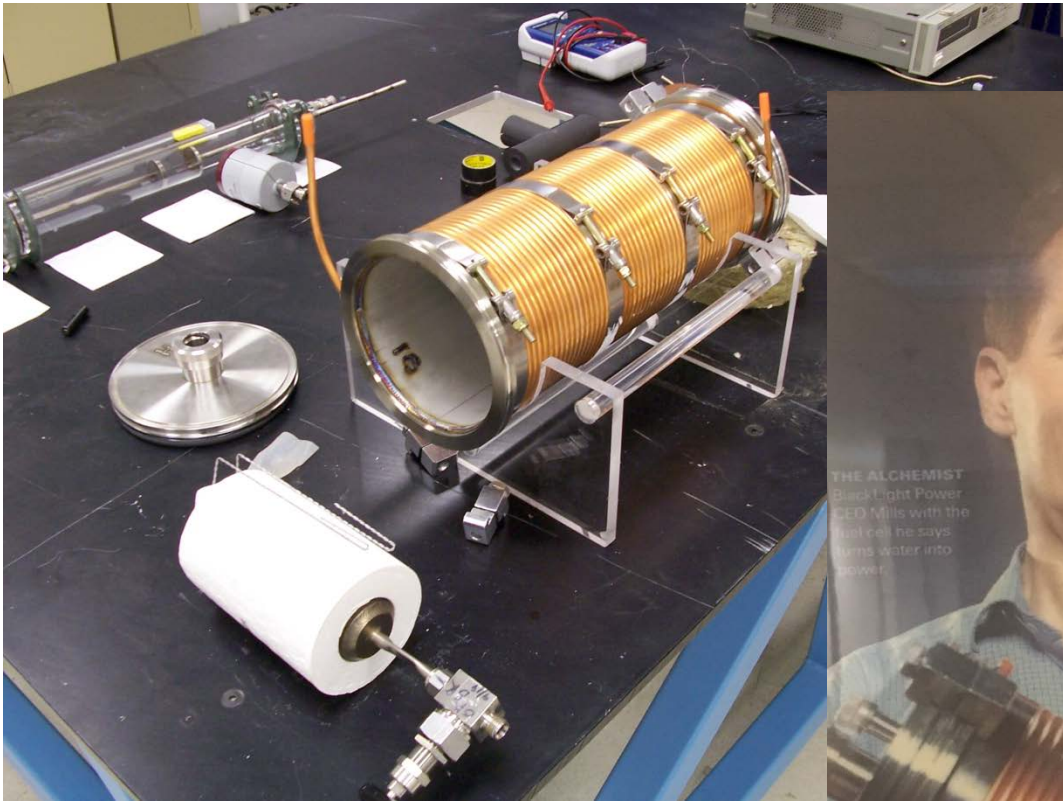
.....some more invention

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# ....and more invention



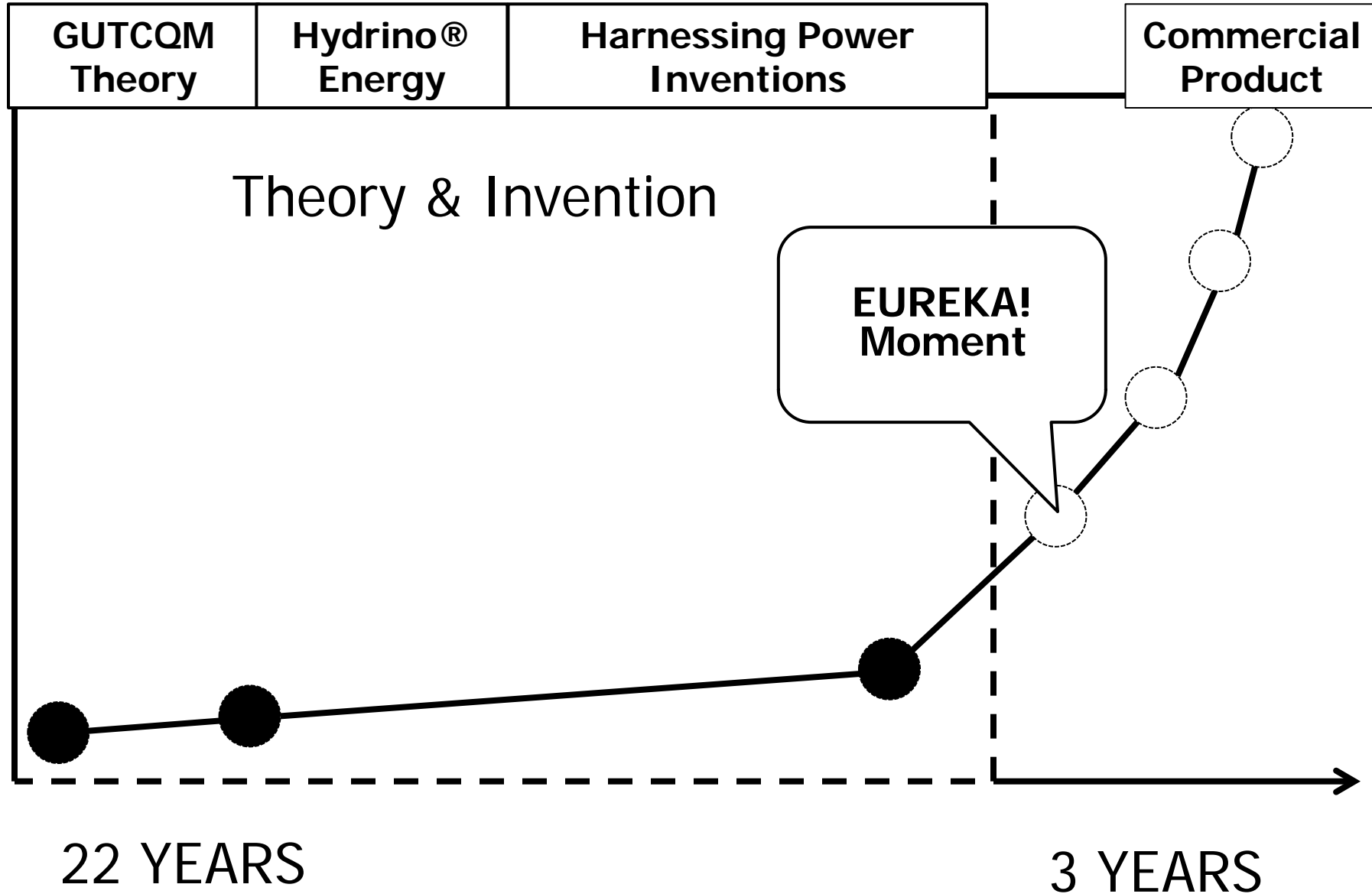
.....and still more invention

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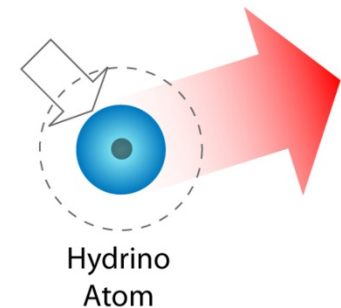
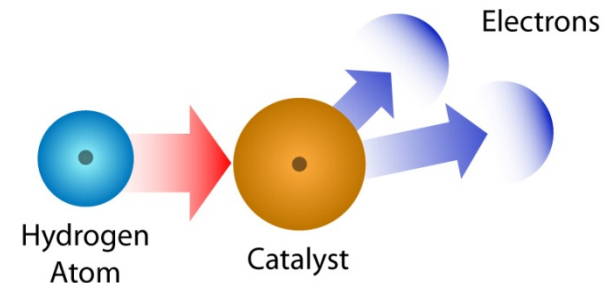


Fall 2013



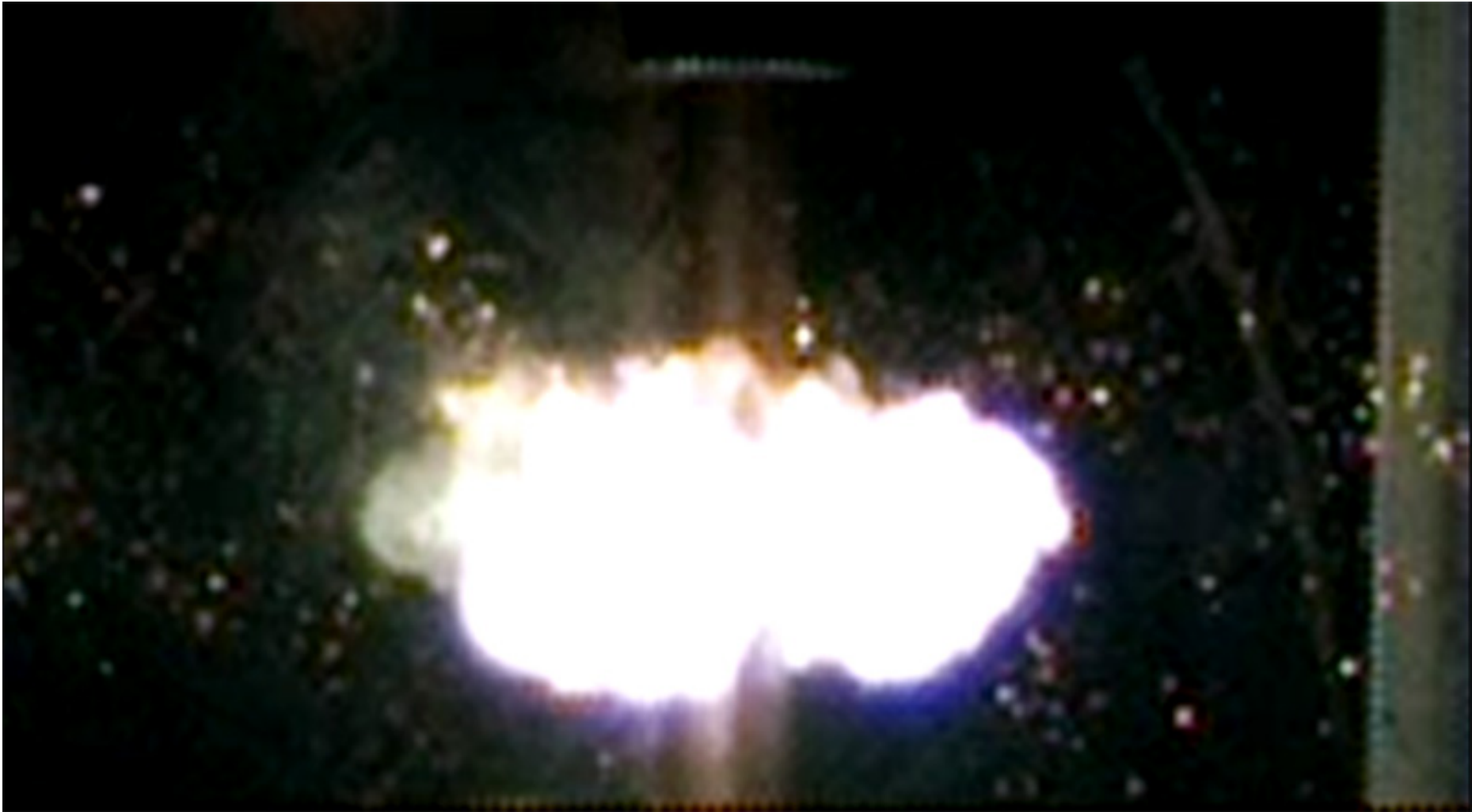
# EUREKA! moment – The 3<sup>rd</sup> step

1. Atomic hydrogen reacts with an energy acceptor called a catalyst wherein energy is transferred from atomic hydrogen to the catalyst which forms an ion due to accepting the energy
2. Then, the negative electron drops to a lower shell closer to the positive proton to form a smaller hydrogen atom called a “hydrino” releasing energy that ultimately is in the form of heat
3. *The catalyst ion regains its lost electrons to reform the catalyst for another cycle with the release of the initial energy accepted from hydrogen. With the imposition of an arc current condition, the limiting space charge of the ionized electrons is eliminated and the rate becomes massively high.*



