There has been considerable interest in the 3d transition metal disulfides having pyrite structure to study metal-insulator transition in connection with the Mott-Hubbard model. (1) Recently, by high pressure electrical measurement Wilson and Pitt<sup>2</sup>) have found that a metal-insulator transition in NiS<sub>2</sub> occurs in the vicinity of 32 kbar at room temperature. They also have pointed out that for the semiconducting NiS<sub>2</sub> there is a lattice parameter greater by 0.03Å than would have occured in a metallic phase.

In the present study, we carried out X-ray diffraction measurement on NiS<sub>2</sub> at room temperature up to 100 kbar in order to clarify if the transition is associated with a change in crystal structure and/or volume.

meter a=5.687Å were prepared by chemical vapour transport with chlorine. A powdered sample of the single crystals was filled in a 0.3 mm hole in the center of a boron-epoxy disk, which was pressed between Bridgman anvils. 3)

A pressure clamp vessel including the anvils was mounted on a goniometer of a Guinier focusing camera. Diffraction pattern by Mo-Ka radiation was recorded on a curved film with a radius of 114.6 mm that allows a dispersion equal to maximum 20 angle of 45°. The pressure on the sample was calibrated by intimately mixing NiS<sub>2</sub> with CsCl as an internal standard for pressure because almost every line of NaCl overlaps the lines of NiS<sub>2</sub>. The pressure-volume relation for CsCl calculated by Decker<sup>4)</sup> was used