**MMO system-QL tool user manual**

February 2018 ver.

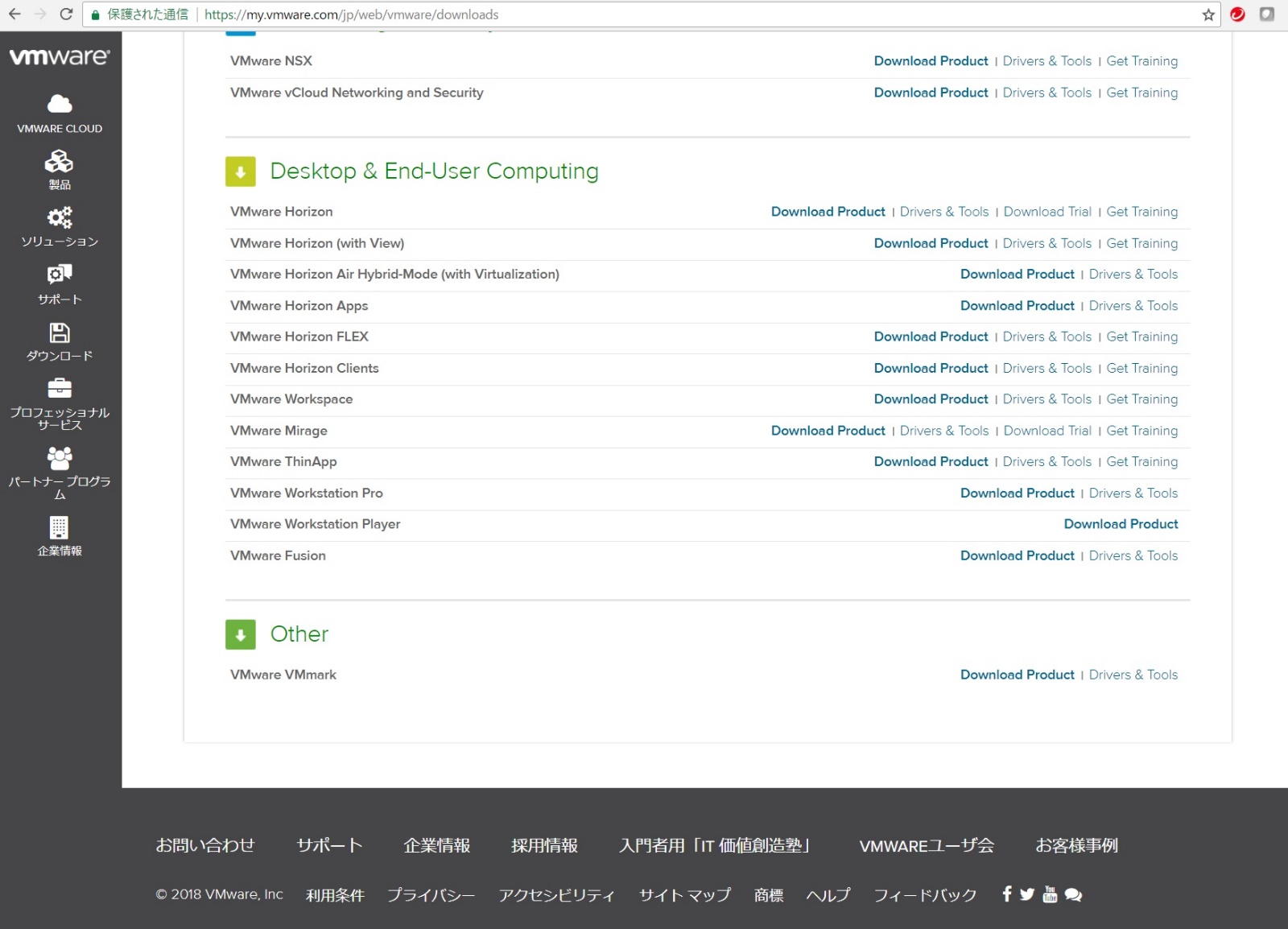
BepiColombo MMO system team

1. How to install

【1.1】Install VMware Workstation player

<https://my.vmware.com/web/vmware/downloads>

# Free versions are available only for Windows and Linux.



【1.2】Extract the distributed file ”mmo\_tlmmonVM\_ver20180208.zip” at anywhere in your PC

