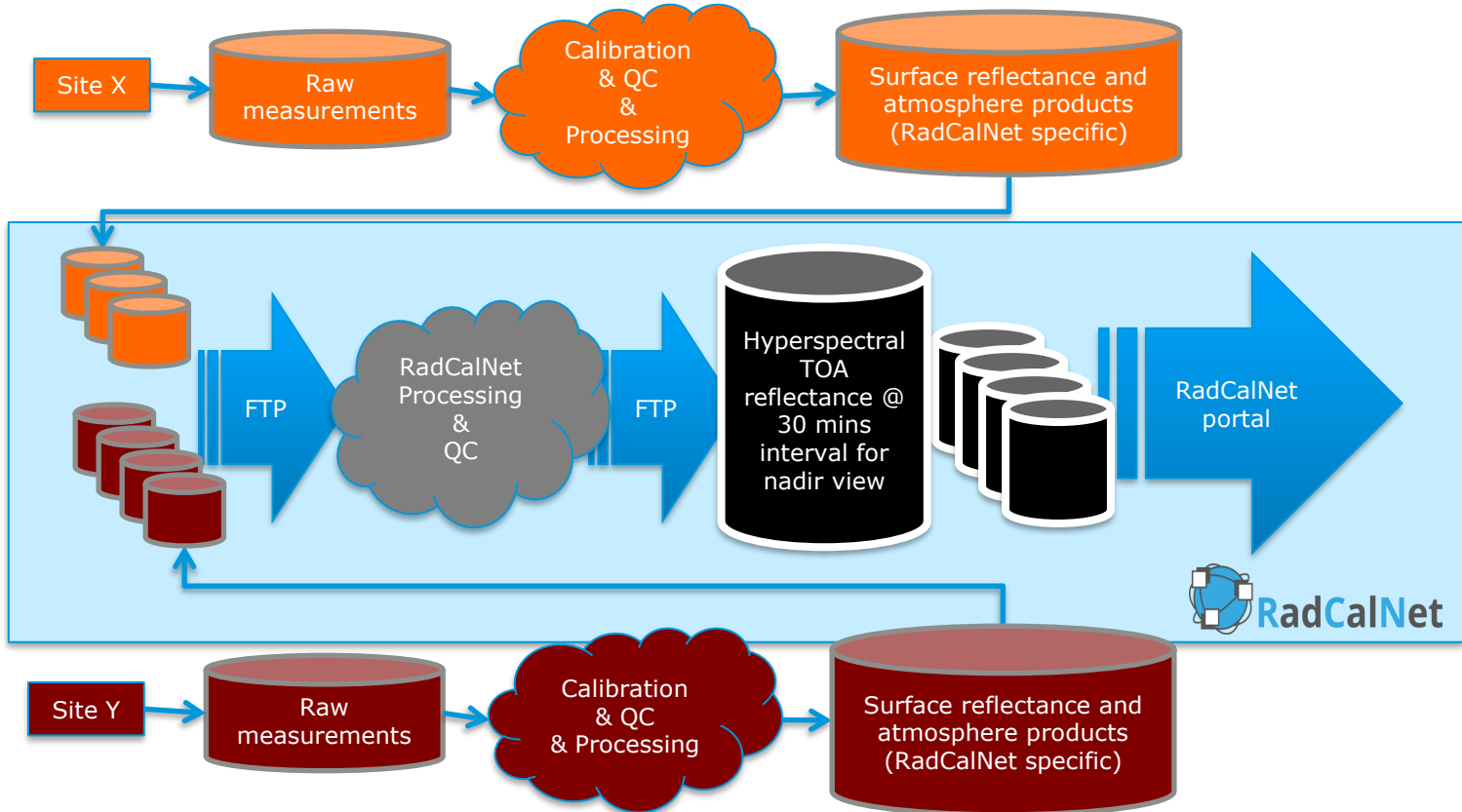


The Radiometric Calibration Network: RadCalNet

M. Bouvet on behalf of the RadCalNet WG (CEOS/WGCV/IVOS)



What is RadCalNet?