# Explosive power

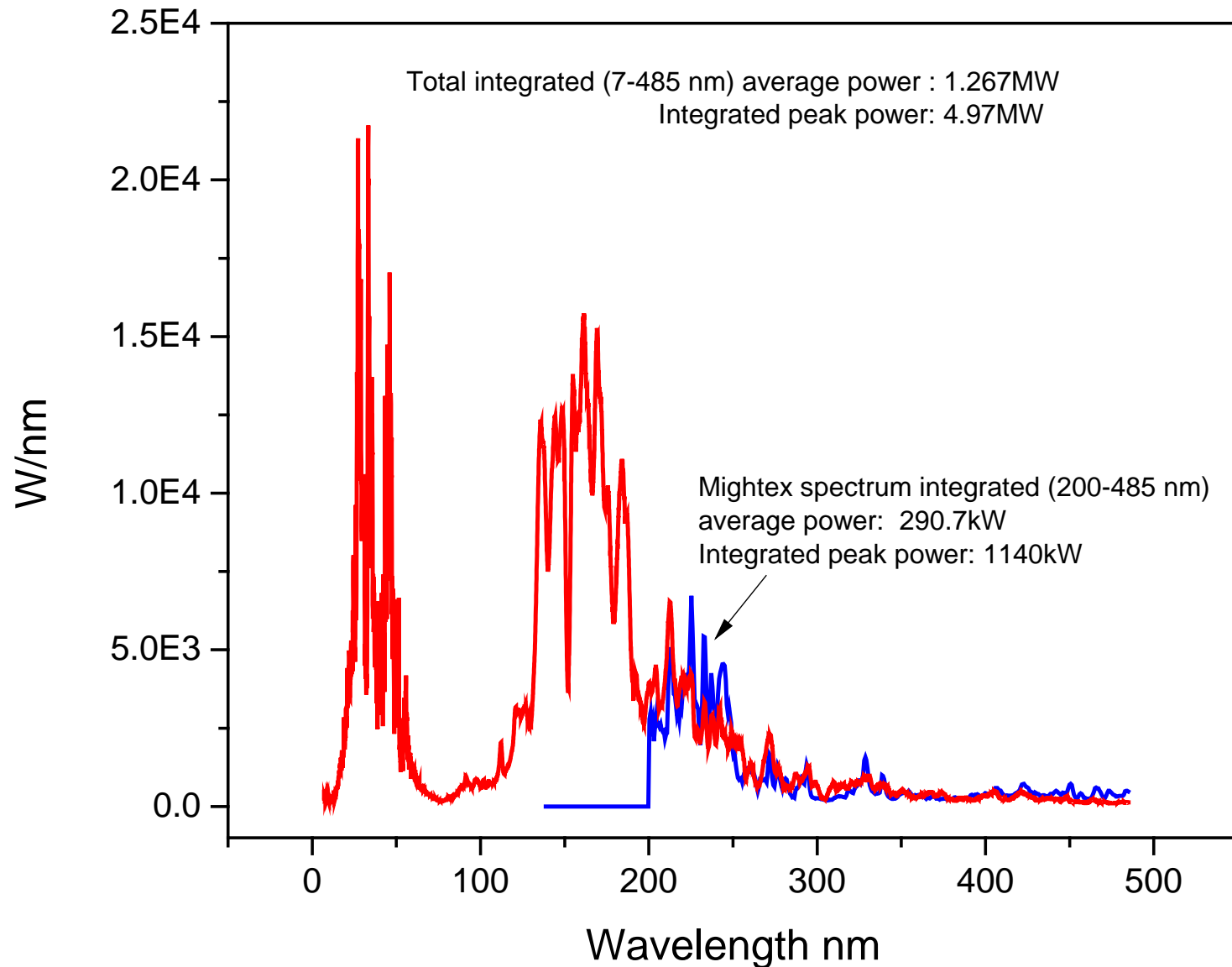
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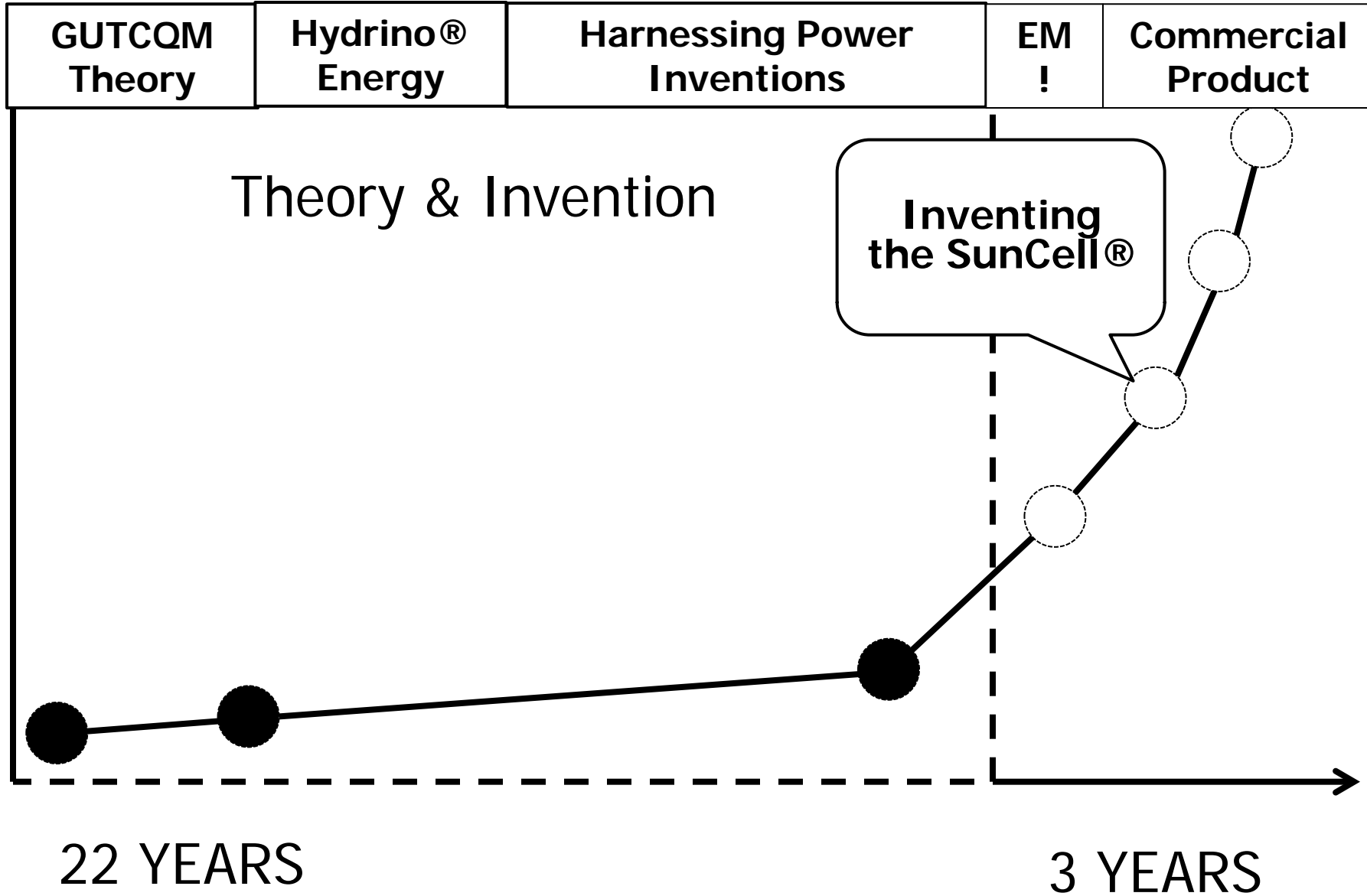
Click the above image to view on YouTube:  
<https://www.youtube.com/watch?v=SDhRvnYZbng>

# Optical Power Measurement Using NIST Standard

## Over the UV Region: Spectral Emission in the High Energy Region Only



2014-2016





# Slurry pumps, Pneumatic injectors & Cyclones

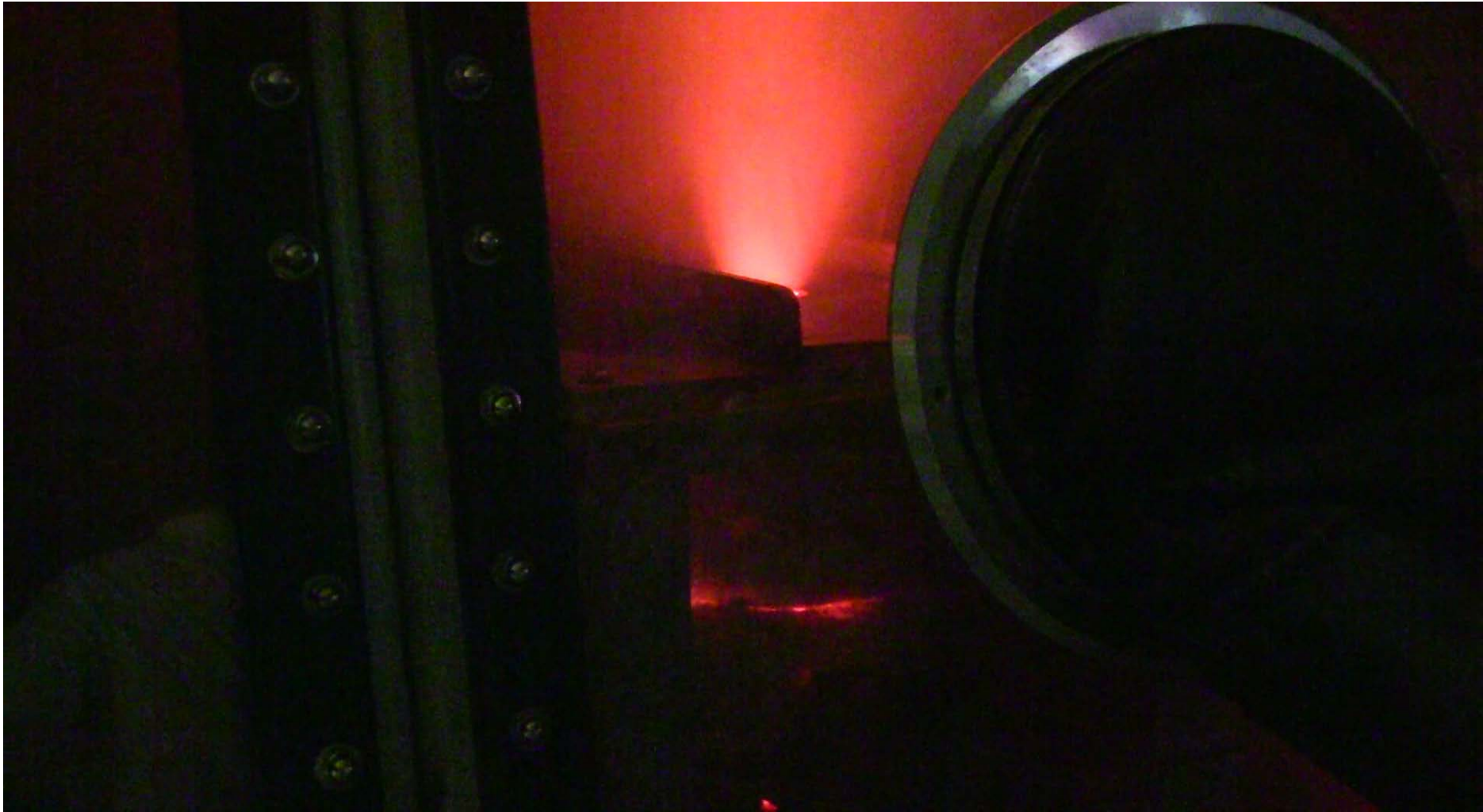


# Rollers, Shot Systems & SunCell® Prototypes



# A million watts in a teacup

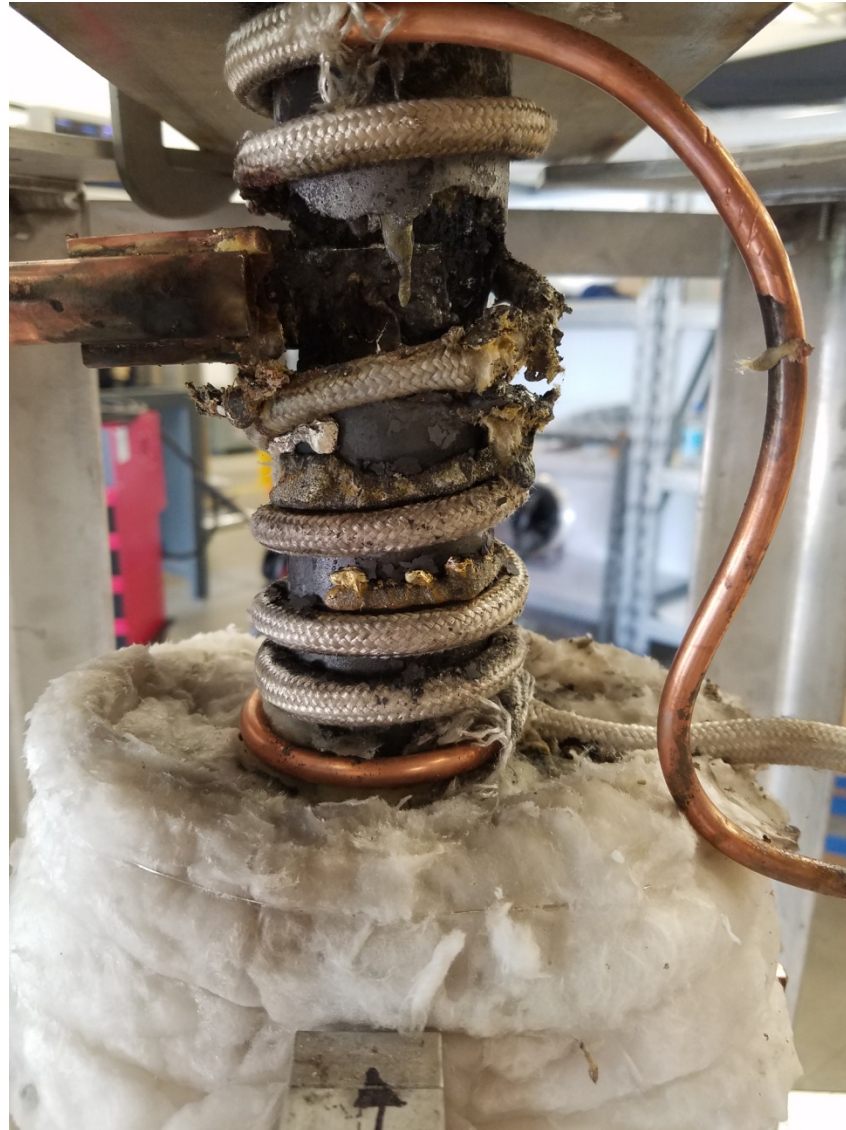
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Click the above image to view on YouTube:  
<https://www.youtube.com/watch?v=1G07iVwthno>

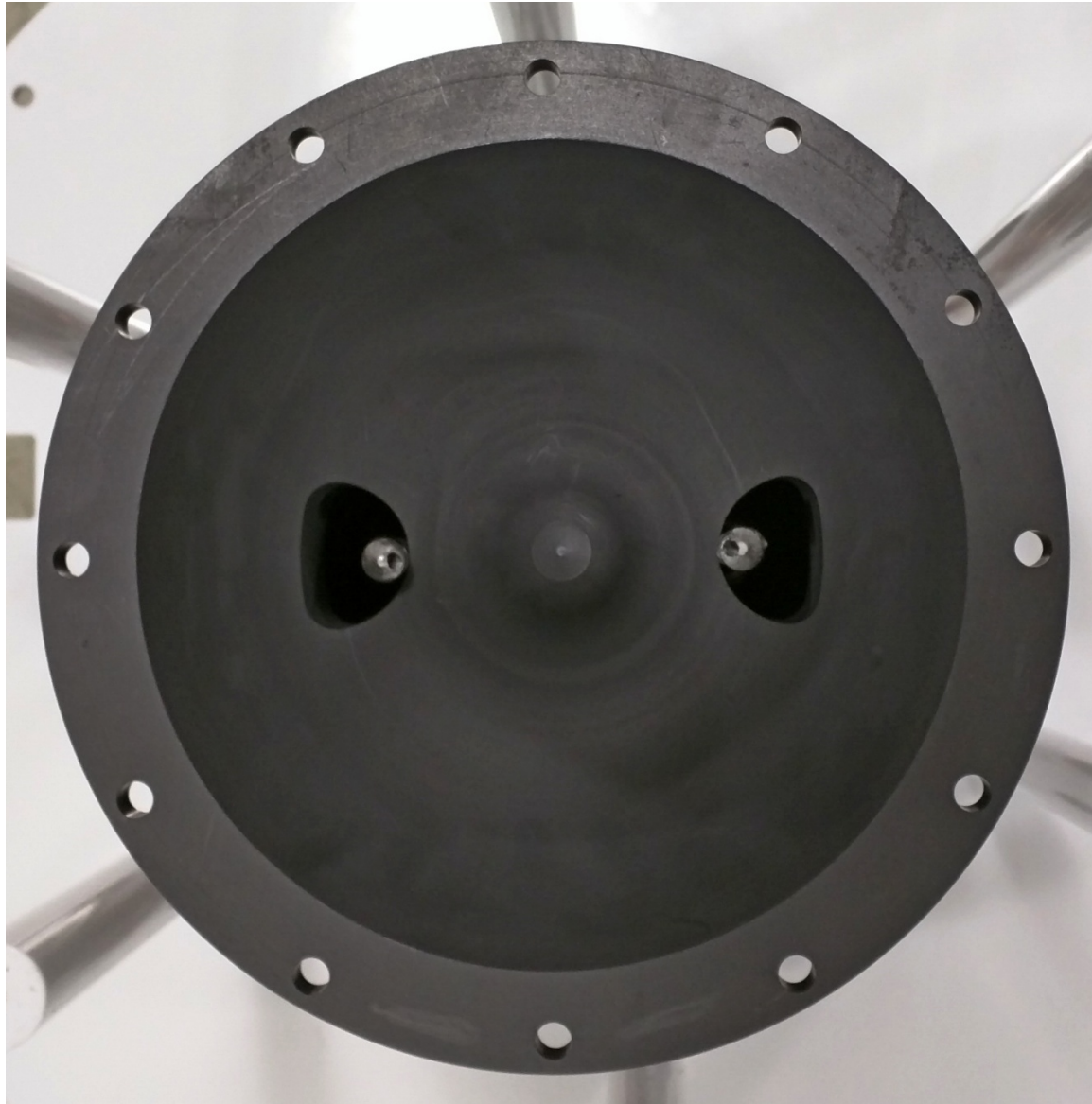


# Vaporizing tungsten electrodes



# Key invention – Liquid electrode injectors

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# The SunCell® Commercial Design

