

Example Plenary Presentation for a ROSES Review Panel

- This is a generic ROSES review plenary presentation. If you see errors or omissions contact SARA@nasa.gov.
- XX and or red means this is something that should be removed or customized.
- This is a single power point file, but generally I gave two, presenting the first part the night before the review began and the second part, about how to write a finding, the after the first day of discussion.

Thank you, thank you, thank you

thank you, thank you, thank you

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Thank you all so much for participating in this review. I just cannot thank you enough. For those of you who are getting the trivial honorarium I know that its not enough and for those of you who are civil servants and not even getting that, well, I know how you feel. But thank you, you are good people, doing an important job. Thank you for your service to your nation's space agency.

This is Part 1, about the review

This is Part 1, about how we will do the review, about the evaluation criteria, about conflict of interest and bias, how to deal with compliance issues and voting and other things you need to know before starting the discussions and actually voting. In Part 2 we will talk in more detail about exactly what the evaluations should look like.

Introductions - NRESS

- XX Red and or XX means please remove and or customize. XX these are just examples, names of contractors supporting the review...
- Michelle Henson, NASA Research & Education Support Services (NRESS) Primary task Lead
- Lynette Williams, NASA Research & Education Support Services (NRESS) Secondary task lead
- Renee Atkins (NRESS) Meeting Planner

NRESS does their presentation now about the file sharing and logistical things.

Introductory Information about your program element, this one is from Emerging Worlds (EW) customize

- Try to understand the formation and early evolution of the Solar System.
- Strategic question: "How did the Sun's family of planets, satellites, and minor bodies form and evolve?"
- Scope: physics and chemistry of events and materials relevant to the formation of planets, satellites, and minor bodies, including dust, and to the early history of these bodies.
- The Emerging Worlds program values the potential of interdisciplinary efforts to solve key scientific question.

What does EW not do?

Again, replace/customize

- Research and analysis of exoplanetary systems
- Proposals centered on observations outside Solar System
- Earth science, except for well-justified analog studies
- Data analysis proposals that could be submitted to one of Planetary Science Division Data Analysis Programs.
- Investigations into processes that occur late in the history of small bodies and after global differentiation on other bodies.

The text of the call for proposals will be available to you for reference and if you have questions about relevance please ask.

Legal Reminders

- All review materials are property of NASA. Destroy paper at end of meeting; clear proposals and reviews from your storage media.
- The peer review process must be fair, impartial, informed, and confidential both in fact and in appearance.
- Confidentiality of proceedings and proposals must be maintained by panelists even after selections are announced. NASA never releases names of external or panel reviewers. Breaches of confidentiality are unethical and unfair to all involved.
- No social media
 - Do not Tweet!
 - Don't reveal your location (if in person)
 - Don't reveal your participation on Facebook!
 - Also don't discuss specific service in your Departmental Newsletter or in your CV.
 - Generic statements about service are permissible, of course.



ROSES Review Defaults

(these may be superseded by instructions in a program element)



- No triage is performed; all [compliant] proposals are discussed.
- Hypothesis-driven science is not required — there is a place at NASA for exploration & Applications. You need to consider when it is appropriate.
- Don't guess, infer, interpolate, extrapolate, or read between the lines. Evaluate what's written in the proposal.
- Proposals are not required to have a training component, although having one may be considered a strength by the panel.
- Proposals are not required to have a community service component either.
- Don't compare one proposal with another or rank them (see below).
- Proposers only receive the panel reviews, not the individual reviews.
- Panel doesn't make selections... it makes "findings". Discipline scientists recommend proposals for selection to the selection official, typically the R&A for the Division. The goal is to select the best, relevant science that we can afford.

Conflict of Interest

We hope that none of you have a real "conflict", that is, a personal financial stake in any of the proposals under consideration today. None of you should be a paid team member or married to someone who is or has a personal financial stake. If so, you have a real conflict, i.e., a "panel-level" conflict and you may not take part in the review.

For Civil servants, the rules for conflict are slightly different, sometimes having serious consequences, so its best to confer with legal in such cases.

Conflict vs. Bias

Its quite possible, even likely that some of you work at (or have applied for a job at) the same organization as team members on some of the proposals under consideration today. In such cases you step out of the room for the discussion and voting on that proposal, but you may review the other proposals in the panel. That is what we call a proposal-level conflict. Not really a conflict, bias really but we use that word. Note: UCLA \neq UCSD; JSC \neq GSFC. Those are really competitors, not the same organization.

Bias and Recusal

We want to avoid even the appearance of bias and there are relationships that cause a reasonable person to presume that one is biased. When you did the self certification in NSPIRES and saw the lists of names and organizations. On the next slide we will see what kinds of relationships might create the appearance of bias. Basically, any case where you will have trouble being unbiased, like someone with whom you work often (or a rival), step out of the room for that proposal.

Bias and Recusal Examples

- You are a long-term, close collaborator of a PI/Co-I
- You were a mentor or student of a PI/Co-I in recent years (NSPIRES forms say 12 months but many avoid reviewing proposals where mentor or student is PI for 2-5 years afterwards or longer)
- You published a series of papers with a PI/Co-I in the last 3 years
- You receive funds from an important investigator on the proposal under consideration.
- You have any reason to be concerned about your own impartiality or the appearance of impartiality.
- You have a close, personal relationship with a funded team member.

Bias and Recusal cont.

When in doubt ask the civil servant who is running the review panel. If its a case of bias, one way to test it is using our community standard: Have the panelist present their relationship with the proposer (e.g., "we coauthored a paper on this topics two years ago") and ask the panelists, is anyone uncomfortable with this? If so, the panelist may leave their comments, like an external, and exit the room. If the response is 'meh', then the reviewer may stay. Please note it in the log, however.

Cognitive Bias

- NASA strives to reduce factors that could reduce the accuracy of our review process.
- One well-known such factor is unconscious bias
- One way to attenuate such bias is to adhere to the criteria and apply them uniformly.
- Another good practice is to systematically consider each factor within Merit (see below) for each proposal
- Another is for us to take our time, not rush.
- Don't let yourself get hangry.

