



Panel Summary #1

Proposal Number: 1211356

Panel Summary:
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Intellectual merit

Strengths:

IDENTIKIT2 is a tool to complement direct numerical merger simulations, with potentially broad applicability. The automated parameter search implemented in IDENTIKIT2 is a significant improvement in usability over the original software.

Weaknesses:

Beyond the ability of the software to provide estimates of the initial orbital parameters of observed systems, given certain, strong priors on other important parameters, the proposal lacks specificity on what will be achieved, scientifically.

The description of the method lacked clarity and many assumption made in the software were only implicit.

Given the 17 parameters spanned by the model, the proposal also does not demonstrate that initial conditions for ab initio merger simulations derived using IDENTIKIT can successfully reproduce the observed system.

Given the lack of gas dynamics in the IDENTIKIT tool, using observed HI kinematic information to constrain orbital parameters is necessarily inaccurate, and the degree to which this simplification of neglecting gas dynamics affects the results is not discussed in the proposal.

Broader impact

Strengths:

Releasing IDENTIKIT2 for public use is the major broader impact component of the proposal. The proposal demonstrates that IDENTIKIT has already been used by the community and has been cited.

The data management plan adequately addresses the requirements of this proposal.

Weaknesses:

The role of the graduate students in the project is not specified. Given the limited number of students advised by the PI in previous research, the proposal would benefit from a more detailed description of student involvement and mentoring strategy.

The summary was read by the panel and the panel concurred that the summary accurately reflects the panel discussion.

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