The RadCalNet sites



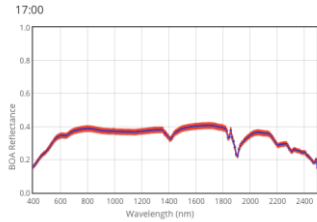
Today 5 sites (+ more in preparation)



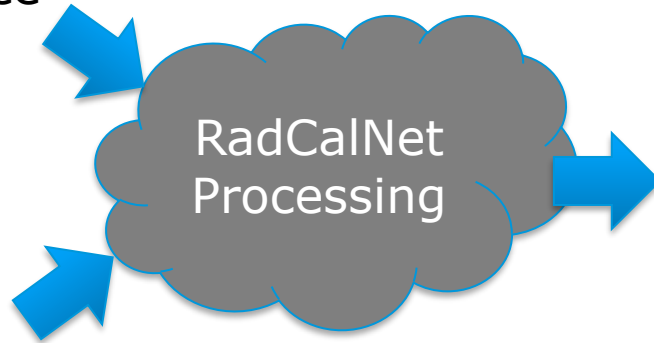
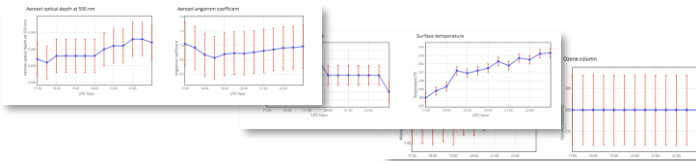
The RadCalNet processing

- Propagation of surface/atmospheric measurements to top-of-atmosphere nadir reflectance via MODTRAN 6
- Associated uncertainties results from propagation of the surface / atmosphere uncertainties via pre-computed Montecarlo runs of the radiative transfer

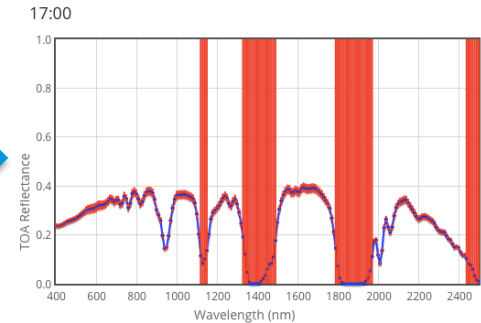
Surface reflectance



Atmospheric measurements



TOA reflectance



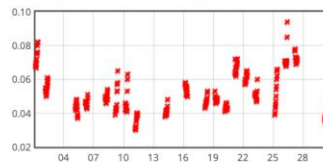
The portal



esa



Monthly Aerosol Optical Depth at 550nm (Month 04)



Webcam views for the day



- All TOA simulations available for this day (every 30 mins between 9:00 and 15:00 Local Standard Time)
- TOA simulations only partially available for this day

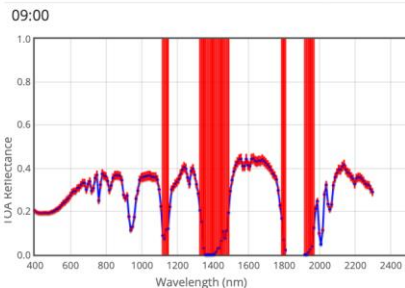
[Download daily data for all instruments](#)

Sensor : 01

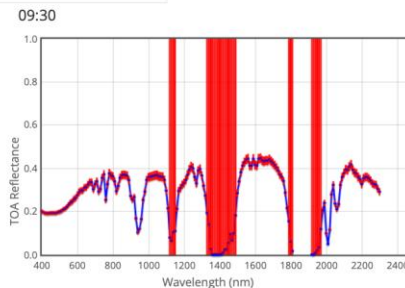
Input version : 07

Output version : 04

Atmospheric parameters



BOA Reflectance



Contact Admin

Do you want live notifications when people reply to your posts? [Enable Notifications](#)

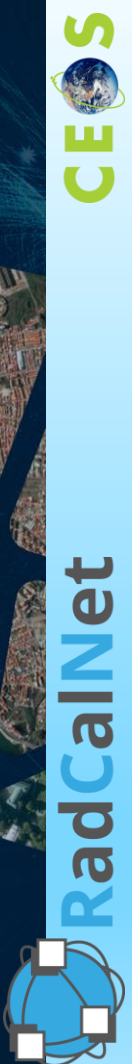
all categories ▾ all tags ▾ **Categories** Latest Unread (3) Top + New Topic