Code of Conduct

- SMD is committed to ensuring that our peer-review panels are conducted with the highest possible levels of integrity, inclusion, and professional respect.
- The SMD Anti-Racism Action Group (ARAG) has also recommended the use of a Code of Conduct as a tool to aid in achieving these goals.
- The next couple slides are about this and
- [Here is a link to the externally available PDF of the SMD Code of Conduct for Review Panels](#)

Code of Conduct for Panelists

1. Be prepared and contribute to the panel review.
2. Evaluate the merit of the proposals including the strength of the proposing team not the people as individuals.
3. Evaluate expertise and not "experience" (slide on this below)
4. Be an active participant in the discussions.
5. Do not interrupt others or talk over others.
6. Keep comments succinct and to the point and thus give everyone the opportunity to contribute to the discussion.
7. Be mindful of bias in all contexts.
8. Step in to address abusive or bullying behavior.
9. Be respectful of all regardless of differences (professional or otherwise).
10. Actively help create an environment free of harassment.

At any time, please talk to a NASA Official if you have any concerns.

Code of Conduct for Panel Chairs

1. Lead by example in creating the appropriate environment for free and professional discussion.
2. Lead the panel in an inclusive and welcoming way and respond immediately to any abusive, bullying or unprofessional behavior.
3. Proactively encourage participation of reviewers who may be less experienced at panel reviews.
4. Proactively solicit input from each panel member in the discussion of each proposal; ensure that the discussion is not dominated by a few reviewers.
5. Keep the discussion moving and end on time to allow for sufficient time and discussion for all the proposals in the panel.
6. Keep the discussion focused on the strengths and weaknesses of the proposal, and not on the individuals or other tangential topics

At any time, please talk to a NASA Official if you have any concerns.

How to Proceed

- The primary should read all the reviews for that proposal, including externals, if any. Take notes on whether major findings repeat, or are contradictory.
- Begin with proposals where everyone agreed, more or less, Those will go more smoothly.
- Avoid starting with proposals with conflicts or, if you must, discuss at a time when the person conflicted is out e.g., early if the panelist is on the west coast so they can just come into the meeting later.
- The primary or the civil servant leader or the executive secretary starts off by reading out the names of people and organizations. Ask whether anyone has a reason to recuse themselves.
- The primary presents first, giving a brief summary of the idea and implementation, listing their major findings for Merit, strengths and then weaknesses, followed by relevance and cost, if applicable.
- Then the Secondary reviewers present in turn adding to the comments by the primary.

How to Proceed, cont.

- The primary or one of the other panelists should then succinctly summarize the external reviews, reading out loud only those comments that bring up something new, are illuminating, or contradict something that was said. The panel may disagree with/ignore part/all of an external review. In any case, focus on words, not grades, since they are not calibrated to the panel.
- Be succinct, don't repeat what others have said. It's OK to say "I agree but have an addition...", or whatever. It's not wrong to speak only briefly, but if you have something to say then say it.
- Once a proposal has been discussed for 30 minutes start paying attention to the time. It's OK for a difficult case to take an hour but they need not all take that long.
- Pay attention to the quiet people, specifically ask them their opinions if they are not speaking up.
- Don't let yourself get hungry, eat and drink. Stretch.

Evaluation Criteria

- Default criteria are Merit, Relevance, and Cost, as defined in the guidebook (those should be available to you).
- The program element may add or modify criteria xx if so note that in detail here.
- Scientific/technical merit. This is always scored by the panel on the full scale. Half points are generally permitted.
- Relevance (to the program specifically). Tell us what you think, assuming everything works as proposed. This may be yes/no or an abridged scale.
- Cost reasonableness. This may get a grade or not. State what the issues are.
- In each case the proposals are compared to an ideal, not to one another (dog show analogy: a beagle is compared to an ideal beagle, not a basset hound).

Guidebook Definition of Merit

The NASA Guidebook defines merit as:

- The scientific quality of the proposed project, including, but not limited to, the scientific rationale and the expected significance and/or impact of the proposed work;
- Overall technical quality of the proposed work, including, but not limited to, the quality of the management plan and project timeline for carrying out the work and the effectiveness and resilience of the proposed experimental designs, methods, techniques, and approaches for achieving the proposed goals and/or objectives;
- The qualifications, capabilities, and related expertise of personnel demonstrated by the proposal (e.g., publications, delivered products, and other measures of productivity and/or expertise) that would affect the likelihood of achieving the objectives.
- Facilities, instruments, equipment and other resources or support systems presented in the proposal that would affect the likelihood of achieving the proposed objectives.

About Evaluating Merit: Expertise vs. Experience

- Expertise vs. Experience.
 - Expertise: expert skill or knowledge in a particular field.
 - Experience: practical contact with and observation of facts or events
 - While expertise usually comes with experience, one who has repeatedly made the same mistake has experience but may not have learned from it.
- The definition of Merit now uses the word "expertise" rather than experience so as to emphasize the assessment of whether the team member has the requisite knowledge/skills etc. needed to conduct the work, as opposed to how many years they have done it.

About Evaluating Merit

- You must write something on:
 - A. SCIENCE
 - Are the scientific goals important and compelling?
 - How much will the proposed research advance the field if successful?
 - B. IMPLEMENTATION
 - Can the goals be achieved using the proposed techniques and methods?
 - Can the goals be achieved on the proposed schedule?
 - Can the goals be achieved with this proposal team?
 - Does the proposal acknowledge potential pitfalls and propose alternatives?
- You need not explicitly make findings regarding the team and the facilities, but do consider it for each proposal. It should be very rare for findings regarding the team and the facilities to be major strengths.

DMP is part of Merit

- Most proposals must provide a data management plan (DMP) or an explanation of why one is not necessary given the nature of the work proposed.
- Starting in 2020, in a change from prior years, ROSES said that unless we are told otherwise, the sufficiency of the data management plan is evaluated as part of the proposal's intrinsic merit.
- Unless otherwise stated, the data management plan should be in a 2-page section in the proposal PDF immediately following the references and citations for the Scientific/Technical/Management (S/T/M) portion of the proposal and does not count against the page limit for the S/T/M Section.
- Not all program elements require a DMP (e.g., ESTO and other technology development calls don't ask for a DMP, but ROSES still requires that applicable data be archived later).
- Some program elements require a DMP but do not put it in a separate section, it's part of the page limited S/T/M Section. Examples include: A.8 GEDI ST, B.7 SWO2R, B.12 HDEE, C.4 PDART, D.2 ADAP, D.13 APD USPI, D.14 TCAN, and F.3 XRP.

