Update and temporary modifications at SRT

Please, indicate the date, temporary instructions and modifications the user needs to take into account to perform the observations in blue, and the problem(s) you have during the session in red. The solution to the problem(s) is indicated in green.

12/05/2025 - (S. Poppi, E. Egron) :

In K-band, the derotator sometimes maintains the derotator configuration used in the previous project. The observer has to pay attention to this and check the derotator configuration in the "Receivers panel". If necessary, use the following commands in the OperatorInput:

```
> derotatorSetConfiguration=fixed
> derotatorSetPosition=0d
```

14/04/2025 - (F. Gaudiomonte) :

In C-high there are strong RFI in the frequency range: 6570-6710 MHz.

11/03/2025 - (E. Egron) :

In caso di problemi durante le osservazioni, scrivete una mail a srt-usersupport.oaca@inaf.it descrivendo il problema incontrato.

10/03/2025 - (E. Egron) :

Per evitare i problemi con i servo minori, si chiede la cortesia di riportare l'antenna a 88deg di elevazione (`> goTo=*,88d`) prima di cambiare il ricevitore in fuoco quando si passa dalla banda K al C-high, o contrario.

25/11/2024 - (E. Egron, G. Carboni) :

Quando una procedura (es: *telescopePark*, *setupKKG*, etc) non va a completamento e il telescopio sembra non andare in tracking nonostante l'operatorInput accetti normalmente i comandi:

```
> abort
```

Se invece l'operatorInput non risponde nemmeno ai comandi, aprire un nuovo terminale e digitare *operatorInput*, e nella nuova finestra digitare il comando:

```
> abort
```

11/07/2024 - (E. Egron, G. Carboni) :

Per attivare la lama d'aria in banda K:

```
> setGregorianAirBladeStatus=ON   (wait 30 seconds)
```

11/07/2024 - (E. Egron, G. Carboni) :

In caso di errore sul panel dei servo minori, digitare:

```
> servoReset
> servoSetup=CCG    (codice del ricevitore usato: CCB,CCG,KKG)
```

25/06/2024 - (E. Egron, C. Migoni) :

Le nuove configurazioni per SARDARA sono:

- C-high:
  - `> initialize=SCH00S` per full-Stokes observations
  - `> initialize=SCH00` per total intensity observations
- C-low:
  - `> initialize=SCC00S` per total intensity observations
  - `> initialize=SCC00` per total intensity observations

20/06/2024 - (E. Egron) :

Se dovesse comparire un errore (Error in rosso) sull'ACU, fare > antennaReset finche' sparisca l'errore (farlo 2 volte o di piu' se è necessario attendere 10 secondi tra un antennaReset e l'altro.), poi > antennaTrack

22/05/2024 - (E. Egron) :

- At the end of the observations, in order to stop and park the antenna:

> haltSchedule
> telescopePark

- Per settare le section, ormai non c'è piu' bisogno di scrivere setSection=0,... per CH0, poi 1 per CH1, ecc, si puo' usare direttamente l'asterisco per settare tutte le sessioni insieme:

e.g. > setSection=*, *,300,*,*,0.000025,*

al posto di:

>setSection=0,*,300,*,*,0.000025,*
>setSection=1,*,300,*,*,0.000025,*

27/02/2024 - (E. Egron) :

Do not press the emergency stop button.

19/02/2024 - (S.Poppi) C-LOW receiver code is CCG

Follow instructions for the other C-band receivers on SRT procedure pages using the CCG code (C double polarization in Gregorian Focus)

>setupCCG
or if needed
>antennaSetup=CCG
>receiversSetup=CCG

Sardara Config is

initialize=SCC00

The best LO for totalpower measurements and 300 MHz bandwidth is 4600 MHz.
For SARDARA/SKARAB with 1.4 MHz bandwidth the LO is to be set to 4100 MHz.

Focus scan is not available.