【1.3】Connect your PC to your network

【2. Boot the virtual Cent OS on VMware】

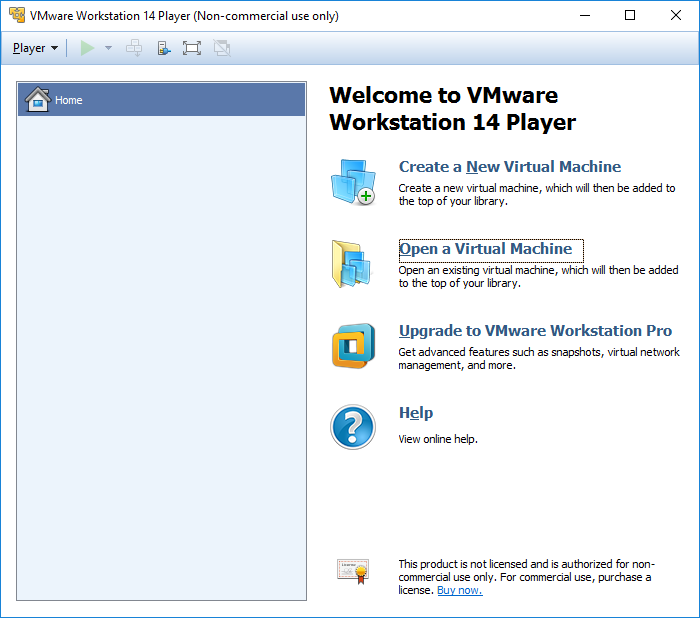
1. Start VMware Workstation Player



2. Play virtual machine

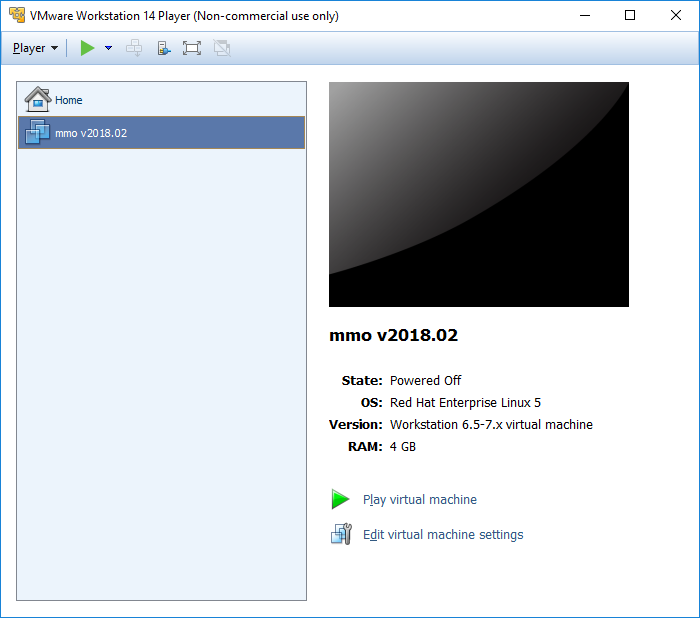
<Only for the first time>

Select “Open a Virtual Machine” -> the directory you decompressed the tool (zip file) in Step 1.2 -> mmo\_tlmmonVM\_ver20180208/mmo\_erg/CentOS 5.8.vmx