Additional Merit Continued **Optional**

XX Program officer: In addition to the standard definition of Merit some programs in some years have additional factors for Merit, e.g., calls for Science Team members sometimes include a factor about complementing not duplicating existing efforts, calls involving flight will have special factors particular to the carrier vehicle, and early career competitions sometimes include factors related to professional development of the PI. **If this call has a special factor or criterion this is the place to describe it.**

Major vs. Minor Findings

Your Intrinsic Merit findings take the form of a list of strengths and weaknesses, each either *major* or *minor*.

- **MAJOR Strengths and Weaknesses**

Findings regarding things that greatly increase the likelihood of success or failure = of such importance that each one can influence your vote on Intrinsic Merit.

- **MINOR Strengths and Weaknesses**

Findings about things of lesser importance, i.e., that somewhat increase the likelihood of success or failure. Taken alone, none should have much influence on your vote on Intrinsic Merit, but several of them combined might influence it. (If are group of them are related consider combining into a single Major).

Evaluating Merit – I. Strengths

- Major Strength:
 - A. A finding that goals and objectives are of great importance, highly compelling, or that the research would make a significant impact in the field [Science]
 - B. A finding that greatly enhances the likelihood that objectives will be accomplished [Implementation]
- Minor Strength:
 - A positive finding about the goals, objectives, or impact, but without the superlatives, or only about a small part of the proposal [Science]
 - B. A finding that somewhat enhances the likelihood that some or all objectives will be accomplished [Implementation]

Evaluating Merit – II. Weaknesses

- Major Weakness:
 - A. A finding that a large portion or all of the research is unlikely to make a significant [positive] impact in the field [Science]
 - B. A finding of a serious deficiency that could prevent objectives from being accomplished [Implementation]
- Minor Weakness:
 - A. A negative finding about the likely impact of the work, but which only applies to a small part of the proposal [Science]
 - B. A finding that somewhat decreases the likelihood that objectives will be achieved [Implementation]

About the Team

- Sometimes a strength for qualifications of the team is listed as consolation prize for weak proposals, like this is terrible but they have gone good work in the past.
- Remember that a Major Strength must be something that greatly increases confidence in achieving the objectives. Only make it a major if the team is really, really good, and will be able to do something other teams probably could not do.
- Such strengths should be rare
- Be consistent, this is prone to unconscious bias.

Merit vs. Relevance or Cost

- Criteria are separate. Occasionally, there may be some confusion. Here are the most common examples:
- Impact is Merit, not Relevance. A proposal is not *more* relevant if it would have a greater impact, it is more meritorious.
- Assessing whether the amount of person time is appropriate is cost.
- Only very rarely, if the time requested is hugely over or under what the review panel expects, that may indicate a conceptual problem, i.e., they may fundamentally not understand what they are about to undertake. In such a case that underlying misunderstanding is Merit. Such a finding would require examples be provided from the text of the proposal.
- Similarly, requesting too many years is Cost or comments to the PI or NASA, rather than Merit.

About Relevance

Relevance is judged assuming that the proposal is successful as proposed. That is, we are ignoring merit weaknesses for now.

Relevance is judged based on relevance to the particular program element of ROSES, not to "NASA", "SMD", or "Earth Science".

Rarely program elements require an explicit statement of relevance but that is not standard. Unless otherwise stated the only question is whether you, the reader, think it relevant.

About Cost – What to evaluate

Are the proposed levels of effort (i.e., person time) appropriate to successfully accomplish the goals of the investigation?

Do the other resources you can see (e.g., supplies, equipment, travel, instrument time, high-end computing time) seem appropriate to successfully accomplish the the investigation?

Is the budget clearly described and justified, including all major sub-awards?

About Cost – What not to evaluate

Do not comment on or even think about salaries in the unlikely event that you can see them.

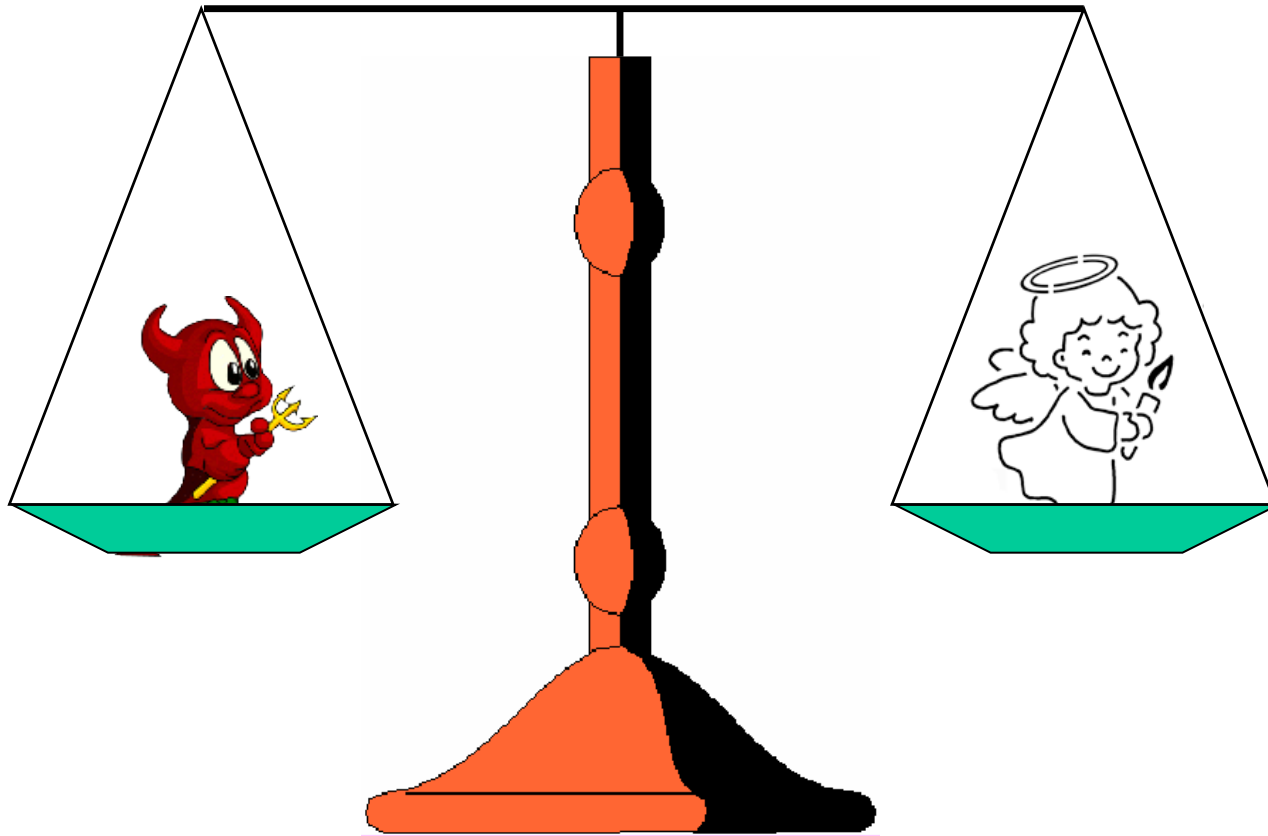
Don't worry about "bang for the buck". It is not up to the panel to decide that a proposal costs too much of the available funds - that's the job of the Program Officers. Plus, you can't see all of the costs anyway.

