combination of the calibration uncertainty, the uncertainty due to noise, and the uncertainty in determining the baseline.

III. ^{12}CO (J = 1 – 0) OBSERVATIONS

Observations in the ^{12}CO (J = 1 – 0) line (115.2712 GHz) were made using the 3 mm SIS receiver on the National Radio Astronomy Observatory (NRAO) 12m telescope at Kitt Peak, Arizona[1], during February 9-12, 1994. At this frequency, the beamsize is FWHM = 55″. We observed [ ] positions in [ ] galaxy plumes. The galaxies and the positions observed are listed in Table 1. For the 3 galaxies without published CO measurements for the main galaxy, we also obtained spectra for the central position of the galaxy; these locations are also included in Table 1.

Two 256 × 2 MHz filterbanks, one for each polarization, were used for these observations, providing a total bandpass of 1300 km/s and a spectral resolution of 5.2 km/s. Each scan was 6 minutes long, and the total time on a position ranged from 30 minutes to 4 hours (is this true?). Calibration was accomplished using an ambient chopper wheel. The system temperatures ranged from 200K to 450K. The observations generally were made using a nuating subreflector with a beam throw of $2'--3'$. In some cases, position switching was necessary to avoid chopping onto the target galaxy or on the plume; in those cases, the reference beam was located 4′-6′ $away in azimuth. The pointing was checked periodically with Mars, Saturn, Jupiter, 3C279, 3C345, 3C84, 3C274, and 4C39.25, and was consistent to less than 10", except in one instance (marked in the table), where a shift of 25" was noted.$

Each 6 minute scan was checked individually for baseline problems, and was not used if there were obvious deviations which affected the summed spectrum. A linear baseline was fitted and removed from the summed spectra. The final summed CO spectra are shown in Figure 1. Of the [ ] positions observed, we detected emission in [ ]. For each position observed, we record the rms noise level, T_A^*, in Table 1, along with the central velocity. For detections, we also record the integrated CO flux density $I(CO) = \int T_R dV$, calculated assuming the plume fills the beam (efficiency $\eta = 0.5$), a reasonable assumption given the published HI distributions. The uncertainty on these measurements are ∼[ ]%, due to a