

## An integrated dataset of daily lake surface water temperature over Tibetan Plateau

Linan Guo<sup>1,2</sup>, Hongxing Zheng<sup>3</sup>, Yanhong Wu<sup>1,2\*</sup>, Lanxin Fan<sup>1,2</sup>, Mengxuan Wen<sup>1</sup>, Junsheng Li<sup>1,2</sup>, Fangfang Zhang<sup>1</sup>, Liping Zhu<sup>4</sup>, Bing Zhang<sup>1,2\*</sup>

<sup>1</sup>Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Sciences, Beijing 100094, China

<sup>2</sup>University of the Chinese Academy of Sciences, Beijing 100049, China

<sup>3</sup>CSIRO Land and Water, Canberra, ACT 2601, Australia

<sup>4</sup>Institute of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing 100101, China

Table S1 Summary of *in-situ* lake surface temperature observation used for validation. The first 4 lakes denoted by \* are with relative long sequential observation, while other lakes are observed sporadically and cited from Liu et al. (2021).

LakeID	Lake	Observation date/period	Sources
TPL114	Serling Co <sup>*</sup>	18/04/2014~30/09/2014	Guo et al. (2016)
TPL041	Ngoring Lake <sup>*</sup>	01/06/2011~29/11/2011	Li et al. (2015)
TPL012	Bangong Co <sup>*</sup>	30/07/2012~21/10/2012	Nation Tibetan Plateau Third Pole Environment Data Center
TPL028	Dogze Co <sup>*</sup>	19/08/2012~30/08/2013	Nation Tibetan Plateau Third Pole Environment Data Center
TPL082	Mapam Yumco	25/09/2009, 04/09/2017	Liu et al. (2021)
TPL031	Tangra yumco	06/09/2009	
TPL101	Pumoyong Co	27/06/2009	
TPL153	Zhari Namco	16/09/2009	
TPL014	Npen Co	01/09/2009	
TPL012	Bangong Co	24/07/2010	
TPL069	Langa Co	14/07/2010, 08/09/2017	
TPL048	Kunggyu Co	18/07/2010	

TPL098	Paiku Co	06/07/2010
TPL121	Taro Co	23/09/2011
TPL029	Co Ngoin	24/07/2012
TPL149	Yunbo Co	12/08/2012
TPL009	Bam Co	21/08/2012
TPL027	Dawa Co	11/08/2012
TPL154	Zhangne Co	17/08/2012, 18/10/2013
TPL046	Gomang Co	17/08/2012
TPL023	Cuo Lake/Co Ngoin1	02/08/2012, 24/06/2017
TPL103	Qagoi Co	19/08/2012
TPL028	Dogze Co	18/08/2012, 26/09/2013
TPL070	Lagkor Co	08/08/2012
TPL012	Bangong Co	28/07/2012
TPL013	Bandao Lake	27/10/2012
TPL003	Amur Co	22/10/2012
TPL146	Yongbo Lake	03/10/2012
TPL077	Longwei Co	25/10/2012
TPL039	Dogaicoring QangCo	08/11/2012
TPL008	Ngangzi Co	18/10/2013
TPL055	Gyado Lake	26/10/2013
TPL017	Bura Co	29/10/2013
TPL030	Tangqung Co	23/09/2013
TPL134	Xuru Co	02/09/2013
TPL088	Monco Bunnyi	22/09/2013
TPL114	Serling Co	07/08/2014

TPL050	Gozha Co	25/09/2015	
TPL038	Dogai Coring	07/11/2016	
TPL037	Dorsoidong Co/Tu Co	24/10/2016	
TPL122	Nam Co	24/06/2016	
TPL030	Migriggyangzham Co	29/10/2016	
TPL007	Ngangla Ringco	03/08/2017	
TPL067	Gyaring Co	02/07/2017	
TPL157	Serling Co	02/06/2017	

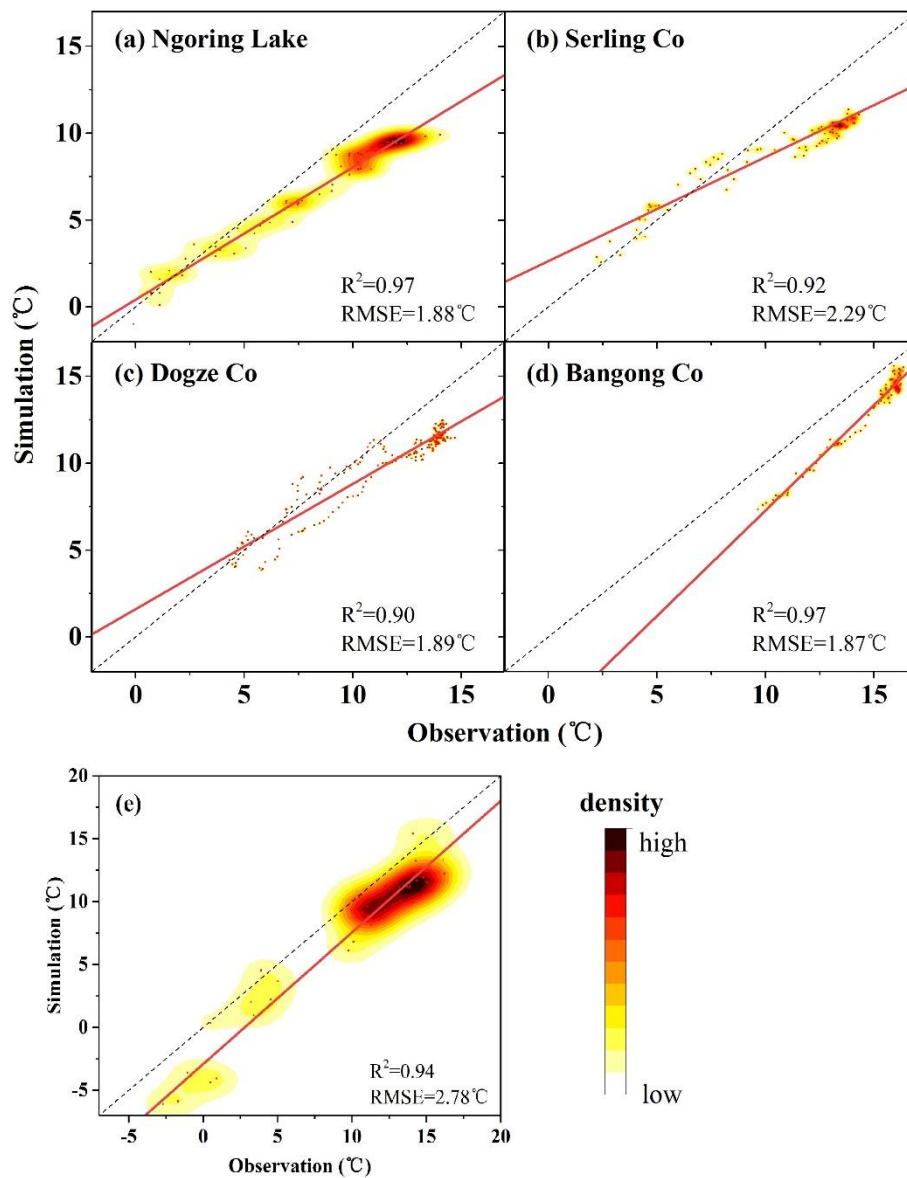


Figure S1 Validation of modeling results against in-situ observation summarized in Table S1: (a)-(d) is the temporal validation respectively for the 4 lakes with sequential observation; (e) is the spatial validation for the 41 lakes with sporadic observation. The solid lines are the regression lines. The dashed lines are the 1:1 lines.

## References

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