<Normal step>

Play virtual machine



3. Log in CentOS

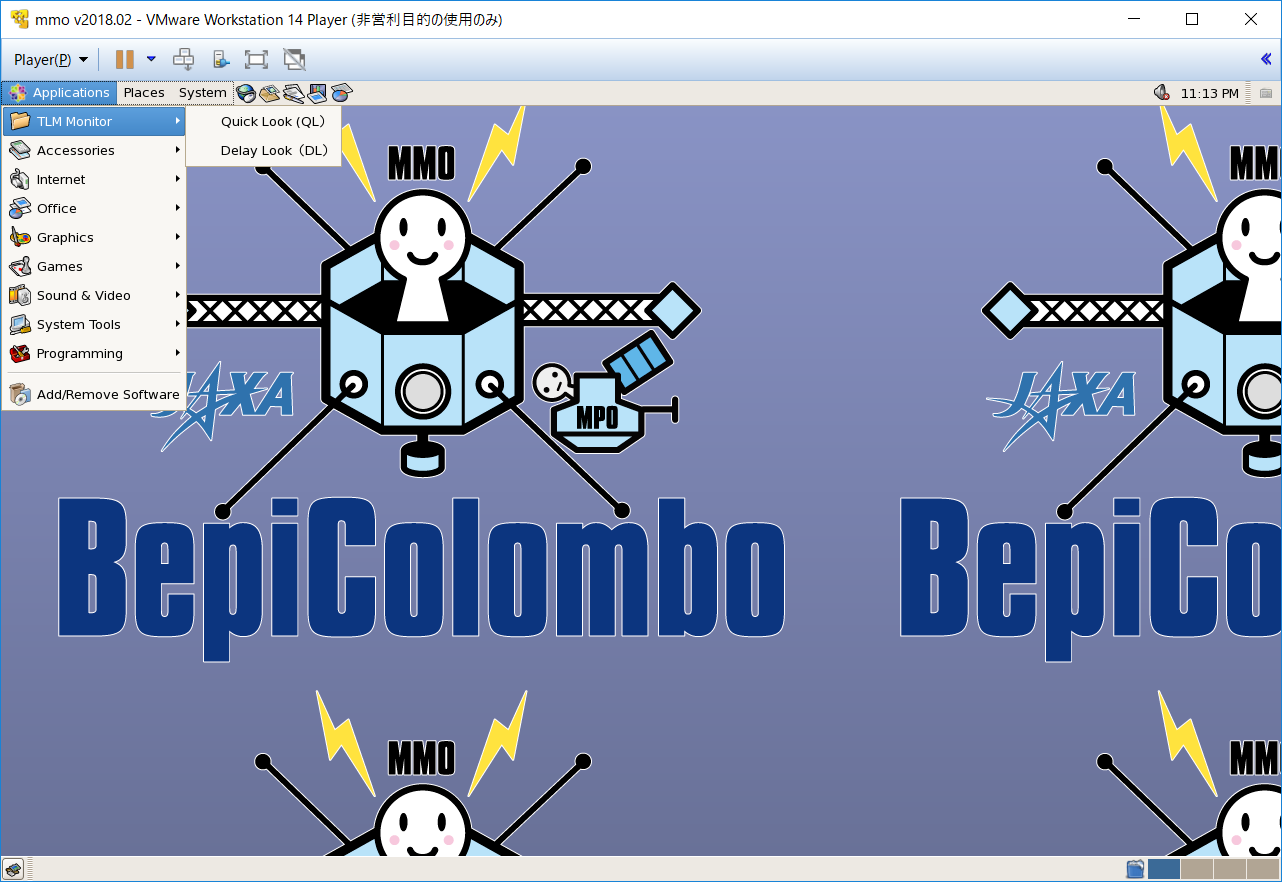
　User name:　mmo\_user

　PW:　mmo\_user

# Default keyboard setting: US keyboard

4. Start system-QL tool

* 1. Applications -> TLM Monitor -> Quick Look（QL）



* 1. Connection Status Window -> Connect -> Data Source Select

Select Antenna ID -> Connect

10\_MMO\_X\_RL　：　Nominal (e.g., Estec Test MMO TLM recieve)

11\_MMO\_X\_RL\_1553B　：　1553B connection <NECP C/O test, Venus-flyby test>

(Estec Test MMO-1553B TLM recieve)

20\_MMO\_X\_RL\_EDDS-A　：　Data via ESOC/EDDS-GW A

( MMO TLM Receive From ESOC EDDS-A)

21\_MMO\_X\_RL\_EDDS-B　：　Data via ESOC/EDDS-GW B

( MMO TLM Receive From ESOC EDDS-B)

30\_MMO\_X\_RL\_CEB　：　Data via ESOC/EDDS-GW　Cebreros

( MMO TLM Receive From ESOC Cebreros)

