ALMA Computing Group

TELCAL IDL Documentation

COMP–70.00.00.00–70.75.00.00–A–ICD

1.10

Atacama Large Millimeter Array

TELCAL Interface Control Document

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Purpose

Telescope calibration consists of calibration operations that are performed in order to ensure that ALMA is and remains in proper shape to successfully observe the projects as they are scheduled.

Many of these calibrations are executed on a short time scale (0.5 second), so that the results are made available to the observing process which, in some cases, is waiting for those results to continue and acquire data. Therefore Telescope Calibration is a component of ALMA instrument operation (as shown in [Architecture]). However data reduction methods are more characteristic of the pipeline, and in [SSR] the relevant requirements appear in the Pipeline section.

Results are also used by the Administration subsystem to maintain at all times a proper hardware quality control of the array (see [Architecture]), and by the Scheduler which needs to be informed, as the quality of the calibration is one of the main factors determining which project is best observed at a given time.

Namespace

For IDL interfaces the *alma.TelCal.<interface_name>* namespace shall be used. For later implementations, guidelines will be specified later (e.g. *alma.TelCal.<interface_name>.impl*). For XML schemas we will use the *Alma/<entity>* namespace. Note that this is a relative namepace declaration where a suitable root has to be added when we decide on how it should look like (e.g. *http://www.alma.edu/Alma/<entity>*).

Interfaces

Only the interfaces used by other ALMA software subsystems are shown in this document.

Interface ComponentLifecycle

All subsystem components implement the lifecycle interface of the container–component model. This interface is part of ACS allowing for the container to start, stop, initialize, update and query the status of the component. The main user of this interface is the Executive control and monitor all of the ALMA software components.

```
interface ComponentLifecycle {

void setComponentName(string instanceName);
```

Sets the name that is assigned at deployment time or dynamically by the framework.

```
void setContainerServices(ContainerServices service);

   void initialize();
```
   Initializes the component
```
   void execute();
```
   Called after to tell the component that it has to be ready to accept incoming functional calls any time.
```
   void cleanup();
```
   Called when component no longer needed.
```
}
```

Interface ParameterTuning

The executive or the DRUI uses this interface to change the values of some parameters used by the TelCal Subsystem.
Description of this interface can be found in ParameterTuning.idl.

Interface OffLineOperation

There is requirement the TelCal Subsystem is available off–line. Among other uses this is foreseen for re–calibration in Santiago or at Regional Support Centers. There is thus the need to provide an interface to a client subsystem (the DRUI or Off–Line subsystems) for this purpose. The main functions would be to specify the data to be processed from a file (given by the DRUI), and start processing.
Description of this interface can be found in OffLineOperation.idl.

Interface GetTelCalResults

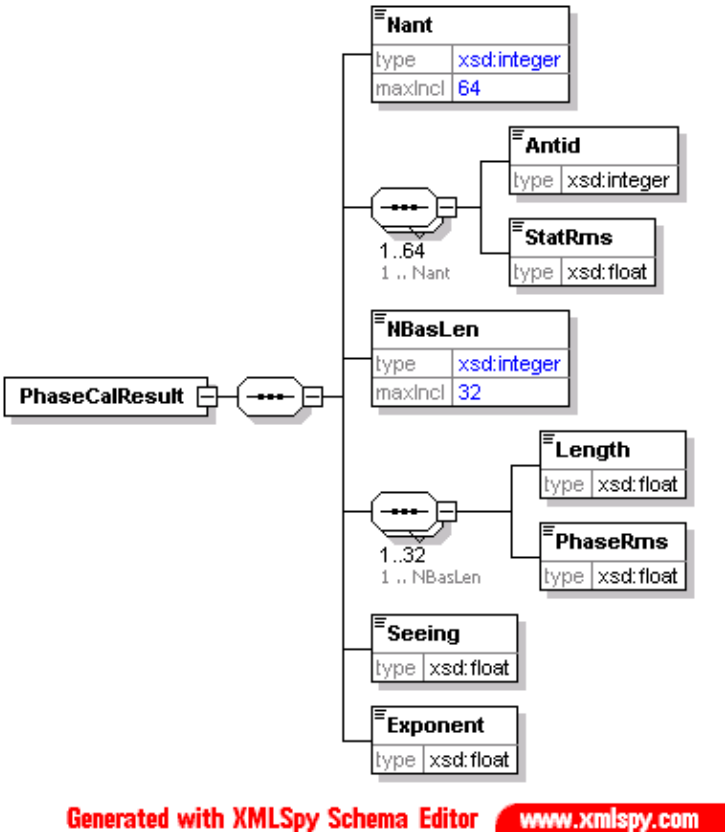
This interface is used by all subsystems to get the results of the Telescope Calibration. User subsystems are Control, Scheduling, DRUI, Off–Line, Executive subsystems.
Description of this interface can be found in TelCalPublisher.idl.

Data types and Entities

The schemas required here are specified in an external XSD file. All the types are described here, for clarity, as XML schemas; some if not most will be actually passed in binary form to the Control System for efficiency reasons; storage in the archive may also use VOTables. For this reason XML examples are not listed.

