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Xiang Yu*, xiang.zhiy@gmail.com, and **Shiqing Zhang**. *The central configuration formed by two twisted regular polygons*. Preliminary report.

We study the necessary conditions and sufficient conditions for the central configuration formed by two twisted regular polygons, in particular, we prove that two twisted regular polygons must have equal edge number and for the $2N$ -body problem, the twisted angles must be $\theta = 0$ or $\theta = \pi/N$, then we also prove that there exists only two simple central configurations for spatial configuration. (Received September 11, 2012)