31\_MMO\_X\_RL\_MAL　：　Data via ESOC/EDDS-GW　Malargue

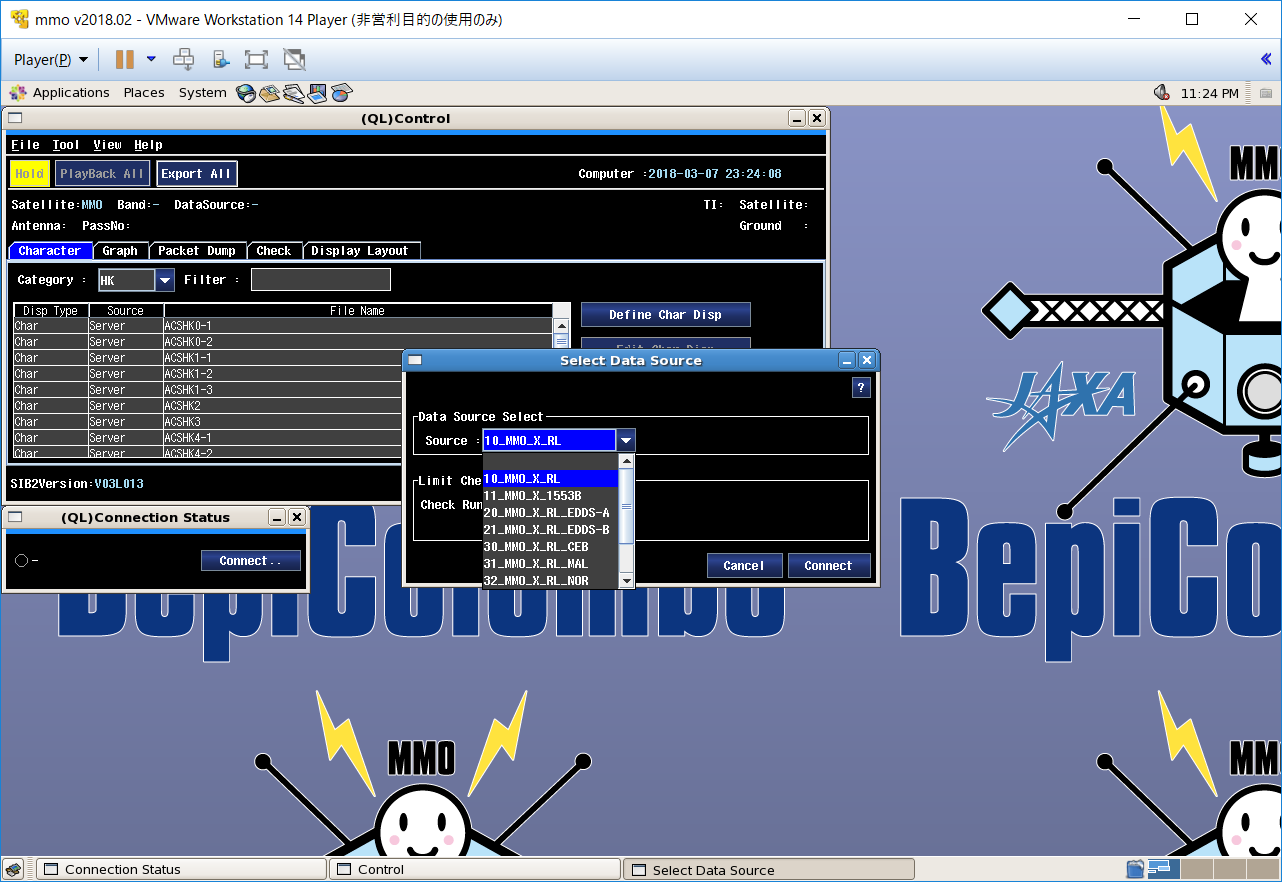
( MMO TLM Receive From ESOC Malargue)

32\_MMO\_X\_RL\_NOR　：　Data via ESOC/EDDS-GW　NewNorcia

( MMO TLM Receive From ESOC NewNorcia)

