

Thermophysics and Aeromechanics 2014 vol.21 N3, pages 309-317

---

## **Distinctive features of vortical structures generation in separated channel flow behind a rib under transition to turbulence**

Molochnikov V., Mazo A., Malyukov A., Kalinin E., Mikheev N., Dushina O., Paereliy A.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### **Abstract**

© 2014, Pleiades Publishing, Ltd. Results of laboratory research and numerical simulation of 3D separated channel flow behind a semi-cylindrical spanwise rib in laminar and transitional to turbulence flow regimes are presented. Data on dynamics of flow structure and evolution of large-scale vortical structures generated in the obstacle wake zone have been obtained.

<http://dx.doi.org/10.1134/S0869864314030056>

---

### **Keywords**

direct numerical simulation, flow visualization, laminar-turbulent transition, large-scale vortical structures, spanwise rib