27-Nov-17

SRI Response to FAA: 1644-EX-ST-2017

Correspondence reference number: 39815

FAA concern: The FAA reviewed 1644-EX-ST-2017, and found potential risk of interference to C 080955 in Dodge City, KS, which may be radio line of sight. If the proponent can provide mitigation against that facility, the FAA will concur.

During the balloon experiment, SRI will refrain from pointing the heading direction of the antenna toward the FAA station at Dodge City, KS. As seen in Figures 1 and 2 below, the radar antenna has a narrow beam in the azimuth direction. To mitigate interference with the FAA station, SRI will avoid from pointing the antenna toward Dodge City, KS by at least 20 deg azimuth, which will put the line of sight towards the FAA station out of the SRI radar antenna main beam. This will reduce the antenna gain for the radar antenna by at least 25 dB from peak in the direction toward the FAA station. Furthermore, the SRI radar transmitter emission mask is such that spurious emissions outside of the 2,937.5 to 2,950 MHz is less than -60 dBc (Figure 3). SRI will also have operators standing by that can disable the radar transmitter at a moment's notice.

- Lauren Wye: 650-678-9184
- Simon Lee: 805-801-9223

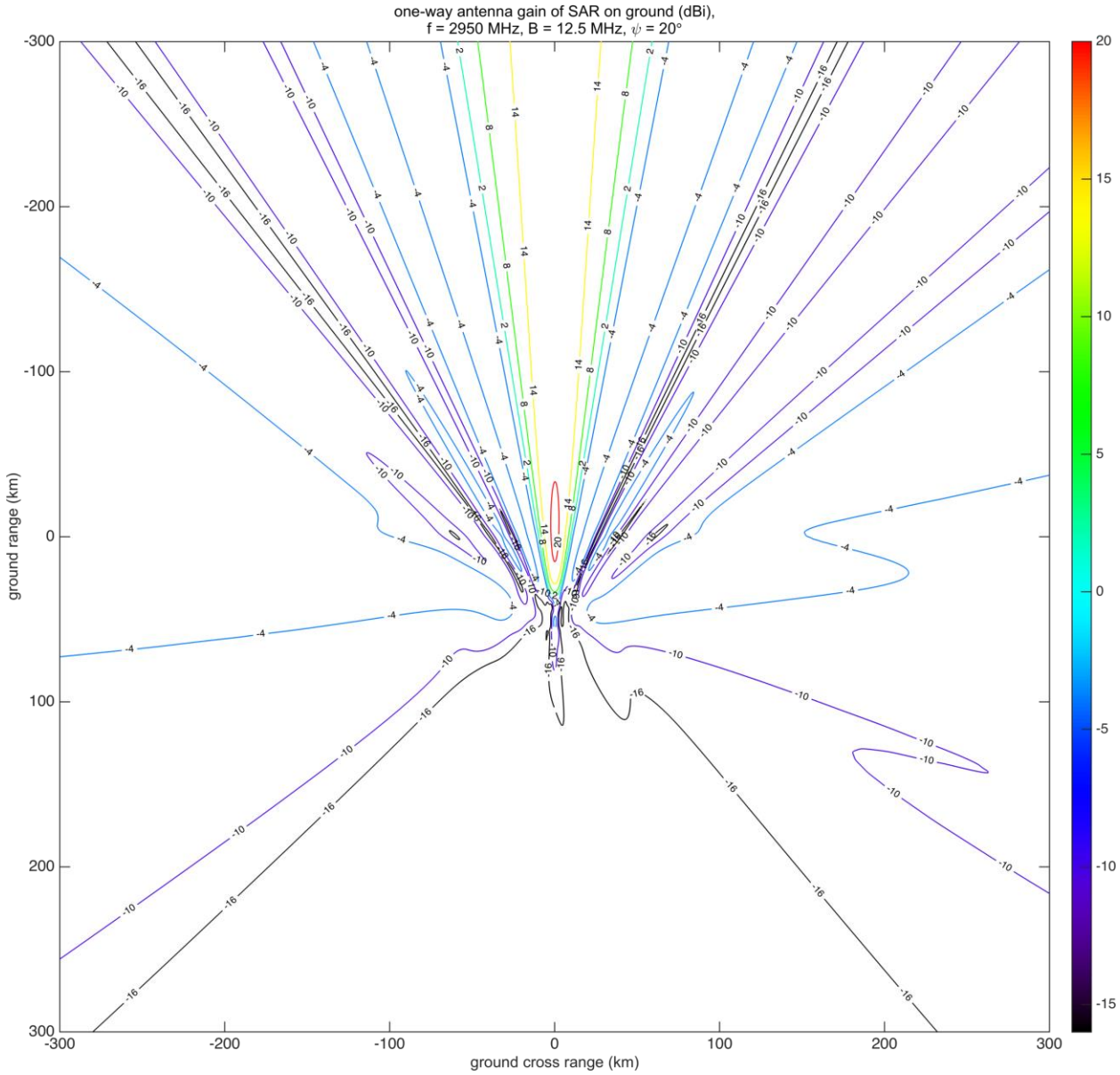

Figure 1. SRI Radar Antenna Beam Projected to Ground, 20 deg Grazing Angle

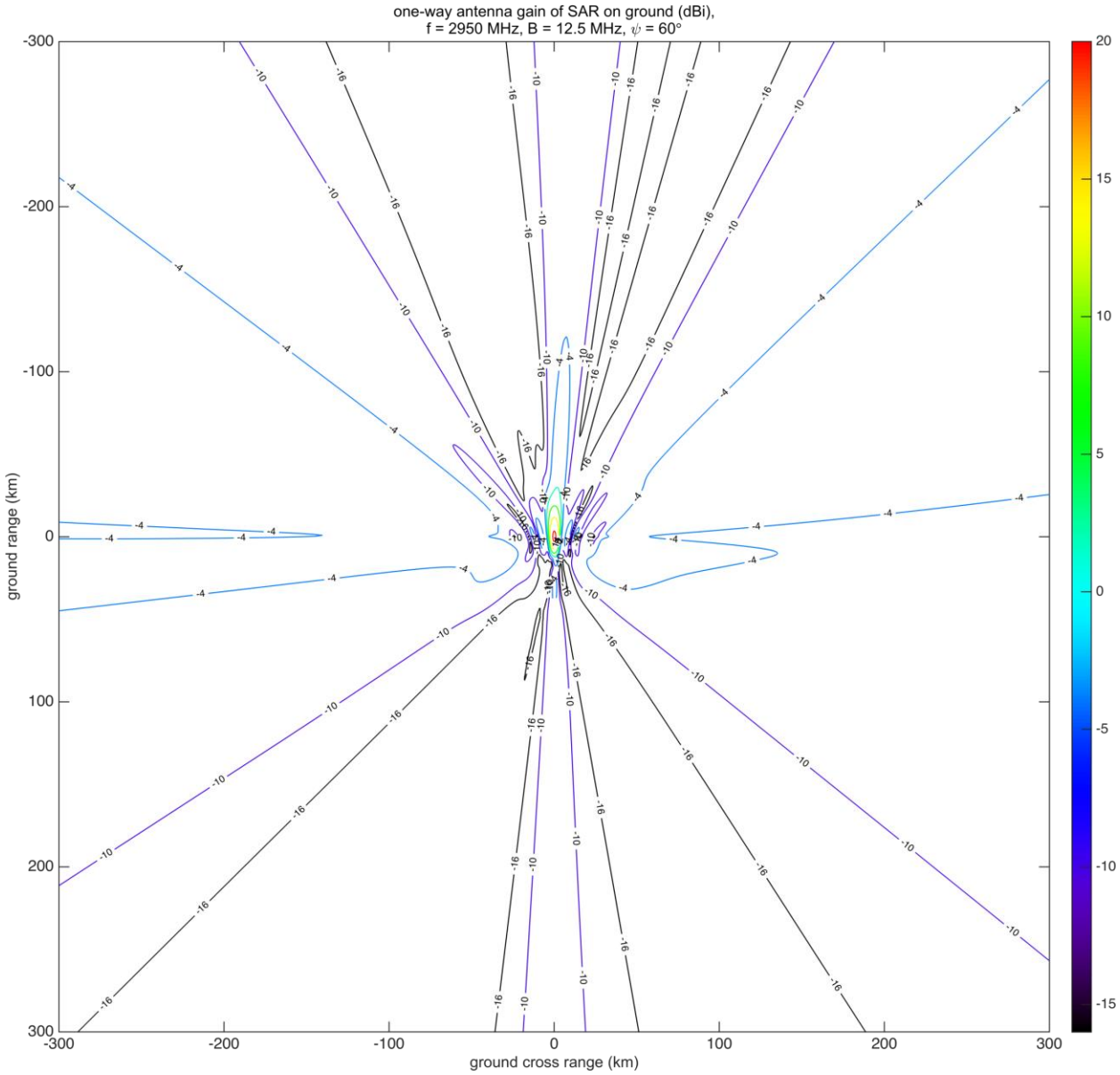

Figure 2. SRI Radar Antenna Beam Projected to Ground, 60 deg Grazing Angle

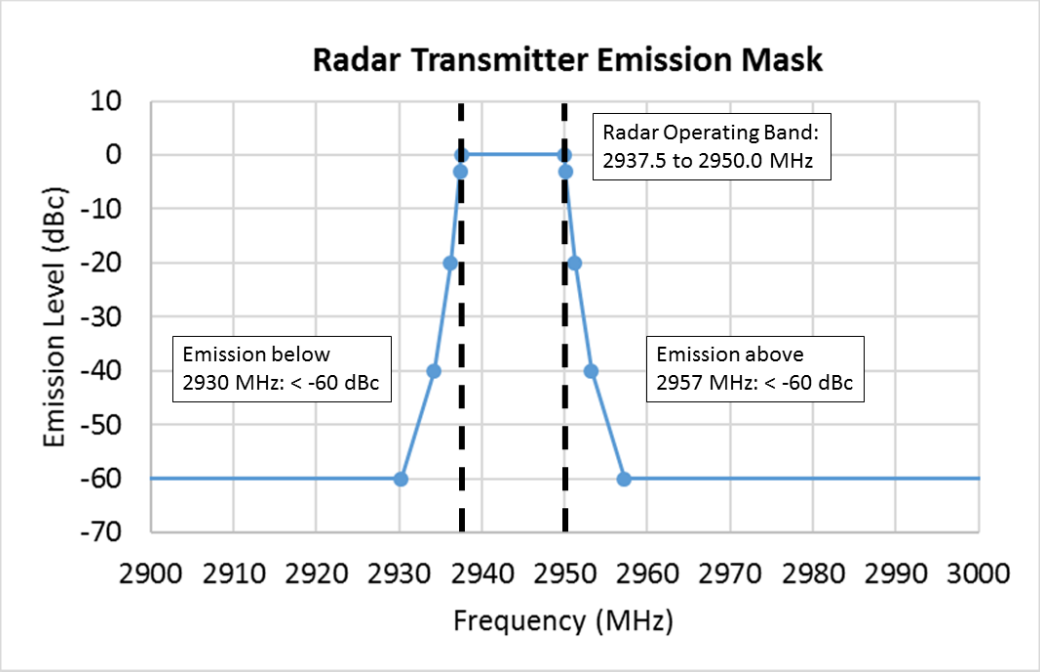

Figure 3. SRI Radar Emission Mask