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Possible Mechanism of the Pseudogap Formation in Intermetallic Compound Al_3V SUSUMU MIYAHARA, KAZUO TSUMURAYA, Meiji University, JAPAN — The pseudogaps in compounds give a unique electronic character in the materials such as the ones in the skutterudites. The Al_3V compound with DO_{22} structure has also a deep pseudogap that has been explained by the presence of the covalent Al-V and Al- Al bonds in the compound [1]. We propose another possibility of the formation of the pseudogap in the DO_{22} compound using a density functional method. We introduce a Peierls distortions along c-axis of the double-stacked ordered unit cell, we calculate the density of states and check the gap formation. We will apply the mechanism to the other systems with pseudogap. [1] M. Krajčí and J. Hafner, J. Phys.: Condens. Matter, 14, 1865 (2002).

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