PhaseCalResult

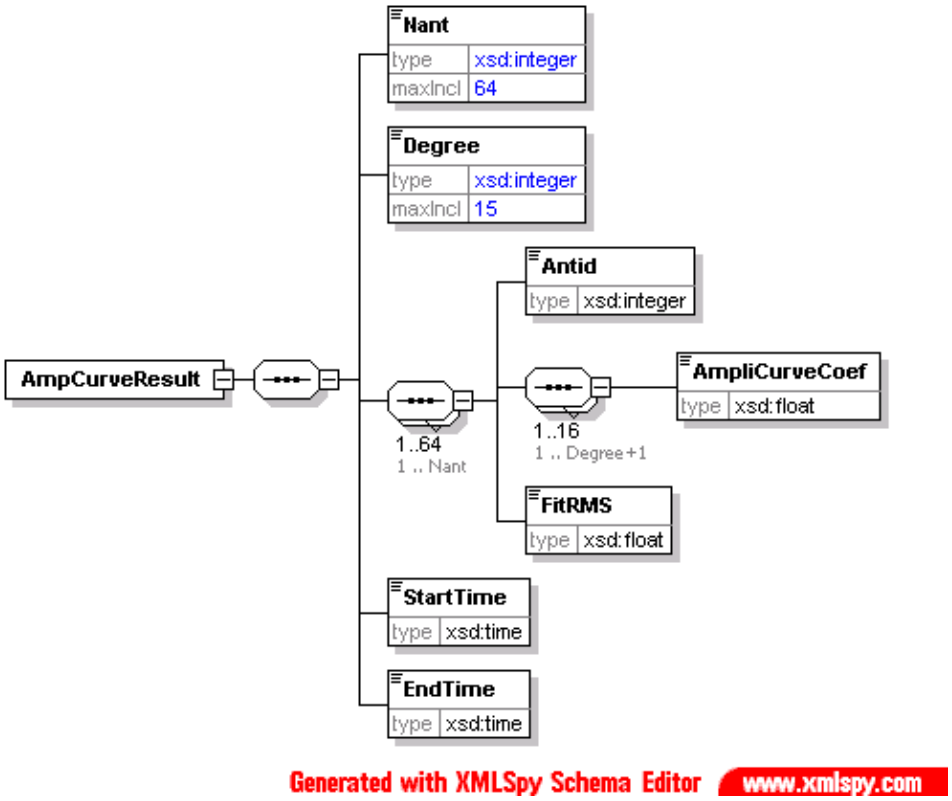
Each observation of a phase calibrator should be result in the measurement of phase fluctuations as a function of baseline length. This is used to estimate e.g. a seeing parameter and the slope of the power spectrum of phase fluctuations (experience will show us which is the best parameter to be used for dynamic scheduling).



Size Estimate : 0.77 kb
Frequency : typically every 30s to 10 min.

AmpliCalResult

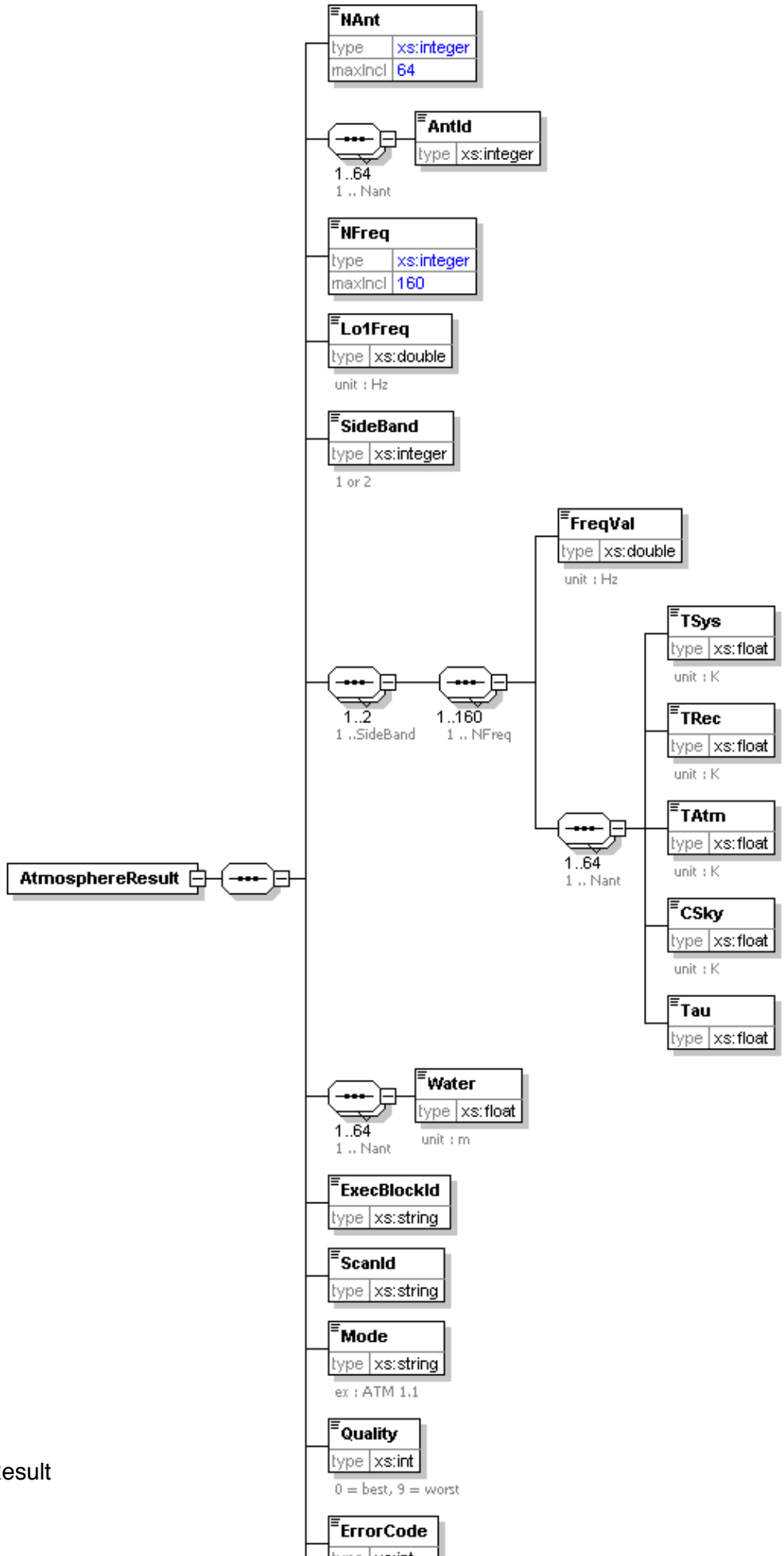
The observation of amplitude calibrators enable checking the antenna efficiencies and the validity of WVR−based phase correction.