On a related note, do not comment on cost sharing, like ooo, what a great deal that you are getting this post doc for free. Just assess whether the time in the summary table is appropriate, whether or not NASA pays.

PIs can't control their overhead rates or costs of benefits, so on the off chance you get to see those, ignore that and don't make findings on those.

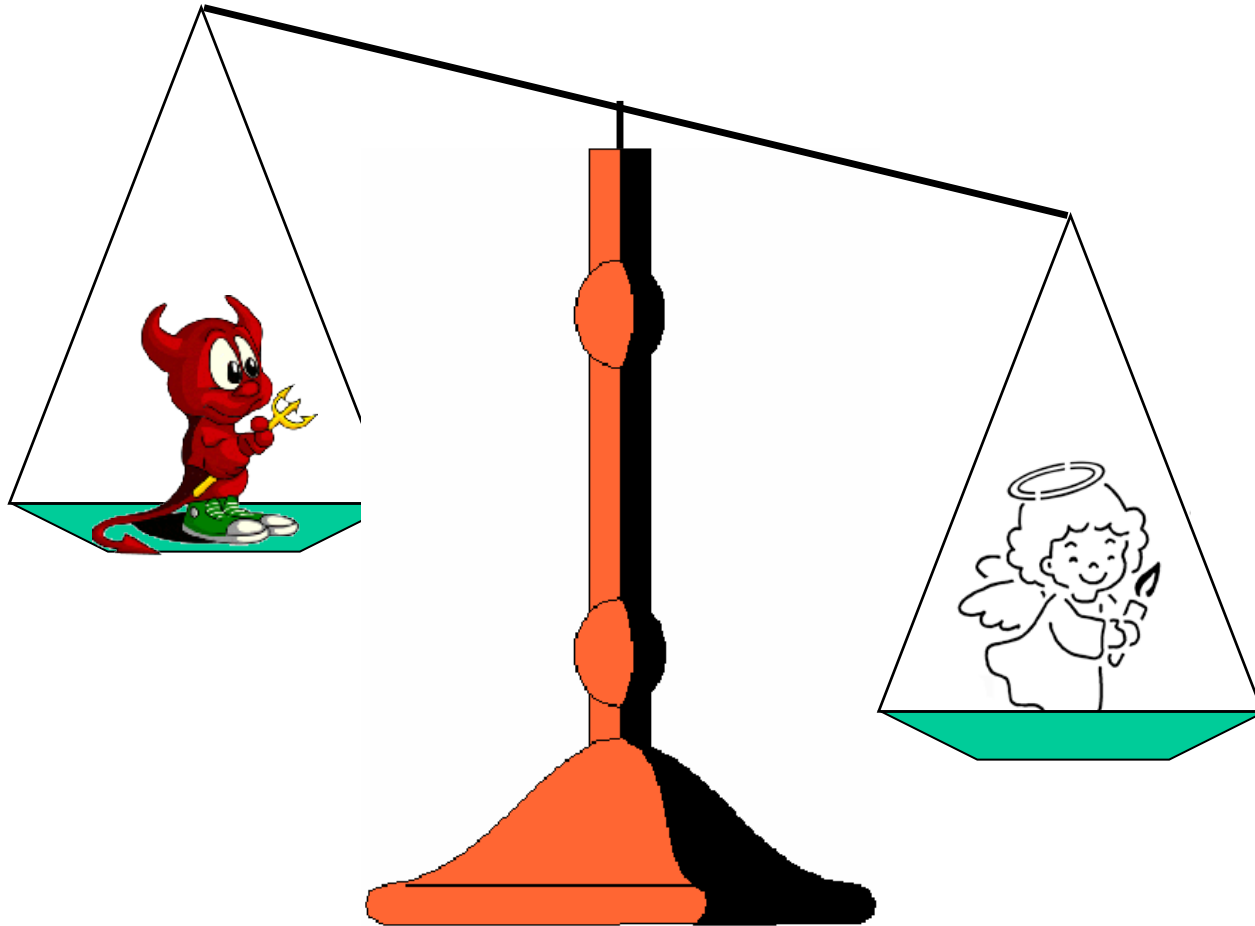
Scoring Intrinsic Merit – Good

A competent proposal, in which strengths and weaknesses essentially balance (no "fatal" weaknesses).