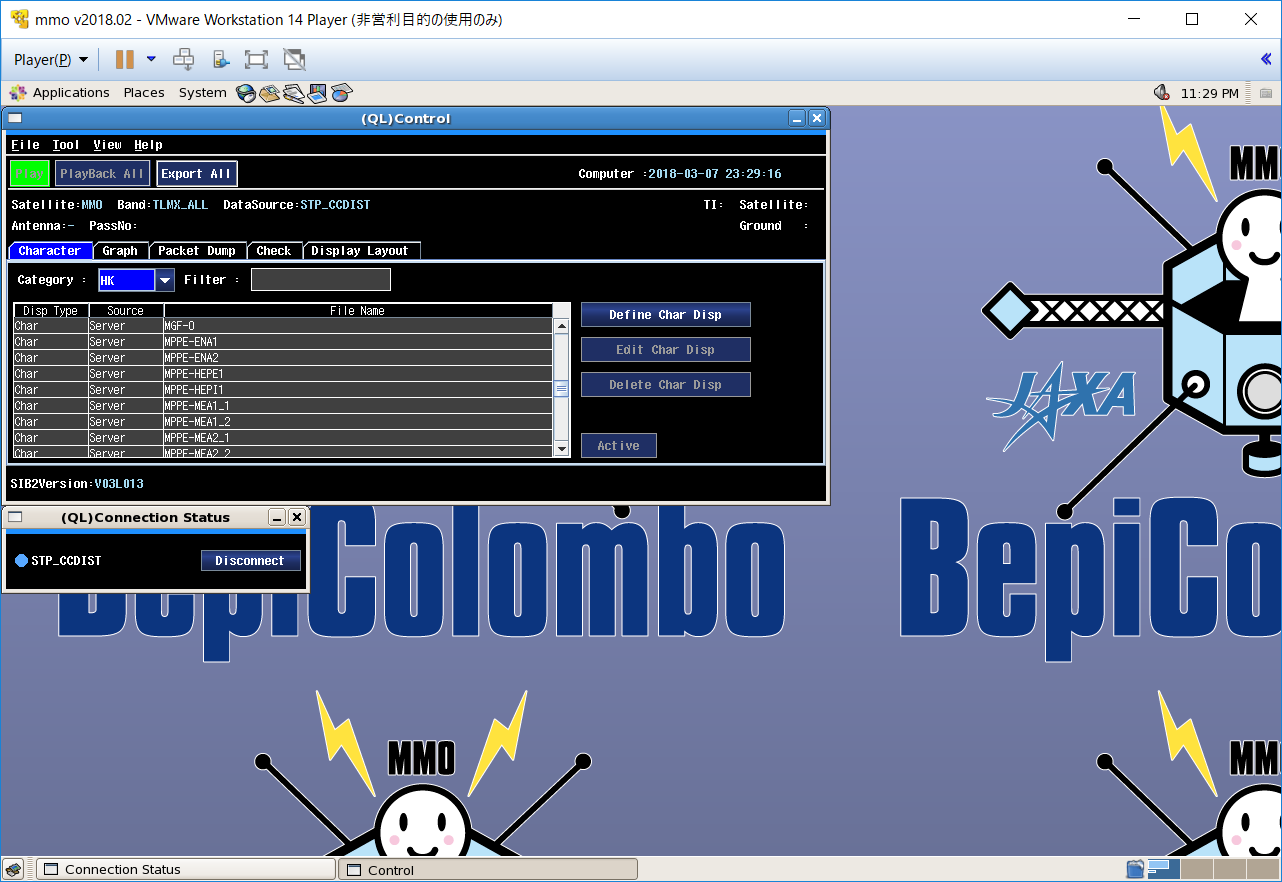
33\_MMO\_X\_RL\_ERS　：　Data via ESOC/EDDS-GW　ReferenceSta

( MMO TLM Receive From ESOC ReferenceStation)



* 1. Open QL window:

