Clear time (seconds) 90				
Enemy HP particles Default				
Particle RNG Average				
Rotation mode Fixed				
Rotation length 20				
Character	Mualani	Kinich	Kachina	Sethos
Skill cooldown				8/0
Skill particles generated				2 / 0
Turret particles per second				
Turret uptime				
Skill uses per rotation (primary type)	Skill 2	Skill 2	Mounted 2	Press 1
Skill uses per rotation (secondary type)				Full CA 3
Feed particles to ally				
Proportion of particles fed				
Favonius triggers per rotation Bonus non-particle energy per rotation				
Time on field	50%	20%	20%	10%
Number of rotations between bursts	50%	20%	20%	10%
Burst cooldown	15	18	18	15
Burst energy cost (after discount)	60	70	18 70	13 60
	142%	159%	178%	363%
Total energy recharge needed	14270	159%	1/0%	505%
Element	Hydro	Dendro	Geo	Electro
Energy from Mualani	27.00	5.40	5.40	5.40
Energy from Kinich	6.00	30.00	6.00	6.00
Energy from Kachina	4.80	4.80	24.00	4.80
Energy from Sethos	1.20	1.20	1.20	6.00
Energy from HP particles	3.20	2.72	2.72	
Energy from other sources	0.00	0.00	0.00	0.00
Total energy per burst	42.20	44.12	39.32	24.76

## Copy or download this spreadsheet to edit it yourself

To enable Advanced Mode, unhide rows 15-26 Made by Zakharov29229 from the KeqingMains discord The Energy Recharge Calculator guide is available here The latest version is available here Current version 1.58.2 Latest version 1.58.2 Abyss version N/A R2 7.5 per skill use 7.5 per trigger 7.5 per trigger 13.5 5 per NA Flat Energy Amenoma Kageuchi Katsuragikiri Nagamas Kitain Cross Spear Prototype Amber Everlasting Moonglow Shimenawa's Baminis R1 10.5 per skill use 10.5 per trigger 10.5 per trigger 12 per skill use 12 per trigger 12 per trigger 6 per skill use 6 per trigger 6 per trigger 9 per skill use 9 per trigger 9 per trigger This is after the drain; if there is no energy to consume, add 3 flat energy. In Moonglow to per user wa's Reminiscence -15 per skill use the Hero of Cinder Cit Add 6 energy per Nightsoul Burst 3 for all bow and catalyst users every time this character gets a particle on-field, with 3s cooldown 6 for all party members except the wearer r abilities See the character explanation in the bottom of the green section attacks See the wiki for more information oll of the H he Exile haracter abiliti Iormal attacks

This is how long it takes you to clear an Abyss chamber. Enemies drop a total of 9 clear particles Change this if you want to have enough ER even when you get unlucky on particle RNG. Every character uses skills and bursts on a fixed rotation. Change to "Flexible" for the classic view.

How long it takes you to complete one rotation

Skill cooldown is just for reference and does not affect any calculations. The number of particles generated by each use of the skill. Turrets are skills that generate particles over time, such as Fischl's Oz.

This is the number of times you use a character's skill for each time you use their burst. This is the number of times you use a character's sam for each time you use their burst. If you use another type of skill, this is how many times you use that type This is who will catch the elemental particles. "Don't Know" counts as off field particles for everyone. If a character catches some of their own particles and feeds some, this is what percentage is fed. This is the number of times a Favonius effect triggers for each time you use a character's burst. This is the portion of time a character spends on field. It affects turret and HP particle energy. This is the portion of time a character spends on field. It affects turret and HP particle energy. This is how often you use each character's burst. It will typically depend on your team's rotation.

If you don't use a character's burst, ignore their ER needs and put the rotation length as burst time. Mualani's Sharky Bites can generate particles once per Skill use. Mualani's C4 restores 8 energy per puffer. She will gain 2 puffers per Skill. Put this in "Bonus non-particle Energy"

Kinich's Scalespiker Cannon can generate particles once per Skill use. Kinich's C4 restores 5 Energy after using Loop Shots or Scalespiker Cannon. Put this in "Bonus non-particle Energy"

Kachina generates particles per skill hit. If Nightsoul points are used to move around, she may generate less energy. C2 adds skill hits. Add .33 skills if C2. If Sethos does not use his burst, switch to fixed rotation mode (cell C5).