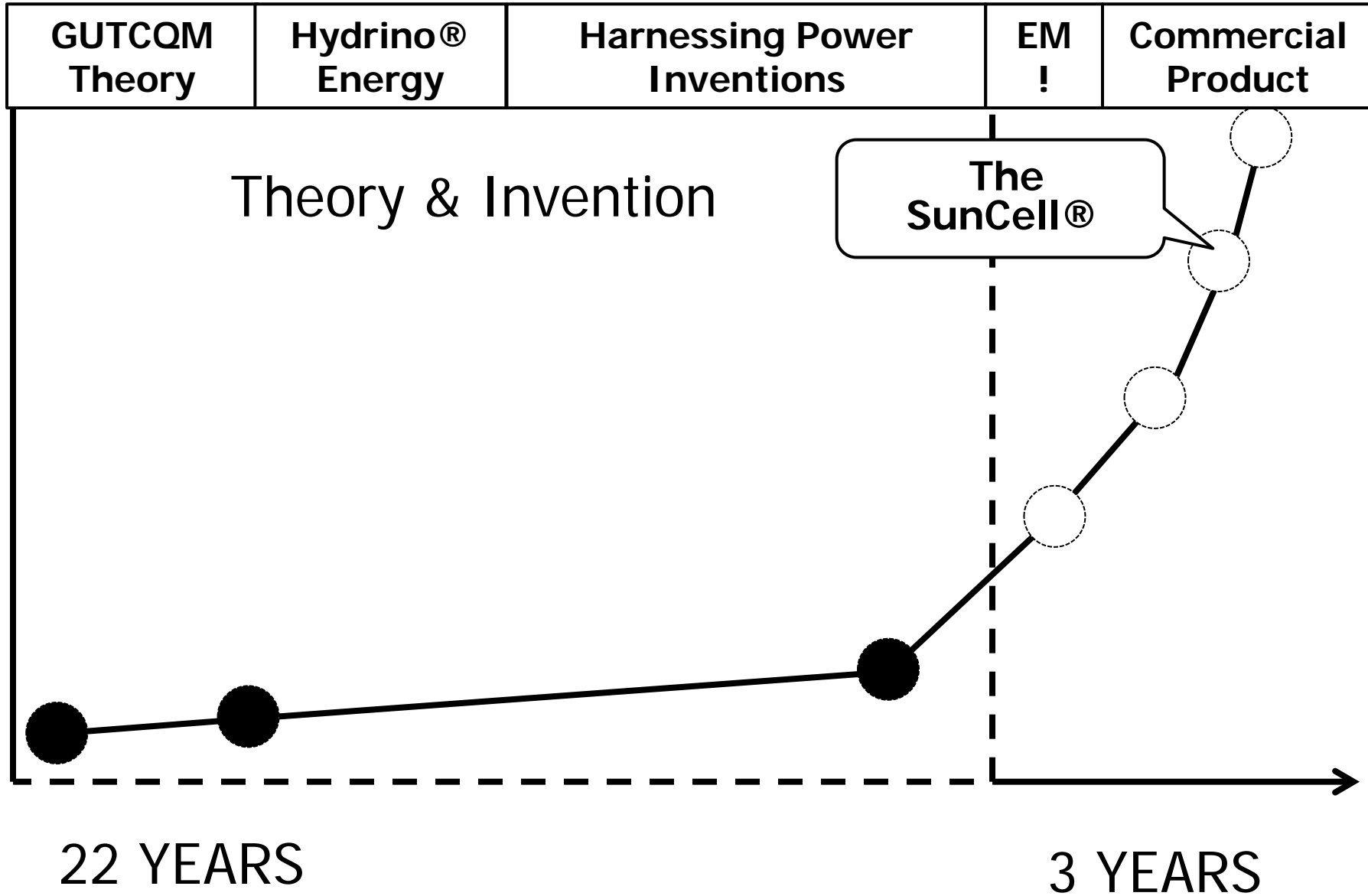
*Unveiled on October 25<sup>th</sup> at the Brilliant Light Power's Industry Day*

*"This design fixes all of the outstanding engineering challenges required to manufacture the commercial product"*

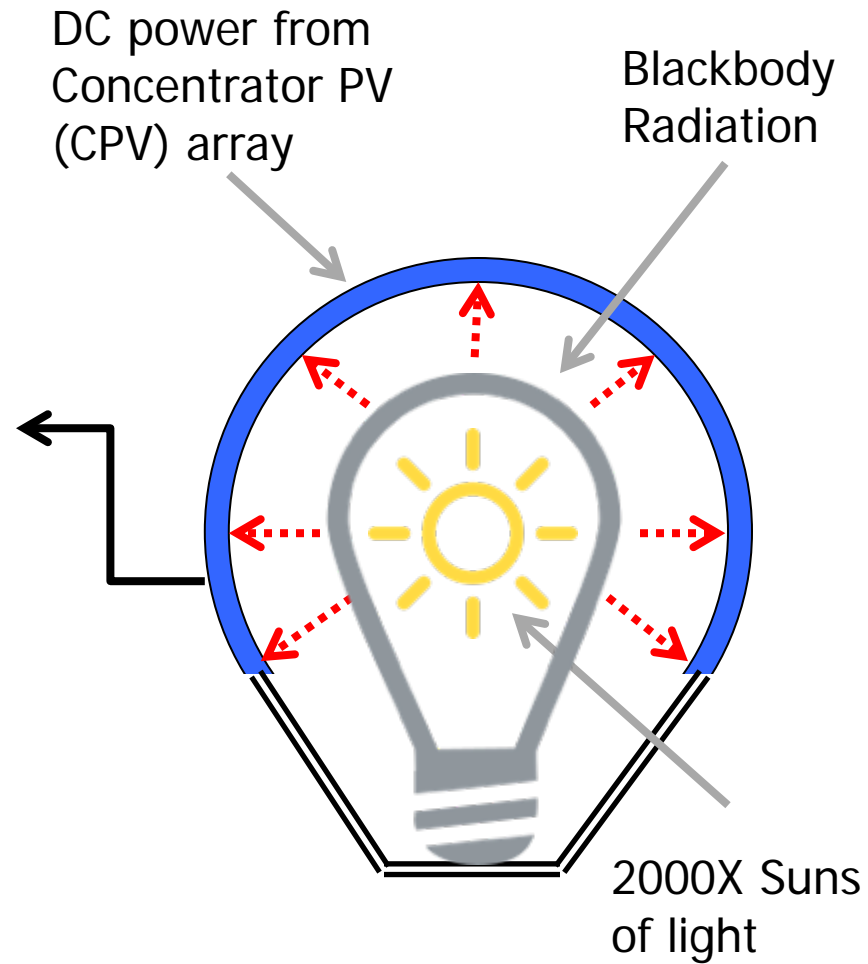
*John DeCarlo, CTO of Columbia Tech, BrLP's engineering partner*

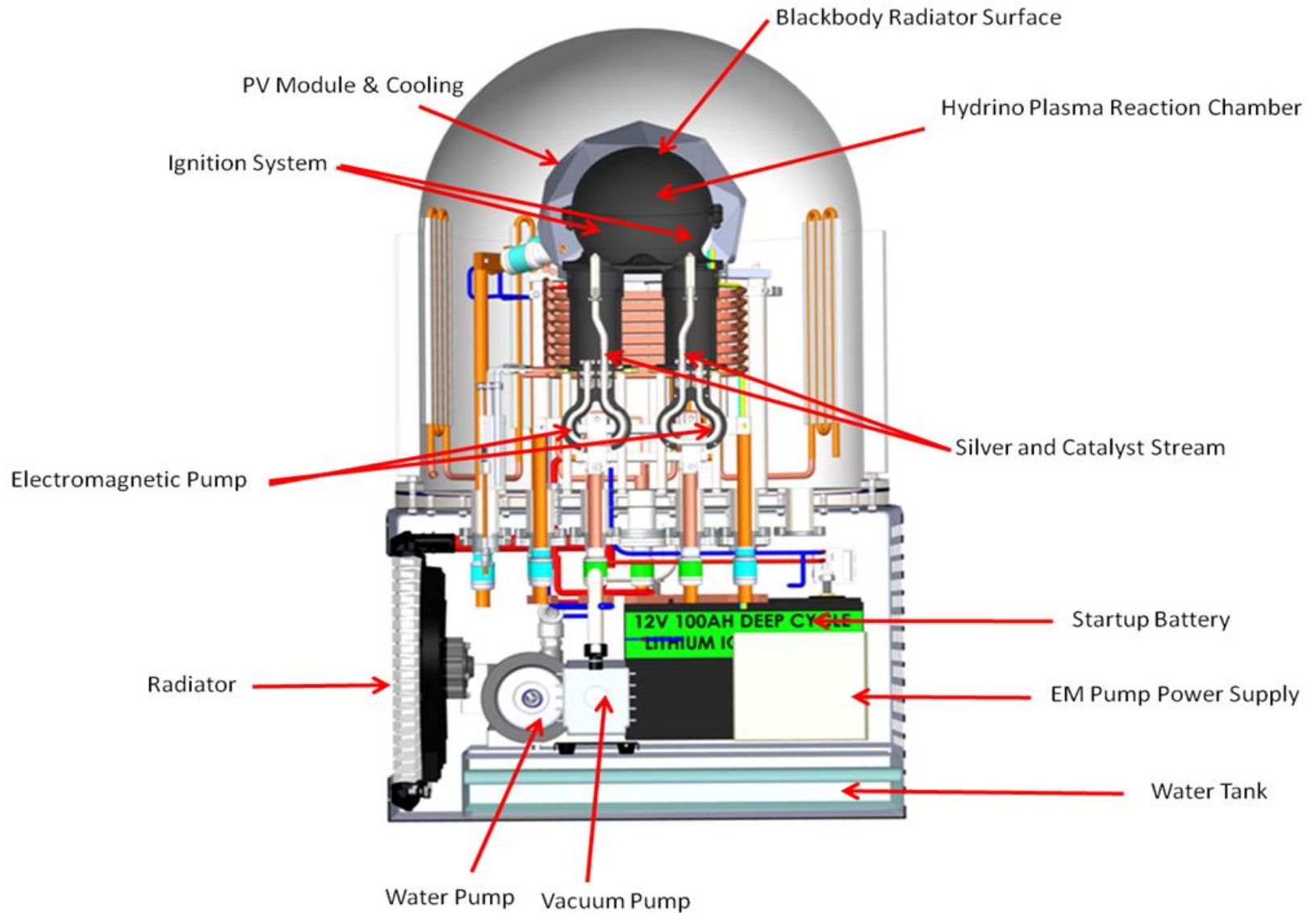


2014-2016

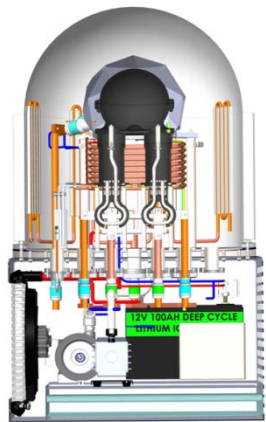


# How the SunCell® Works





# Spectral Emission in the High Energy Region Only

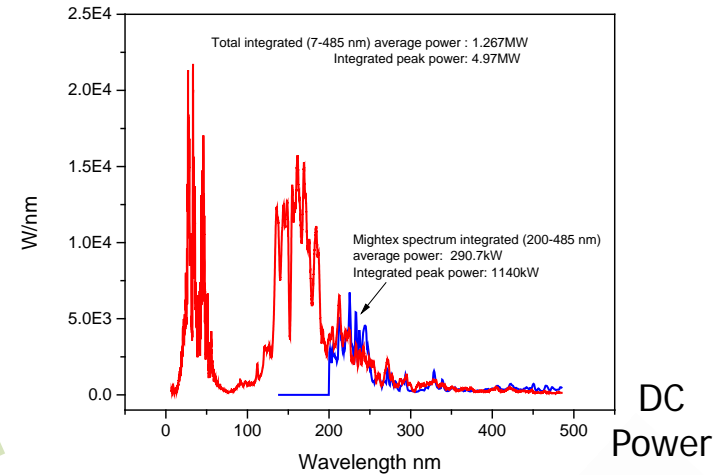


Plasma Ignition



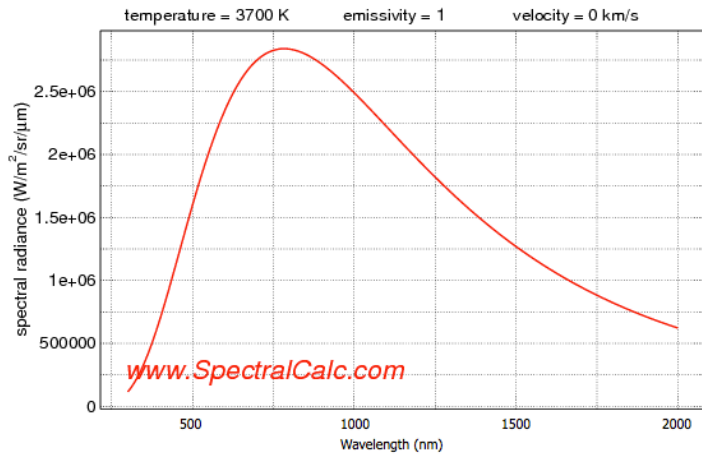
Measurement

Plasma Emission  
(Power Calibrated Spectrum)

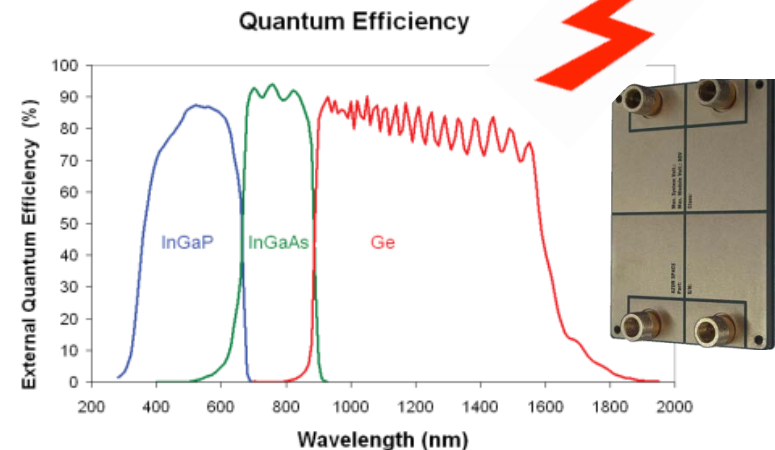


Absorb to BB

Re-emit to CPV



SunCell Blackbody Radiator



Concentrator PV  
Power Conversion Spectrum



# Standard or Concentrated PV Uses the Same Massive Footprint



Due to the same low incident light concentration from the Sun, the typical scale is 100 MW on 250 acres (about 1 million m<sup>2</sup>)

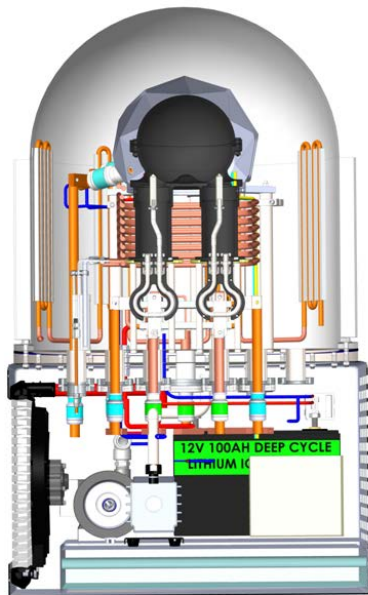


# SunCell® vs Solar PV

An autonomous SunCell operating at up to 10,000 Suns requires 75,000 times less area and complexity than a matched conventional solar power station.