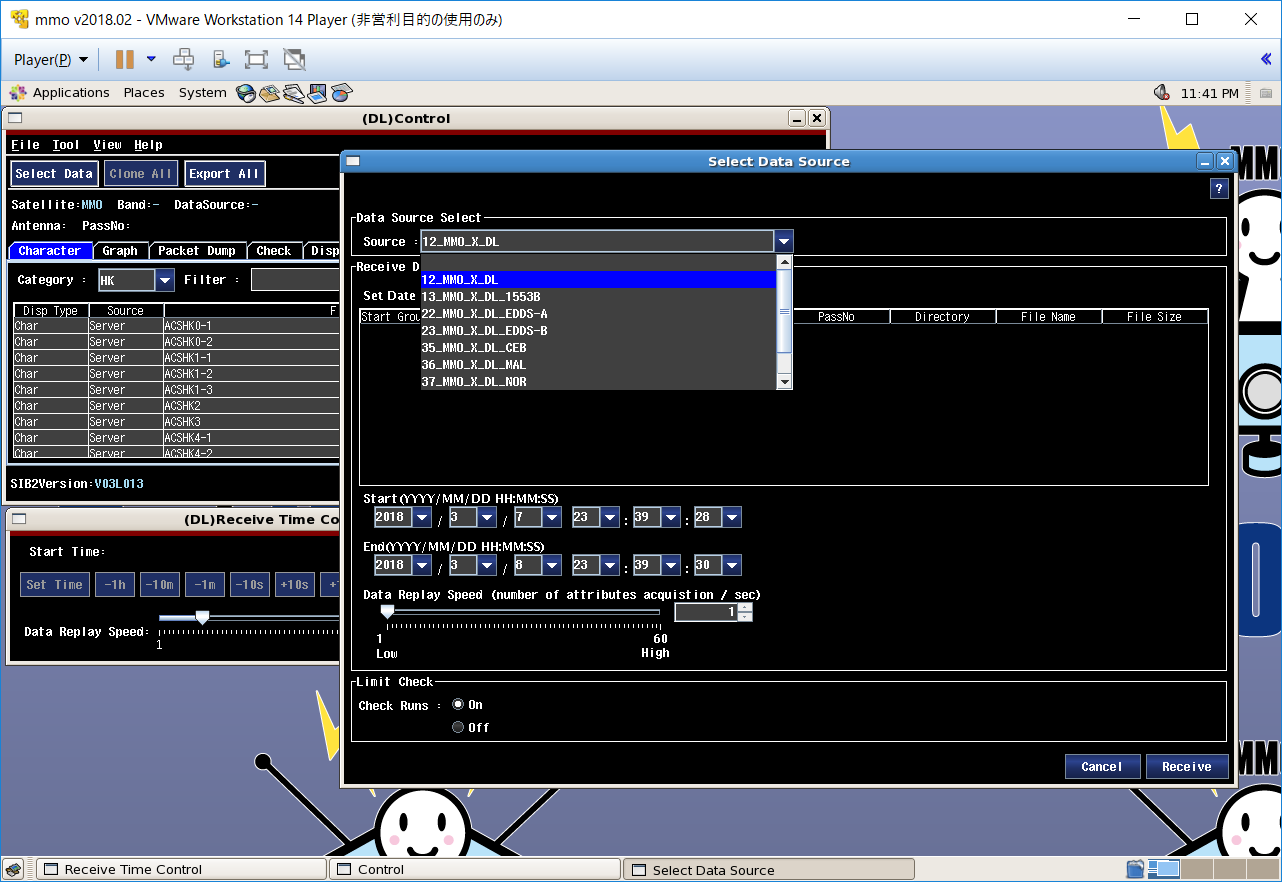
Character -> Category: HK -> Select each instrument file



5. Start system-DL tool

1. Applications -> TLM Monitor -> Delay Look（DL）
2. Control Window -> Select Data -> Data Source Select

Select Antenna ID -> Receive



12\_MMO\_X\_DL　：　Nominal (e.g., Estec Test MMO TLM recieve)

13\_MMO\_X\_DL\_1553B　：　1553B connection <NECP C/O test, Venus-flyby test>

(Estec Test MMO-1553B TLM recieve)

22\_MMO\_X\_DL\_EDDS-A　：　Data via ESOC/EDDS-GW A

( MMO TLM Receive From ESOC EDDS-A)

23\_MMO\_X\_DL\_EDDS-B　：　Data via ESOC/EDDS-GW B

( MMO TLM Receive From ESOC EDDS-B)

35\_MMO\_X\_DL\_CEB　：　Data via ESOC/EDDS-GW　Cebreros

( MMO TLM Receive From ESOC Cebreros)

36\_MMO\_X\_DL\_MAL　：　Data via ESOC/EDDS-GW　Malargue

( MMO TLM Receive From ESOC Malargue)

