

#	Category	Issue	Status
1	Optics	Vendors; investigate alternative vendors	DONE (Rayner)
2	Optics	Review descope options for optics	DONE (Rayner)
3	Optics	Translation of the optical design to warm dimensions is essential before any final dimensioning of the bench of mechanisms can be done.	DONE (Kokubun)
4	Optics	Account for second pass through aperture for diffraction calculation.	DONE (Rayner)
5	Optics	Alignment Plan, talk to Phillip MacQueen/Sarah Tuttle about using CMM vs. alignment telescope.	DECIDED NOT TO USE COORD. MEASURING MACHINE (Connelley, Rayner)
6	Optics, Mechanical	Will have Insoo Yuk send immersion grading mount drawings	DONE (Jaffe)
7	Optics, Mechanical	An optical assembly and alignment plan is needed before the optics mounts can proceed to detailed design.	PRELIMINARY ALIGNMENT PLAN DONE (Connelley, Rayner, Kokubun)
8	Optics, Mechanical	Outline integration and test plan, including optical assembly/alignment plan.	PRELIMINARY ASSEMBLY PLAN DONE (Connelley, Rayner, Kokubun)
9	Mechanical	Most types of AI are good thermal conductors down to LN2 temps, but many are much worse at 40K. This should be factored into the design of the two array assemblies	DONE (Onaka, Warmbier, Bonnet)
10	Mechanical, Budget, Schedule	revisit mechanisms, adopt standard/simplified design for filter/slit/order sorter wheel (means fewer filters in the SV channel).	DONE (Bonnet, Kokubun, Rayner); using standard worm gear design; reduce use of Geneva mechanism
11	Mechanical, Optical, Budget	K-mirror over-designed	DONE (Kokubun, Rayner); mechanism was redesigned and is simpler.
12	Mechanical, Optical, Science, Budget, Schedule	Requirements of XD mechanism demanding, if could eliminate the need for tilt adjustment and just have selection mechanism, would save on time, budget	DONE (Kokubun, Rayner). Decided we need the tilt mechanism, but overall design simplified.
13	Mechanical	eliminating tilt adjustment: reduce max slit length, # of discrete configs goes down proportionately; consider using XD gratings in both first and second order;	DONE (Kokubun, Rayner). Decided we need the tilt mechanism. Overall design was simplified.
14	Mechanical	If extra positions on wheel, could consider installing PI XD gratings to enable special programs	DONE (Kokubun, Rayner). There is a spare grating position.
15	Electrical, Software	Timestamp requirement	DONE (Rayner)
16	Electrical, Mechanical	Wiring paths requires guidance from electronics engineer	IN PROGRESS (Warmbier, Kokubun). Having weekly meetings.
17	Optics, Mechanical	Development of the design for light baffling within both channels, but especially the spectrograph channel, is required before the mechanisms can enter detailed design.	IN PROGRESS (Rayner, Bonnet, Kokubun). Warm Zemax design completed; lens mounts completed; discussions on baffling initiated.
18	Management	Desclope strategy to meet budget of funds and time	IN PROGRESS (Rayner, Kokubun, Bonnet). Detailed schedule and budget to be reviewed soon.
19	Management	Need systems engineer	STATUS: We do not have time or funds to hire a systems eng. Rayner and Kokubun to provide overall sys. eng. requirements.
20	Management	Project manager with role as engineer likely to be problematic	STATUS: Kokubun and Tokunaga jointly providing project management. Kokubun to continue design work as needed and offload drafting to others.
21	Management	Difficulty in purchasing optics successfully, need person who has both the ability to vet sources, manage purchasing, and has time to do so.	STATUS: Rayner is finishing the purchase of the optics. We are close to sending out the purchase orders. Kokubun and Chung will handle the machine shop fabrication orders. We plan to have an experience purchaser available for equipment and parts purchases.
22	Budget	Should have 20% contingency, as mechanical still undetermined	STATUS: We are refining the budget. A higher fidelity budget-to-completion will be made in July.

23	Budget	Consider machine shops outside of Hawai'i to get work done. Could save 20% or more.	STATUS: We are planning to do this.
24	Schedule	Mechanical fabrication schedule compressed.	STATUS: We think we can meet the schedule milestones given at the review. We will update the schedule in about a month.
25	Optics	Decision date for cutting existing LM grating; IRTF may need to cover cost for travel.	TBD
26	Optics	Making an LM grating with ebeam system	TBD
27	Optics	Discuss with Luke Keller about creating psf for surface irregularity to verify OAP roughness	TBD
28	Optics, Mechanical	Aligning immersion grating	TBD
29	Mechanical	Closed cycle cooler should be vibration and ground isolated from vacuum vessel and cold fingers should also be vibration and ground isolated from the cold states	TBD; plan to follow SpeX design.
30	Mechanical	Radiation shield and cryogenic spectrograph enclosure should be separate, electrically isolated Faraday cages that are tied to ground at a well defined star point.	TBD; plan to follow SpeX design.
31	Mechanical, Electrical	All mechanism electrical/sensor circuits should be isolated from spectrograph ground and tied back to star point	TBD; plan to follow SpeX design.
32	Mechanical	You need to be sure the LN2 reservoir has adequate thermal coupling for all fill levels and orientations	TBD
33	Electrical	Create spares policy	TBD
34	Electrical	Analog and digital ground should be kept separate for each detector array to the controller and tied together at star point	TBD
35	Electrical, Mechanical	Disable Kaman sensor at electronics box, away from dewar	TBD
36	Electrical, Mechanical	what are H2RG cable length differences between NSFCAM/iSHELL	TBD
37	Electrical, Mechanical	Thermal shielding on phytron motors should be developed/reviewed	TBD
38	Electrical, Software	Possibly enable interleaved readouts	TBD
39	Electrical, Software	should maintain disabling of power in system, such as motors	TBD