SunCell

11 MW



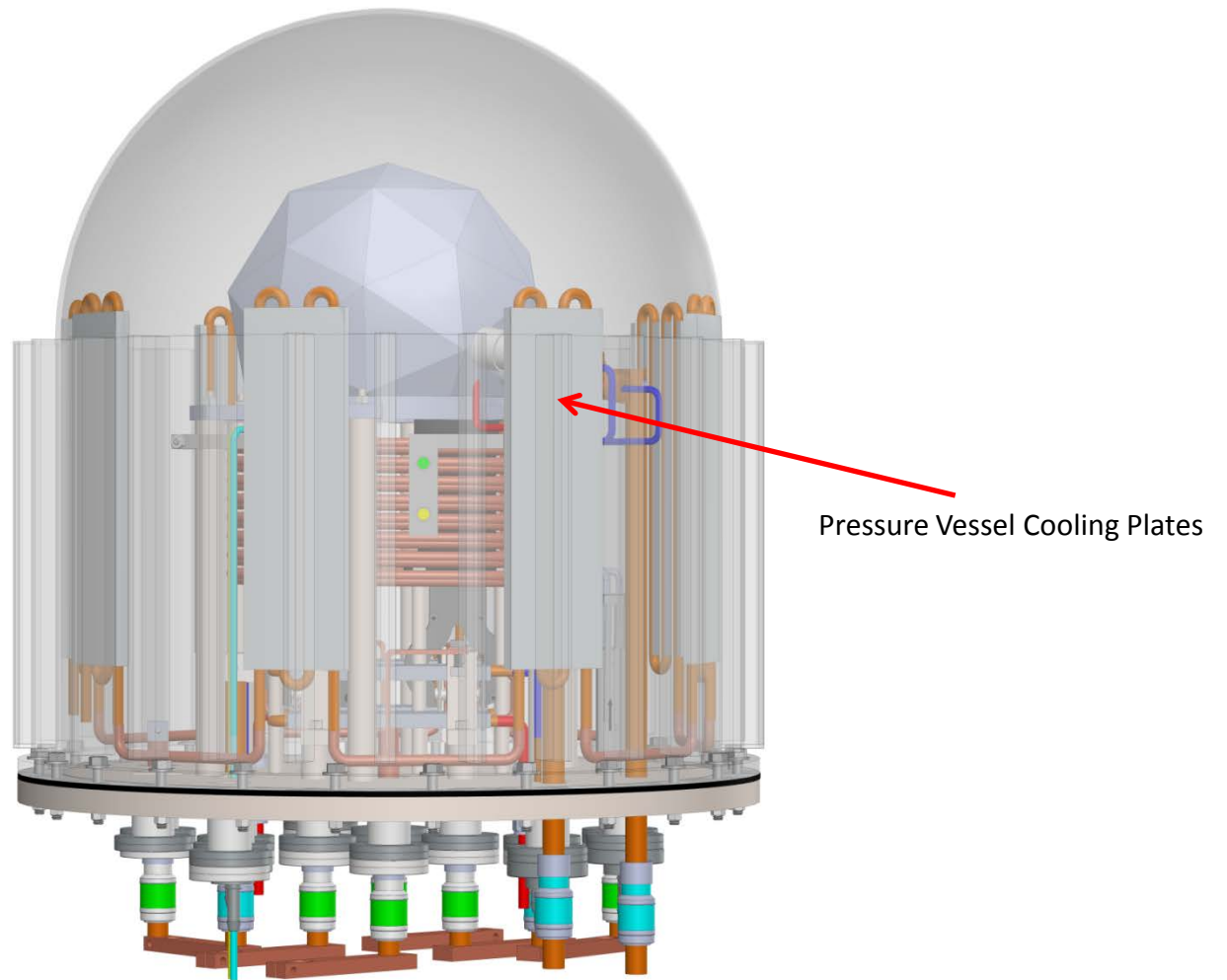
1 m<sup>2</sup>

Planta Solar 10, Sevilla, Spain

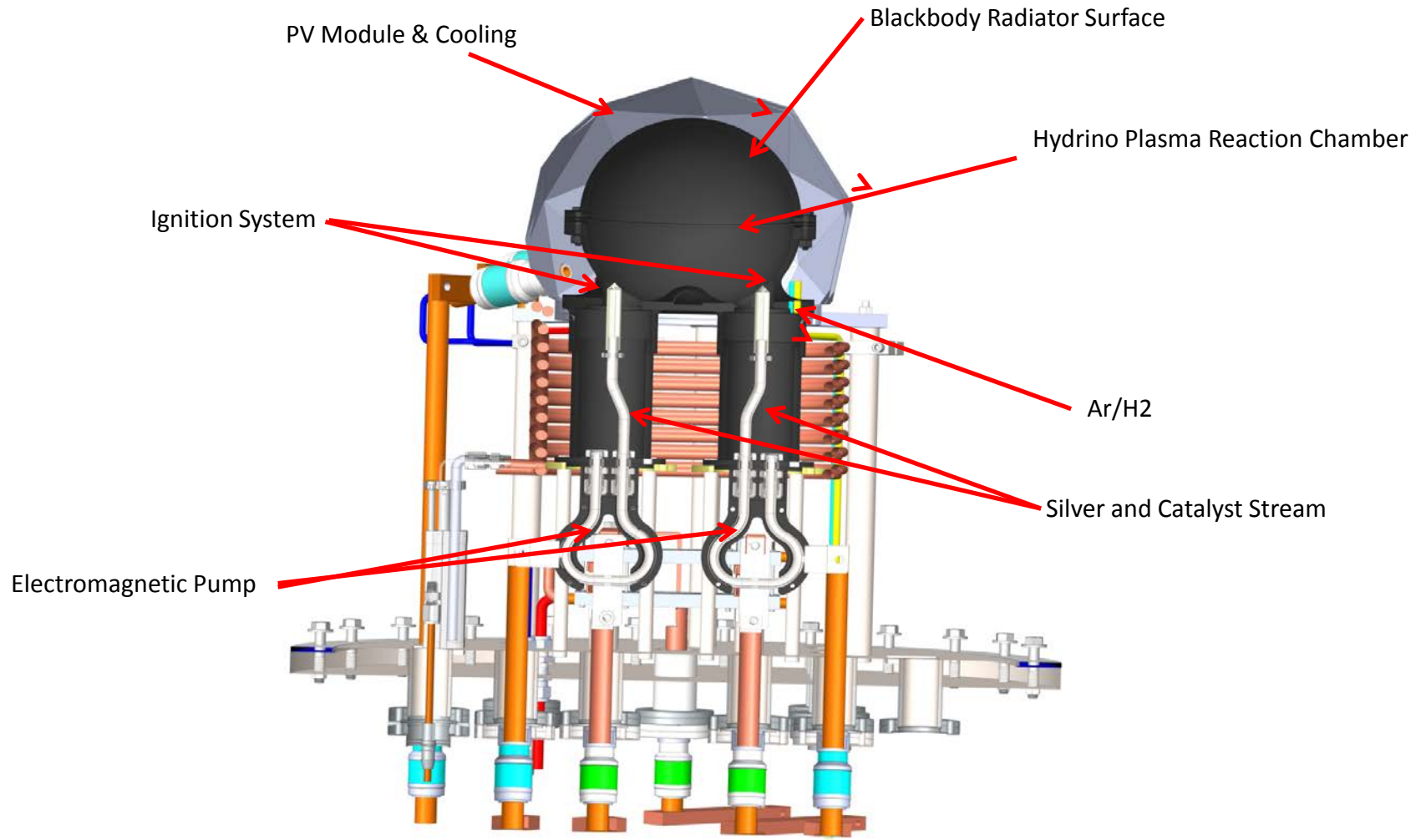
11 MW

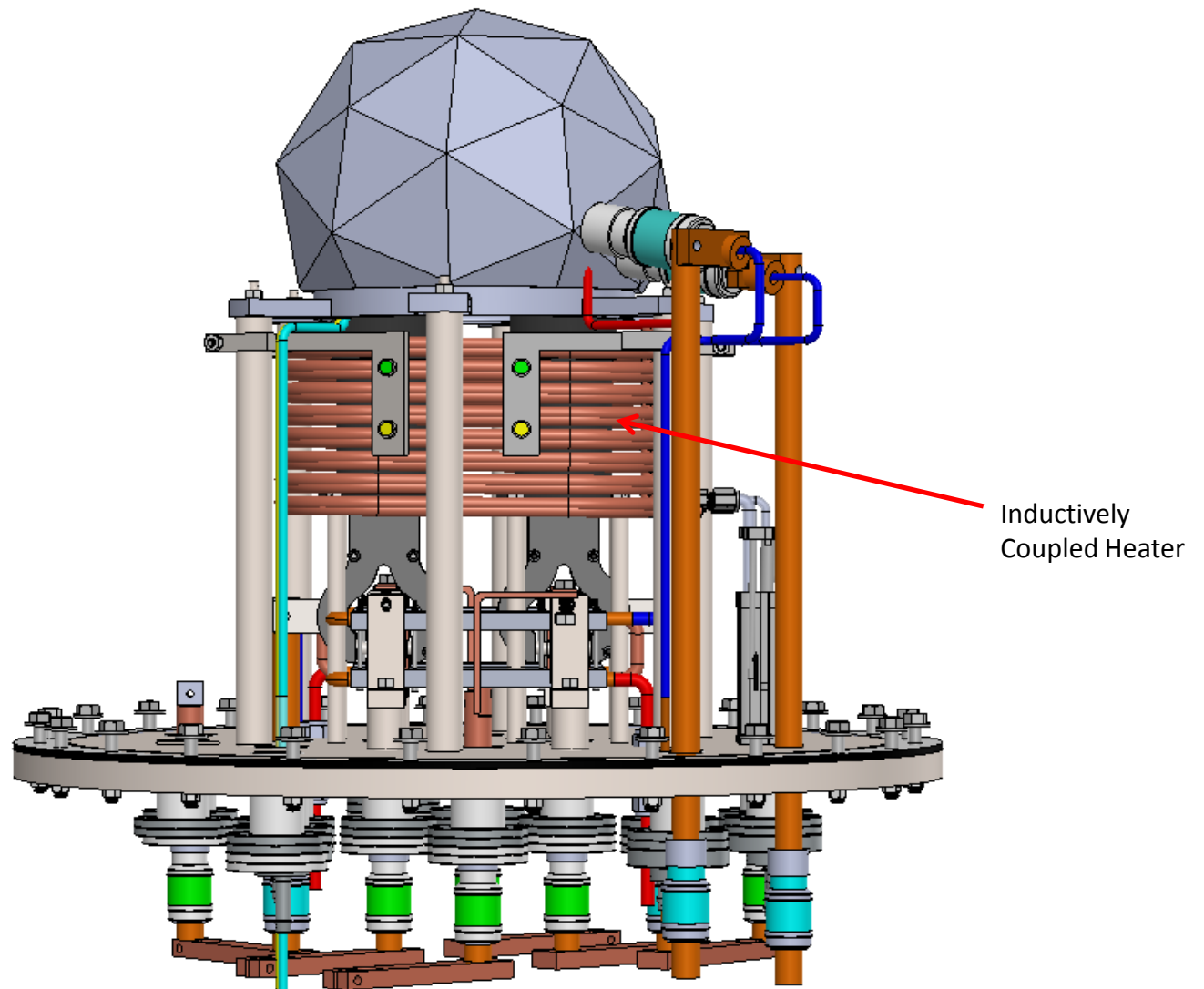


75,000 m<sup>2</sup> (nrel.gov)