Category Topics

Announcements	27
Announcements of general interest to the entire RadCalNet community will be posted under this section.	
FAQ	1
Description of the RadCalNet Forum and the various categories	
Documentation	6
Topic related to RadCalNet documentation	
Data	36
Discussion on RadCalNet data and Sites	
■ BOA and Atmosphere for BTCN ■ BOA and Atmosphere for RVUS ■ BOA and Atmosphere for LCFR ■ BOA and Atmosphere for GONA ■ TOA for all sites 1 unread	
Site Review	4
This category is created for discussion between the new site owner and the RadCalNet Working Group based on the review of the requested documentation and data .	
■ Bactou Sandy Site Review 1 unread	
Uncategorized	5
Topics that don't need a category, or don't fit into any other	

Latest

	GONA missing data from 13th August 2023	0
■ BOA and Atmosphere for GONA		20d
	Data delay at RVUS as of 4 Aug 2023 continues	0
■ BOA and Atmosphere for RVUS		29d
	MODTRAN's use of BOA refl. to simulate TOA refl 1	7
■ Data		Aug 23
	LCFR missing data in 2022	3
■ Data		Aug 22
	Data delay at RVUS (4 Aug 2023)	0
■ BOA and Atmosphere for RVUS		Aug 13
	RVUS data delayed due to ozone product delay	1
■ BOA and Atmosphere for RVUS		Aug 6
	RadCalNet data reprocessing: Collection 2023 available	0



Collection 2023

- Collection 2023 released on 12th of July 2023
- Reprocessing of the full archive of 4 out of the 5 RadCalNet sites (all but RVUS)

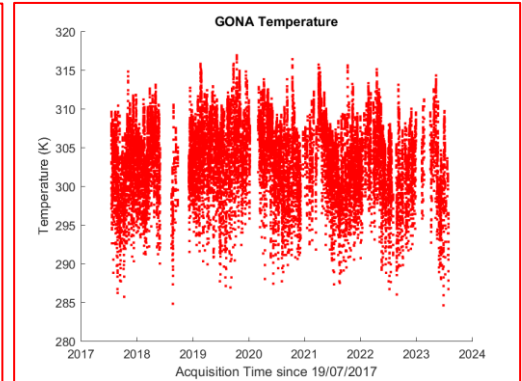
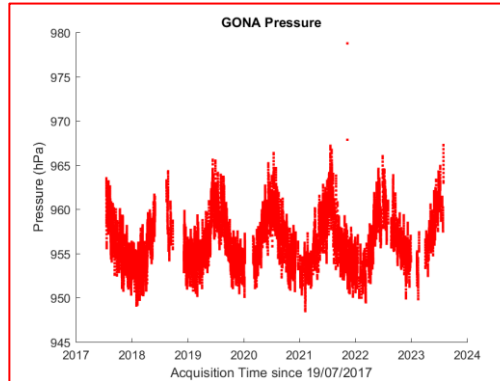
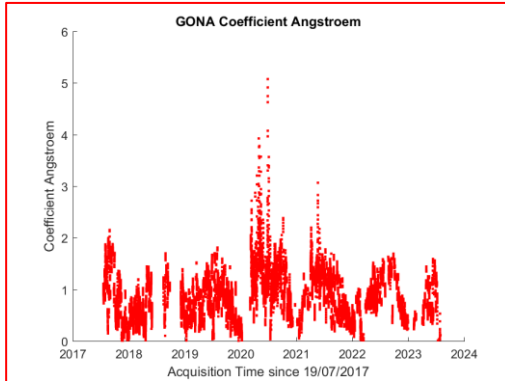
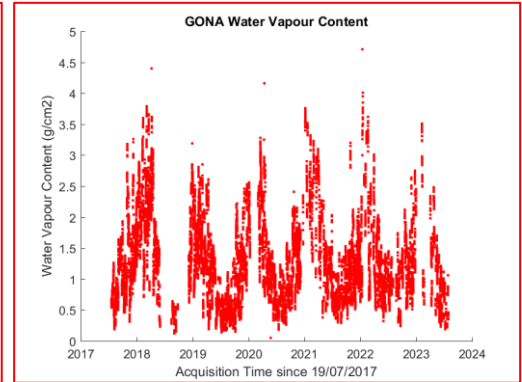
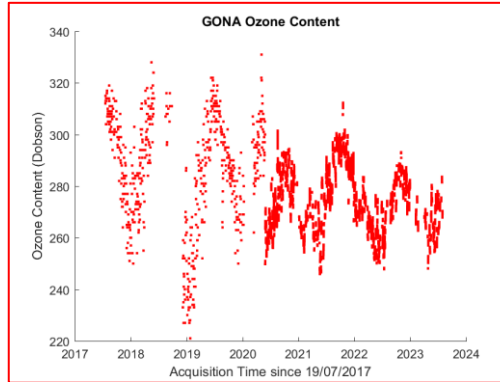
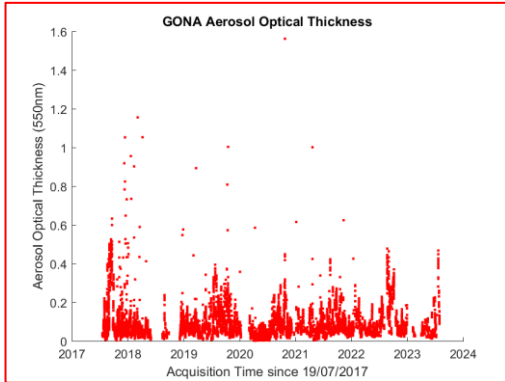
- Release note:

