The Carbon Shield Project

TEAM ANTI-POSITRON
The iDEA

- To build a lightweight carbon fiber housing to protect some sort of medium to determine its efficiency.
We decided after much debate that *E. coli* would be the sure fire way to go. Problem is none of us have played the biology game before…
Meltdowns are never accounted for.

- In the process of determining how best to construct carbon fiber shields, an evolution of meltdowns and successes paved the way.
A box is a box, until it goes into near space…

- The original idea was to create a box with individualized compartments for each part of the experiment.
- The outcome was solid, as a… well box.
Shielded! (All power to aft shields!!!)

- The original idea was to send four 112mm long shield tubes up, containing glass test tubes.
- After a Dim Dim Sung moment, the tube sizes on both accounts were reduced.
It's magic hour, and I see trees in our near space future…

- The morning of the launch proved how a lack of sleep can impair judgement.
- Trees in Near Space… space trees, cool!
- After a change in payload holder we have liftoff!
Culturing with Hockey Sticks?

After recovery (and a long drive back) the samples were diluted and placed on natural agar spread plates. Billions of lives were at stake...

Incubation yields fantastic results! Colonies of near space bacterial astronauts.
Interpreting the results was more than a bargain.

Growth on a cosmic scale!!!

Going forward.

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<th>Ground Control</th>
<th>Flight Control</th>
<th>Unheated, Shielded</th>
<th>Heated, Shielded</th>
<th>Heated, Shielded, Sealed Set 1</th>
<th>Heated, Shielded, Sealed Set 2</th>
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Blue=Tube Exposed
Yellow=External Temperature
Green=Sealed+Heated
Red=Just heated
Unexpected Results
- Flight Control (exposed) grew the most
- Genetic Mutation
- E. coli radB101 Strain
Thus observing no mutation is a better indication of shielding capability
Questions?