Size Estimate : 1.25 kb
Frequency : typically every 1 to 10 min

AtmosphereResult

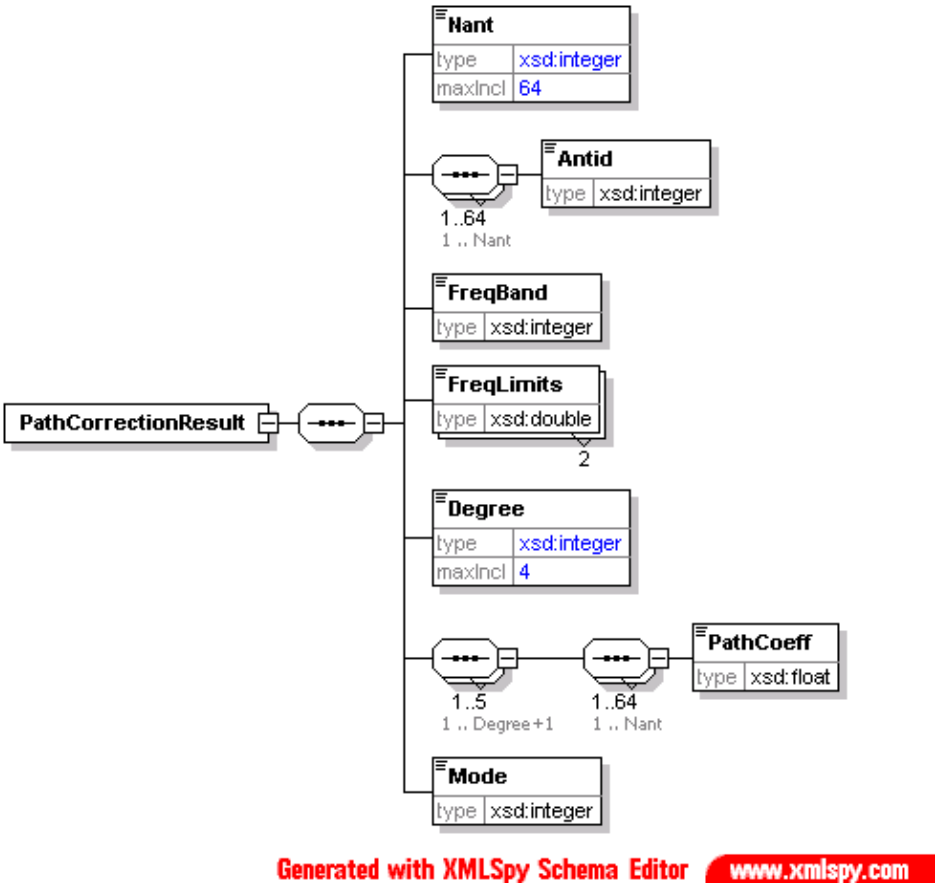
Atmospheric calibration has to be performed at frequent intervals, to compute the atmosphere–corrected system temperatures, which will be used in the pipelines to convert raw data into antenna temperature scale, corrected for the elevation dependence of atmospheric absorption. Due to the large bandwidths of ALMA receivers, these system temperatures must be sampled at about 100 MHz intervals. The other parameters are not directly used for scaling, but will be used for data quality evaluation by the Science and Quick Look pipelines.


AtmosphereResult
NAnt
type xs:integer
maxIncl 64
1..64
1 .. Nant
AntId
type xs:integer
NFreq
type xs:integer
maxIncl 160
Lo1Freq
type xs:double
unit : Hz
SideBand
type xs:integer
1 or 2
1..2
1 ..SideBand
1..160
1 .. NFreq
FreqVal
type xs:double
unit : Hz
1..64
1 .. Nant
TSys
type xs:float
unit : K
TRec
type xs:float
unit : K
TAtm
type xs:float
unit : K
CSky
type xs:float
unit : K
Tau
type xs:float
1..64
1 .. Nant
Water
type xs:float
unit : m
ExecBlockId
type xs:string
ScanId
type xs:string
Mode
type xs:string
ex : ATM 1.1
Quality
type xs:int
0 = best, 9 = worst
ErrorCode

Size Estimate : 351.52 kb
Frequency : typically every 1 to 10 min

PathCorrectionResult

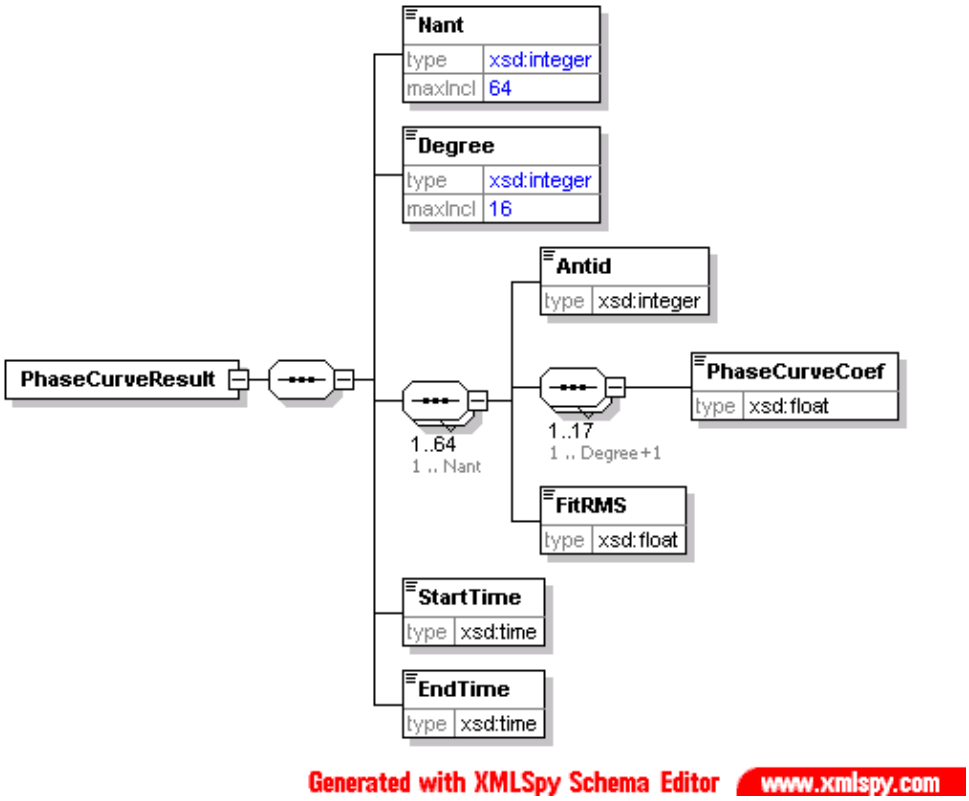
The path length correction, based on the WVR radiometer data, is applied at ~0.5 second intervals by the Correlator (prior to integration), to correct for atmospheric pathlength fluctuations. Coefficients to be used for this purpose have a slight frequency dependence across receiver bands, approximated by low degree polynomials.
==>>> Missing number of WVR channels.