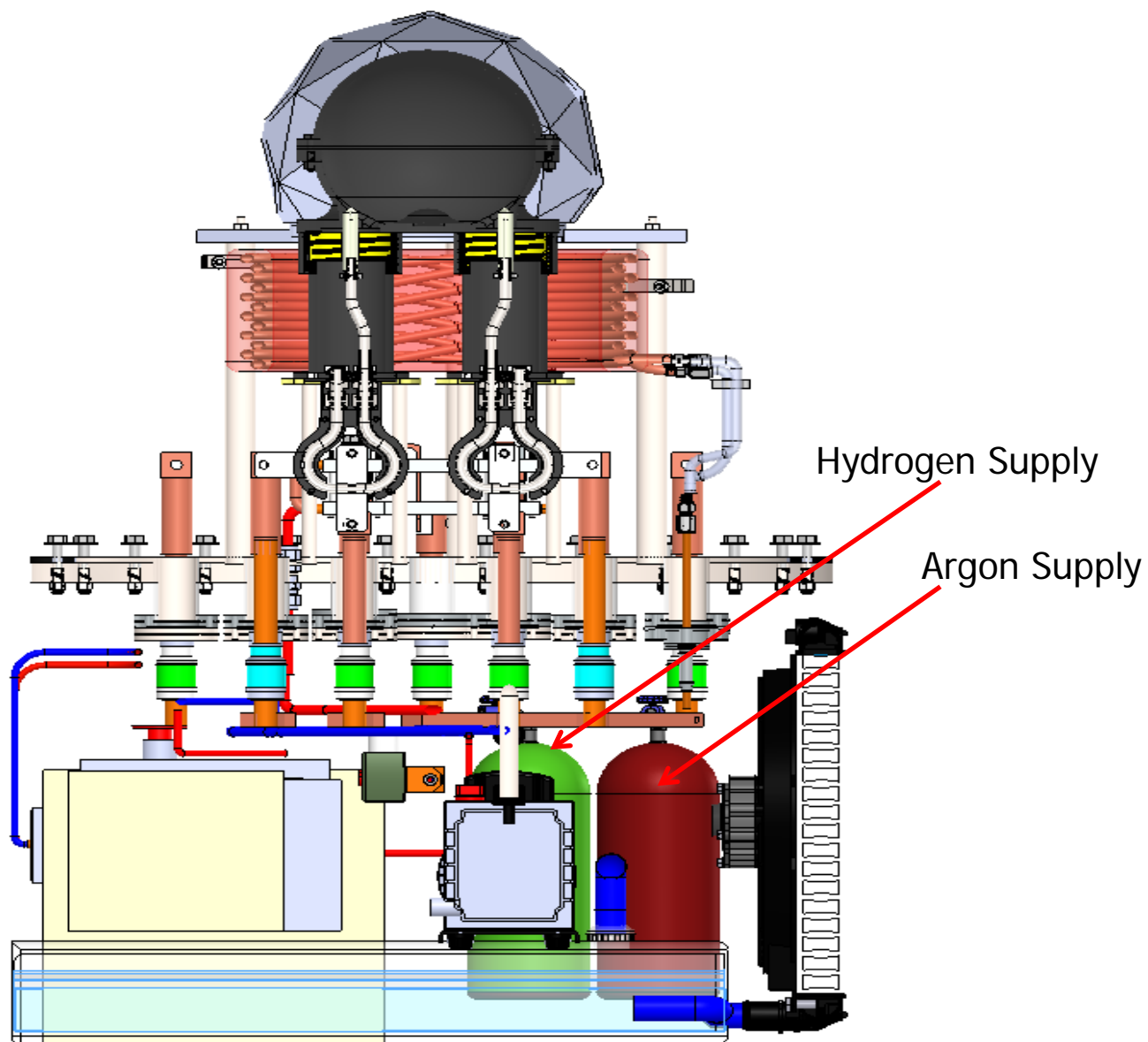


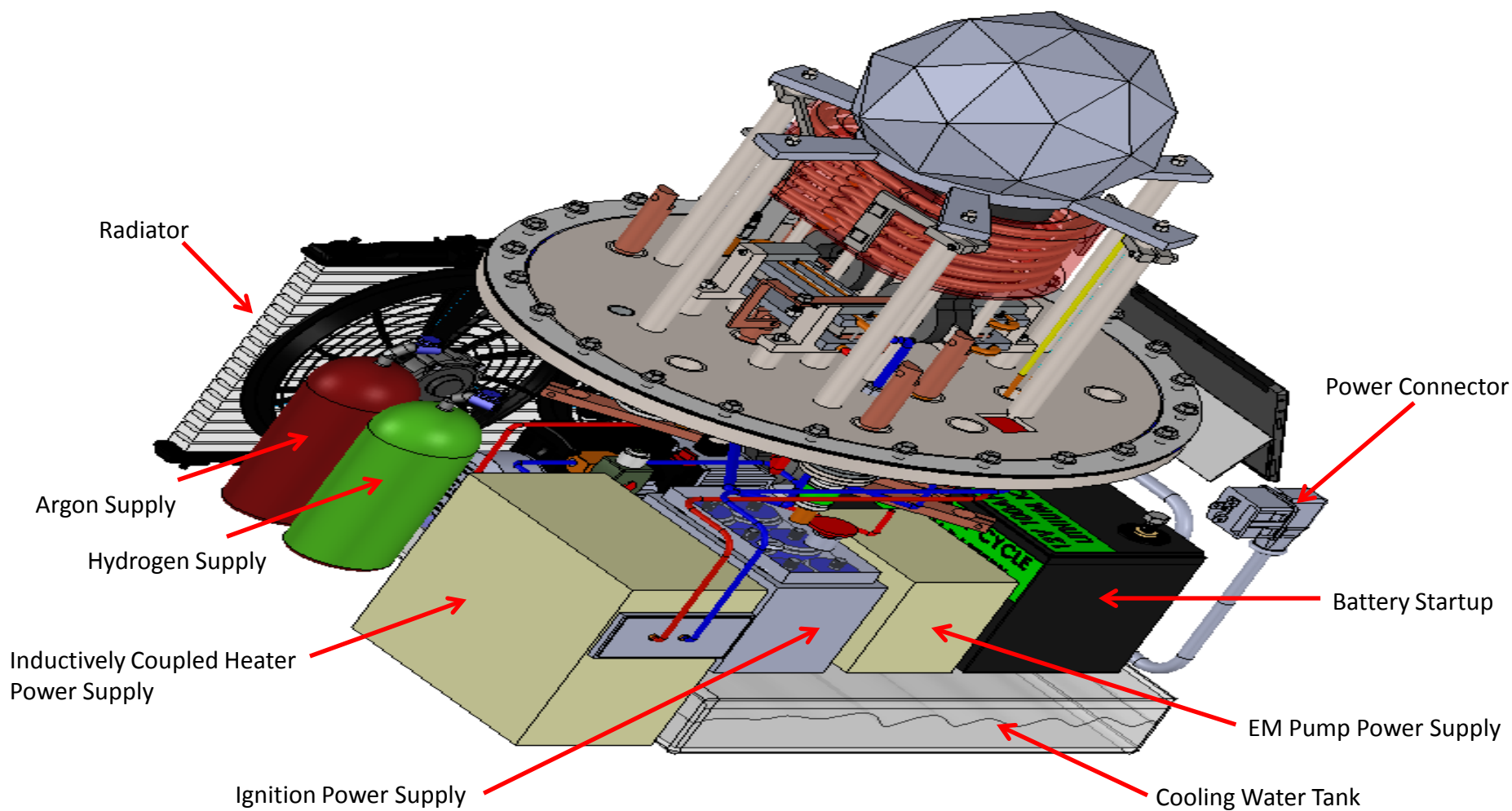












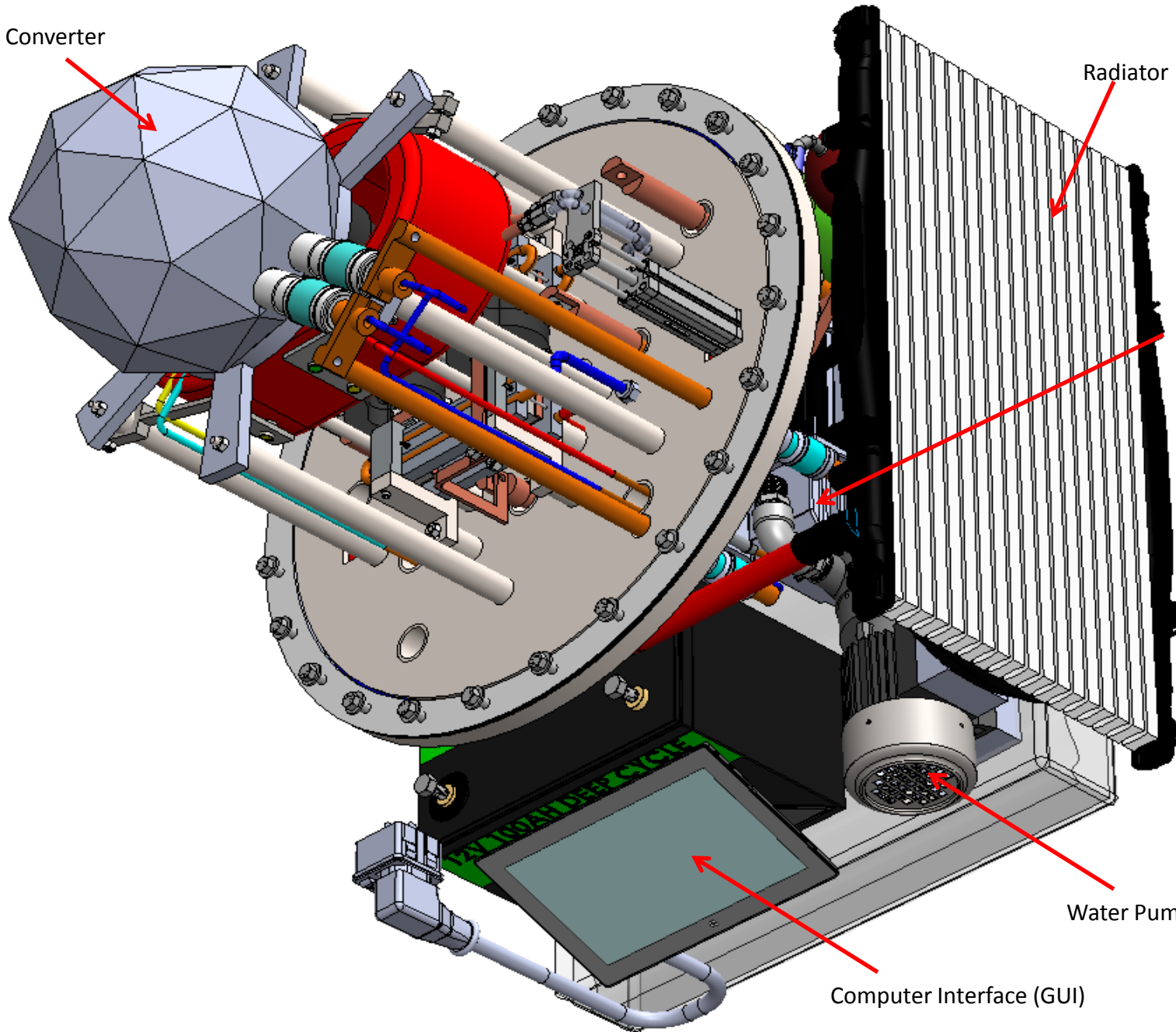
PV Converter

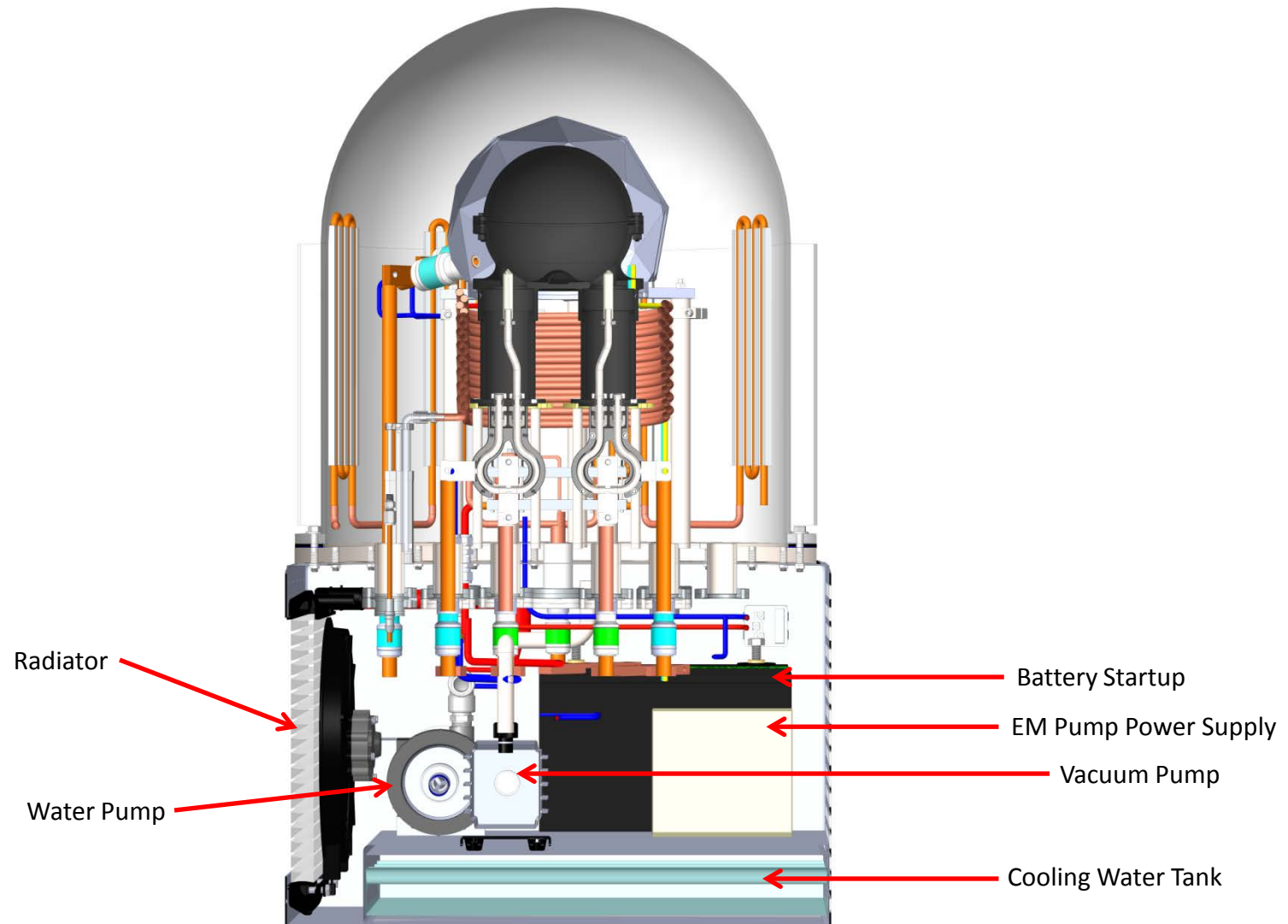
Radiator

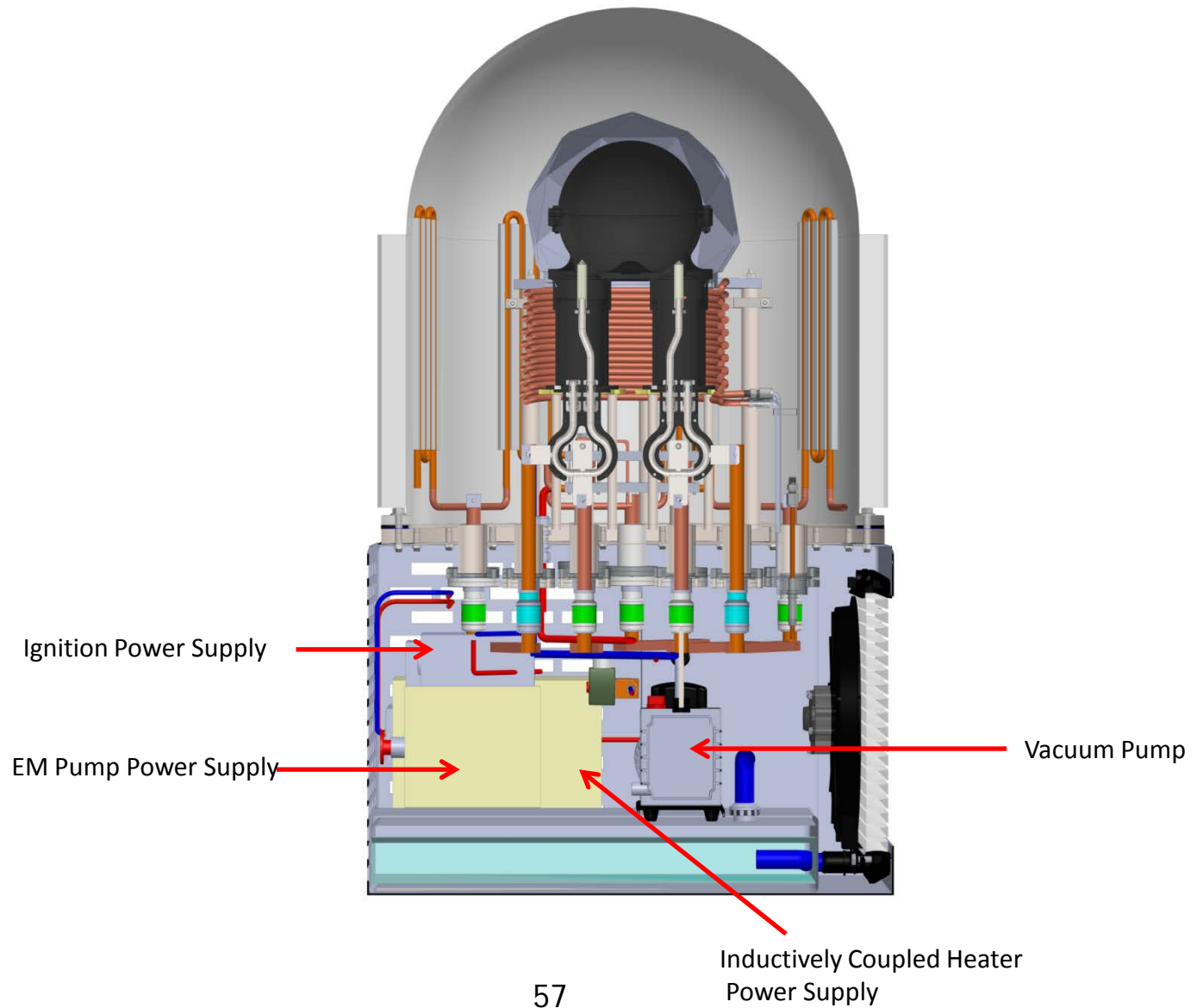
Vacuum Pump

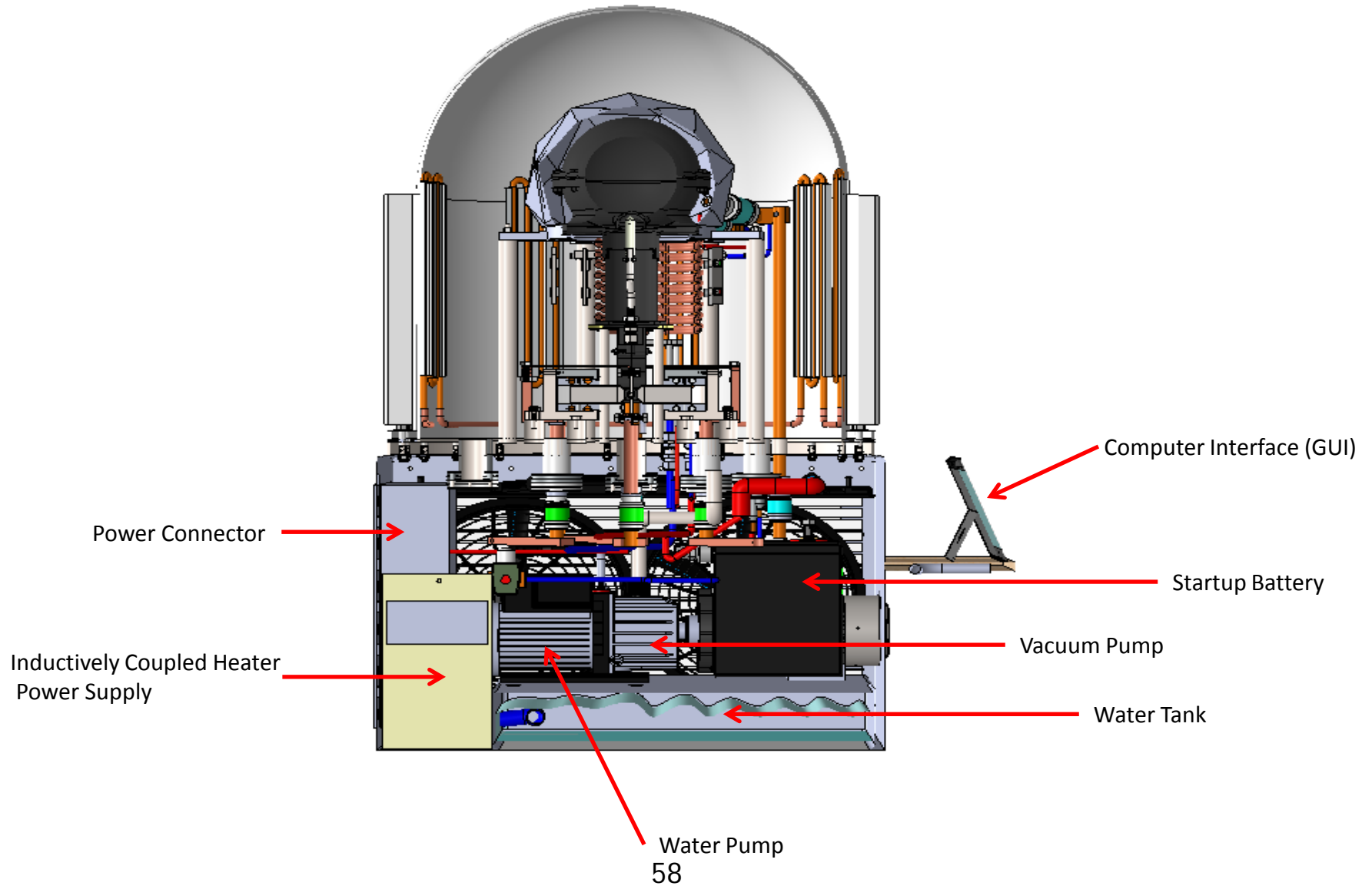
Water Pump

Computer Interface (GUI)

