

Feature



Recreating “The Impossible Astronaut” Jennifer Wylie

An ardent Doctor Who fan pays tribute to her NASA roots by recreating the Apollo 11 spacesuit from the season six episode, “The Impossible Astronaut.”

Back in 2011, I decided to make the Apollo 11 astronaut suit from the *Doctor Who* episode, “The Impossible Astronaut.” I had a vested interest in this project, not just as a fan of the television show, but as a fan of the space program in general. My father worked in the Mission Control Center of NASA’s Johnson Space Center in Houston for about as long as I had been alive, so I grew up with a great fascination for the stars and planets.

“The Impossible Astronaut” is the first episode of the sixth series of the series, and is the first of a two-part story that concluded with “Day of the Moon.” In the episode, Amy Pond, Rory and River Song are summoned to Utah, USA, by the eleventh Doctor. While on a picnic, a figure in an American astronaut suit emerges from the nearby lake. The Doctor approaches it, but warns his companions not to interfere. The astronaut shoots the Doctor, causing him to



Jennifer Wylie as River Song, from the episode “The Impossible Astronaut.” Astronaut photo: [Jade Falcon](#). Background image: BBC.

begin to regenerate, but his companions are horrified to witness the astronaut shoot him again, killing him before he can fully regenerate.

Later, they are surprised to meet a younger incarnation of the Doctor. He is attempting to locate a young girl who made a series of mysterious phone calls to the U.S. President asking for help. They trace her to the space center in Florida, where they again encounter a figure in an astronaut suit. In danger, and without thinking, Amy picks up a gun and shoots at the suit. However, she realizes too late that the helmet’s visor has opened to reveal the little girl.

What follows is a “build diary” starting from when I first decided to start the project. I’ll start by saying that building a “jumpsuit with just some stuff on it” is not an easy project, especially when it comes to the fit and the finish, and making the costume worthy of bearing the honor of the NASA patch. Here we go!

The first thing I had to do was research the design and materials. For that, I picked the brain of fellow space junky Phil Gust. It turned out that he had a copy of a new book put out by the Smithsonian Institution called *Spacesuits: The Smithsonian National Air and Space Museum Collection* by Amanda Young, with photographs by Mark Avino (ISBN 978-1-57687-498). It has a wealth of



information, including reference photos and descriptions of the materials and the construction techniques that were used for almost every spacesuit ever made, including those from the Apollo era. After looking at his copy, I quickly ordered my own through [Amazon](#). Wow!



Spacesuits: The Smithsonian National Air and Space Museum Collection was a guide for my project.

My plan, such as it was, was to make a muslin for fit, use some lightweight fusible interfacing to fuse the muslin to lightweight twill, and from there to fuse that to the final fabric to create the right amount of weight and durability. I picked up the twill at [Hancock's Fabrics](#) for \$2.99 a yard on sale, and found the final fabric on sale at [Fabrics R Us](#) in San Jose, California.

The first thing I had to do was find a pattern. You would think that finding a jumpsuit/coverall pattern would be easy, it wasn't! None of the big makers (Vogue, Burda, Butterick, McCall's, Simplicity) had one. I finally found one from [Kwik Sew](#), 3389 (right), but I had to go to four different stores to get my hands on one. I also wound up making extra trips to the store for basic supplies simply because as I have not really done any big projects in three years, I hadn't realized that I had run out of important stuff that I needed, like a seam gauge, marking chalk, and thread. (Who ever runs out of plain black and plain white thread? THIS GIRL!) So, while I got a lot done, I didn't really make a lot of progress at first.

Now I was ready to put together the set of muslin coveralls. It's admittedly very strange, creating something that is not only not fitted to me, but is *supposed* to be bulky. I'm not used to that, so my usual modus operandi of just 'draping a pattern to fit' was not going to work this time. I also had to make pants, and I HATE making pants. Making pants is only second to setting in sleeves, and I hate that the most! I had five



I used this Kwik Sew pattern 3389 for the coveralls.

months to get this done (actually four; I didn't want to have to be in a crunch the two weeks before [Costume-Con 30](#)) and I had to figure out how to transport the darned thing. It was going to easily take up my biggest suitcase and then some, so I had to employ some help by someone driving down to take it for me. Despite flying on Southwest Airlines with free baggage, I thought that I might get quite a few 'love notes' from the TSA along the way, and since I would have to send the helmet down by car anyway, I might as well save myself the aggravation.



