

- UC-COM-CCF-31000: Atmosphere Modelling (Site climatology)

- Responsible:
- Scope:
- Affected systems: GDAS/WRF (1), Sun/Moon photometer (2), ARCADE LIDAR (3), Radiosondes (4), Weather monitoring for LSTs (5), archival data from MAGIC LIDAR (7), archival data from optical telescopes at the ORM (8), satellite data (9)
- Trigger: Results from Site Climatology assessment or data analysis results (Long-term Array Calibration results: CTA-N vs CTA-S, Electrons, Archival data,...)

MG: shouldn't it be rather: "Need to define the parameter space of MC simulations" and "Need to understand frequency and instrumentation for long-term atmospheric monitoring" and "Need to define Atmospheric monitoring for online dynamic short-term scheduling"

- Frequency: On demand by MC, DATA and CCF
 - UC-COM-CCF-3112x: Production of GFS/WRF Calibration Events
Note: Here there should be a list of UCs that describe how to produce the calibration events (RR: those calibration events will be downloaded from the GFS/WRF to a CTA DB (ACTL))
 - UC-COM-CCF-3113x: Production of GFS/WRF Calibration Products
Note: Here there should be a list of UCs that describes how to produce the calibration products that afterwards will be used to the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page) (RR: Production of molecular profiles for MC? (DATA))
 - UC-COM-CCF-3114x: Integration of GFS/WRF Calibration Products
List of UCs that described how the device/method results will be implemented into the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page) (RR: Integration of the molecular profiles for MC (DATA))

- UC-COM-CCF-3121x: Operation of AERONET sun photometer

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3122x: Production of AERONET sun photometer

Calibration Events

Note: Here there should be a list of UCs that describe how to produce the calibration events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3123x: Production of Photometer Calibration Products (aerosols properties) (to be considered specially for the moon photometer)

Note: Here there should be a list of UCs that describes how to produce the calibration products that afterwards will be used to the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page) **MG: This will be done by the Raman LIDAR experts during the commissioning, and for a later modelling of the wavelength-dependent atmospheric extinction, but don't see whether it should be part of automated integration into the DATA/ACTL pipeline.**

- UC-COM-CCF-3124x: Integration of Photometer Calibration Products List of UCs that described how the device/method results will be implemented into the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page) **MG: This will be done by the Raman LIDAR experts during the commissioning, and for a later modelling of the wavelength-dependent atmospheric extinction, but don't see whether it should be part of automated integration into the DATA/ACTL pipeline.**

- UC-COM-CCF-3131x: Operation of ARCADE LIDAR and production Calibration Events (e.g. start up and shutdown device) **(RR: only UCs for this device ONLY if ARCADE LIDAR will derive some requirements)**

- UC-COM-CCF-3141x: Operation of radiosonde and productions of Calibration Events (e.g. start up and shutdown device) (RR: only UCs for this device if will derive some requirement or if it is going to be launched during CTA operation phase)
MG: don't understand this UC.... Radio sondes will serve to calibrate the GFS, before CTA starts regular operation.... don't see why it should be part of automated integration into the DATA/ACTL pipeline.
 - UC-COM-CCF-3161: Operation of weather monitoring for LSTs and production of Calibration Events (e.g. start up and shutdown device) (RR: only UCs for this device ONLY if ARCADE LIDAR will derive some requirements)
- UC-COM-CCF-32000: Atmospheric monitoring for online dynamic short-term scheduling
 - Affected systems: ASC (1), Ceilometers (2)
 - Trigger: ACTL-Scheduler
 - Frequency: Before start of a new scheduling (?) block (typically less than each 20 min.)
 - UC-COM-CCF-3211x: Operation of ASC
Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)
 - UC-COM-CCF-3221x: Production of ASC Monitoring Events
Note: Here there should be a list of UCs that describe how to produce the calibration events (equivalent to "Perform observation" for telescopes)
 - UC-COM-CCF-3221x: Operation of Ceilometer

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

■ UC-COM-CCF-3222x: Production of Ceilometer Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the calibration events (equivalent to “Perform observation” for telescopes)