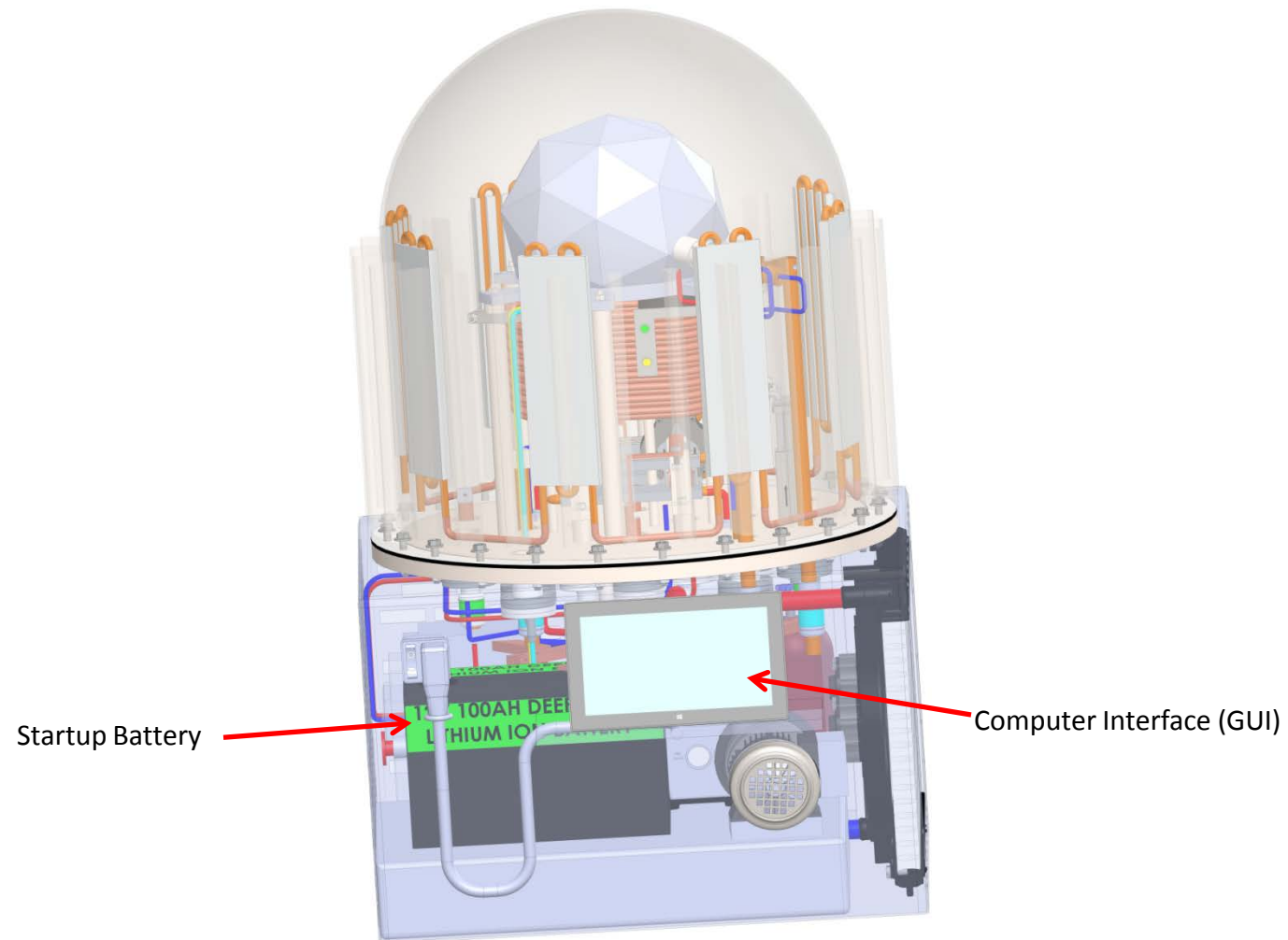


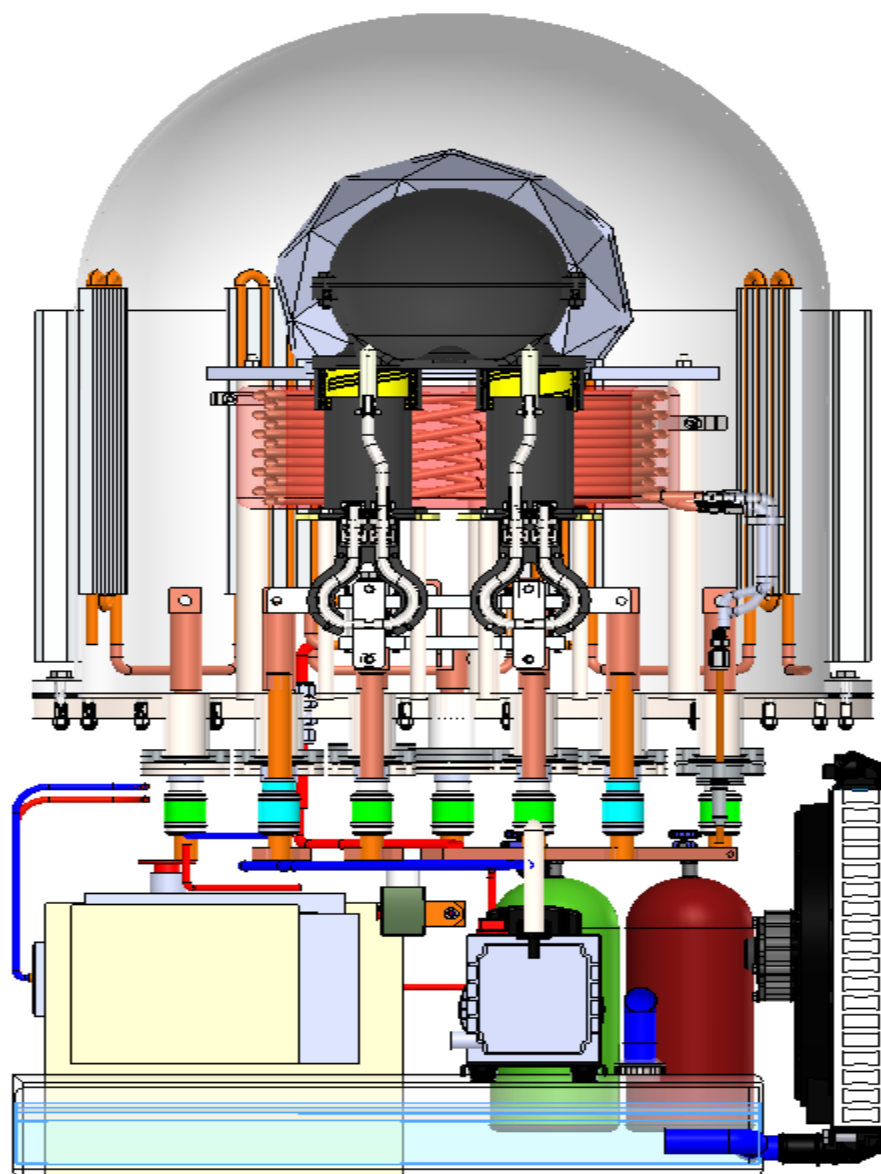


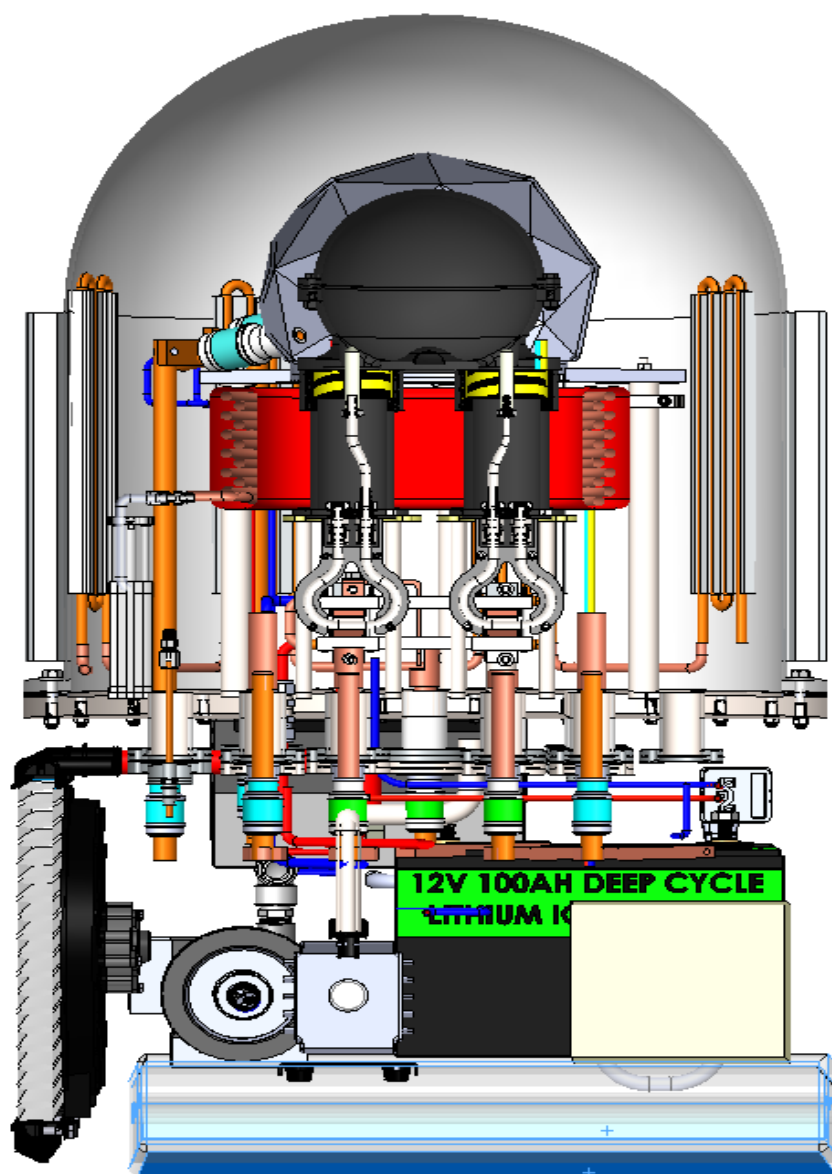


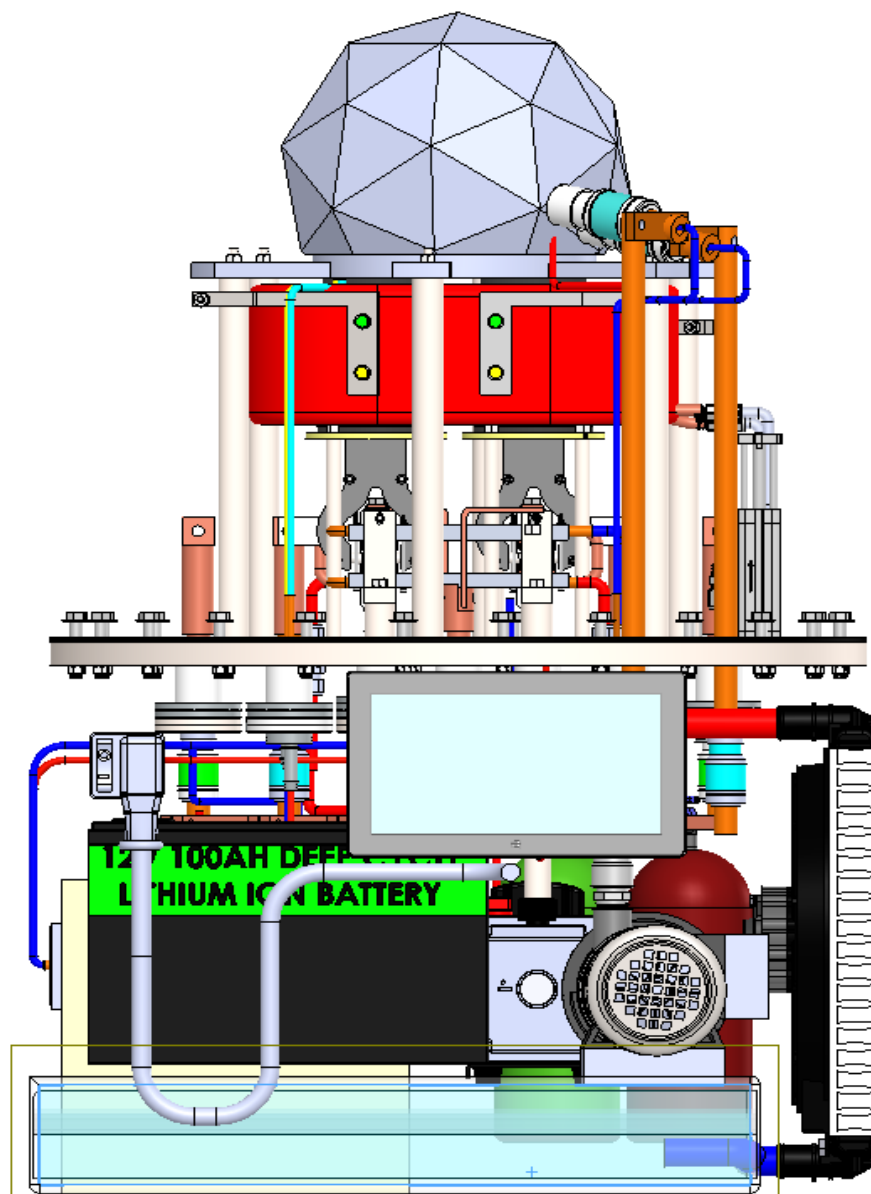


