

Review of: "Investigations on Input Impedance and Radiation Pattern of a UWB Antenna for Microwave Imaging"

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Potential competing interests: No potential competing interests to declare.

Summary:

Interesting investigation of varying ground plane reflector size for monopole planar antenna. Some pattern measurements given but not at the frequencies of presented simulated patterns, additional pattern simulations given. Very verbose abstract and introduction. Very verbose and extensive section "2. Related Works" (section 2: 12 pages!).

Concept:

- The use of RF absorber to produce desired antenna characteristics (section 2). Main drawback is reduction of efficiency and gain due to loss. The comparison to legacy antenna concepts without absorbers is rather unfair.
- It is unclear why an absorber should lead to resonances ("The disadvantage of using an RF absorber is that it could produce conductive cavities that will oscillate", page 8).
- The simulated return loss of the designed antenna, shown in figure 23 is different from the simulation curve in figure 24?
- The measured and simulated pattern should be at the same frequency, with the same antenna (ie, ground plane size). Measured and simulated pattern cuts shall be in one figure to ease comparison. Return loss (measured and simulated) for increased ground plane versions missing.

Clarity and structure:

- synonym ("TDC") defined 3 times in a single paragraph (page 3)? Once shall be sufficient.
- authors referring to themselves both in singular ("the author") as well as in plural ("the authors") - for example, both cases appear in the first paragraph on page 4. This shall be made consistent.
- many data, including measured, are repeated from ref [9] in the figures 4,5,6,7,8.
- figure captions and table titles include "source - the authors" (or, "the author"), which can be omitted because the complete manuscript has the authors as its source, unless stated otherwise.
- equations shall be type-set as such, not as text (see page 18)
- the many of the "other references" (page 36) is unclear: relevant references are numbered and listed on page 37, so why not deleting the irrelevant "other references"?