Inside view of the overlocked seams and the zippers

There was a month where I didn't do anything except for assemble the muslin shell. While the shape was promising, getting it to fit over the football pads that I was going to wear underneath to get the proper shape was proving...well...impossible! This involved several episodes



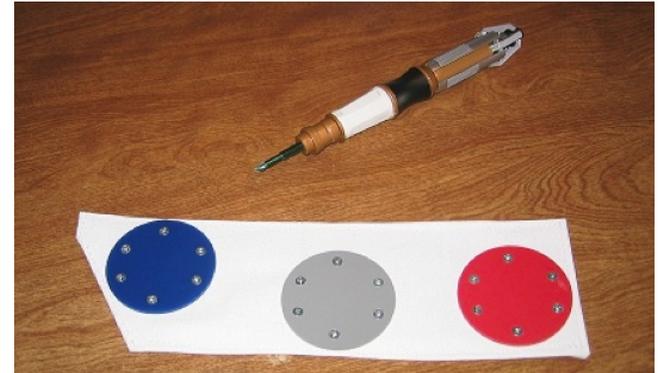
Home stretch! I needed to find patches that looked 'weathered' but nothing I found on-line looked right. So, I got some printable fabric, ran the designs I found online through my printer, and overlocked the patches onto the jumpsuit.

of crying, a bunch of seam ripping, more sewing, more crying, and a couple of moments where I gave serious thought to just dumping the whole pile of fabric onto the driveway and setting it on fire.

The only reason I didn't decide to just chuck the whole thing was because I had dumped a considerable amount of money into purchasing the helmet. There was just no way I could fabricate what I needed, especially when it came to a gold opaque-to-flash-photo visor. I finally stopped crying, had a couple of beers (not necessarily in that order) and got down to business.

Once the muslin *finally* fit, getting the layers cut and sewn together was actually relatively easy. However, I discovered when I went to overlock the inside seams that the fluff from the quilt batting was preventing me from getting the needles into the fabric, so I had to take a very fine scissor and carefully cut the fluff out of all the seams. This was tedious and time-consuming, but I got to chat further in-depth with Phil and Kathe about the costume, and Kathe was kind enough to allow me to use her Serger.

After getting *that* done, we went on a trip to [Orchard Supply Hardware](#) to look for the "bits" to put on the front. Thankfully, the trip was fruitful and Phil helped me find some plumbing couplers that worked perfectly. I used nail polish to color them blue and red, and purchased some plastic discs from [TAP Plastics](#) to make the backings.



(Above) TAP Plastic drilled the holes in the disks, and I used a *Sonic Screwdriver* screw driver to attach them. (Below) I bolted them through plastic canvas to hold the shape.



Front of jumpsuit with the disks attached.



Front of jumpsuit with couplers, and magnets.

The hoses are pieces of rope covered with the same fabric as the suit. Rare Earth magnets glued to the rope and inside of the plumbing connectors lock them into place.

The gloves are knit gloves with blue PVC caps glued to the tips. Black nylon backing was folded to create the hand, and attached to a cuff of matching fabric from the suit. I originally ordered a pair from [Space Toys](#), but they were too large, so I made my own version based on their 'pattern'. The black nylon pieces were 'cannibalized' from the purchased version.



The backpack is cardboard box, covered with the same fabric as the spacesuit, so it's very light. It connects with plastic clips to straps sewn into the shoulder seams of the suit. I purchased the helmet online from [Space Toys](#). Although it came with a nylon cover, I created a secondary cover for it out of the same fabric as the suit so that it would match.

It's extremely hot to wear! I have to safety pin a washcloth to my undershirt and put "blue squishie" ice packs in it on my chest and the small of my back. I can tolerate wearing it with ice for a few hours- without ice, about half an hour!

Despite all the heartburn, setbacks, and tears, and thanks to some support and advice from friends, everything finally came together, and I managed to finish the costume in time to enter it in the sci-fi/fantasy masquerade at Costume-Con 30 in 2012. I was very proud of what I had accomplished. For me, recreating "The Impossible Astronaut" was my very own "Space Odyssey."

Jennifer Wylie is a sci-fi and fantasy costumer who is a fan of a number of genres, including Girl Genius and Dr. Who. She has been the masquerade director for Silicon, and was recently masquerade co-director for [Gallifrey One](#) in 2010.



Jennifer Wylie as River Song from the episode "The Impossible Astronaut". Photo: © [Richard Man](#).