This is a fake review written in the style in which final evaluations should be written. Each comment covers a specific item or a series of related items. The comments contain only declarative statements and are written in paragraph form (with no bullet points). Successive comments are separated by an empty line. "None noted." is placed any section where the panel has no comments.

Generic Example PANEL EVALUATION of
PROPOSAL SUBMITTED IN RESPONSE TO: NNH25ZDA001N-OPRP

PI: Leisner, Jared S
Institution: NASA Headquarters
Proposal Number: 25-OPR25-9999
Title: Saturn's magnetospheric convection: Properties and evolution of small-scale injection events

BRIEF SUMMARY OF RESEARCH OBJECTIVES:

This brief description primarily is here so that six months from now the program officer can start here and after reading this think "Oh yeah, that one". Some cynical program officers will say that it's also here so that the proposer knows that you read their proposal. That would become obvious from reading the weaknesses as well, I would think. Some programs don't include this anymore. Some require that peer reviewers just use your abstract.

BRIEF SUMMARY OF OVERALL EVALUATION:

This brief summary of the evaluation is just that, typically one sentence for each major finding. Often reviewers are told to start each major strength or weakness with a bold headline, in which case this section will maybe simply a collection the bold topical sentences from the major strengths and weaknesses below. This section should also mention the relevance and cost if the panel was asked to comment on those factors. It should look something like this:

Combining data from multiple Cassini instruments would offer new insights and reduce uncertainty, greatly increasing the likelihood of success. Also, the focus on young injection events observed by the Cassini radio and plasma wave science instrument is also a strength, as it could help to constrain this or that parameter and or is a better test of thus and such. Then it says "However," and gives the weaknesses, e.g., However, recently published papers have shown that the experimental approach cannot achieve the goal of determining this parameter or However, recent observations indicate that the elemental abundance is far too low for this to be a factor or just However, the lack of detail in the descriptions of the measurements call into question whether the parameters can actually be measured at the required level of accuracy. The effort requested was reasonable to conduct the proposed work and the project is relevant to this program.

INDIVIDUAL CRITERIA FINDINGS

The generic definition of Merit is given in Appendix D of the NASA guidebook for Proposers. This generic definition of Merit includes four parts: 1) The idea including impact, 2) The implementation 3) The people and 4) Facilities, instruments, equipment. By default for ROSES, Merit now also includes the DMP, if applicable. ROSES panel evaluation forms returned to proposers should break out Merit Strengths and Weaknesses into Major and Minor.

The two most common kinds of major Merit findings are Science and/or Implementation; the former focuses on the concept, the latter is directed at the manner in which the work would be done. Thus, it is entirely possible that a proposer could get a major strength for an idea that has great potential and yet get a major weakness for implementation, because the manner in which they would attempt to test their hypothesis is flawed or doesn't adequately distinguish between the hypothesis they are trying to test and another one. While findings on the other aspects of merit occur, they are less frequently "major" strengths or weaknesses in my experience, because being qualified to do the work and having the basic tools is pretty much as expected.

INTRINSIC MERIT

Major Strengths:

This is the defination of a Major Strength, in the form of a Major Strength.
A major strength is something that "significantly increases" the likelihood of success (= the confidence of the peer review panel that the work will be successful). For example, a finding that the proposed goals and objectives are of great importance, highly compelling, that the research would make a significant impact in the field. Note the use of the word would rather than will. A major strength for implementation is a finding of something that greatly enhances the likelihood that objectives will be accomplished. The former could be a novel science idea (gee, I have never heard anyone suggest that these two things could be corellated before), whereas the latter a clever way of doing the measurement.

This is Max's recommended generic format for a major finding, either a strength or a weakness. That is, it starts with a bold summary sentence. If at all possible, responsibility (whether due to action or inaction) of the strength or weakness should be expressed as an attribute of or lack in the proposal rather than people. A major finding should be two to five sentences with factual statements that support the initial assertion of strength or weakness, and then (if necessary) a sentence that ties the described issue back into the proposal with specificity. Assertions or findings should be written such that there is neither a direct nor an indirect reference or allusion to the panel, e.g., not "The panel was skeptical that…" instead it was a failure of the proposal that it did not clearly demonstrate that...whatever. Don't use words that are also adjectival ratings like "excellent". Below are examples. Some program officers feel very strongly that all references to the proposal should be in past tense. Examples follow.

Combining data from multiple Cassini instruments would offer new insights and reduce uncertainty, greatly increase the likelihood of success. The Cassini magnetometer, plasma wave, and plasma data data sets together would provide the most complete image of the injection events possible with single-spacecraft observations, but have rarely been used together in the manner proposed. The synthesis of these datasets should greatly reduce the uncertainty and compensate for any spurious single instrument results.