Good

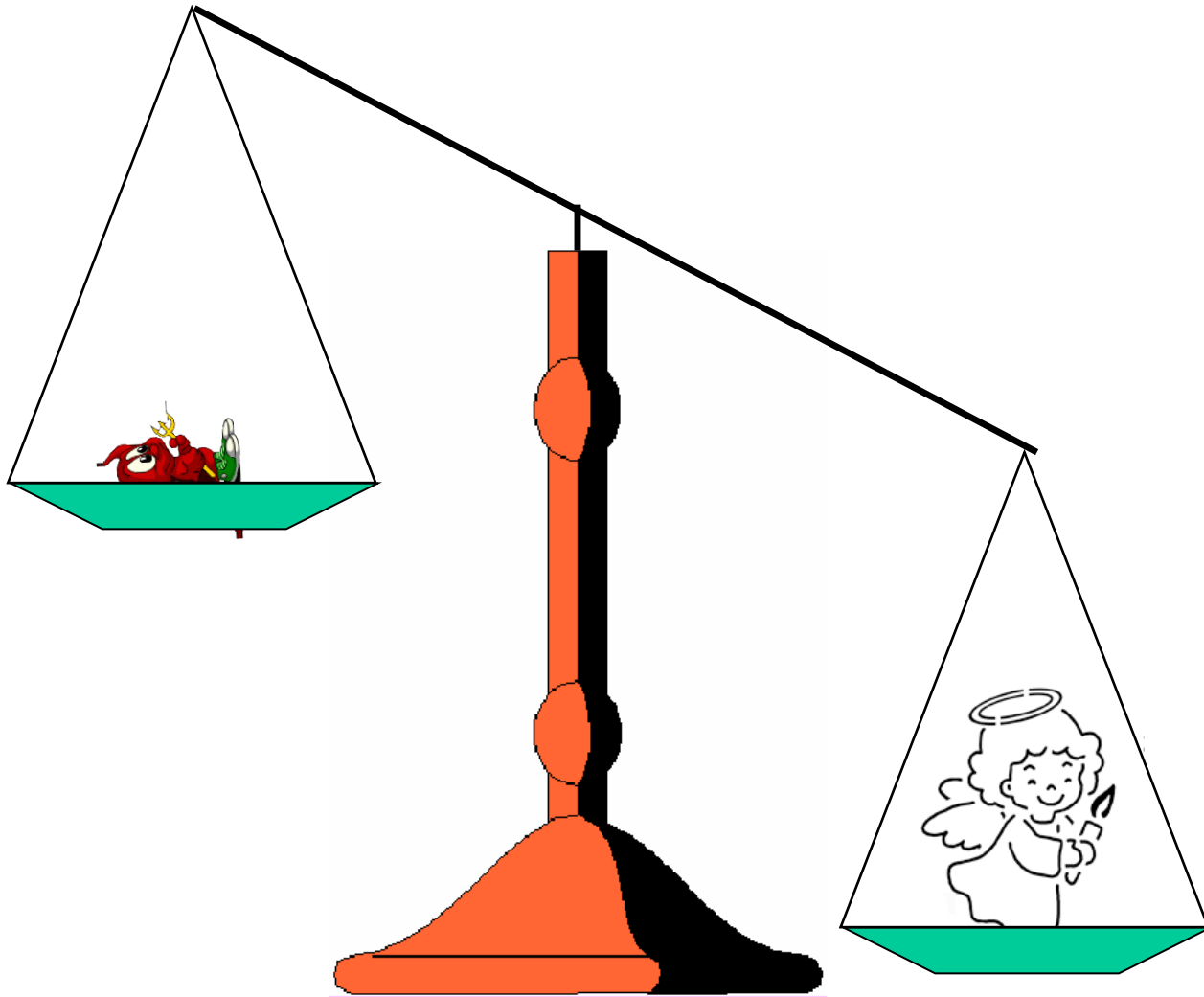
Scoring Intrinsic Merit – Very Good



A competent proposal of high merit in which strengths outweigh weaknesses (no "fatal" weaknesses).