Size Estimate : 6.54 kb
Frequency : typically every 5 min.

PhaseCurveResult

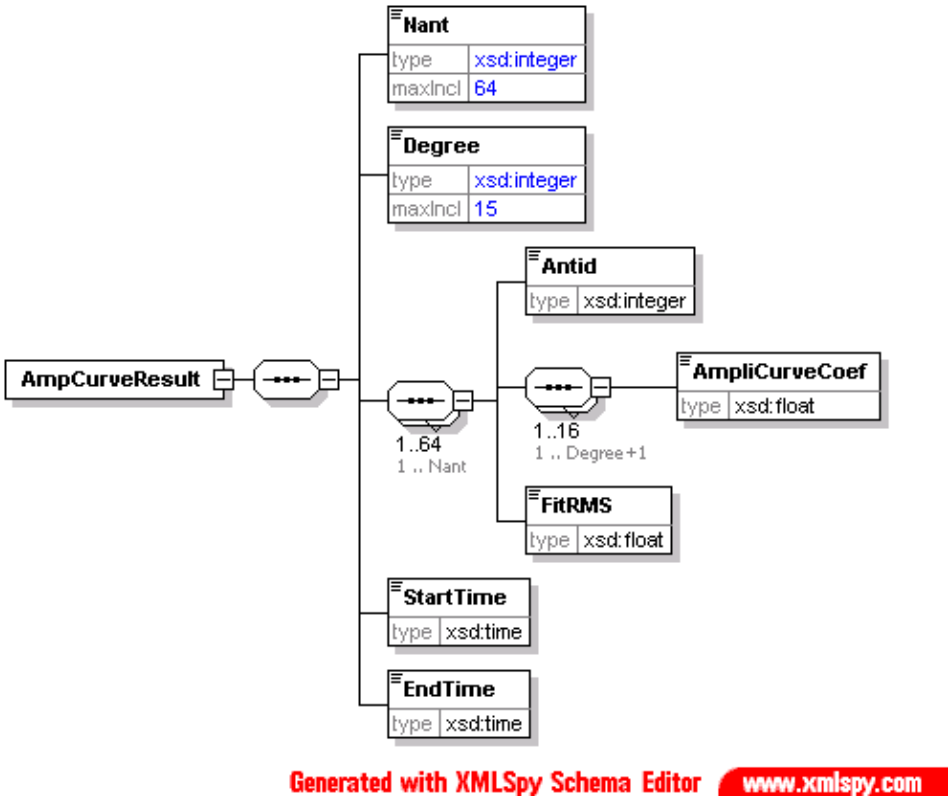
Observation of phase calibrators at regular intervals is used to define a polynomial phase calibration curve that is made available to the Quick Look pipeline for science data display purposes.



Size Estimate : 4.77 kb
Frequency : typically every 10 min.

AmpCurveResult

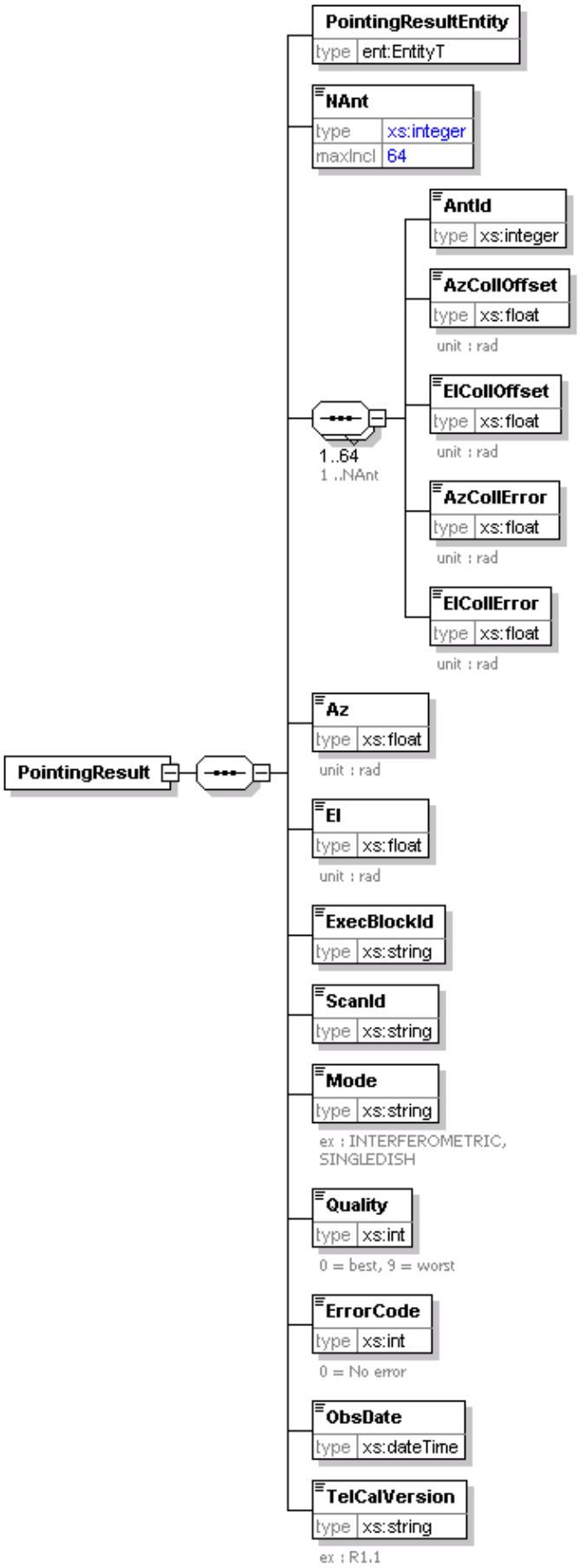
Observation of amplitude calibrators at regular intervals is used to define a polynomial amplitude calibration curve that is made available to the Quick Look pipeline for science data display purposes.



