observed for 14 hours each at 21 cm with the NRAO Very Large Array. Neither object was detected with a three sigma limit of 0.45 mJy. There are several stronger radio sources in the vicinity, but these are not likely associated with the QSO's.

09.26.10 Rapid Radio Outburst in the Quasi-Stellar Source 1510-08. T.J. BALONEK and W.A. DENT, Univ. of Mass. - The very recent spikelike radio outburst in the quasi-stellar source 1510-08 (Andrew et al, IAU Circular #3328) confirms the reality of similar rapid flux density variations which were suggested by less extensively sampled data prior to 1979. This source has been observed regularly since 1970 at five radio frequencies between 2.7 and 90 GHz, as part of a study of the evolution of about 100 extragalactic radio sources. The data indicates several periods of abrupt changes throughout the observed frequency range. The recent outburst was first noted on 14-16 January 1979 ($S_{90\ GHz}$ = 7.6 Jy; S_{30} = 8.9; S_{15} = 6.7; all $\pm$.2 Jy), which followed two years of minor flux variations (range 1¼ to 2¼ Jy). The recent outburst, among the most dramatic observed in any source, increased at a rate greater than 3 Jy per month which probably peaked in early January at frequencies above 15 GHz, and 2 months later at 7.9 GHz. The decline has been slower and has been sampled biweekly at 7.9, 15.5, and 90 GHz from which the spectral evolution can be studied. No strong correlation has been found between the optical (range 16½ to 17½ magnitudes) and radio variations (A. Smith, private communication).

10.26.10 Radio Spectrum of NGC7714 (2333+019), NGC7715 (2333+019) and UB1 (2333+019), KOJOIAN, G., Univ. of Wisconsin-Eau Claire, TOVMASSIAN, H. M., BYURAKAN ASTROPHYSICAL OBSERVATORY-USSR, FIGURA, C., Univ. of Wisconsin-Eau Claire - The radio spectrum of NGC7714 (between 91 cm-6 cm) and NGC7715 (between 91 cm - 11 cm), a peculiar pair of interacting galaxies (VV51,Arp289) and the quasar UB1 (between 91 cm - 6 cm) has been obtained. The data includes flux density measurements collected from several observers. NGC7714 is also known as Markarian 538.

11.26.10 No redshift in 3C 295. Y.P. VARSHNI, Univ. of Ottawa. -We have proposed a theory of quasars (Varshni, 1975 Ap. Space Sci. 37, L1; 1977 Ap. Space Sci. 46, 443; 1978 The Ta-You Wu Festschrift:Science of Matter, S. Fujita (ed.), Gordon and Breach, p.285; 1979 Physics in Canada 35, 11), based on sound physical principles, which does not need the artifical assumption of redshifts and provides satisfactory explanations of the various phenomena associated with quasars. We now extend our theory to objects like 3C 295 which are referred to as radio "galaxies" and for which redshifts $\geq$ 0.02 have been claimed. The redshift hypothesis leads to problems (e.g., source of the large energy released, superrelativistic expansion) for radio "galaxies" which are similar to those for quasars. Our theory (laser action) resolves all these problems. For quasars we do not find any need for assuming redshifts in their spectra and this is also the case for radio galaxies. Because radio galaxies are nebulous objects, it would be reasonable to expect that forbidden transitions would also become important. Most of the available optical spectra data on radio galaxies are of a poor quality, 3C 123 is cited as an example. The spectra of quasars bear analogy with the spectra of Wolf-Rayet stars; we can expect that the spectra of radio-"galaxies" will bear analogy with the spectra of novae and nova-like stars. As regards radio properties, the continuity argument for radio galaxies and quasars is well known. We consider 3C 295 in detail. Minkowski (1960 Ap.J. 132, 908) observed an emission line in the spectrum of 3C 295 at 5447.8 Å. Data on quasars show that even for strong emission lines there are uncertainties of ±3Å. Assuming the same uncertainty for λ5447.8, there are about 30 allowed lines which are possible candidates for identification. Emission lines at 5440.5, 5446.9, 5453.8, and 5455 Å have been recorded in nova-like stars. It is obvious that instead of radio galaxies, these objects should be called radio nebulae.

12.26.10 Relativistic Jets and the Continuum Emission in QSOs. ALAN P. MARSCHER, Univ. of Calif., San Diego -- The radio through optical, and possibly X-ray, emission of QSOs and active galactic nuclei is interpreted in terms of a relativistic jet containing high energy particles and magnetic field. An observer whose line of sight is nearly parallel to the jet axis detects a strong, compact radio source whose flux density smoothly connects with an optical spectrum which is much steeper than that emitted in the rest frame of the jet flow. The radiation is strongly polarized, and this type of source is identified with the optically violent variables. Larger viewing angles relative to the jet axis result in spectral dominance by the central region containing the "energy machine" which drives the energy flux in the jet. This radiation is weakly polarized, has a flatter spectrum and low degree of variability, and is associated with much weaker radio sources. These results are found to be consistent with presently available observational data and future observational tests are suggested.