

## Mathematics &gt; Differential Geometry

# A\_2-singularities of hypersurfaces with non-negative sectional curvature in Euclidean space

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In a previous work, the authors gave a definition of 'front bundles'. Using this, we give a realization theorem for wave fronts in space forms, like as in the fundamental theorem of surface theory. As an application, we investigate the behavior of principal singular curvatures along  $A_2$ -singularities of hypersurfaces with non-negative sectional curvature in Euclidean space.

Comments: 17 pages. This paper consists of the contents of sect. 2 & 3 in the ver. 1 & 2 of "The intrinsic duality of wave fronts" ([arXiv:0910.3456](https://arxiv.org/abs/0910.3456)) by the same authors, which are removed from the older version. The paper [arXiv:0910.3456](https://arxiv.org/abs/0910.3456) are revised as "Coherent tangent bundles and Gauss-Bonnet formulas for wave fronts" ([arXiv:0910.3456v3](https://arxiv.org/abs/0910.3456v3)), which will be published in "Journal of Geometric Analysis"

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