Assume $\mathbf{A},\mathbf{B}\in \mathbb{R}^{n\times m}$ be two given data matrices. Let $\mathbf{X}\in\mathbb{R}^{n\times p}$ and $\mathbf{P}\in\mathbb{R}^{n\times q}$ ($p+q=n$), where $\mathbf{X}$ is the partially known guidance employed to guide the solutions of $\mathbf{P}$. From the Section 1, we can see that $[\mathbf{X}\ \mathbf{P}]=\mathbf{T}\in\mathbb{R}^{n\times n}$ is the orthonormal matrix which transform the matrix $\mathbf{A}$ to best fit the matrix $\mathbf{B}$ under the least square sense. Instead of obtaining $\mathbf{T}$ in classical orthogonal Proctustes problem, we need to obtain part of $\mathbf{T}$ with partially known guidance in the guidance version. Note that the original orthogonal Procrustes problems is a special case of the problem discussed in this paper. When there is no guidance at all, i.e., $\mathbf{X}=\oldemptyset$, the two problems are equivalent. For simplicity, we assume $n\ge m$ and the other cases can be analyzed in a similar way. We formulate the orthogonal Procrustes problem with partially known priors as: