



中国科学院
CHINESE ACADEMY OF SCIENCES



SVOM BA follow-up system for O3 gravitational waves

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SVOMsystemreview-IAP

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SVOM GW follow-up system



Open Public Access (OPA) GWalerts

GCNlistener (pygcn)

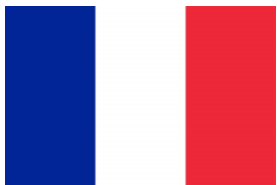


Recompose the LSCGWalert into « SVOMformat »

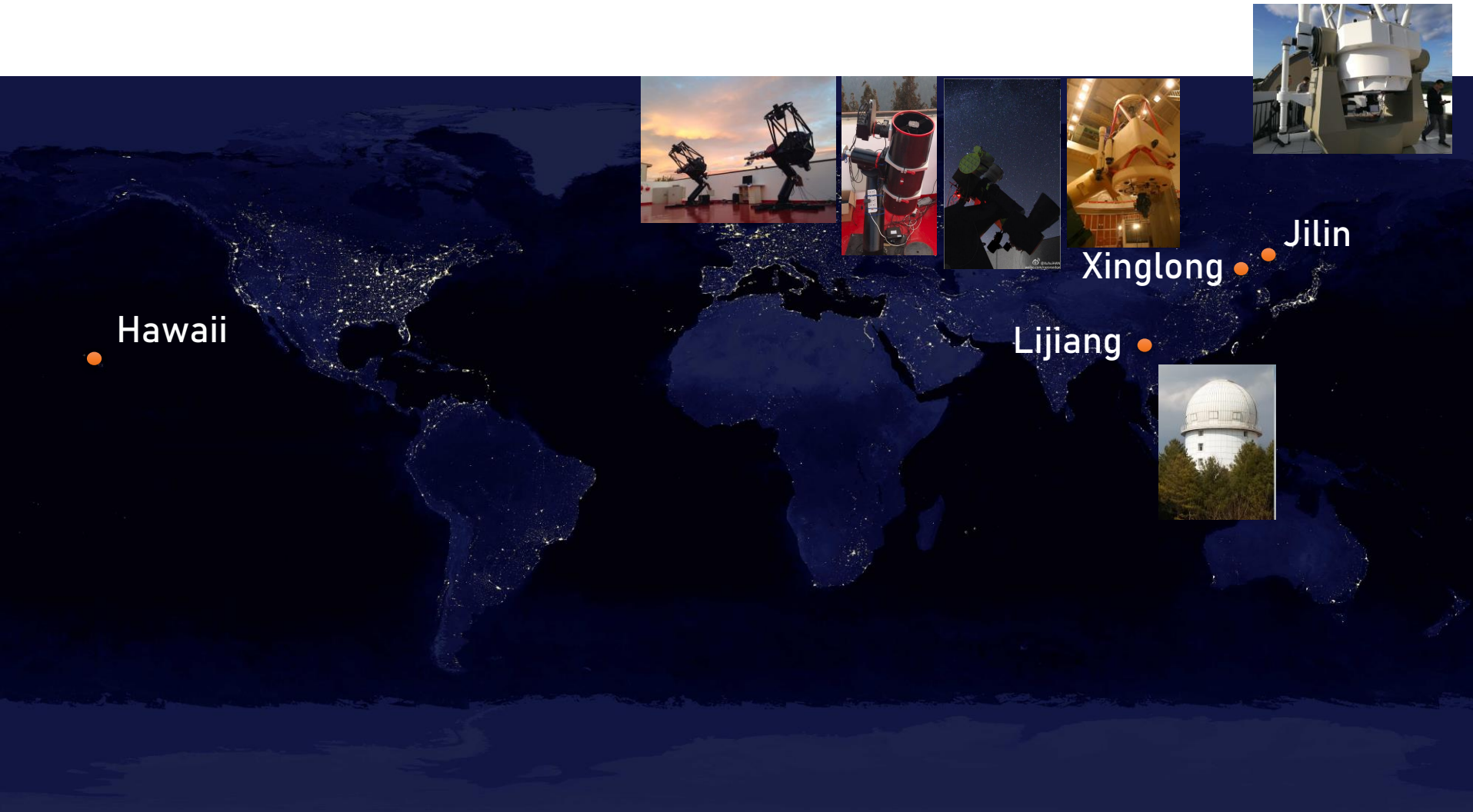
VOEvent listener (pygcn)



Chinese Multi-messenger Science Center (CMM)



Our telescope network



Alerts from LAL

Format: VOEvent

Alert type: Preliminary, Initial, Update, Retraction

Alert content:

1. GW parameters (Prob. BNS, BBH..., Prob. EM, Prob NS, date, distance, etc..)
2. GW scientific products : skymap URL, LSC data path
3. SVOM tile/galaxy target obs. coordinates (J.G Ducoin et al.)

GWAC will receive a VOEvent with tilings (Wide field of view telescope)

GWAC-F60/GWAC-F30/C-GFT will receive a VOEvent with a list of galaxy coordinates ranked wrt to their position in the 3D volume of the GW error box (RA, dec, distance), « J-Gs grade »

CMM architecture

Alert decoder + SVOM telescope obs

- ❑ GWskymaps
- ❑ XMLVOEfile
- ❑ Visibility plots
- ❑ OT finding charts
- ❑ Galaxy images
- ❑ Key softwares

FTP

Database

- ❖ Trigger parameters
- ❖ Network status
- ❖ OT parameters
(online data processing)
- ❖ Galaxy parameters
- ❖ BAActions

Web interface



BA user
You!



Summary



Summary

$T - T_{\text{GW,alert}} < 1\text{hr}$

Hawaii



Lijiang

Xinglong Jilin

Obs plan
Obs result



BA check

http://cmm.svom.cn/SVOM_BA_interface/

Summary

$T - T_{\text{GW,alert}} < \text{few hrs}$



BA Actions

http://cmm.svom.cn/SVOM_BA_interface/

Summary

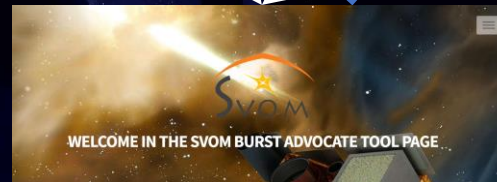
$T - T_{\text{GW,alert}}$ up to 24hr

Hawaii



Lijiang

Xinglong Jilin



BA Actions

http://cmm.svom.cn/SVOM_BA_interface/