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1.58.2								
Fixed Xilonen skill CD								
1.58.1								
Added Xilonen note								
1.58.0								
Added Xilonen and Scroll note	2							
1.57.0								
Added Kinich								
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Added functionality for skills t	to gonorato flat one	ray this is used	hy Sothos an	d Nilou C4				
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1.52.1								
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Changeu Amartham and fixed	Cionnae CD							
1.52.0								
1.52.0 Added Clorinde								
Added Clorinde								
1.51.3								
Added Yoimiya note								
1.51.2								
Fixed some error highlighting								
1 51 1								
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1.47.0												
Added N	lavia											
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Added F	urina and C	narlotte										
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1.41.2												
Fixed bu	g which did	n't allow se	electing "do	n't know"	as feed ta	rget						
1.41.1												
Added D	ehya C2 eff	ect										
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Updated	l Abyss HP p	articles for	version 3.7	7								
1.40.0												
Added K	irara											
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1.38.4												

Fixed variance	calculations for turret	skills					
1.38.3							
Removed varia	nce from Nahida part	icle generation					
1.38.2							
	chl calcs for 0 skill use	es					
1.38.1							
Fixed bug relat	ed to using two differ	ent kinds of turret s	kills on the same ch	aracter			
1.38.0							
	th estimate of particl	e generation may h	e undated based or	further informat	ion		
	help text for fixed rot						
Added link to E							
	s another name for T	artaglia					
1.37.0							
Added a choice	e to use either fixed ro	otation mode or flex	ible rotation mode.	This is a big chan	ge and may have	introduced bugs.	
Fixed some bug	gs in advanced mode						
Updated abyss	HP particles for 3.5						
1 20 0							
1.36.0	ed Mode. Enable this	by unbiding rows 1/	1.25				
	y calculations. This sh			advanced mode. I	put may introduce	huge	
Rewrote energ	y calculations. This sh	outuin t have any en	ect unless you use			e bugs.	
1.35.0							
	he previous bugfix						
1.34.0							
Fixed a bug in o	alculating the particl	es caught by a chara	cter who feeds only	y some of their pa	articles		
1.33.0							
Added Dehya	(	:- - f!:					
	Know" option for part y calculations. This sh		oct but may introd	uco hugo			
Rewrote energ		outuin t have any en	ect, but may introd	uce bugs.			
1.32.1							
Fixed incorrect	enemy particle data						
1.32.0							
	highlighting when Ra		at energy (hyperblo	oom teams don't	usually use raiden	burst)	
Updated enem	y HP particles for 3.4	abyss					
1 21 0							
1.31.0 Poducod Albait	ham particle generat	ion from 7 to 6 hasa	d on further testing	<del>,</del>			
Reduced Allian	inani particle generat			5			
1.30.0							
Added Alhaitha	am and Yaoyao						
1.29.0							
Fixed bug in Fis	chl particle generatio	n					
1 39 0							
1.28.0							

1.27.0							
Fixed bugged Faruza	n C6						
Updated Abyss to 3.3							
1.26.2							
Updated Faruzan C6	to work as a turret						
1.26.1							
Added Faruzan C6 pr	oc partile gen						
1.26.0							
Added Wanderer							
Added Faruzan							
1.25.0							
Added Layla							
Fixed some incorrect	particle values						
1.24.2							
Added HP particle in	fo for 3.2 abyss						
1.24.1							
Added more options	for lartaglia						
1.24.0							
Added Nahida							
Added Natilda							
1.23.0							
Added Nilou							
1.22.3							
Fixed bug with Dori							
1.22.2							
Fixed bug with partic	le feeding						
1.22.1							
Fixed bug with Dend	ro Traveller						
1.22.0							
Added Cyno and Can							
Allowed for the use of	of two different skill	types (e.g. Kazul	ha doing 1 press	and 1 hold	1)		
1.21.2							
Fixed bug in particle	teeding menu						
1.21.1			· · · · ·				
Fixed Diona and Yae	particle generation	in sate and worst	c-case scenarios				
1 31 0							
1.21.0							
Added Dori				_			
1.20.3							
	ate Dendro Traveler						

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Updated Sara and Sa	ayu skill options				
1.13.0					
Updated abyss HP p	articles for version 12.6				
1.12.0					
Added option to sele	ect "Nobody" so you can h	nave 1-3 character tear	ns. This includes increas	ed energy received fror	n off-field particles
Fixed error when cha	anging character results ir	n invalid particle feedin	g		
Added error messag	e when Yae uses her skill	3 times (one skill use r	epresents 3 totems)		
Fixed incorrect error	highlighting				
1.11.1					
Added "hybrid" opti	on to Ayato				
Fixed missing skill co	oldown for off-field Ayato	)			
1.11.0					
Added Ayato					
Changed how calcul	ations are displayed in the	e bottom section			
1.10.2					
Added abyss particle	es for new abyss				
1.10.1					
Removed abyss part	icles. Will be updated for	new abyss shortly			
1.10.0					
Added Yae Miko					
1.9.0					
Fixed bug in 4th cha	racter field time calculation	ons			
1.8.0					
Fixed bug in Kokomi					
Fixed bug which did	n't allow feeding favonius	particles from a turret	character		
1.7.0					
Added changelog					
	ers to enemy HP particle s				
	d" with character-specific	skill types			
Added particle RNG	setting				