

With the revised version of the paper that has been uploaded by the Author, most of the questions posed by the reviewers have been answered. However, I think that the paper still needs a major revision, to improve its quality.

**- The paper requires a careful revision of the language, which is sometimes**

The English has been revised

- **In the introduction the discussion on multiple-domain models at lines 54ff. is partly repeated at lines 77ff.**

The sentence '*which recognizes the existence of mobile and immobile domains for transport,*' at lines 77ff has been removed as it is already said before (lines 54ff).

- **Furthermore the literature results recalled at lines 95 to 97 and 104 to 107 are largely similar and these sentences could be merged.**

The sentence '*The results indicated that the classical ADE is not appropriate for modeling early first arrival and long – time tailing*' has been substituted with '*The results confirmed poor fitting results of ADE.*'

- **Finally, lines 135 to 138 could be rewritten, as they seem to repeat the same concept with different words.**

*'Most of previous investigations of flow and transport in fracture networks considered Darcian flow, and there are few controlled laboratory experiments on solute transport under non Darcian flow. The behaviour of the solute transport in fracture networks under non – darcian flow conditions has been therefore poorly investigated.'*

The two sentences have been merged into: '*As most of previous investigations of flow and transport in fracture networks considered Darcian flow, the behaviour of the solute transport in fracture networks under non – darcian flow conditions has been therefore poorly investigated*'

- **It could be useful to clearly state in the introduction the dimensionality (1D, 2D or 3D) of the flow considered both in the experiments and in the models.**

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- **Equations (1), (2), (3) and (5): I do not like to see the power of a vector. I suggest to use a different.**

*The notation of vector was removed and  $\nabla$  operator was replaced with differential operator in x – direction.*

- **The model should be described more clearly. I have some concerns about equation (14). If I understand correctly, the Authors consider a network of conduits, labelled with the index  $i=1,...,n$ , that connect two fracture intersections in parallel. Then  $1/R$  is equal to the sum of  $1/R_i$ . In this case equation (14) should read  $Q_j = \sum(Q)/[\sum (1/R_i)]$ , which is different from equation (14).**

**In fact, the two expressions coincide only in the simplest case of two parallel conducts (R6 and R3+R4+R5). These are exactly the conditions of the paper. Therefore, I suggest to simplify the notation of the model.**

Equation (14) has been replaced with the following equations:

$$Q_j = \sum Q \left( \frac{1}{R_j} \frac{\prod_{i=1}^n R_i}{\sum_{i=1}^n R_i} \right)$$

**Non-public comments to the Author:**

**Please, check the use of significant digits, above all in the tables, where, e.g., 0.1925 +- 0.0863 should be written as 0.19 +- 0.09. Also, be consistent with SI prescriptions: e.g., at line 150, substitute "0.60x0.40x0.8 m" with "0.6 m x 0.4 m x 0.8 m" or "0.6 x 0.4 x 0.8 m3".**

*In the table 1, 2, 3, 4 the significant digits have been uniformed and aligned*

**Line 205, substitute a & b with a' & b'.**

*a & b was replaced with a' & b'*

**After equation (8), please change C1 with Cim, as suggested by one of the reviewers.**

*In the equation (8) C<sub>1</sub> was replaced with C<sub>m</sub> as suggested by the second reviewer.*