Very Good

Scoring Intrinsic Merit – Excellent

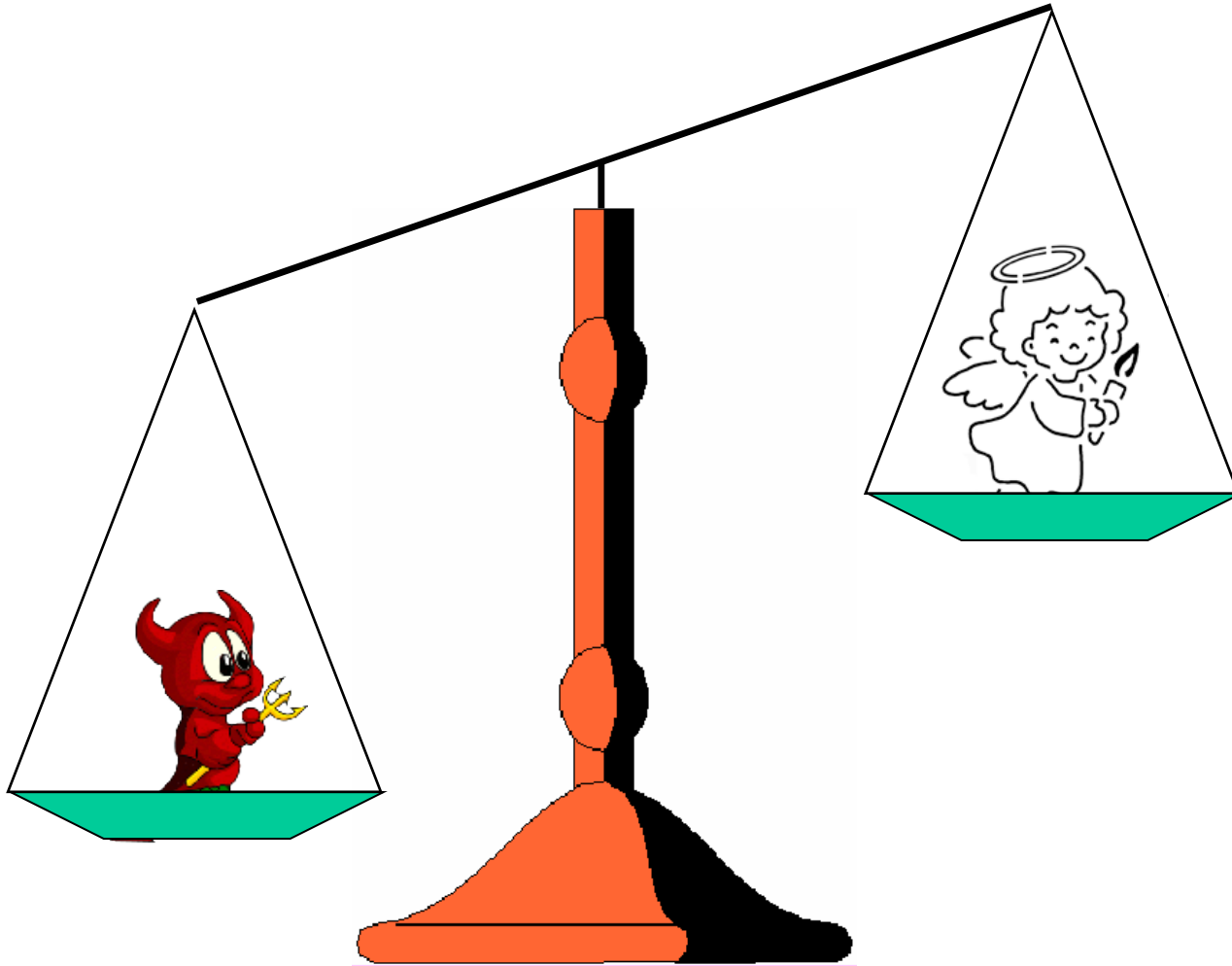


A thorough and compelling proposal of exceptional merit, as documented by numerous or significant strengths and no major weaknesses.

Excellent

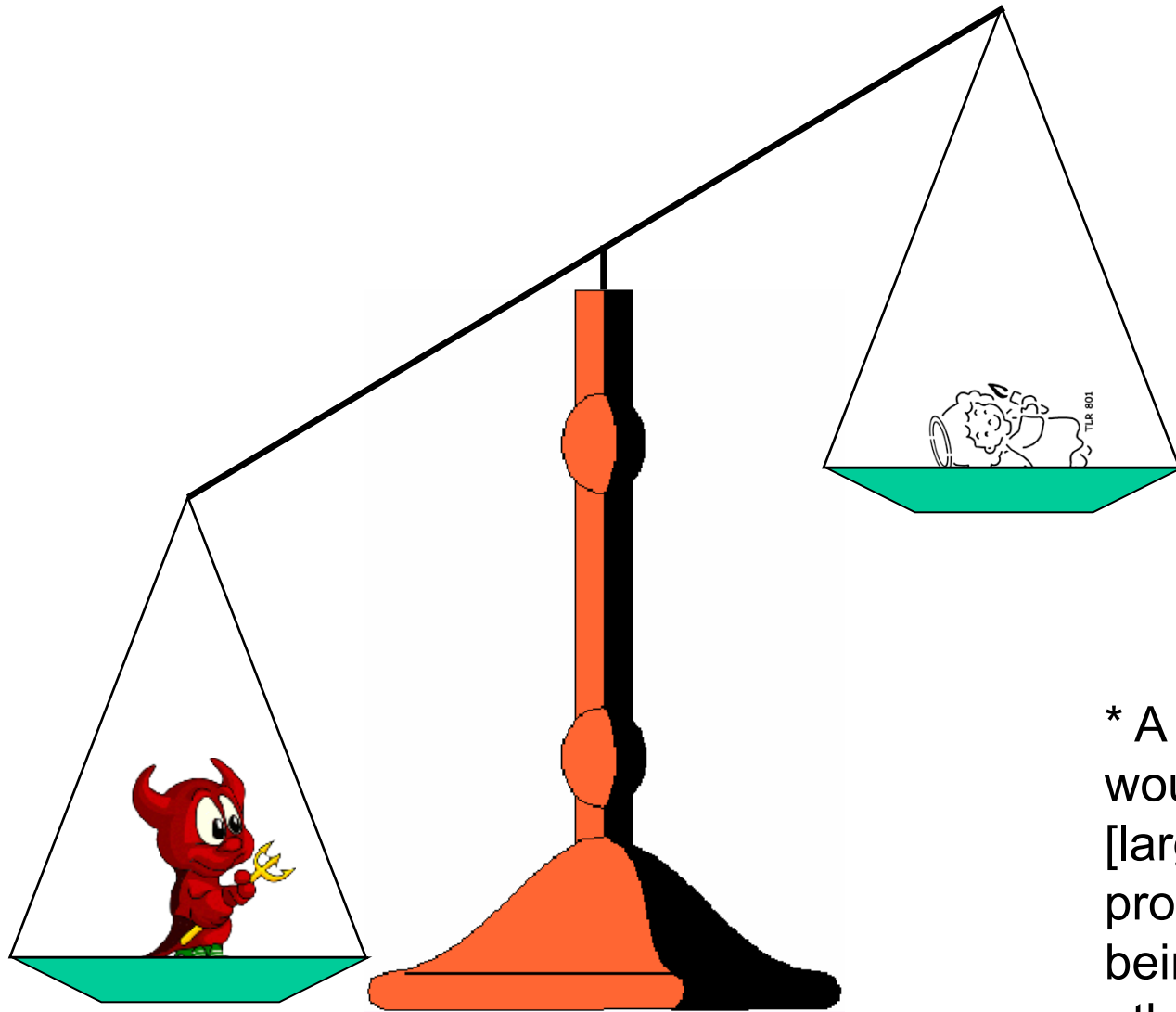
Scoring Intrinsic Merit – Fair

A proposal in which weaknesses outweigh strengths.



Fair

Scoring Intrinsic Merit - Poor



Poor

A seriously flawed proposal as documented by numerous or significant weaknesses that constitute fatal flaws*.

* A Major Weakness that would effectively prevent in [large] part or wholly the proposed objectives from being accomplished, or that otherwise may render the proposal unsuitable for consideration for funding

Don't Be Afraid to Use the Whole Range

- Take advantage of the full "dynamic range" of the grading system: E (5.0), VG (4.0), G (3.0), F (2.0), and P (1.0), where appropriate.
- This isn't Olympic figure skating. It is not your job to "leave room" for an even better (or worse) proposal that might come along, to pick winners, or to rank. Score proposals according to the previous definitions.
- Voting the intermediate grades (e.g., E/VG) is acceptable unless the program manager tells you otherwise.

What does this *really* mean?

- Don't stress over the calculus of major/minor findings. It's not a counting game. Findings may have different weights.
- Do worry about fatal flaws — if a proposal has any, it shouldn't be rated above good/fair.