19/02/2024 - (S.Poppi) discos-dev instead of discos-console

Discos is run on discos-dev. Use discos-dev instead of discos-console.
e.g use:

```
$> scp [schedulename.*] [projectID]@discos-dev:./schedules/
```

instead of:

```
$> scp [schedulename.*] [projectID]@discos-console:./schedules/
```

27/06/2024 - (E. Egron, S. Poppi) :

~~Bug di SARDARA quando si da' il comando initialize=SK77S:~~
~~Attenzione, si puo' mandare in crash il sistema quando si da' il setSection con il numero delle sezioni sbagliato. Con SK77S, il setSection opera per beam e pertanto i valori sono da 0 a 6. Il baco e' che se si da' un numero maggiore il component di Sardara va in crash.~~

~~In caso succedesse, la procedura per risolvere è:~~

~~- aprire un nuovo terminale e dare il comando discosConsole -c (chiude tutte le finestre della console)~~
~~- spostarsi nel desktop virtuale n.1 e dare verificare in acscommandcenter il numero dei container.~~
~~- se i container sono 34 in deployment info (dovrebbero essere 35) vuol dire che il container di Sardara e' andato in crash.~~
~~- dall'elenco container alla riga di Sardara, pigiare su "stop" (quadrato nero) e successivamente su play (triangolo verde).~~
~~- tornare sul desktop virtuale due e digitare da terminale discosConsole (ora si dovrebbero aprire la console).~~
~~- chooseBackend=BACKENDS/TotalPower, verificare con getTpi e tsys che il sistema sia ok.~~
~~- chooseBackned=BACKENDS/Sardara e rifare il setup (attenzione a non ripetere l'errore).~~

Risolto.

19/02/2024 - Quicklook non available.

~~**26/04/2021 (E. Egron, G. Carboni)** If the Quicklook stop running correctly and is frozen to a previous session, you can restart it from the user "observer":~~
~~***su - discos service quicklook restart***~~
~~Please, ask the project friend to complete the procedure with the password.~~

24/02/2020 (E. Egron) ACU control panel: if an error appears (red box), please report in the log at the end of the observations the azimuth, elevation, UT and read and report the information on the ACU (move the cursor on the tab "ERROR" in red. You will see a message like "err_externerr"). Then, follow the instructions on the guide to solve the problem.

30/01/2020 (G. Carboni) Quicklook service will be temporarily available only for TotalPower and XAreos backends.

30/01/2020 (E. Egron) When using SARDARA, the rms range given by the command getRms has to be 20-22 for the C and K bands.

13/01/2020 (E. Egron) The number of containers is now 34.

30/09/2019 (S.Poppi) The running containers are 31, instead of 32, the LP Receiver container is down for maintenance.

14/05/2019 (E. Egron) Temporary instructions to configure the SAB => not necessary from 20/06/2019

ssh -CX observer@viewer02
cd SAB
python sabc.py

Select the backend and click on "Send".

When the backend is correctly set up, close the window of the application.

30/09/2019 *The sab is no longer needed.*.

11/12/2018 (M. Burgay) At the completion of the focus procedure, the MinorServo tui was in error and a message "SRP failure" and "SRP cannot move" appeared in the MinorServoBoss in ACU. Giving a *track* command worked (and all the offsets were correctly applied)

05/09/2018 (E. Egron) With SARDARA, the signal has to be attenuated based on the rms range. Check its value with "getRms" and attenuate the signal with "setAttenuation=*[section], [attenuation]*" until the rms reaches a value between 30 and 33.

In K-band, you have to set the attenuation of the feeds 0 and 1, instead for the other feeds, the attenuation has to be set at 0 since the rms does not arrive at 30.

In case of problem with the command getRms, you can set the attenuation manually depending of the receiver and the bandwidth. The values indicated by A. Melis are the following:

- K-band

	bw=1500MHz	bw=420MHz
sezione 0	10	7
sezione 1	14	12
sezione 2	13	11
sezione 3	10	8
sezione 4	0	0
sezione 5	0	0
sezione 6	0	0
sezione 7	0	0
sezione 8	0	0
sezione 9	0	0
sezione 10	0	0
sezione 11	0	0
sezione 12	0	0
sezione 13	0	0

- L-band
- C-band

~~**05/09/2018 (D. Perrodin, G. Surcis):** XXL4 (and probably XXC4: the default in Nuraghe) not enough for observations in L-band. New, strong RFI at high frequencies ruin the entire L-band. Need Maccaferri filter for pulsar observations (but careful: power splitters are faulty and induce a strong ripple in the baseband) or tighter RF filter such as XXL2 (or XXC2).~~

