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北黄海盆地构造变形及动力学演化过程 [点此下载全文](#)

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摘要:

以北黄海盆地构造几何学、运动学特征为基础,探讨了北黄海盆地的构造变形样式及动力学演化过程。研究表明,北黄海盆地的构造变形包括伸展构造变形、挤压构造变形、扭动构造变形以及反转构造变形等,北黄海盆地发育的区域动力学背景即是以区域拉伸作用为主、且叠加有水平挤压作用以及相关的扭动作用,并由此导致了北黄海盆地是以一系列地堑、半地堑式拗陷组成的拉张断陷盆地;北黄海盆地的伸展、挤压与升降作用受控于板块相互作用引起的区域引张与挤压应力场并辅以深部软流圈的微弱上拱隆起作用,其动力学演化过程包括晚侏罗世—早白垩世伸展断陷、晚白垩世—古新世热隆、始新世—渐新世裂陷、渐新世末期—新近纪早期构造反转以及新近纪热沉降等5个阶段。

关键词: [北黄海盆地](#) [构造变形样式](#) [动力学演化](#)

Tectonic Deformation Mechanism and Geodynamic Process of North Yellow Sea Basin [Download Fulltext](#)

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Abstract:

Based on the structural geometry and kinematics of North Yellow Sea basin, the tectonic deformation style and geodynamic process of North Yellow Sea basin are studied. The result shows that there are four kinds of tectonic deformation for North Yellow Sea basin, including extensional structural deformation, compressed structural deformation, shear structural deformation and inverse structural deformation, etc, and the regional geodynamic setting for North Yellow Sea basin were mainly the regional extension superimposed by horizontal compressing and correlative shearing, which resulted in extensional faulted basin for North Yellow Sea basin with a series of graben and half-graben mode depressions. The extension, compression, elevation and subsidence of North Yellow Sea basin were controlled by regional extensional and compressional stress field caused by interaction of plates and weak uplifting of asthenosphere underneath, and its geodynamic evolution process included five stages such as extensional fault depression in Late Jurassic-Early Cretaceous, thermo-upwelling in late Cretaceous-Paleocene, rifting in Eocene-Oligocene, structural inversion in late Oligocene-early Neogene and thermo-subsiding in Neogene.

Keywords: [North Yellow Sea basin](#) [tectonic deformation style](#) [geodynamic evolution](#)

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