Menghitung Helicity Aliran PAS = To calculate the Helicity of PAS flow / Tarhadi

Tarhadi, uathor

Abstrak

[ABSTRAK
Aliran PAS dibuat oleh Pekeris, Accad, dan Shkoller pada tahun 1973 sewaktu melakukan studi tentang model aliran yang dapat membangkitkan proses dinamo. Ternyata aliran PAS yang membangkitkan proses dinamo merupakan aliran Beltrami. Berdasarkan definisi helicity yang dikemukakan oleh Moffatt, aliran Beltrami memiliki helicity yang besar. Pada studi ini kita hitung seberapa besar helicity aliran Beltrami tersebut. Untuk membandingkan besar helicity Beltrami dengan helicity aliran yang lain maka kita hitung pula helicity salah satu aliran non Beltrami, yaitu aliran Quasi PAS. Hasilnya menunjukkan bahwa helicity aliran PAS lebih tinggi dari pada helicity aliran Quasi PAS.
<hr>
ABSTRACT
PAS flow created by Pekeris, Accad, and Shkoller in 1973 while conducting a study on the flow model which can generate a dynamo process. Apparently that PAS flow which generates dynamo process is a Beltrami flow. Based on the definition of helicity proposed by Moffatt, Beltrami flow has a large helicity. In this study we calculate how much the magnitude helicity of Beltrami flow. To compare the magnitude helicity of Beltrami flow with another flow, we also calculate helicity of a non Beltrami flow, that is Quasi PAS . The results show that the magnitude helicity of PAS flow is higher than the magnitude helicity of Quasi PAS flow ., PAS flow created by Pekeris, Accad, and Shkoller in 1973 while conducting a study on the flow model which can generate a dynamo process. Apparently that PAS flow which generates dynamo process is a Beltrami flow. Based on the definition of helicity proposed by Moffatt, Beltrami flow has a large helicity. In this study we calculate how much the magnitude helicity of Beltrami flow. To compare the magnitude helicity of Beltrami flow with another flow, we also calculate helicity of a non Beltrami flow, that is Quasi PAS . The results show that the magnitude helicity of PAS flow is higher than the magnitude helicity of Quasi PAS flow .]