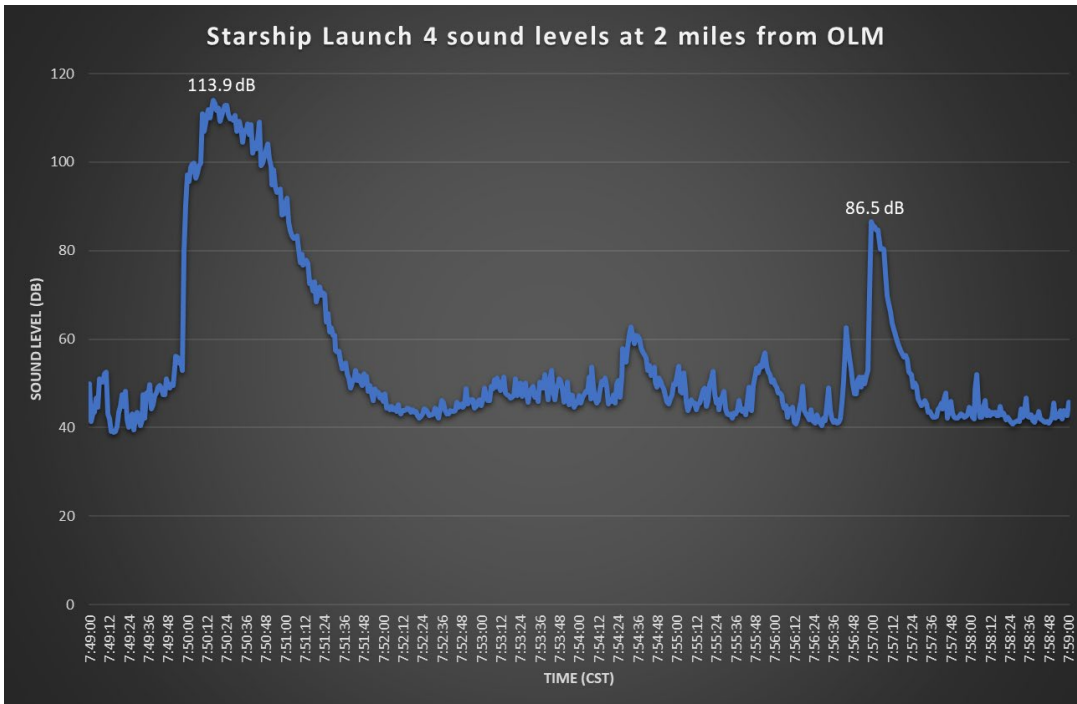


**From:** [Bilodeau, Stephanie A](#)  
**To:** [Perez, Chris](#); [Orms, Mary](#); [Gardiner, Dawn](#); [Reyes, Ernesto](#)  
**Cc:** [DeLaGarza, Imer](#)  
**Subject:** Sound levels for launch #4  
**Date:** Monday, June 10, 2024 10:34:06 AM  
**Attachments:** [image.png](#)  
[IMG\\_0008.JPG](#)  
[IMG\\_0007.JPG](#)

---

Good morning,

For launch #4, our sound meter was placed at the same location as it was for launches #1 and #2 at approximately 2 miles away from the launch pad. Below is a graph showing the variation in sound levels over a 10 minute period with the launch occurring at approximately 7:50.



The max dB recorded was 113.9 (compared to 114.9 dB and 114.5 dB for launches #1 and #2 respectively). The slight variation in recorded levels between launches could be due to environmental factors. You'll also notice a second jump in sound levels occurring at approximately 7:57, which I believe was from the reignition of the booster engines as it splashed down in the gulf.

I also placed a game camera near a Wilson's Plover nest approximately 0.7 miles south of the launch pad which captured the bird's movement away from the nest during the launch (photos attached). Interestingly, the bird did not get off the nest until the rocket had cleared the top of the tower at least 13 seconds after engine ignition which means this bird must have experienced the maximum sound level at around 0.7 miles from the launch pad, unfortunately we don't know what the sound level was at that distance, but likely higher than the 113.9 dB recorded at 2 miles away.

Please let me know if you have any questions.

Thank you,

**Stephanie Bilodeau**

Wildlife Biologist

U.S. Fish and Wildlife Service

Lower Rio Grande Valley NWR

3325 Green Jay Rd.

Alamo, TX 78516

Mobile: (956) 475-8420

Office: (956) 784-7512

# Starship Launch 4 sound levels at 2 miles from OLM