Excellent	"must fund"
Very Good	"should fund"
Good	"could fund"
Less than Good	"don't fund"

Unofficial

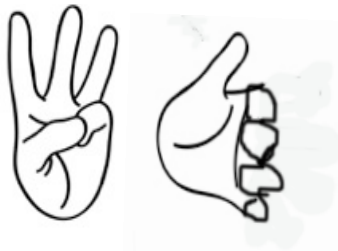
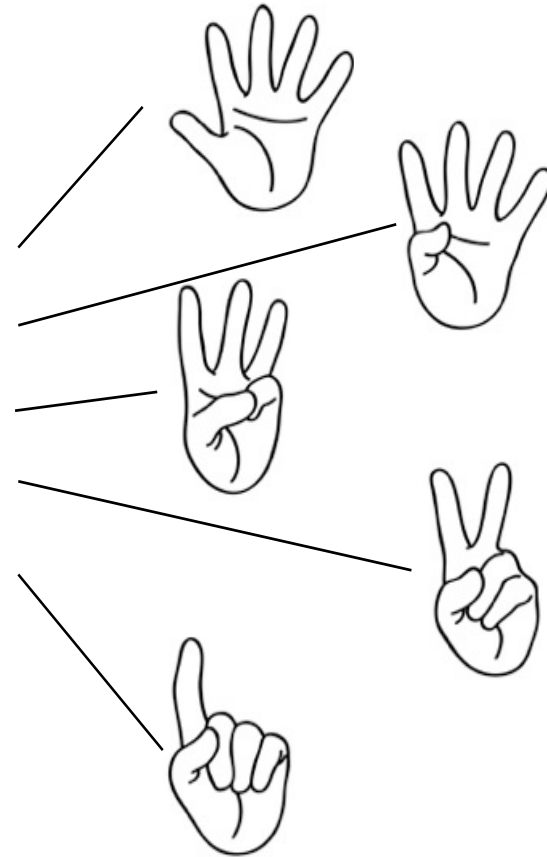
What actually gets funded will depend on budgets and maybe programmatic priorities.

Should I vote?

- If you feel in any way biased (even if not technically conflicted) you probably should leave the room. If you are not going to vote you may not stay and esp. not talk.
- There are two aspects to how a panel scores intrinsic merit on a proposal:
 - 1) Defining the strengths and weaknesses
 - 2) Assessing the importance of the strengths and weaknesses
- If you didn't read the proposal, you probably can't contribute much to (1), but you may be able to contribute to (2); if so, you should vote.
- If you don't understand the proposal or the panel discussion, feel unable to assess the importance of findings, you may abstain.

Voting may be by word or number written on a piece of paper, or typed into a chat box or by show of hands...

Adjectival Score	Numerical Indicator
E	5.0
VG	4.0
G	3.0
F	2.0
P	1.0



3.5 (VG/G)

If voting openly, everybody votes at once.

Conversion from Mean or Median Numerical Score to Adjectival Rating

- ≥ 4.75 → Excellent
- 4.25 - 4.74 → Excellent/Very Good
- 3.75 - 4.24 → Very Good
- 3.25 - 3.74 → Very Good/Good
- 2.75 - 3.24 → Good
- 2.25 - 2.74 → Good/Fair
- 1.75 - 2.24 → Fair
- 1.25 - 1.74 → Fair/Poor
- ≤ 1.24 → Poor

Ideally, your spreadsheet where you record the grades does this automatically, but you should verify the math

- Executive Secretaries are in charge of the template

Conversion from Mean or Median Numerical Score to Adjectival Rating

- ≥ 4.75 → Excellent
- 4.25 - 4.74 → Excellent/Very Good
- 3.75 - 4.24 → Very Good
- 3.25 - 3.74 → Very Good/Good
- 2.75 - 3.24 → Good
- 2.25 - 2.74 → Good/Fair
- 1.75 - 2.24 → Fair
- 1.25 - 1.74 → Fair/Poor
- ≤ 1.24 → Poor

Caveat: this is absurdly over precise. No one should vote a tenth or a hundredth, this is just to put an adjectival rating on the proposal based on the mean and/or the median (I recommend both since a difference is data).

About Multi-task Projects

Many PIs propose projects with multiple tasks. How do you evaluate the relationship(s) among them?

- There is no rule that says a proposal must have a single objective or that all tasks must be related.
- Don't assess a weakness because the tasks are independent unless the proposal misrepresents their relationship in some way.
- One may give a strength for synergy between the tasks that increases their overall impact or the likelihood of overall success.
- NASA may fund only part of a proposal, but such actions are rare and must be done equitably.
- A case where it might be used is a short proof of concept award for high-risk high-impact work or funding of a technology to reduce risk.

Partial funding ("descoping")

- Rarely, when one task is very much better or worse than the other(s) and they are separable, the review panel may take two votes, e.g., one for the proposal as written and one for e.g., just the experimental task, not the theory task.
- Do this only if its clear that the one task being preserved is far superior to the rest, or the one being removed is far inferior.
- Don't create subprojects where none were proposed; if it's not a modular proposal, too bad.
- Provide scores and narrative comments for the whole proposal as written in the main part of the evaluation.
- Provide scores and narrative comments for the partial selection only in the notes to NASA Section. Lets not tip NASA's hand in this regard.
- Please tell us what portion of the budget and team you think is associated with the descope.

Compliance

- SMD may reject proposals that don't comply with ROSES or the Guidebook for Proposers. You may find compliance problems in the proposals under review.
- If noncompliance results in not being able to evaluate something (e.g., lack of a CV prevents assessment of team capabilities) this will result in a Merit, Cost or Relevance weakness and thus is its own punishment.
- However, if noncompliance gives an advantage e.g., more words by going over by a page or by using a smaller font etc., don't give a weakness or lower the score. Instead, make a comment to the PI and make comments to NASA evaluating severity. The Program Officers will take appropriate action. Typically, such proposals will not be funded no matter how high the score.
- Bring the Program Officers into your discussions of compliance.