37\_MMO\_X\_DL\_NOR　：　Data via ESOC/EDDS-GW　NewNorcia

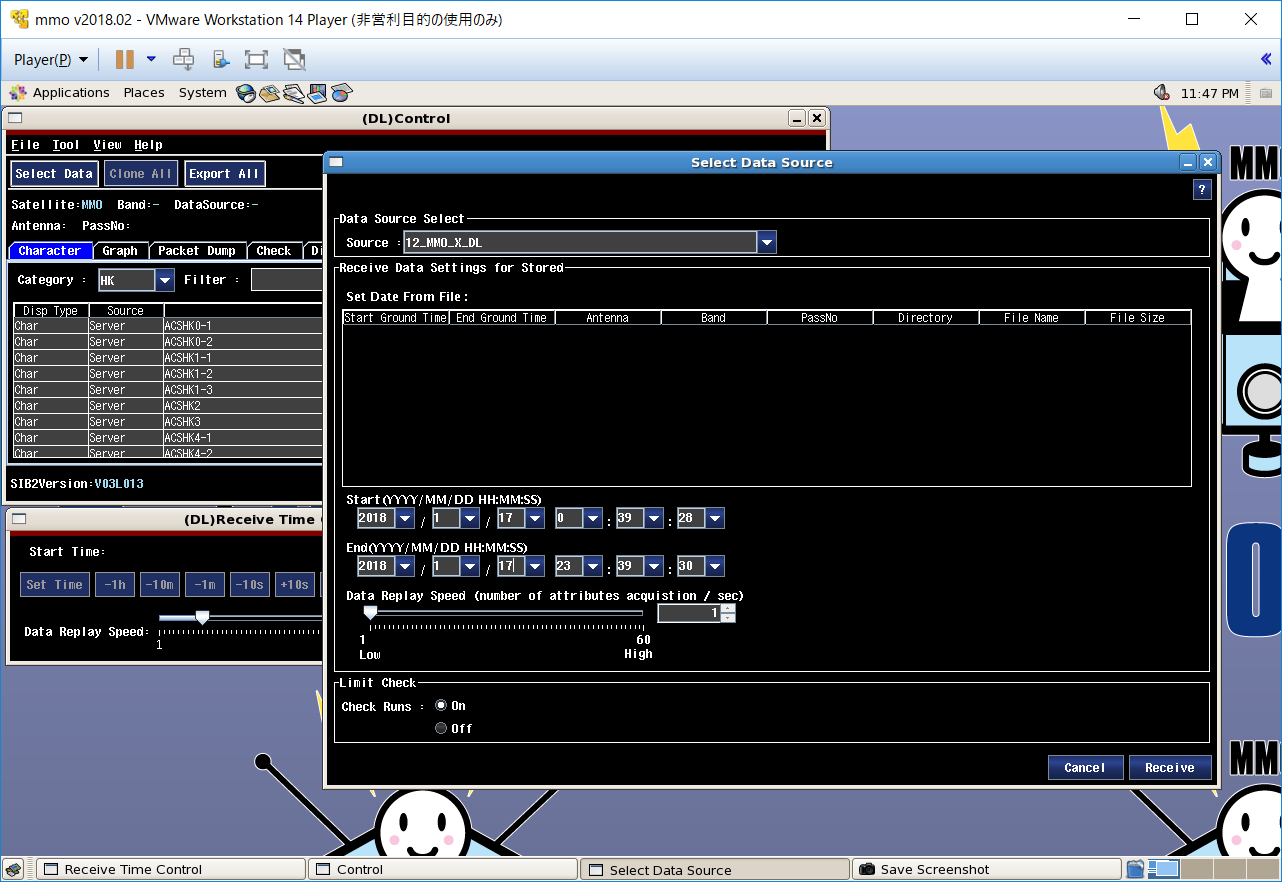
( MMO TLM Receive From ESOC NewNorcia)

38\_MMO\_X\_DL\_ERS　：　Data via ESOC/EDDS-GW　ReferenceSta

( MMO TLM Receive From ESOC ReferenceStation)

1. Time set

Set Start Time & End Time -> Receive



1. Start DL

Push Hold button to start DL