Size Estimate :Size: 4.52 kb
Frequency : typically every 10 min.

PointingResult

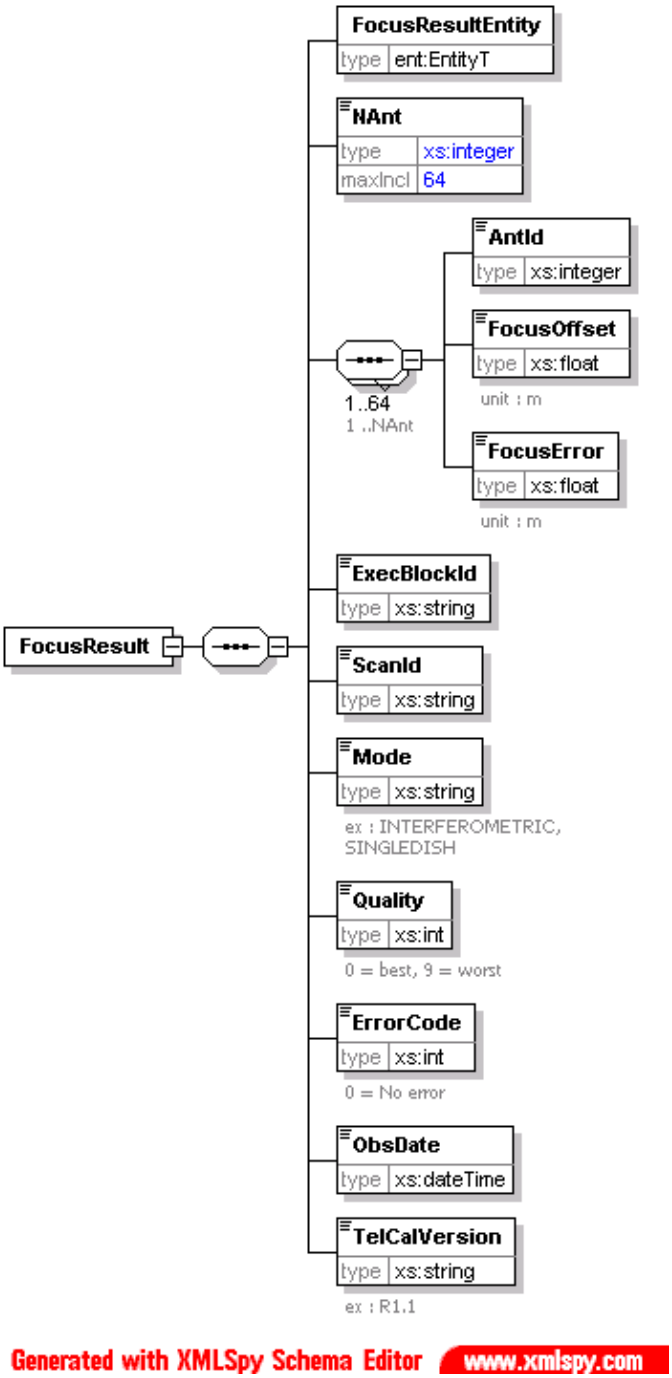
Reference pointing at regular intervals is needed to obtain the required pointing accuracy. Each pointing measurement results in an update of pointing collimation offsets.


PointingResultEntity
type ent:EntityT
NAnt
type xs:integer
maxIncl 64
AntId
type xs:integer
AzCollOffset
type xs:float
unit : rad
ElCollOffset
type xs:float
unit : rad
1..64
1 ..NAnt
AzCollError
type xs:float
unit : rad
ElCollError
type xs:float
unit : rad
PointingResult
Az
type xs:float
unit : rad
El
type xs:float
unit : rad
ExecBlockId
type xs:string
ScanId
type xs:string
Mode
type xs:string
ex : INTERFEROMETRIC, SINGLEDISH
Quality
type xs:int
0 = best, 9 = worst
ErrorCode
type xs:int
0 = No error
ObsDate
type xs:dateTime
TelCalVersion
type xs:string
ex : R1.1

Size estimate : 1.26 kb
Frequency : typically 30 min.

FocusResult

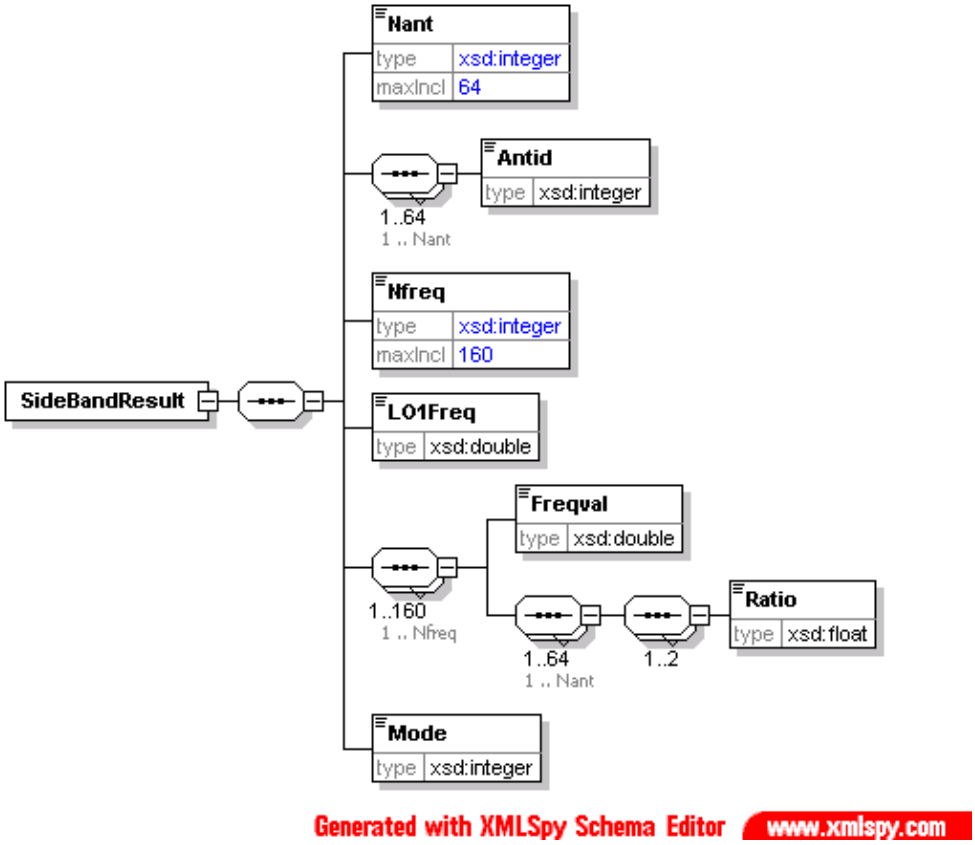
At regular intervals the focus will need to be updated to compensate for thermal deformations.