Risk/Impact Assessment

AFTER you have voted on a proposal then, separate from the grade it received, you will also quickly assess two things about each proposal:

1. What would be the impact of this work (high, medium, low)
High-impact = if confirmed/successful, would have a substantial and measurable effect on current thinking, methods or practice.
2. What is the intellectual or reputational risk, i.e., tests novel and significant hypotheses for which there is scant precedent or preliminary data or that are counter to the existing scientific consensus. This is not implementation risk which refers to the likelihood that the proposed research can be successfully conducted as proposed.

Risk/Impact Assessment

1. Do not waste time discussing opinions on these questions; there is no "right" answer. Just vote according to your opinion and be done with it.
2. The vote may be done by show of hands or whatever method is most convenient. Simply count the number of people voting for each of the options and record them in the spreadsheet provided.

It should look something like this:

Proposal #	PI Last	1. IMPACT			2. RISK (intellectual)		
		High	Medium	Low	Great Extent	Some Extent	Little/no Extent
21-OSS-002	Bernstein	2	4	1	1	6	0

End of First Slide Set

Thank you all again for your service on this review panel, we know that it's a lot of work. You are doing a great service for your community, thank you.

A copy of these slides as well as the call for proposals, the ROSES overview, the guidebook for proposers, will all be made available to you on the local area network (if an in person meeting) or in the shared files area of the google drive or WebEx or Adobe Connect or whatever you are using if virtual.

Part 2: Writing up the Evaluation

- This is Part 2 of the "plenary" presentation for a ROSES review. Generally I present this second half in the afternoon or evening of the first day of discussion of the proposals.
- In this part we will tell you how we want you to write up a panel evaluation.
- [Here is a link to a publicly posted example ROSES panel evaluation.](#)

Panel Evaluations

Proposers only receive the panel evaluation, not the individual reviews. Thus, if a comment from an external reviewer is of importance then you must include it in the panel evaluation (or notes to NASA, as appropriate).

- Evaluations are not in narrative form, nor a bullet list, but more like a short notice in the newspaper.
- List strengths and weaknesses as short paragraphs.
- Start with a topic sentence, and support as necessary with additional sentences.
- Put topic sentence in bold if the strength or weakness is major.
- Put majors before minors.
- Be consistent among your group's proposals.
- See examples

Panel Summaries Cont.

- One concept in each strength/weakness, if possible.
- Always start with an evaluative topic sentence referring to the proposal. Evaluative, not merely a statement of fact.
- Avoid naked findings. Major findings should always have an explanation after the topic sentence. Back up assertions with specific examples from the proposal and/or references.
- Don't give consolation prizes. If something isn't worth mentioning on a good proposal, then don't bring it up for a bad proposal.
- The words and number of (major) findings must be consistent with the Intrinsic merit (mean) panel score.
- Be consistent across proposals (e.g., if we gave a weakness for x on that other proposal, why are we not doing so here?)
- Refer back to definition of merit and ask yourself each time, did we consider each factor (the idea, the implementation, the facilities, the team).

Major Merit Finding Instructions in the form of a Major Merit Finding

This is Max's recommended generic format for a major finding, especially a weakness, which requires back up. That is, it starts with a bold summary sentence. For each comment, responsibility (whether due to action or inaction) of the strength or weakness should be assigned to the proposal itself (except perhaps in the case of lack of publications). There 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. It's generally true that 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". More examples may follow this slide or be in the shared folder in your panel "room".

Major Merit Finding Example

Although the proposal stated that analysis of the plasma wave would be automated, it did not provide sufficient detail on this process. While the proposal correctly noted that information on these waves would assist studies on particle acceleration (due to wave-particle interactions), it did not detail the data that the 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.

Major Finding Reminder

Remember that these findings you are writing have different audiences that have different needs and your job is to attempt to satisfy all of them. That is, a major finding, especially a major weakness, will be read critically by the proposers so its important that the panel provide enough detail that the proposers really understand what they did wrong so it can be fixed next time. Your second audience for these is the program officer who, when the proposer complains a month later, needs to be able to refresh his or her memory and understand when they reread the weakness. Finally, these recommendations by the program officer to fund or decline based on your write ups may be read by the selection official and other program officers who attend the meeting.

Panel Summaries Don't:

- Don't write personal comments.
- Don't use a review to continue an academic debate.
- Don't try to rewrite the proposal or phrase weaknesses as suggestions.
- Don't comment imputed motives of proposers.
- Don't refer to the panel, or reviewers and the PI only in the case of a finding specifically about that person. Just refer to the proposal.
- Don't write "should be funded..." nor use the "scoring" adjectives like 'excellent', very good etc.
- Don't ask questions.
- Don't say "there was concern"
- Don't say "The panel did not understand..." it is their responsibility to write a proposal that cannot be misunderstood.
- Don't comment on capabilities as an advisor or supervisor.

Panel summaries continued

- If there's no finding in a category on the evaluation form (like minor strengths or whatever), please write "None noted" or "As expected" so it's clear that it was intentionally left blank.

Other Parts of the Evaluation

- Check headers/proposal info on the form you're using, sometimes it's the wrong proposal.
- Brief Summary of Research Objectives
 - Some program officers require that you use the executive summary from the proposal, while others let you write your own.
 - You are encouraged to use words from the proposal itself, as appropriate.
- Brief Summary of Overall Evaluation
 - Do this last! Sums up the review. Don't forget weaknesses. Use bold topic sentences from major strengths and weaknesses.
 - Include intrinsic merit, relevance, and cost findings

The Notes to NASA Section

- NOTES to NASA: use this section for any programmatic factors the NASA program manager identifies for you or just anything you want to remind us about, e.g.,
 - High risk, high reward
 - Early-career, promising PI
 - Key team member has recently moved
 - Identical proposal was funded by NSF last year
 - Compliance issues
 - Anything up in the air on which the success of the work might depend like: "If they don't get the telescope time... or "If they don't get the drone permit then such and such a task cannot be completed."

Technical Evaluation Form

- In the notes to NASA section that the proposer does not see there is this form used by the grants office only if they make a grant. Your program officer may ask you to fill it out for scores >3.

Explain the relevance of this research to this NASA program (or other programs):

Use the boilerplate language.

Describe the proposal's overall scientific or technical merit:

Just use the bold topical sentences for the merit strengths. Don't put any weaknesses here. Only bother doing this for proposals rated Good or higher.

Comment on the cost elements:

Use the boilerplate language, unless the program officer says otherwise.