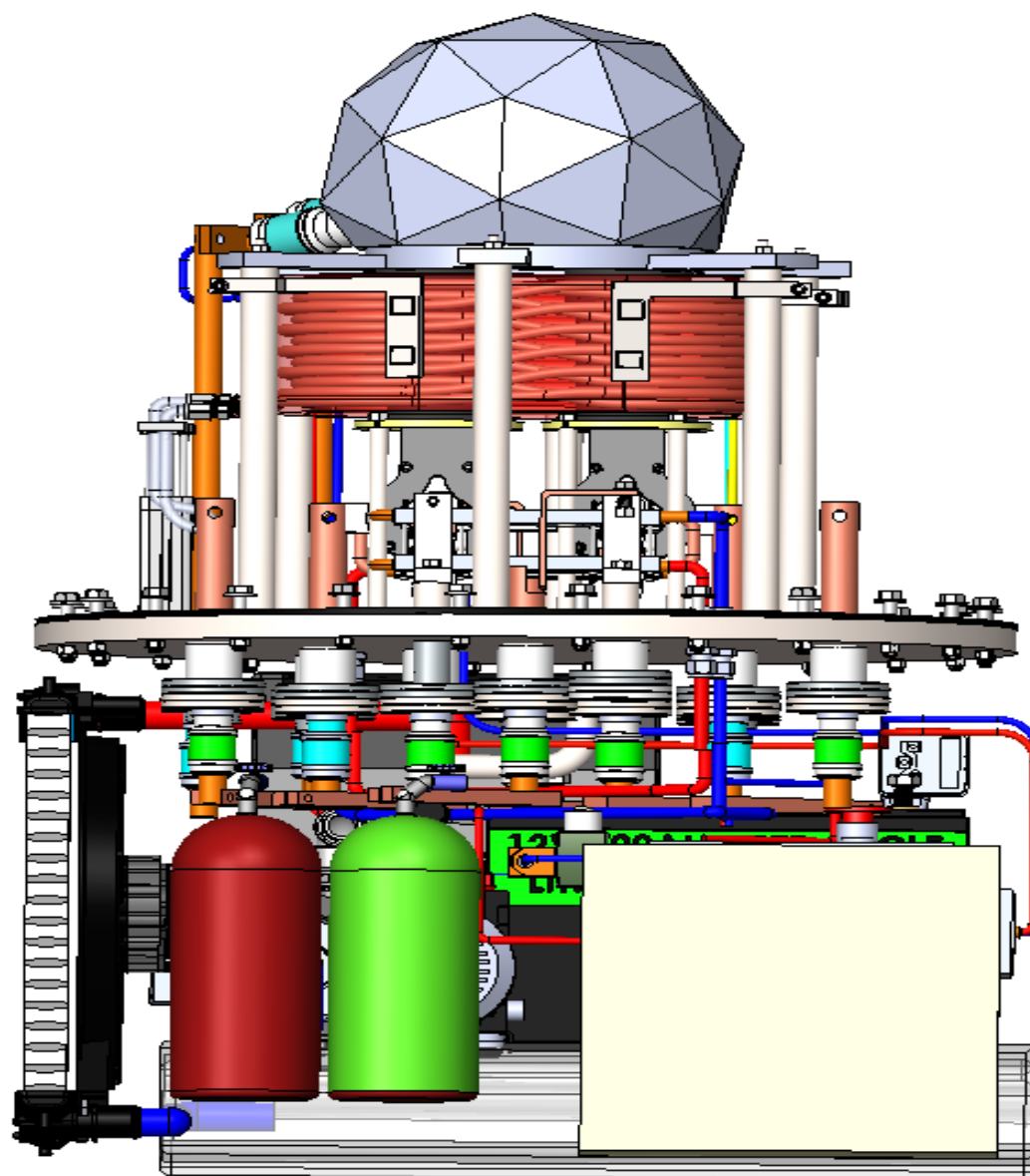


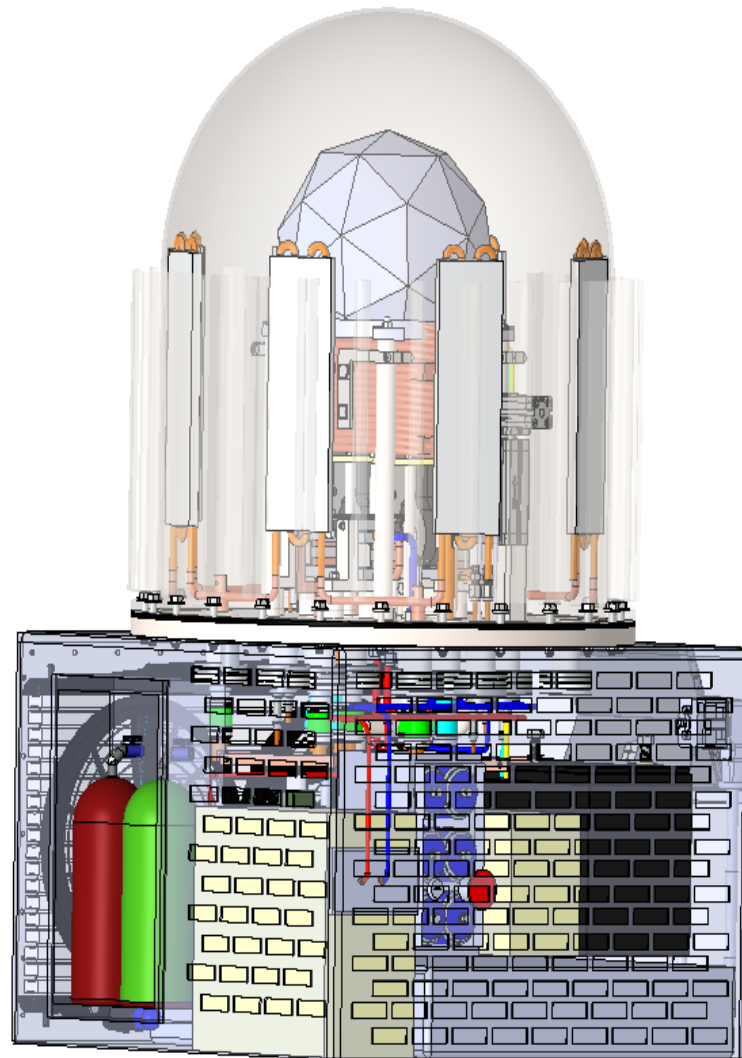




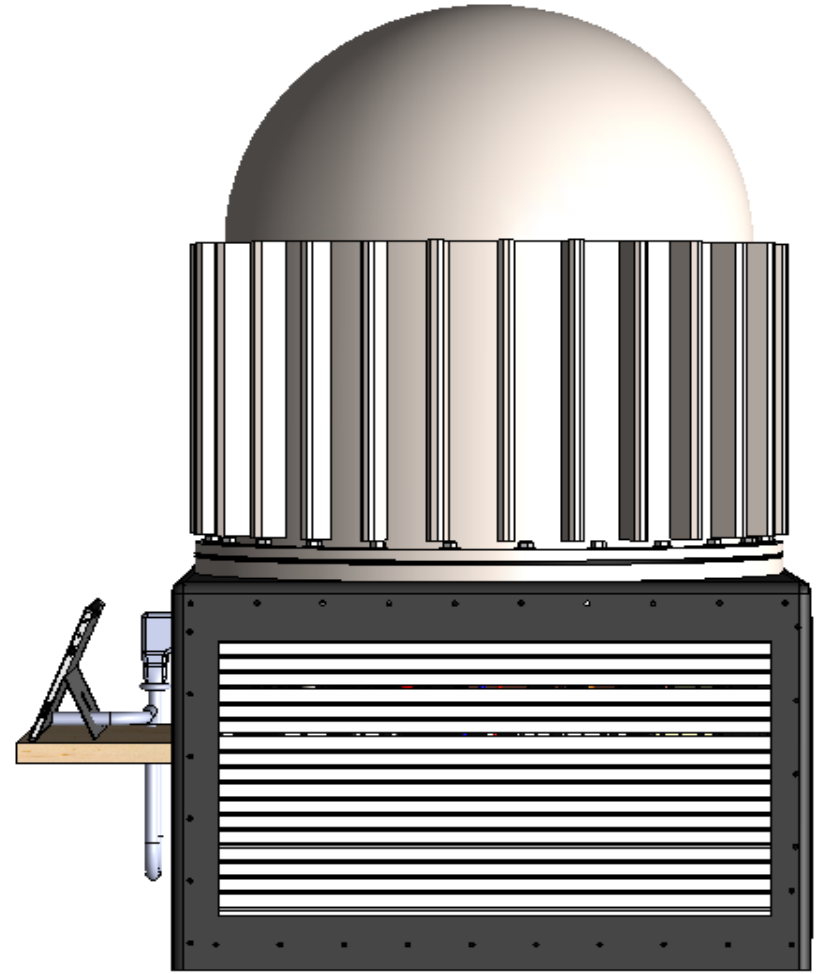
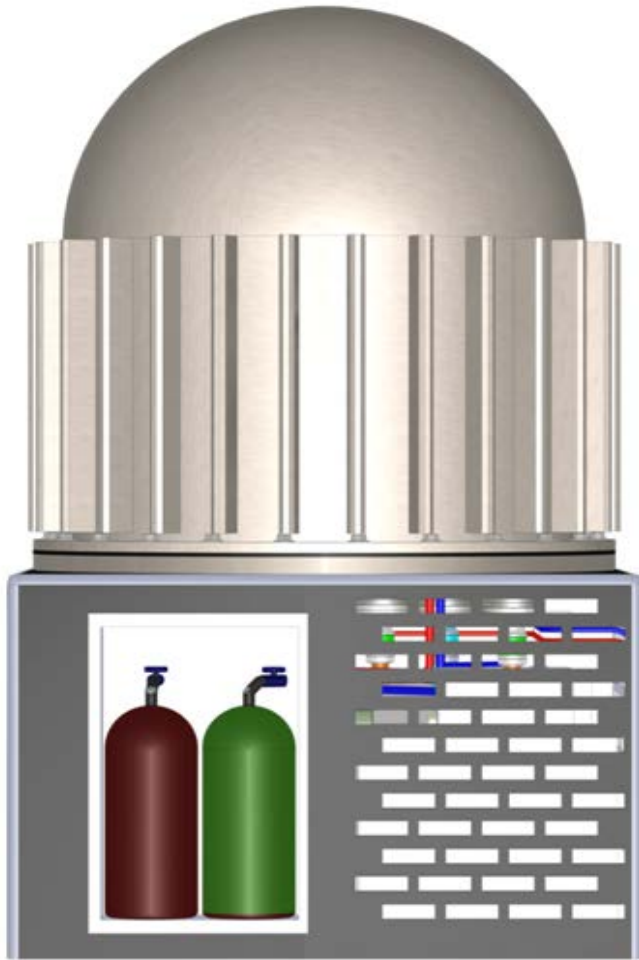


