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The combined traffic network of China¹ CHANG-GUI GU, SI-JUN PAN, KAI-JUN LI, YAN-QING QU, CHAO QIAO, YU-MEI JIANG, DA-REN HE, Ynagzhou University — From a new viewpoint, we study the combined traffic network of china including the intercity bus network, the railway network, and the airplane network. Some statistical properties, such as averaged distance, clustering coefficient, assortativity, degree distribution, and degree correlation have been empirically investigated for each traffic network and the combined one. From the results we found that the cumulative distribution of cluster coefficient is in a good agreement with the node degree distribution. In order to describe the jumping between the sub-networks, we define and discuss some new statistical properties, such as the jump-convenience and average jumping distance. This may be the first investigation on a combined traffic network.

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