Minor Strengths:

A minor strength is a positive finding that increases the confidence of the peer review panel that the work will be successful, but not significantly, i.e., without the superlatives, and/or only about a part of the proposal.

Minor Strengths don't start with a bold sentence and these are typically shorter, sometimes just one sentence, e.g., team strengths are typically minor unless they are really special. Ditto having published, and having adequate instrumentation. These things could be major strengths if they are the one and only group in the country that can do this, they have a unique capability etc., but generally these are minor, if its a finding at all. Maybe its just as expected.

Major Weaknesses:

This is the defination of a Major Weaknesses, in the form of a Major Weaknesses.
Just as a major strength is something that "significantly increases" the likelihood of success (the confidence of the peer review panel that the work will be successful), a major weakness is something that significantly undermines the confidence of the peer review panel that the work would be successful.

The classic major weakness is a lack of detail. If you said that you were going to do something because it was important or because that is the thing that you do better than others, then you better explain exactly how you will do it. Lack of detail makes the reviewers worry that while the proposal presents a good idea, the team doesn't really appreciate how difficult this will be, resulting in either nothing or worse: a result that they think does what they wanted it to do but actually is misleading. Again, don't use words that are also adjectival ratings like "poor".

Although the proposal stated that analysis of the plasma wave would be automated, it did not provide sufficient detail on this process. It correctly noted that information on these waves would assist studies on particle acceleration (due to wave-particle interactions), but did not detail the data that the relevant researchers would require. In order to study wave-particle interactions, it is necessary to have the polarization ellipse and propagation information for the waves. In Figure 2, the proposal showed an example of whistler mode waves from a "young" injection event. The wave frequencies there were low enough to fall into the RPWS five-channel waveform receiver’s range, which would have allowed a test of how "planar" the waves are and whether reasonable polarization ellipses could be calculated. Without this proof of concept, the proposal did not convincingly demonstrate that this data product would produce accurate and meaningful results.

Minor Weaknesses:

A minor weakness is a finding that decreases the confidence of the peer review panel that the work will be successful, but not significantly and/or only about a small part of the proposal.

The technique of identifying how far a flux tube has moved planetward by comparing its heated plasma to conservation of the first adiabatic invariant within the magnetosphere would work at Saturn due to the relatively large region over which these events are observed and the plasma and magnetic field variations within the same. Although it suggested that the method could be used

elsewhere, the proposal did not demonstrate that similar useful gradients are present in the other fast-rotating magnetospheres

Although the proposal did not state that latitude would be considered as a separate parameter, Andre et al. (2007) showed significant variation in the magnetic signature with latitude. If events at all latitudes are grouped together, then sampling bias due to the correlation between coverage in local time and latitude in Cassini's orbits may introduce anomalous or erroneous results.

The proposal would have been strengthened by a demonstration that the technique of identifying the flux tube's source L shell produces a clear one-to-one mapping. Given the large bins in L shell used for the analysis, it is possible that misidentifications would bias the results within a bin.

MERIT RATING: Very Good

The adjectival Merit rating returned to the proposer is based on the median of the panel votes (1 = Poor up to 5 = Excellent, see the table in Appendix D of the NASA guidebook for Proposers). Some panels allow half votes (e.g., E/VG = 4.5). Sometimes ratings are given separately for each of the criteria (Merit, Relevance, Cost), but sometimes only one "overall" rating is given back to the proposer, see below.

RELEVANCE

There is a great deal of varation in how ROSES elements review relevance. Please note that this is not relevance to NASA, or to SMD, its relevance to the specific program element. Some program officers require an explicit statement of relevance from the proposer (e.g., on the cover pages) and will have the panel evaluate not just whether the proposal is relevant but whether relevance was adequately and convincingly discussed. Others just ask: "Do you think it was relevant?" Some have each panelist to vote on a five point scale, others on a three point scale, some just thumbs up or down, and some have the panel provide only comments but no vote.

Strengths:

As stated, this work is relevant to the Outer Planets Research program's goals. This work would enhance the scientific return from the Cassini mission to address a key question of fast-rotating magnetospheres. Further, this work would be applicable to future missions at Jupiter, Uranus, and Neptune.

I don't think that we need Major and Minor subcategories in Relevance and Cost. Others may disagree.

Weaknesses:

None noted.