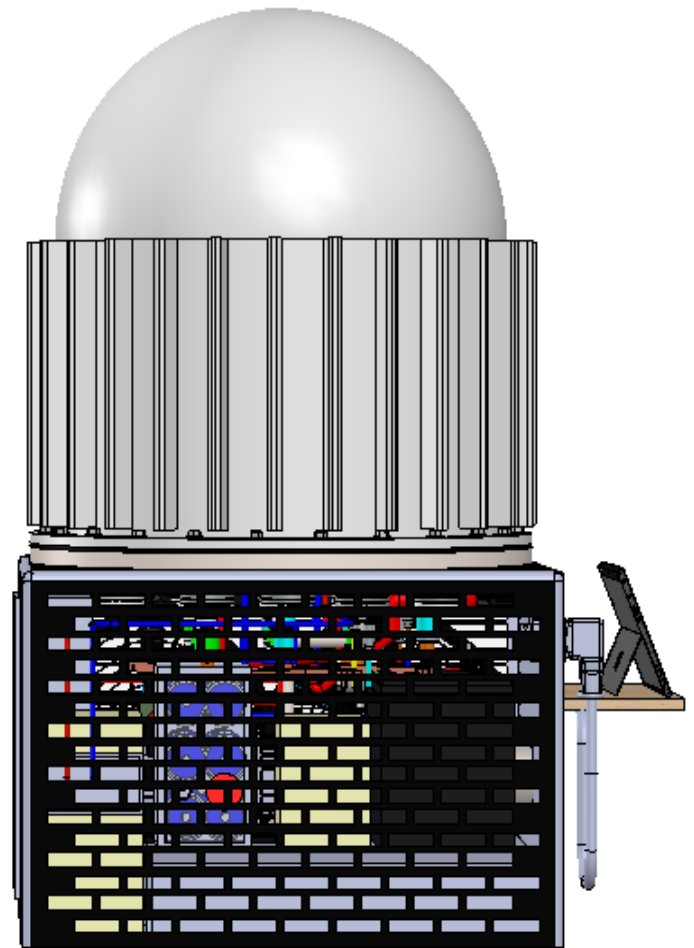










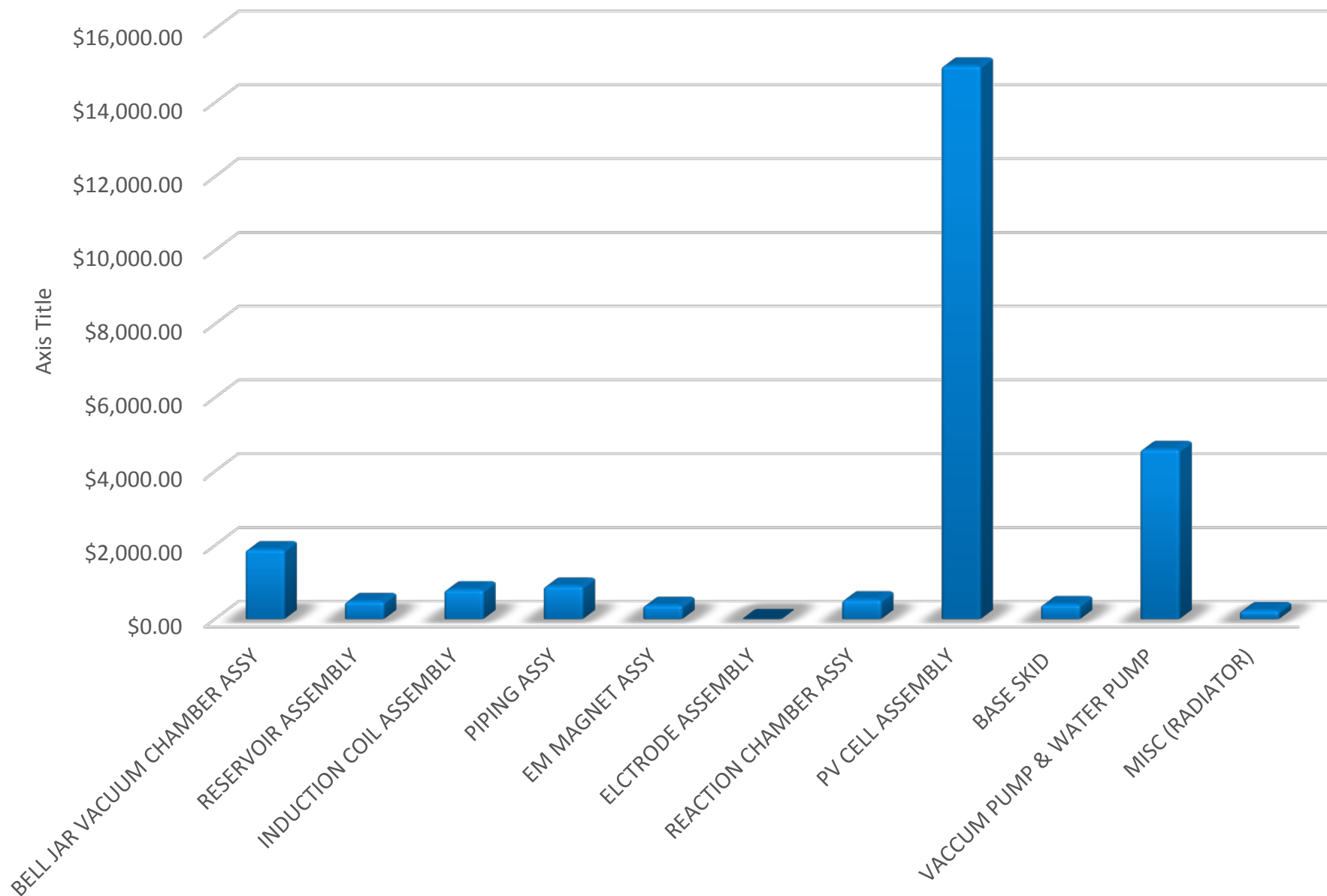


# Commercially available parts



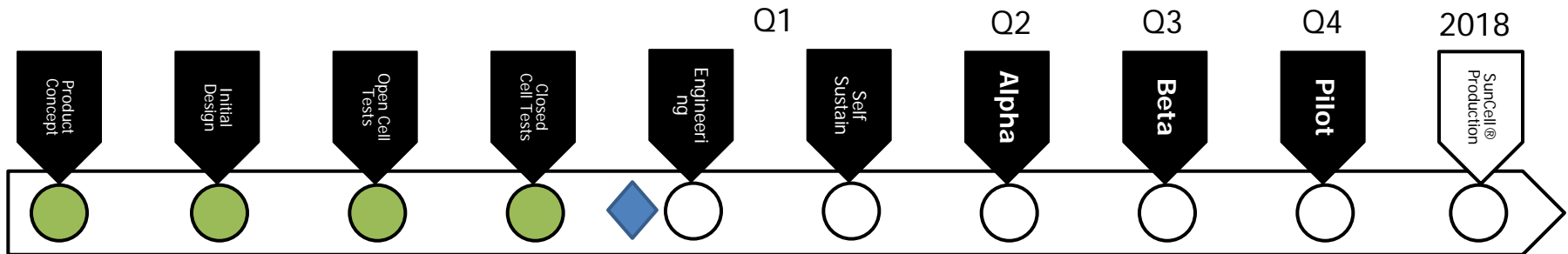
250KW SUN CELL COST ANALYSIS	
DESCRIPTION	TOTAL COST AT SUB ASSY LEVEL
BELL JAR VACUUM CHAMBER ASSY	\$1,891.47
RESERVOIR ASSEMBLY	\$484.17
INDUCTION COIL ASSEMBLY	\$800.00
PIPING ASSY	\$900.00
EM MAGNET ASSY	\$380.00
ELECTRODE ASSEMBLY	\$0.00
REACTION CHAMBER ASSY	\$530.00
PV CELL ASSEMBLY	\$15,000.00
BASE SKID	\$400.00
VACCUM PUMP & WATER PUMP	\$4,600.00
MISC (RADIATOR)	\$236.00
DESCRIPTION	TOTAL COST 250KW
TOTAL COST	<b>\$25,221.64</b>

# TOTAL COST 250KW SUN CELL AT SUB ASSEMBLY LEVEL





# SunCell® Road to Commercial Launch



## Engineering & Self Sustaining Prototype

- a) Engineering prototype demonstrating continuous operation of SunCell® without catalyst & hydrogen
- b) Self sustaining prototype demonstrating self sustained continuous operation with catalyst & hydrogen

## Alpha: Operational Prototype

- a) Enclosed cell with automatic computer control of the reaction.
- b) Operates continuously for hours.
- c) Restart capability
- d) Integrated CPV with heat transfer/cooling
- e) Generates ~30 kW DC net electricity
- f) Operated by BrLP and/or CT personnel only, does not need to have an overall enclosure or easy user interface/software
- g) Includes sensors and data capture to monitor key reaction parameters, inputs and outputs

## Beta: Field Test Unit

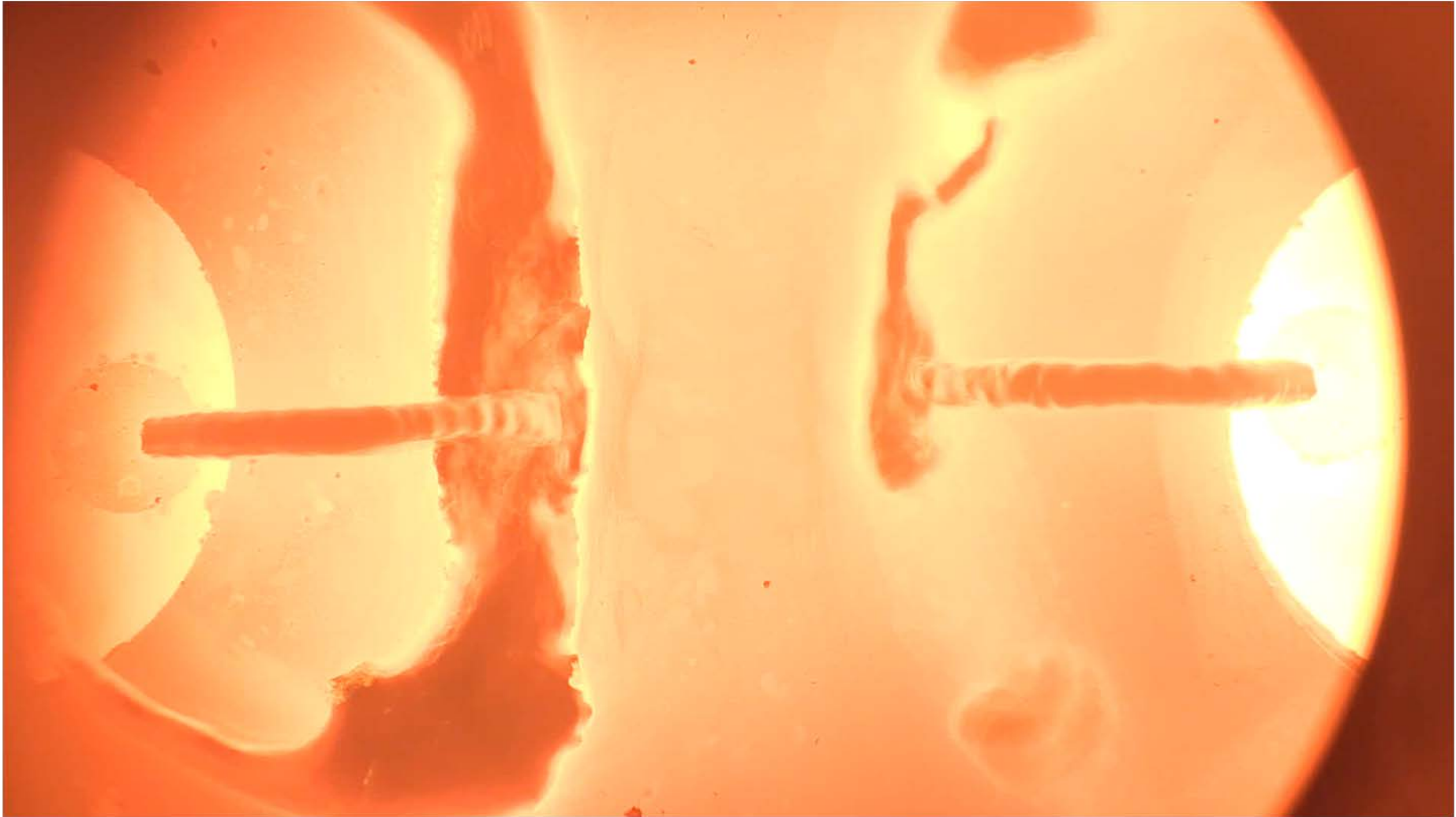
- a) Operates continuously for days
- b) Generates ~60 kW of DC electricity
- c) Can be connected to AC conversion and/or battery storage units
- d) Has a product-like enclosure and safety features
- e) Operated by trained personnel only, user interface not optimized.
- f) Has ability to capture and send data from locations outside BrLP/CT.

## Pilot Production Unit

- a) Meet final product specs for power, reliability, cost, etc
- b) Generates ~100 kW of DC electricity
- c) Built using production-like parts and processes
- d) Final enclosure and software, including user interface and connectivity
- e) Meets safety and other regulations
- f) Can be easily serviced
- g) Capable of being interfaced with an inverter to produce AC power
- h) Capable of running at constant electrical power and rejecting excess power into a resistive load

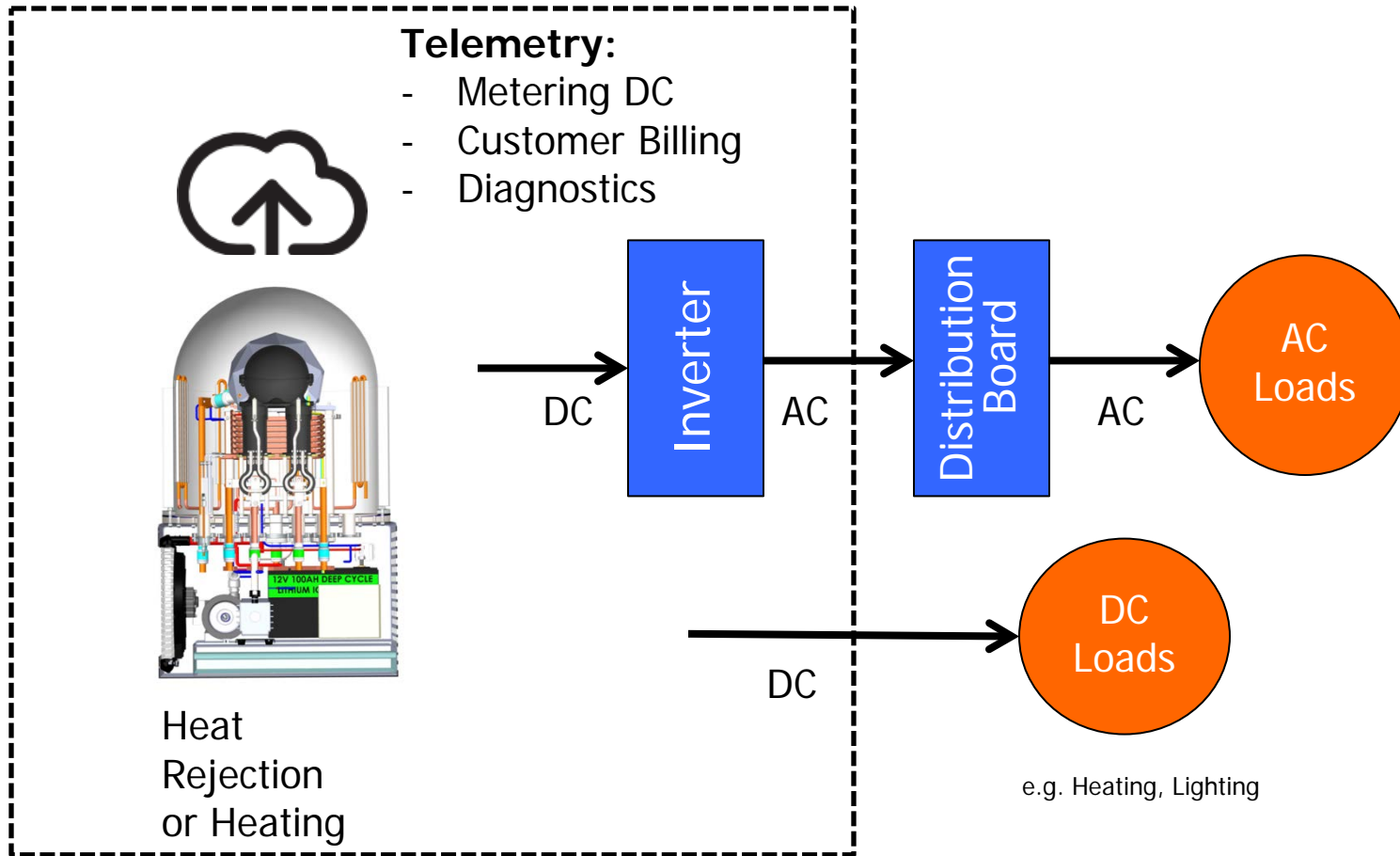
# SunCell® in operation

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Click the above image to view the video on YouTube:  
<https://www.youtube.com/watch?v=jUBheBH9eio>

# SunCell Turnkey System (Basic)



# Global Established Accessible Market with Expansion Opportunities

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- Reinvent electrification as autonomous, completely off grid, mass produced personal power.
- Flat per diem lease charge with no metering.
- Using cell redundancy being off grid is much cheaper than any grid connection and avoids all related utility regulatory leverage.
- Behind the meter during a short temporary learn out phase in the United States, then global push.