https://www.radcalnet.org/documentation/RadCalNetProcessing/2023_Data_Collection_Release_Note_v20230710.pdf

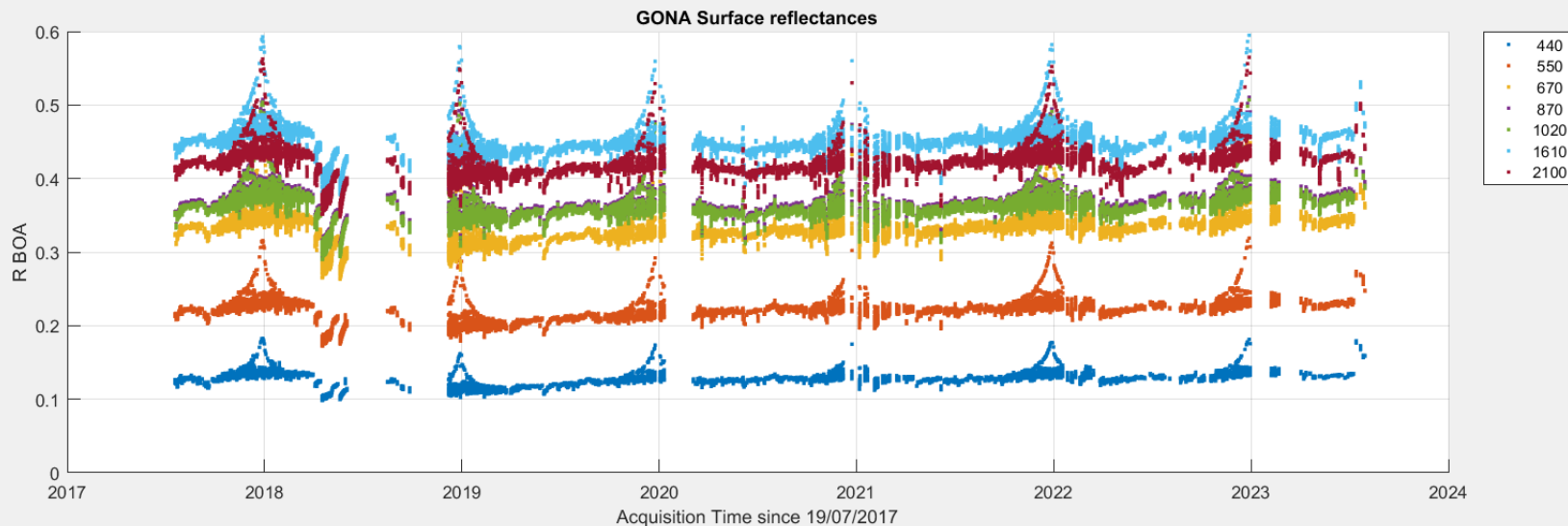
- Number of days with data available:

