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| | authors | <ul style="list-style-type: none">Richard MelroseGunther Uhlmann | authors | <ul style="list-style-type: none">R. MelroseG. Uhlmann | DUPLICATES | 1537 |
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| | urls | <ul style="list-style-type: none">http://arxiv.org/pdf/0712.4236v2http://arxiv.org/abs/0712.4236v2http://arxiv.org/pdf/0712.4236v2 | urls | <ul style="list-style-type: none">https://www.semanticscholar.org/paper/3c8c7e4e26b883639a976754ffd7b390b39b0f4d | | |
| | id | id5138008585371623424 | id | id-7138442798024459059 | | |
| | abstract | Using the free-space translation representation (modified Radon transform) of Lax and Phillips in odd dimensions, it is shown that the generalized backscattering transform (so outgoing angle $\omega = S\theta$ in terms of the incoming angle with S orthogonal and S^{-1} invertible) may be further restricted to give an entire, globally Fredholm, operator on appropriate Sobolev spaces of potentials with compact support. As a corollary we show that the modified backscattering map is a local isomorphism near elements of a generic set of potentials. | abstract | Using the free-space translation representation (modified Radon transform) of Lax and Phillips in odd dimensions, it is shown that the generalized backscattering transform (so outgoing angle $\theta = S^{-1}\omega$, in terms of the incoming angle with S orthogonal and S^{-1} invertible) may be further restricted to give an entire, globally Fredholm, operator on appropriate Sobolev spaces of potentials with compact support. As a corollary we show that the modified backscattering map is a local isomorphism near elements of a generic set of potentials. | | |
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