



The Biology of Biosignature Detection - Part II

January 29 - February 2, 2024
Overview Schedule

Monday, January 29, 2024 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Coffee and Refreshments at Keck Center Pick up badge and welcome packet, find seat in the Think Tank	
9:00 - 9:45	Welcome & Workshop Logistics Participant Introductions	Janet Seid
9:45 - 10:30	Recap of Workshop #1: Way Forward and Study Vision, Goals, and Expectations for Workshop #2	Team Leads
10:30 - 11:00	Break	
11:00 - 12:30	Finalize Workshop Goals via Plenary Discussion, Solicitation of Lightning Talks	Team Leads
12:30 - 2:00	Group Picture and Lunch at the Athenaeum	
2:00 - 3:30	Working Group & Report Out: Extinct Life group & Extant Life group	Groups
3:30 - 4:00	Break	All
4:00 - 4:15	Overview of KISS Breakout Group Format	Janet Seid
4:15 - 5:30	<p>Breakout #1: Topic: <u>Define general 'packages' required to address the objectives we set out in Workshop 1.</u> (e.g. agnostic macromolecule detection, metabolism, 3 others) <i>This exercise is to lay out conceptually the modules of a spacecraft that would deliver on the things we wanted to measure for our matrix that we came up with in workshop 1 - and also a chance to revisit what we decided. No detailed technology to be discussed here - just the principles of the package!</i></p> <p>Groups: Breakout Group #1: Microbiology-focused Breakout Group #2: Biosignatures-focused Breakout Group #3: Geochemistry & Mineralogy-focused Breakout Group #4: Technology capabilities and their gaps</p>	All
5:30 - 5:45	Plenary Group Recap and Discuss Direction for Day 2	Team Leads
5:45 - 6:00	Pack up and walk to the Athenaeum Study Team Leads tag up with KISS	All Team Leads & KISS
6:00	Dinner at the Athenaeum	

Tuesday, January 30, 2024 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Enjoy coffee and refreshments in the Keck Center courtyard	
9:00 - 9:15	Logistics and Team Lead Goals for the Day	Janet Seid Woody Fischer & Team Leads
9:15 - 10:00	Group Report Outs from Breakout Session #1 (4 Groups, 10 mins each)	Groups
10:00 - 11:00	Lightning Talks - 3 Talks Isotopes - Henrik Drake Radiotracer - Tina Treude BIG Ltime lengthscales (Island vs ecosphere) - Don Giovannelli	Henrik Drake Tina Treude Don Giovannelli
11:00 - 11:30	Break	
11:30 - 12:30	Plenary Discussion and preparation for afternoon breakout session	Group
12:30 - 2:00	Lunch on your own	
2:00 - 3:30	<p>Breakout #2: Topic: <u>Now we have general conceptual packages, what capabilities are needed to make them 'real'</u>. <i>Identify if you can specific capabilities that exist or whether we need new capabilities, e.g. nanopore to detect agnostic macromolecules.</i></p> <p>Groups: Breakout Group #1: "Definitive signs of extinct life" package Breakout Group #2: "Definitive signs of extant life" package Breakout Group #3: "Viking 2.0 Experiments" package Breakout Group #4: "Technology capabilities" package</p>	All
3:30 - 4:00	Break	
4:00 - 4:40	Group Report outs from Breakout Session #2 (10 mins each)	Groups
4:40 - 5:15	Plenary discussion	All
5:15 - 5:30	Plenary Group Recap and Discuss Direction for Day 3	All
5:30	Study Team Lead tag up with KISS	All
5:30	OPTIONAL: No-Host Dinner in Pasadena	