Size Estimate : 0.76 kb
Frequency : typically 30 min.

SideBandResult

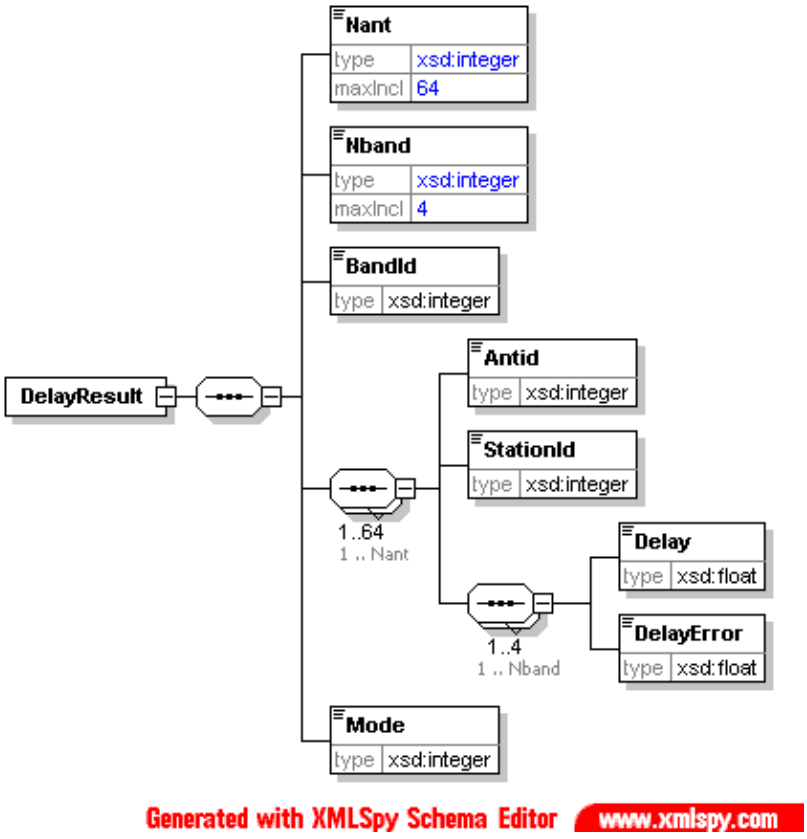
Measurement of the sideband gain ratio is critical to obtain an accurate determination of the system temperatures, even when the image sideband is separated or rejected electronically in interferometric data. For dual side band single dish data this ratio enters directly into the calibration of line intensities.



Size Estimate : 81.52 kb
Frequency : typically every 1 hour.

