6.1.10 Variation in the Flux and Polarization of 4C39.25 at 8 GHz. E.T. Olsen and H.D. Aller, University of Michigan Radio Obs. - The quasi-stellar radio source 4C39.25 has been continuously monitored over the last four years with the University of Michigan 85-ft paraboloid. During this period both the total flux density and its state of linear polarization have shown significant variations. During 1967 the total flux density remained constant, but commencing in early 1968 it has steadily increased by approximately 10% per year. This variation bears a striking similarity to that exhibited by 3C84, a Seyfert galaxy. Prior to the onset of the increase in the total flux density, the source had a degree of linear polarization equal to 2.19% ± 0.14% at a position angle of 142° ± 3°. In early 1968 the degree of polarization decreased to less than 1%. During 1970 the average degree of polarization has been 0.63% ± 0.13% at a position angle of 43° ± 9°.

6.1.10 Collision Strengths for Ultraviolet Emission Lines in Quasars. J. E. OSTERBROOK, Waseda Observatory, University of Wisconsin. - Determination of collision strengths (proportional to collision cross sections) are necessary for calculating the emission line strengths predicted by any model of a quasar, and in particular for quasar models. The important ultraviolet lines include permitted lines, forbidden lines, and semiforbidden (intercombination) lines. Fairly accurately calculated collision strengths are available for most permitted and forbidden lines, but for semiforbidden lines only rough estimates based on the conservation theorem have been available. Recently accurate collision strengths have been calculated for the semiforbidden 2s 2S-2p 2p transition of the C III] isoelectronic sequence (1970 Astrophys. J. 160, 25). Other semiforbidden collision strengths will be calculated in time with a very general program being developed by Seaton, Eissner and others. However, in the interim, the available C III] sequence calculations can be used with the conservation theorem to estimate better approximations to the collision strengths for the other semiforbidden sequences. A table of the best available collision strengths is given, and a few samples of calculated emission-line strengths from various quasar models.

6.1.10 A New Model for Extended Radio Sources. W. J. MERRIS and V. L. TRIMBLE, Inst. of Theor. Astron., Cambridge England. - The power output of active galactic nuclei may be furnished by a large number of collapsing stars or pulsar-like bodies. If these objects lose their rotational energy via electromagnetic torques, then the bulk of the power would emerge as electromag-