06/09/2023													
	2023												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	
RVUS	193	237	225	222	264	246	246	263	250	292	113	2551	
LCFR	0	0	100	125	128	99	132	115	102	100	56	957	
BTCN	0	0	0	52	76	108	102	30	85	63	49	565	
GONA	0	0	0	0	129	157	259	218	226	192	61	1242	
BSCN	0	0	0	0	15	41	73	40	80	68	43	360	
	193	237	325	399	612	651	812	666	743	715	322	5675	

Quality control: GONA atmospheric data



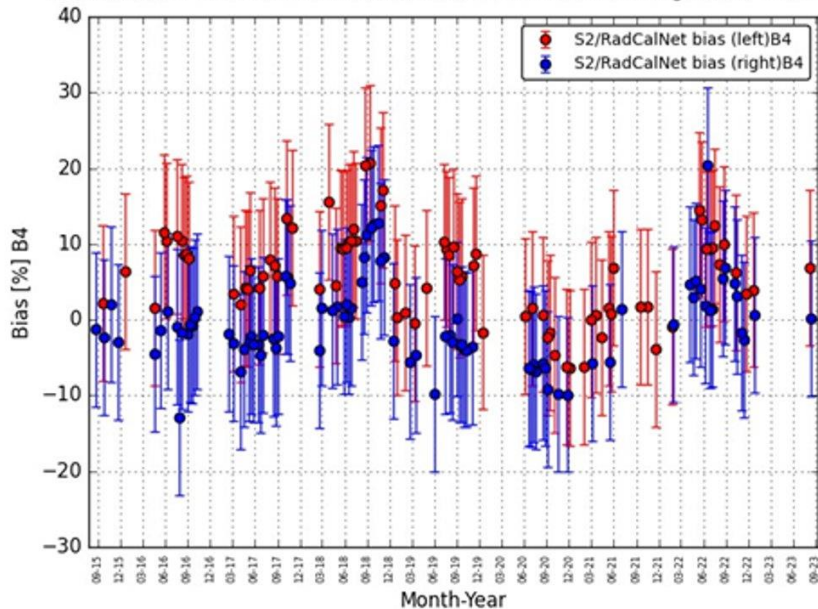
Quality control: GONA surface reflectance