■ UC-COM-CCF-32031: Production of short-term schedule Products

- Responsible:
- Scope: Production of the probability maps for the central scheduler
- Affected systems: ACTL
- Trigger:
- Frequency:

■ UC-COM-CCF-32041: Integration of short term schedule monitoring Products

- Responsible:
- Scope: Integration of the probability map into the Central Scheduler (RR: UC-ACTL-61?, include atmospheric info for short term schedule?) Note: is this related with the Top Level UC: Schedule Programmes?
- Affected systems: ACTL
- Trigger:
- Frequency:

● UC-COM-CCF-33000: Correction and selection of MC and Data and MC using Atmospheric Parameters

- Affected systems: LIDARs (1), FRAM (2), CTC (3), Spectrometer (?)
- Trigger: Normal data reduction chain -> Data taken
- Frequency: Per event time-scales

- UC-COM-CCF-3311x: Operation of LIDAR

- UC-COM-CCF-33111: Support multiple LIDAR pointings

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3312x: Production of LIDAR Calibration Events

Note: Here there should be a list of UCs that describe how to produce the calibration events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3313x: Production of Raman LIDAR Calibration Products

- Note: Here there should be a list of UCs that describes how to produce the calibration products that afterwards will be used to the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page)

- UC-COM-CCF-3321x: Operation of FRAM

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3322x: Production of FRAM Calibration Events

Note: Here there should be a list of UCs that describe how to produce the calibration events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3323x: Production of FRAM Calibration Products

Note: Here there should be a list of UCs that describes how to produce the calibration products that afterwards will be used to the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page)

- UC-COM-CCF-3322x: Production of CTC Calibration Events

Note: Here there should be a list of UCs that describe how to produce the calibration events

- UC-COM-CCF-3323x: Production of CTC Calibration Products

Note: Here there should be a list of UCs that describes how to produce the calibration products that afterwards will be used to the CTA calibration

(to understand the effected systems read CCF/ACTL/DATA explanation in the first page)

- UC-COM-CCF-3304x: Integration of data correction Calibration Products
List of UCs that described how the device/method results will be implemented into the CTA calibration (to understand the effected systems read CCF/ACTL/DATA explanation in the first page) (RR: for MC simulations (and Data correction?))

- UC-COM-CCF-34000: Common CTA weather monitoring

- Affected systems: Classic weather station (1), Anemometers (2), Dust counters (3), Weather forecast (4), Satellite data (5)
- Trigger: Safety of humans, equipment and data
- Frequency: continuous
 - UC-COM-CCF-3411x: Operation of classic Weather station
Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)
 - UC-COM-CCF-3412x: Production of classic Weather station Monitoring Events
Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)
 - UC-COM-CCF-3421x: Operation of Anemometers
Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)
 - UC-COM-CCF-3422x: Production of Anemometers Monitoring Events
Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)
 - UC-COM-CCF-3431x: Operation of Dust counters

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3432x: Production of Dust counters Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3442x: Production of Weather forecast Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events

- UC-COM-CCF-3452x: Production of Satellite data Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events

- UC-COM-CCF-3500: Monitoring of CTA-S earthquakes

- Affected systems: Accelerometers (1)
- Trigger: Safety of humans, equipment and data
- Frequency: continuous

- UC-COM-CCF-3511x: Operation of Accelerometers

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3512x: Production of Accelerometers Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-36000: Monitoring of CTA-N weather

- Affected systems: Rain sensors (1), Electric field mills (2), National Rain Radars (3)
- Trigger: Safety of humans, equipment and data
- Frequency: continuous

- UC-COM-CCF-3611x: Operation of Rain-sensors

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3612x: Production of Rain-sensors Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3621x: Operation of Electric field mills

Note: Here there should be a list of UCs that describe how to operate the device (e.g. start up and shutdown device)

- UC-COM-CCF-3622x: Production of Electric field mills Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events (equivalent to “Perform observation” for telescopes)

- UC-COM-CCF-3632x: Production of National rain radars Monitoring Events

Note: Here there should be a list of UCs that describe how to produce the monitoring events