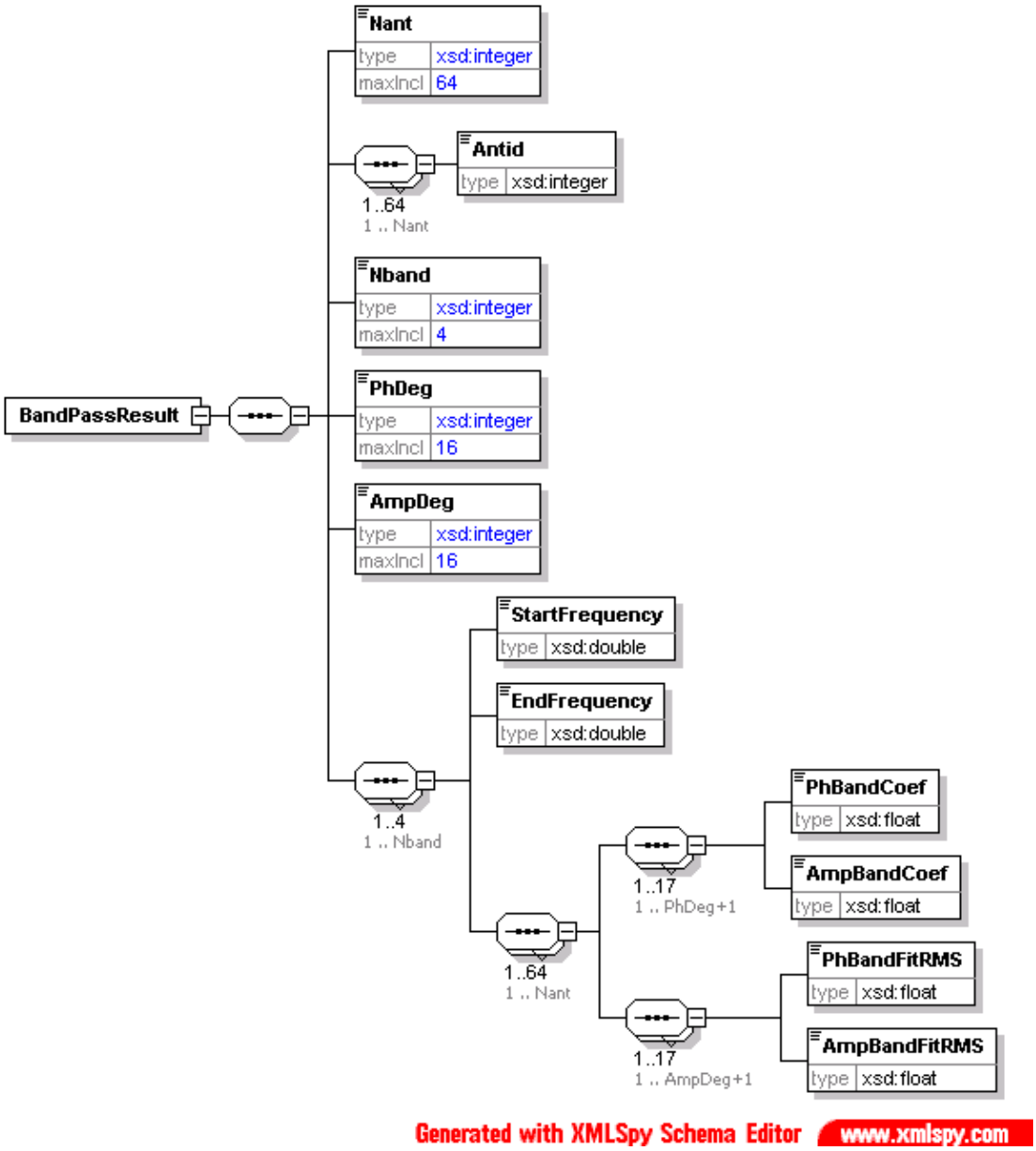
DelayResult

The delay offsets have to be determined precisely to avoid decorrelation when averaging over frequency intervals. They have to be determined for each baseband.



Size Estimate : 1.52 kb
Frequency : typically every 1 hour.

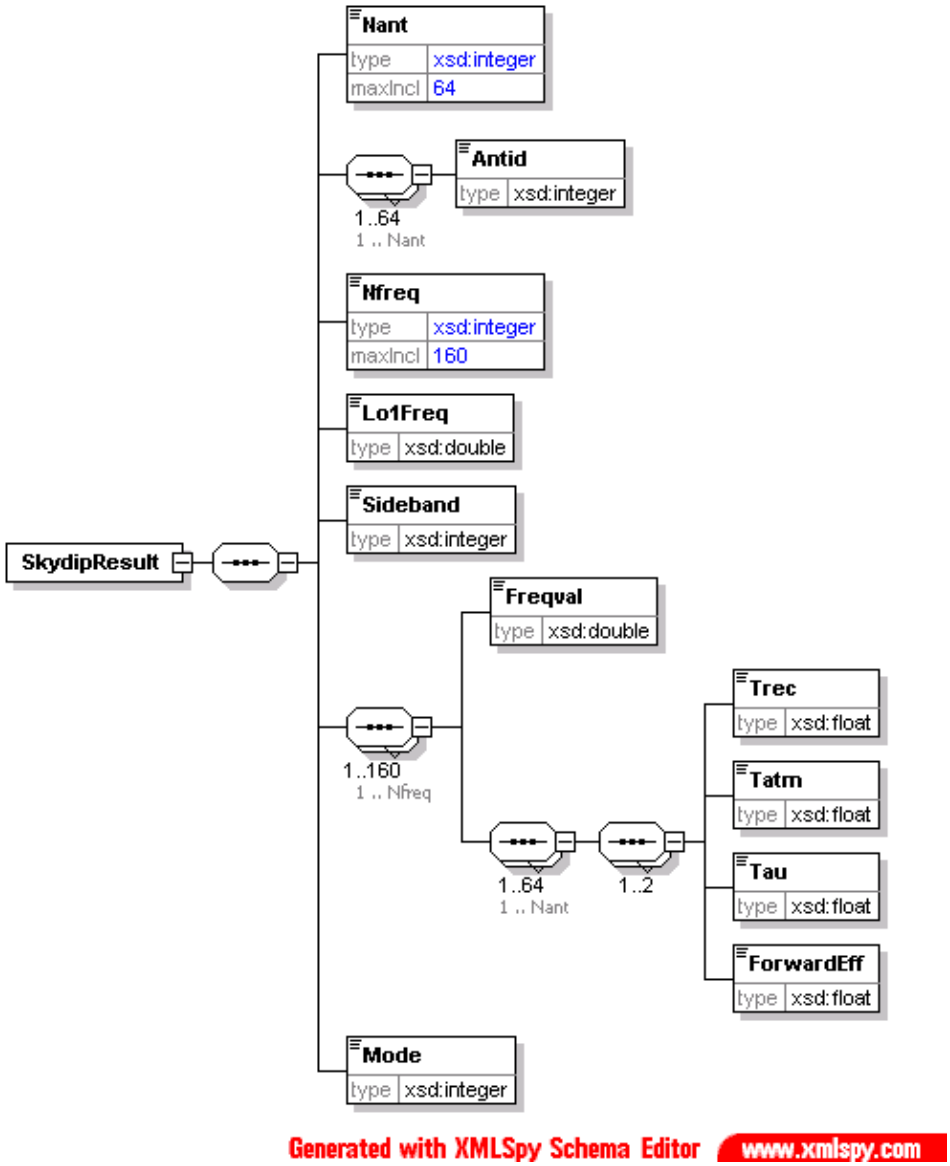
BandPassResult



Size Estimate : 9.28 kb
Frequency : typically every 1 hour.

