1. >> Abstract: “and illustrate some of the challenges facing air quality managers tasked with O3 attainment in the SWUS during late spring and early summer”: A few of these issues could be listed here. What are the main findings of Zhang et al.? <<

The above referee's question has not been explicitly answered and I do not understand in the revised abstract what a "potentially lower NAAQS of 65%" means and where the value of 65% comes from. I suggest to rephrase the sentence and explain the meaning of "challenge". Do you mean the assumed relatively low effectiveness of emission controls when much of the pollution is caused by transport of background ozone?

The *Fires, Asian, and Stratospheric Transport*-Las Vegas Ozone Study (*FAST*-LVOS) was conducted in May and June of 2017 to study the transport of ozone (O_3) to Clark County, Nevada, a marginal non-attainment area in the Southwestern United States. This 6-week (20 May-30 June 2017) field campaign used lidar, ozonesonde, aircraft, and in-situ measurements in conjunction with a variety of models to characterize the distribution of O_3 and related species above southern Nevada and neighboring California, and to probe the influence of stratospheric intrusions, wildfires, and local, regional, and Asian pollution on surface O_3 concentrations in the Las Vegas Valley (≈900 m above sea level, a.s.l.). In this paper, we describe the *FAST*-LVOS campaign and present case studies illustrating the influence of different transport processes on background O_3 in Clark County and southern Nevada. The companion paper by Zhang et al. (2020) describes the use of the AM4 and GEOS-Chem global models to simulate the measurements and estimate the impacts of transported O_3 on surface air quality across the greater Southwestern U.S. and Intermountain West. The *FAST*-LVOS measurements found elevated O_3 layers above Las Vegas on more than 75% (35 of 45) of the sample days, and show that entrainment of these layers contributed to mean 8-h average regional background O_3 concentrations of 50-55 parts-per-billion by volume (ppbv) or about 85-95 μg m^{-3}. These high background concentrations constitute 70-80% of the current U.S. National Ambient Air Quality Standard (NAAQS) of 70 ppbv (≈120 μg m^{-3} at 900 m a.s.l.) for the daily maximum 8-h average (MDA8), and will make attainment of the more stringent standards of 60 or 65 ppbv currently being considered extremely difficult in the interior SWUS.

2. >> P. 3, lines 66-67: The mountains (specify altitude ranges) are certainly higher and more susceptible to intrusions…<<

What is the altitude range? Is it the 2680 m asl quoted in line 88 for the summit of Angle Peak?

The high mean elevations of Colorado (2078 m a.s.l.), Wyoming (2047 m a.s.l.), Utah (1864 m a.s.l.), Nevada (1681 m a.s.l.), and Idaho (1528 m a.s.l.), which make up the heart of the Intermountain West (IMW), i.e., the area of the U.S. bounded by the Cascade (≤4392 m a.s.l.) and Sierra Nevada (≤4421 m a.s.l.) Mountains to the west and the Front Range of the Rocky Mountains (≤4401 m a.s.l.) to the east (Fig. 1a), make this entire region particularly vulnerable to both stratospheric intrusions…