Comparison of Sentinel 2A to RadCalNet TOA at Railroad Valley Playa over archive

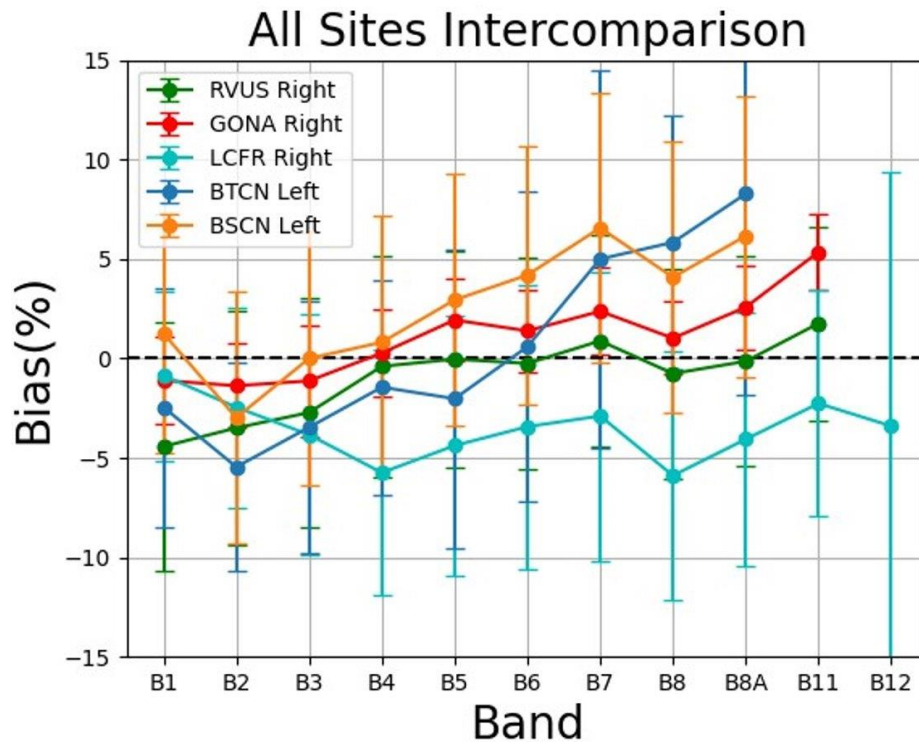
Std(left/right)5.76/5.55

Mean[%]: 2.68 Mean/Median(left)[%]: 6.01/6.44 Mean/Median(right)[%]: -0.40/-1.62



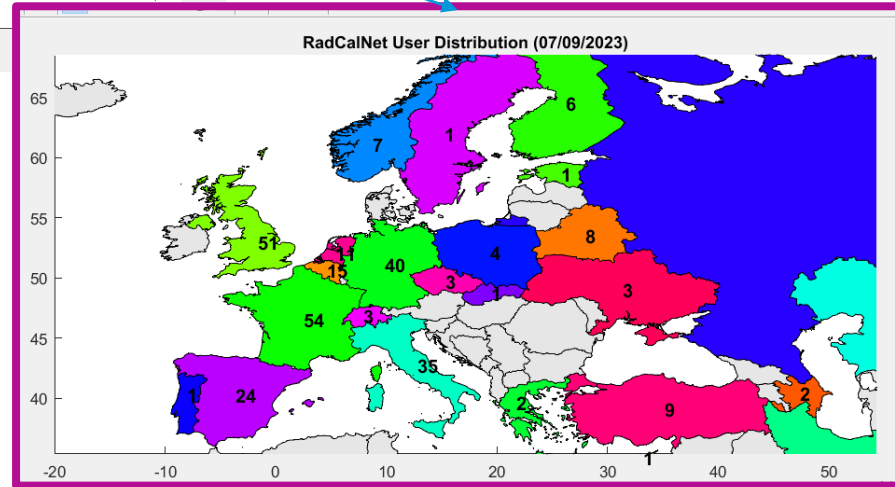
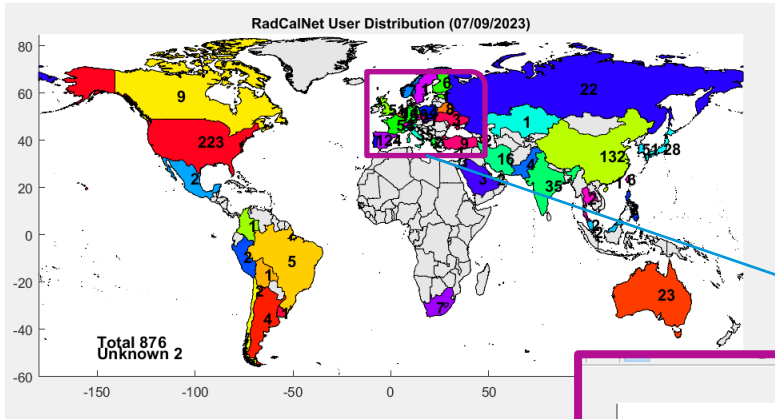
- RadCalNet TOA reflectance available every 30 mins
- Sampled at 10 nm spectral sampling interval
- S2A geometry is not exactly nadir
- BRDF effects not accounted for

