The referee's report on the paper

"ASCENTS AND DESCENTS S-SPECTRUM

IN QUATERNIONIC FRAMEWORK"

by Rachid Ameziane Hassani, Aziz Blali,

Mohammed Drissi-Alami, Abdelkhalek El Amrani

submitted to the

"Siberian electronic mathematical reports"

The paper belongs to the area of the quaternionic functional analysis. More precisely, the authors study various types of spectra for operators on quaternionic Banach spaces. This area of functional analysis is relatively new, and the starting works in the area should give answers to the quite natural questions: what basic properties of the classic (complex) functional analysis are preserved for the quaternionic spaces, and then what are their correct analogs? Clearly, the spectrum of an operator is one of such basic notions.

The research in this direction looks interesting and the paper shows some phenomena which are specific for the quaternionic analysis. To decide if the results obtained are of importance, one should see the place of the quaternionic functional analysis in the general picture of analysis: what are interrelations with other areas of analysis or possible applications, where this approach can lead us to new developments? If such links exist, it would be important to elucidate them. Unfortunately, the paper gives us only a poor and insufficient explanation of the importance of the research. Therefore, the results obtained in the paper appear as facts about specific mathematical objects from an isolated area of mathematics.

Therefore, **I cannot recommend the paper for publication in "Siberian electronic mathematical reports"**. It can probably be published in a more special journal, and then it is strongly recommended to extend the introduction by showing the general role of quaternionic analysis in mathematics.

Sincerely,   January 13, 2025