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Russia's New Yasniy Launch site  
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Russia's newest space launch site promises to deliver many interesting satellites into orbit, and some of them will make interesting targets for amateur space watchers. Two of them, the inflatable habitat prototypes built by 'Bigelow Aerospace' in Nevada, already have become medium-difficulty 'favorites' for skywatchers. More will follow.

Watching a launch from this site -- called 'Yasniy', located in the southwestern corner of Siberia -- was even more fascinating, as I found out last summer as a guest (and first-ever American journalist) of the company. Pinpointing the exact location of the launch pad took some doing, and added to the fun.

As part of the conversion of retired military missiles for commercial purposes, a Russian company named 'Kosmotras' had contracted with the Russian Defense Ministry to buy surplus 'Satan' missiles once their duty tours had expired. At first, the missiles were trucked to Russia's main space base at Baykonur for launching, but then the rocketeers had a better idea -- convert them, and launch them from their original duty station inside the nuclear missile base.

As part of nuclear arms reduction agreements, the Russians had released maps of the base and the locations of the three dozen underground silos with the armed missiles. One of those pads had been decommissioned, and converted to a launch site for the satellite mission. But nobody could divulge which one. I set myself the task of finding out, during my visit.

Because of the military security level in a region filled with thermonuclear weapons, we were mostly confined to a 15-acre fenced compound. Razor-wire-topped chainlink fence, and armed guards (civilians), surrounded us. We even had to watch the launch from there.

The pad itself was miles away, barely visible on a ridge to the west, at least when seen from the roof of our hotel. A veteran of the previous launch pointed its radio tower out to me, and I was able to take a compass reading on the azimuth -- I just happened to have that compass in my pocket when we climbed to the roof.

The following evening, we watched the launch from atop a bunker near the western fence. There was a flash as the booster ignited, then only silence as it climbed into the northwestern sky. I just happened to have a tape recorder in my shirt pocket, and it recorded the shouts of the crowd as the rocket first flared. Thirty two seconds later, it recorded the first roar of the rocket's engines.

The rocket slowly faded into the high northern sky, while back to the west, the smoke plume from its launch drifted slowly to the left. I knew I could now figure out exactly where it was. But not yet -- I hadn't brought the launch pad maps with me, on purpose. They weren't something I wanted to have to explain to my hosts if they were found in a security search.

But a week later, home in Houston, I laid out the geometry of the compound (visible on a Google-Earth image), the true azimuth, and -- thanks to the finite speed of sound -- the range to the pad. There it was, the pad designated "1-1", the oldest of the base's launch sites and quite reasonably, the one taken off military duty in order to make some money. Seeing the launch had been a thrill. Nailing down the exact lift-off location doubled my pleasure. And a few weeks later, watching the payload pass through the skies of Texas completed the pattern.