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**Electronic Properties of Layered Cobaltates.** QING JIE, QIANG LI,  
Brookhaven National Laboratory — Electronic properties of layered cobaltates are strikingly different from those in conventional metals, that result in water-induced superconductivity and large thermoelectric power factor. Here we report a transport study of thermoelectric power and electrical conductivity as a function of temperature and magnetic field in several cobaltate single crystals and thin films:  $\text{Ca}_3\text{Co}_4\text{O}_9$  and highly doped  $\text{Na}_x\text{CoO}_2$ . There are three temperature regions where the electronic transport properties of these cobaltates exhibit distinctive behaviors. At low temperatures, the transport property is strongly influenced by the magnetism. At the elevated temperatures, it shows the feature of a correlated metal. At high temperatures, it has weak temperature dependence. These results will be compared with the infrared studies.

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