COST REASONABLENESS

For ROSES, salary fringe and overhead are not seen by peer reviewers so the evaluation of cost is an evaluation of whether the person time allocated is appropriate and whether the costs of

things are reasonable. As with relevance, sometimes this criterion will result in votes and scores, but may just result in comments. Sometimes small cost issues have no effect on whether or not the proposal is selected, but are dealt with later in a peremptory fashion by NASA, e.g., your travel budget is cut in half and you may take it or leave it. If the cost issue is more complicated but the merit score is excellent a negotiation may occur.

Strengths:

The FTEs requested are commensurate with the proposed work effort and well-justified.

Weaknesses:

When cost weaknesses are noted they are typically because: 1) The time allocated seems way off 2) there was too much travel and 3) something costs too much.

1) The panel gives a weakness if the time allocated seems either too much or too little to perform the tasks as proposed. Some proposers might think that putting down too little time would be fine, no one will complain if they ask for less, but that's not how it works. In fact, it can give the panel the impression that the proposers really don't understand what they are in for and that the project will fail for lack of person time. It used to be common for university professors to put down very small times (like one week) funded and not allocate any unfunded time because the university would not permit them to ask for funding for more than just their summer salary, and they could not be honest about the time they were going to spend during the year. Max thinks he has fixed that problem. If your university doesn't like this please send email to sara@nasa.gov.

2) Reviewers often object to travel to conferences either early in the project when there is little to report or a high proportion of travel relative to time spent on the project, i.e., if as PI you are only devoting quarter time to this but are budgeting $ for travel to 2 meetings per year then this means you are going to 8 meetings per year? If so, OK, but if that sounds high to you then it will sound high to your peer reviewers who are people just like you.

3) Costs of items must be justified, especially at the high end of a range. For example, if your proposal says you need $16,650 for a TDS3054C Tektronix Digital Oscilloscope then it better be clear why a simpler Oscilloscope e.g., from the TBS1000 series for a few hundred won't suffice.

DATA MANAGEMENT PLAN:

Starting in ROSES-2020 the evaluation of the DMP became part of Merit, so it can change the grade and have a bearing on whether or not the proposal is selected. See the ROSES DMP FAQ.

Strengths:

The proposed data management plan was complete and fully compliant. The plasma wave data products would be uploaded to the Planetary Data System and the code would be uploaded to GitHub

Weaknesses:

None noted.

Note to the PI (optional): Adherence to these comments does not constitute a guarantee of future funding.

These are not findings of strengths or weakness, they are things like: There were numerous typographical errors or this or that figure was not clear because the axes were not labeled or the timeline was illegible because of the coloring of the blocks behind the text or this proposal might be better suited to such and such a program.

Overall Adjectival Proposal Rating: Very Good

Not all programs have panelists vote on a separate overall grade, some just have a vote on and return the Merit rating. The adjectival rating is determined by the median of the votes by the panel. See the table in Appendix D of the NASA guidebook for Proposers for definitions of the Adjectival ratings.

----------PAGE BREAK ----------
After this are the notes to NASA that are not seen by the proposer.

COMMENTS TO NASA These comments will not be shared with the PI or outside of NASA.

The panel is encouraged to put reminders here to NASA or practical messages about matters on which the award should be contingent e.g.: "Verify that the proposers received the telescope time…" or "NASA no longer has a parabolic aircraft capability due to divesting the JSC C9 nor a contract with a parabolic aircraft flight service. Consequently, additional funds must be provided for the awardee to acquire Zero-G parabolic flights commercially."

This proposal was meritorious and would generate some really cool data products but lacked a science investigation. Please look into whether your data archiving program might be interested.

Any programmatic factors the selection official asks about, e.g., this is an early career proposer.

Heliophysics Division only, comments about people go here, not above.

If there were two easily separable tasks with very different ratings the panel may, rarely, vote a second time e.g., if just the first task had been proposed. The program officer is not obliged to follow this, many feel that the proposal should be just judged as submitted.

VOTES OF THE PANEL

The distribution of scores should be recorded somewhere. In the old days it was recorded here as seen below. Personally, I had a spreadsheet separate from the panel evals into which the votes were recorded and it automatically calculated the both the median and the mean and difference, to highlight outlier votes.

Rating of Intrinsic Merit:

E	E/ VG	VG	VG/G	G	G/F	F	F/P	P
	X	XXX	XX	X				

or

E	VG	G	F	P
1	6	1		

Rating of Relevance: (some panels don't grade or only as yes or no or on an abridged scale)

E	G	P
7	1	

or

Yes	No
7	1

Rating of Cost Reasonableness: (some panels don't grade this or only on an abridged scale)

E	VG	G	F	P
1	6	1		