Wednesday, January 31, 2024 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Enjoy coffee and refreshments in the Keck Center courtyard	
9:00 - 9:15	Logistics and Team Lead Goals for the Day	Janet Seid Charles Cockell & Team Leads
9:15 - 10:00	Lightning Talks Talk 1: Mars Deep Drill Subsurface access Philippe Tosi Talk 2: Importance of Englacial Targets on Mars - Suniti Karunatillake	Phillipe Tosi Suniti Karunatillake
10:00 - 10:30	Break	
10:30 - 12:00	<p>Breakout #3: Topic: Based on breakout 2, <u>what analytical capabilities are required - what would be measured and how?</u></p> <p>Groups: Breakout Group #1: Subsurface access section Breakout Group #2: Sample needs and handling section Breakout Group #3: Proof of life, extant and extinct section</p>	All
12:00 - 12:30	Group Report outs from Breakout Session #3 (10 mins each)	All
12:30 - 2:00	Lunch at the Athenaeum	
2:00 - 2:30	Group Pulse: One thing you found stimulating this week and One thing you hope to accomplish by the end of this week.	Team Leads
2:30 - 2:45	Lightning Talk: Astrobiology perspective of MSR - Lisa Guan	Lisa Guan
2:45 - 3:00	Writing Assigment #1 Overview	Team Leads
3:00 - 3:30	Break	
2:45 - 5:00	<p>Writing Assignment #1 Writing and Edit Pair-ups</p> <p>1) What are the terrestrial microbiology experiments you would want to see on Mars and the Icy Moons?</p> <p>2) What capabilities don't yet exist to accomplish this?</p>	Team Leads
5:00 - 5:15	Key Topic & Key Figures; 1) What are the take home figures you would want to showcase in our publications? 2) Let's start compiling the message needs	Team Leads
5:15 - 5:30	Plenary Group Recap and Discuss Direction for Day 4	Team Leads
5:30	Study Team Leads tag up with KISS	Team Leads & KISS
5:30	Dinner on your own	

Thursday, February 1, 2024 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Enjoy coffee and refreshments in the Keck Center courtyard	
9:00 - 9:15	Logistics and Team Lead Goals for the Day	Janet Seid Scott Perl & Team Leads
9:15 - 10:15	"Power Hour": Deliverables, Stakeholder and Target Audience	KISS and Team Leads
10:15 - 12:15	Writing Session	Groups
	Break (Open Break Time During Writing Session)	
12:15 - 12:30	Plenary Discussion & Pulse Check of Writing	All
12:30 - 2:00	Lunch on your own	
2:00 - 3:00	Lightning Talks: SHS Raman - Sona Hosseini Low Biomass sampling - Devan Nisson Achieving Mars and synergies with humans - Kennda Lynch	Sona Hosseini Devan Nisson Kennda Lynch
3:00 - 3:30	Are we missing anything? What ancillary measurements would be needed to make these packages as biologically effective as possible, e.g., pH, radiation levels etc. Only items to enhance what we've converged on	All
3:30 - 4:00	Break	
4:00 - 5:15	"Power Hour Plus": Discussion on Path Forward for Collaboration, Advocacy throughout the Community and To-Do List for Completion of Final Report	All
5:15 - 5:30	Plenary Group Recap and Discuss Direction for Day 5	Team Leads
5:30	Pack up and walk to the Athenaeum Study Team Leads tag up with KISS	All Team Leads & KISS
6:00	Dinner at the Athenaeum	

Friday, February 2, 2024 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Enjoy coffee and refreshments in the Keck Center courtyard	
9:00 - 9:15	Logistics and Team Lead Goals for the Day	Janet Seid and Woody Fischer Team Leads
9:15 - 10:00	Importance of Illustrations - KISS Gallery Discussion of Final Report Imagery	Janet Seid Team Leads
10:00 - 10:30	Break	
10:30 - 11:30	Breakouts and report outs on final report images	All
11:30 - 12:30	Writing Session and Peer Review	All
12:30 - 1:30	Informal lunch in the Courtyard	
1:30 - 3:45	Writing Session and Peer Review	All
3:45 - 4:15	Break	
4:15 - 4:45	Workshop Summary and next steps	Teams Leads
4:45 - 5:00	Workshop Closeout	Janet Seid
5:00	Workshop Concludes	