

-----Original Message-----

From: Travis Stephen Schafhausen  
Sent: Sunday, July 08, 2007 12:07 AM  
To: Claire C Yang  
Subject: Re: Story - Atlantis landing

Claire

Due to a rather fortunate sequence of events, namely bad weather at Kennedy Space Center (KSC), a shuttle mission that had already been extended three days, the always perfect and always hot weather at Edwards Air Force Base (EAFB), and my being lucky enough to have an internship at Air Force Research Laboratory (AFRL), I was able to watch the space shuttle Atlantis land at EAFB on June 22, 2007 after a successful trip to the International Space Station. Since I work at AFRL I am located on "The Rock," which just so happens to be perfect for viewing the shuttle landing. "The Rock" is the rocket testing facility on a large hill south of the Edwards main base across the Muroc Dry Lake, and from this elevated position it's very easy to watch the entire descent of the shuttle. It comes out of the west as a very small white speck and quickly moves toward the east. At about the point it is directly overhead of the base, but still far too small to make out any detail, the shock wave hits. It is a very distinct "double boom"; you get both the leading and trailing shocks, that are far stronger than anything that is regularly produced at the base by, say an F-22/16/18 or Joint Strike Fighter (JSF). It's strong enough to give all of the buildings a pretty good rattle and feels like the bass at a rock concert got turned up way too much. After the awe of the shock wave hitting had subsided and I was able to track down the shuttle again, it had just about reached its furthest point east, which is about over the very small town of Boron, California. It's home of one of if not the largest Borax mine in the world, and incidentally, Domingo's. Domingo's is a Mexican Restaurant where the astronauts always go out to dinner after debriefing their mission, and which I can personally attest to being quite good. At this point the shuttle initiates a 270-degree right turn to line up with the long runway at Edwards. Most of the time the shuttle will actually come from the north and execute a 270-degree left turn so that it can land on the Muroc dry lake from east to west.

This allows a perfectly flat surface that is long enough and wide enough to land anything on. However the winds must have been right on that day for the shuttle to actually land on the runway, so that is what it eventually did. As it is making its turn it becomes quite clear that the loving nickname of "flying brick" is very appropriate. From the looks of it, anyone seeing it for the first time would swear that there is no way on earth the shuttle will ever be able to descend quickly enough from its altitude at the beginning of the turn to come even close to the runway. However, at this point it basically begins to fall out of the sky. As it comes in it grows in size astonishingly fast, and as it is lining up for final approach it is easy to make out all of the details—white body, black thermal tiles on the underside, even the NASA logo painted on it. I have heard that the final approach is actually performed at a terrifyingly steep 25 degree, and that the descent before that is quite necessarily much steeper than that. And low and behold, after no more than 5 or 10 minutes, the shuttle had fallen from space

onto the runway at Edwards.

The shuttle was scheduled to stay at Edwards for 10 days before being shipped back to KSC atop the Boeing 747 transport, which allowed enough time to allow to public to get a more up-close viewing. Thus, on the following Friday, I was able to drive to the NASA Dryden Flight Research Center at the Edwards main base to have a closer look. Unfortunately, "closer" is a relative term, but we were able to see the shuttle from approximately 75 yards as final inspections were being performed on it while it was attached to the crane that would eventually lift it to be placed on the 747. It was very interesting to see it in the crane, and especially to see the cover that had been placed over the shuttle engines so that it provides a more aerodynamic cargo package for the 747 to carry back across the country. We also drove right past the 747 that would carry it back to KSC and could easily see the modifications made for the shuttle attachment, which surprisingly seemed to be minimal and simple. It flew out the following night aboard the 747 to make its way back to KSC.

Well, now that I have turned this into a novel, there's your story. Hope you and the rest of whomever this is going out to enjoy it.

Travis