~~**31/08/2018 (D. Perrodin)** Maccaferri filter in L-band gives bad output in one of the two cables/polarizations. This is especially true for the ROACH1 backend. This problem was seen in all L-band ROACH1 data from August 05, 13, 24 and 31 (but no problem on August 30 when no filter was chosen). This needs to be investigated. In the meantime, for the purpose of L-band tests, make sure to NOT use the Maccaferri filters. Also, the filters are not reset~~

automatically when closing the observations. So make sure to set the Maccaferri filters to "no filter" before starting L-band observations. Update as of 05/09/2018: as per Sergio's orders, the cables to the ROACH1 backend are no longer going through the Maccaferri filters, however they still do for the DFB. This greatly improved the ripple in the ROACH1 backend (although not completely; but maybe there is a different, remaining problem with one of the 2 polarizations) and as expected, there is still a ripple in the DFB data. However not using the Maccaferri filter (WIDE=460 MHz) with the ROACH leads to a saturated receiver, probably due to new, very strong RFI at high frequencies (not present prior to 2016). So the ROACH L-band data is useless using only XXL4 and no other filter. It is necessary to use at least XXL2 and possibly XXL3. To be tested. Hopefully the power splitters related to the Maccaferri filters can be replaced and the problem can be fixed so the Maccaferri filters (460 MHz) can be used in the ROACH again (it's a sharper filter than XXL2 even though the frequencies are in theory the same).

30/08/2018 (D. Perrodin, M. Pilia) Problem with ROACH1 backend writing data in only half of the nodes of the LEAP cluster. This problem was solved by doing (twice) a manual reset of the LEAP switch while acquiring data. This involves going into the CED, and doing this manually. If this happens to you, ask an authorized/knowledgeable person (Conchi or Perrodin) to go to the CED and (very carefully) reset the switch.

24/08/2018 (M. Pilia, E. Egron) Problems with the Active Surface (component not active) resolved first with discos from scratch, then problems with Sardara (getRms). We did again discos from scratch since it was impossible to launch a schedule. But still errors with the Active Surface (component not active) and we cannot launch a schedule, with the TP or Sardara. (MP) It seems that the error on the AS continuously reported by the jlog is connected to the presence of red panels but it is nothing to worry about if the AS is mostly green and responsive to asSetup commands. It does create problems, though, as it makes it more difficult to see other notices/warnings/errors.

13/08/2018 (P. Marongiu, M. Pilia)

We had some initial problems with the Mount Status and AntennaBoss Status in FAILURE. Similar issues were pinpointed by the jlog. The maser 1 block in the Quadro di alimentazione della sala T&F was down, probably as a consequence of an electricity glitch.

The setupLLP command brought the antenna to Elevation = 73 degrees twice. This should not cause any problem.

20/07/2018 (G. Surcis, G. Carboni)

during the nodding schedule with Xareos we had in the scheduler the message "Failure" and the tracking of the scheduler was red (while in AntennaBoss was green). For three out of four schedules (3c286p, W75Np, W49Np) no data were written. The tracking became red after subscan 1.1 that sets the derotator. The problem could be due to the use of stopSchedule

~~instead of haltSchedule, indeed Xarcos remains pending in case stopSchedule command is used.~~

~~**16/07/2018 (D. Perrodin et al.)** Trying to plan pulsar observations with the DFB. However looking at the online instructions, it says to input a "SEADAS setup" file and a "SEADAS schedule" file but there are no instructions or link to instructions on how to make these files. Need to add some info.~~

~~If it doesn't get updated and integrated quickly, need to add some comments on setting up LO for L-band (setLOLP.py 2316) as well as manual instructions for setting up Maceafferi filter.~~

~~**15/07/2018 (P. Castangia, D. Perrodin)** At the beginning of the session we sent the command antennaReset + setupKKG, and the minorServo window showed "Failure". This was resolved after doing a second "antennaReset" + "setupKKG".~~

~~We sent a command for setLO that resulted in failure. We resolved by changing the LO value (from 17835: too low, to 17935: OK).~~

~~The "scheduler" window showed "Failure" but everything seems to be running smoothly.~~

~~**10/07/2018 (S. Loru, E. Egron)** At the beginning of the session we sent the command setupKKG, the minorServo were found in failure : the error message on the jlog indicated "GFR in emergency stop". servoSetup=KKG or =CCB did not resolve the situation, neither nutraghe from scratch. The problem was resolved by going in antenna with the reset of the GFR that was in error (Gigi Ortu).~~

08/07/2018 (A. Melis, M. Pilia) One sector of the active surface is not working. We sent the command asSetup=S three times before it switched from Shaped Fixed to Shaped.