Site Intercomparison S2A – 5 sites spectral synthesis

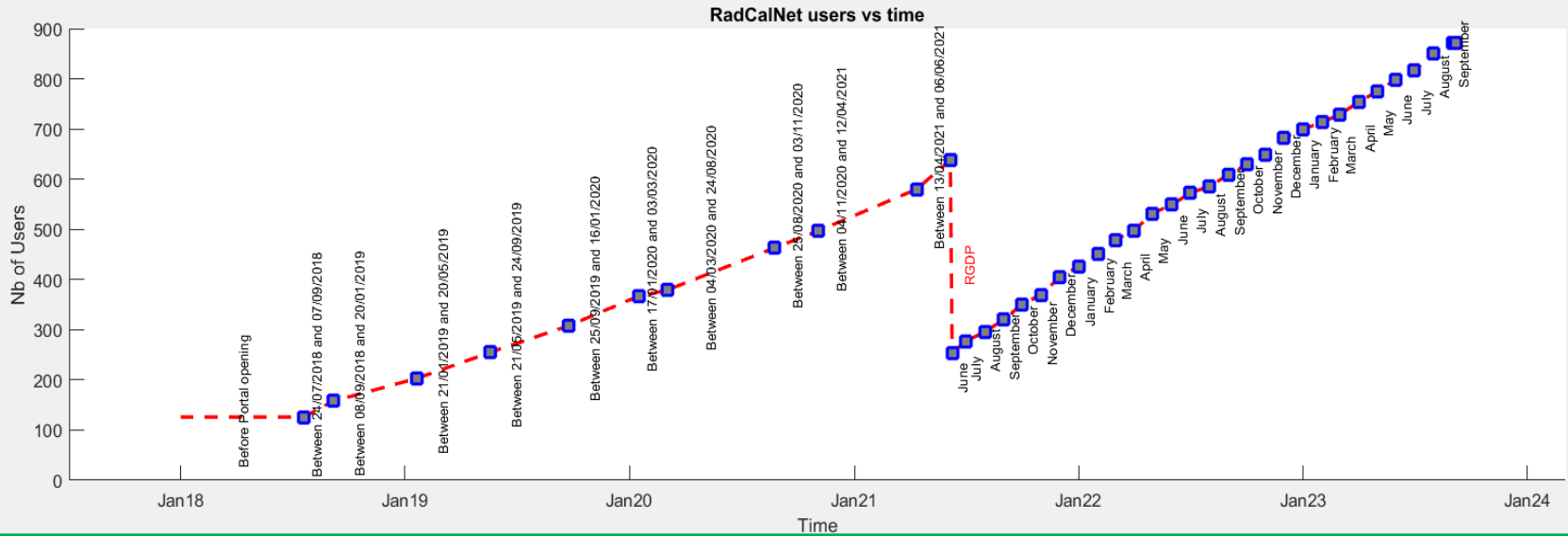




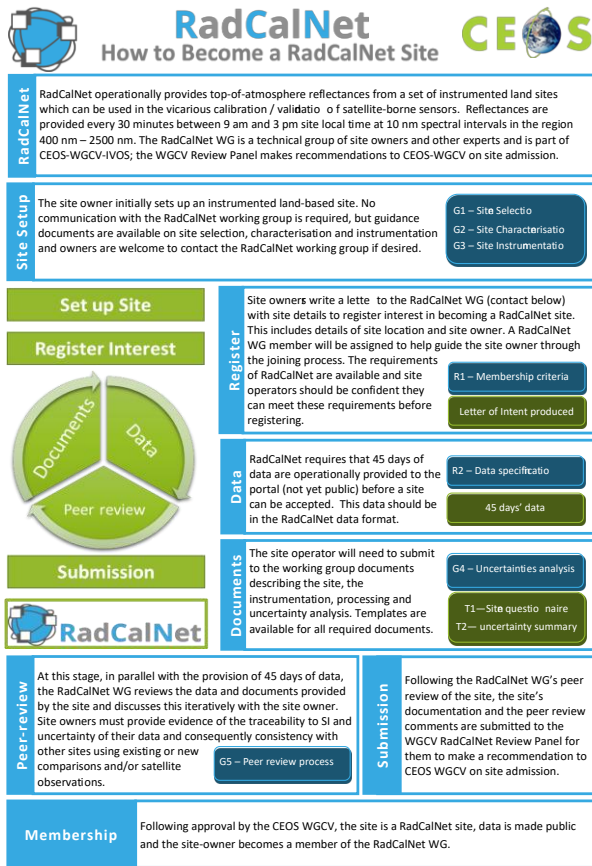
Users



Users

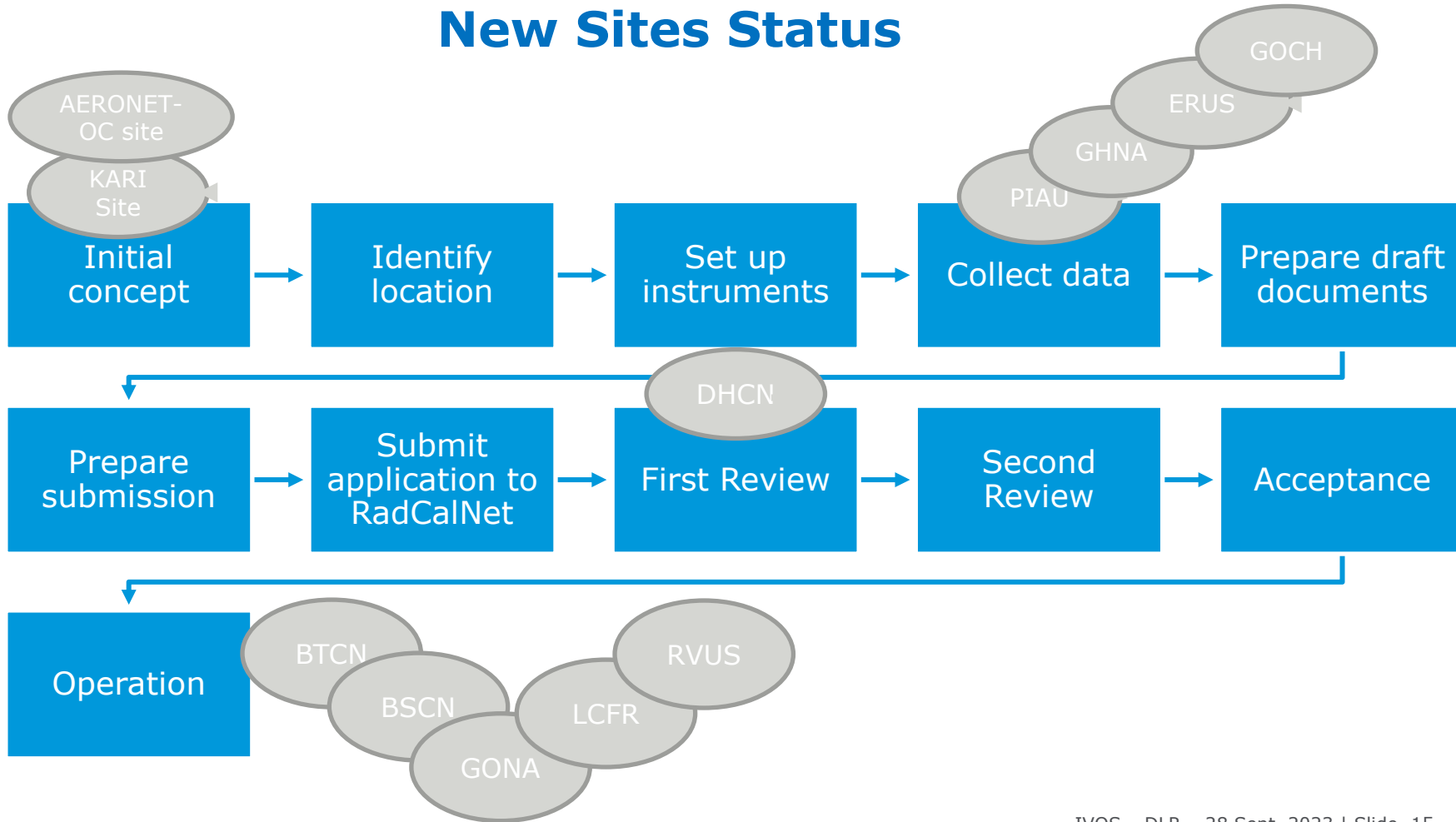


Acceptance process for new sites



- RadCalNet WG members contribute to the review
- Process overseen by WGCV
- Through an acceptance panel reporting to WGCV

New Sites Status



Conclusion

- Collection 2023 available since July 2023
- Continuous efforts to improve data quality and monitor sites
- 5 sites currently providing data. New sites expected to join the network.
- Growing user base
- 5 years of successful RadCalNet operation



Thank you

