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Refined uniform estimates of oscillatory integrals and areas. (Russian) Zbl 0692.47015
Usp. Mat. Nauk 43, No. 5(263), 197-198 (1988).

Let $f: R^2 \rightarrow R$, $\phi: R^2 \rightarrow R$ and

$$I(\tau, f, \phi) = \int_{R^2} \phi \exp\{i\tau f\}, \quad V(\epsilon, f, c, \phi, A) = \int_{R^2} \chi \phi,$$

where χ is the indicator of the set $\{x \in A: c - \epsilon \leq f(x) \leq c + \epsilon\}$ and A is an open set. In the paper some uniform two-term upper estimates for $|I(\tau, f, \phi)|$ and $|V(\epsilon, f, c, \phi, A)|$ are obtained.

Reviewer: [Yu.M.Ryžov](#)

MSC:

- 47A55 Perturbation theory of linear operators
- 26D10 Inequalities involving derivatives and differential and integral operators
- 58J40 Pseudodifferential and Fourier integral operators on manifolds
- 42B99 Harmonic analysis in several variables

Cited in 1 Review

Keywords:

oscillatory integral; canonical Maslov's operator