~~**19/06/2018 (T. Pisanu, M. Pilia)** We didn't manage to do the setupKKG. There was a problem with the Z axis of the PFP. The problem will be investigated in the morning.~~

~~**18/06/2018 (S.Poppi, P.Castangia).** We had the followed error: after unstowing the antenna we've has rrrors with servo minors "error positioning SRP".~~
~~We tried unsuccessfully several times:~~
~~>servoSetup=KKG~~

~~Then we gave:~~
~~>goTo=*,70d~~
~~followed by~~
~~>servoSetup=KKG~~
~~Now, successfully.~~

12/06/2018 (V. Vacca, S. Loru) We had the followed error: the azimuth error section in the ACU - PCP panel became red and the azimuth axis ws deactivated.
We tried several times:

> antennaReset
> antennaTrack

without success. Finally we tried:

> antennaReset
> goTo= 190,45d
> antennaTrack

We noted that the azimuth axis position was 180 deg and the ACU - PCP panel became green.

We found one error: the elevation limits were not set using tab.

Add a single tab before each of two elevation limit values. Be careful only a single tab otherwise NURAGHE doesn't recognize the given elevation range and just skips the scans.

01/06/2018 (S.poppi) It could happen that after a focus scan the control software is on hold and doesn't give prompt after focus scan. If so, open a new terminal shell and type 'operatorInputTui' command. It will appear a new operator input with the prompt. Give the command 'abort' in this new window. The operator input on hold will be releasing the prompt.

~~**25/05/2018** (S. Poppi) Temporary instructions to set the LO for the L-P receiver :~~
~~Da nuraghe-mng, aprire una shell e dare il comando: setLOLP.py 2300~~
~~Il parametro e' la frequenza in MHz, in questo caso 2300. Se va a buon fine la risposta è la seguente:~~
~~S 0 10 2300 1~~
~~Sent: S 0 10 2300 1~~
~~Received: ack~~
~~Importante c' ack dopo received.~~
~~Per leggere il valore dell'oscillatore, sempre da shell di nuraghe-mng : readLOLP.py~~
~~Sent: ? 0~~
~~Received: ack~~
~~0, 18, 2, 10, 2312, 255, 255, 255 ,255, 8, 0, 1~~
~~Freq: 2312 Status: 8 Lock: 1~~
~~E' importante che lo status sia 8 e lock sia 1, se cosi' non fosse indicherebbe un problema (eventualmente occorre risettare la frequenza).~~

~~**15/05/2018** (M. Pilia & A. Possenti): the Active Surface terminal keeps showing lines like this:~~
~~2018-05-ddThh:mm:ss.sss [AS/SECTOR0x/LANyy/USD01 -] Critical exception 5~~
~~Almost all the upper half of the most internal circle of panels is red.~~

10/05/2018 (D. Perrodin & M. Burgay): there were problems with SEADAS and after using it, the externalClient seemed to be stuck. (we used SEADAS to control the DFB, but then going back to ROACH1 we could not get the externalClient to work anymore). This usually means not all processes have been killed. We killed a couple of VNC for SEADAS but that did not resolve the problem.
As far as observations on 14/05/2018 are concerned, there is no longer a problem with the externalClient. In the future, it will be important to check that the closure of SEADAS and SARDARA (ROACH2's) also close the socket connection to the external client. [This is advice for software developers, not for future observers].

08/05/2018 (V. Vacca & S. Leurini): The fire prevention alarm went off without any real danger (no fire broke out). We tried to hush it up and to reset it without success (after each reset, the system reported a fire in a different room of the building). We tried to hush it up once more and it worked, even if the warning message remained.

~~**15/04/2018** (E. Egron & F. Loi): we got the error message "Cannot move the SRP" in the MinorServoBossContainer and jlog. This message often appears during K-band observations (also during previous sessions) at the moment of the pointing optimization.~~

06/04/2018 (E. Egron & M. Pilia): we got the error message "backend busy" in the operatorInput panel when we inserted the bandwidth of the Total Power with the setSection command. We resolved the problem with "nuraghe from scratch" but the command "abort" in the operatorInput panel was most likely sufficient to resolve it (A. Orlati).

~~**05/04/2018** (D. Perrodin & P. Castangia): we launched "nuraghe from scratch" (following instructions in the local version of the SD manual) after failure of "operatorInput", then failure of the "Management Container" and finally failure of all containers. After the second try, the system was back up and running. However one panel on the active surface did not come back to green.~~
~~The user does not need to change anything. Just be aware that failures like this can happen & that one panel did not come back up properly.~~