BandPassResult

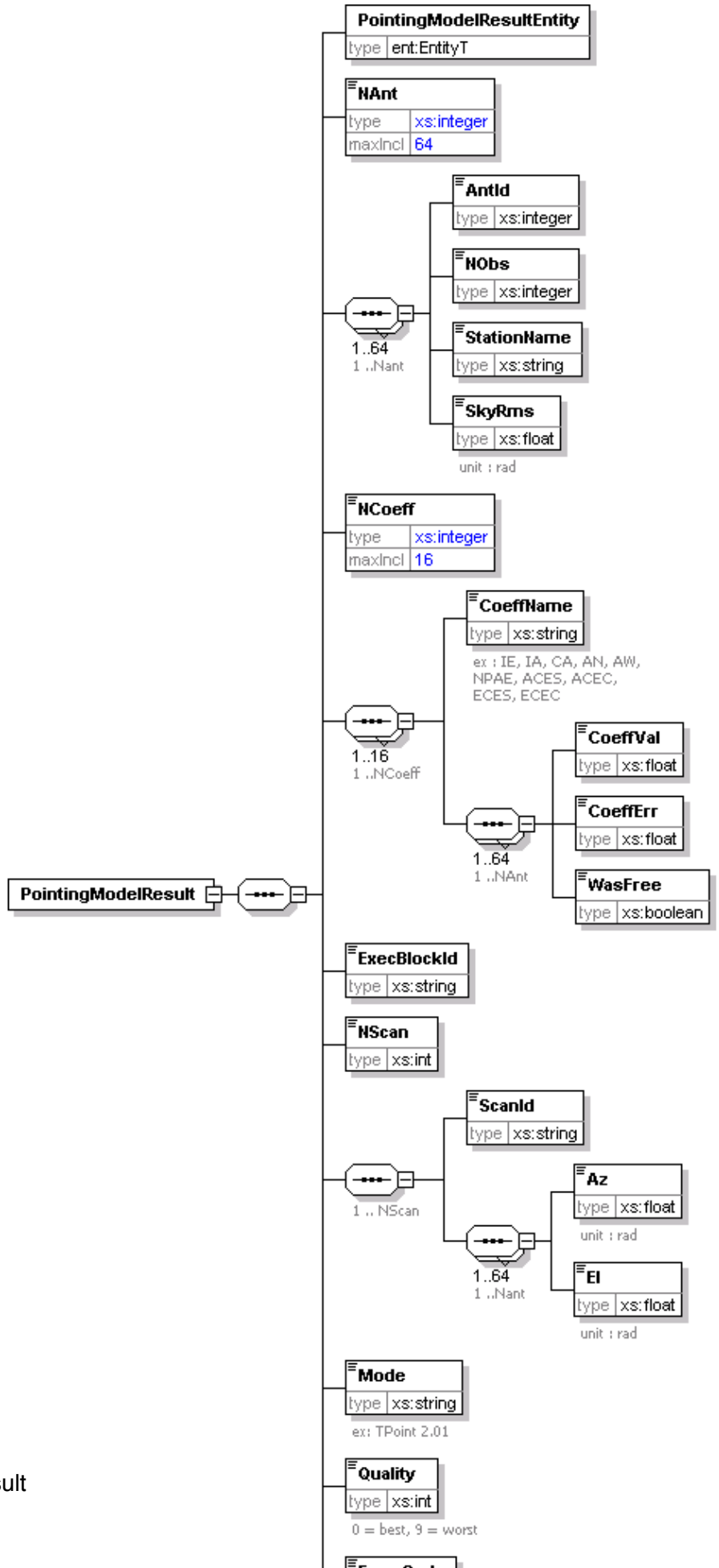
Skydips are measurements of atmospheric brightness as a function of elevation. This enables checking the atmospheric opacities and antenna forward efficiencies.



Size Estimate : 241.52 kb
Frequency : typically every day.

PointingModelResult

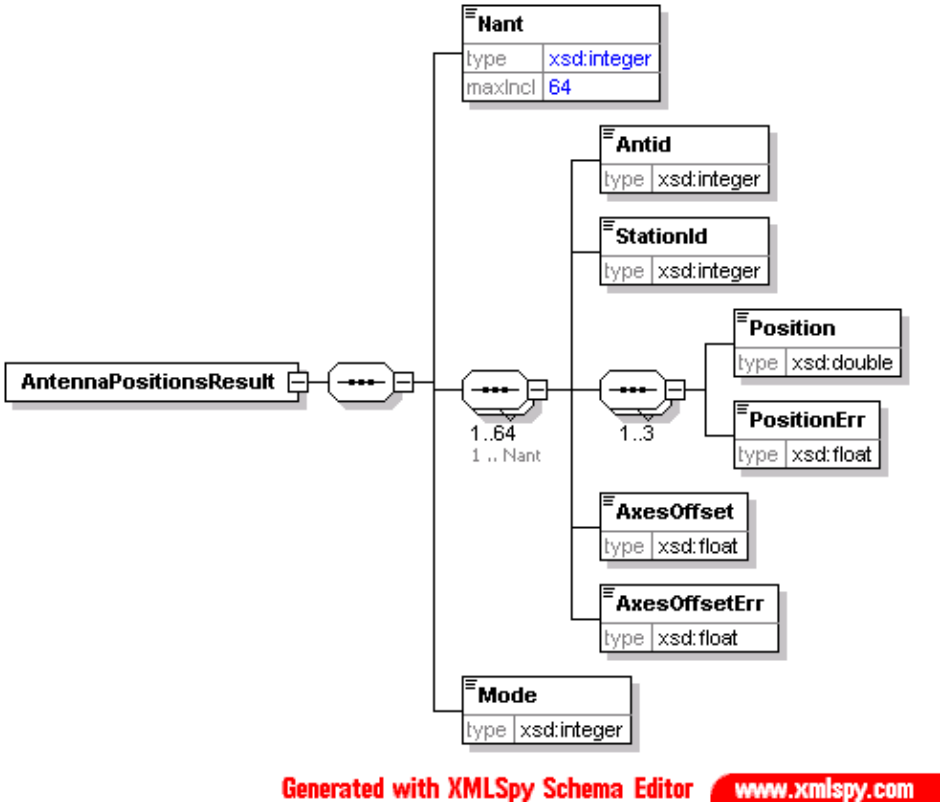
A set of individual pointing measurements on sources in a variety of directions is used to determine the pointing model coefficients that are used for blind pointing, on top of which reference pointing must be used. Alternately local pointing models, made over a smaller portion of the sky, may be made at 1–2 h intervals, combining both processes.


PointingModelResult
PointingModelResultEntity
type ent:EntityT
NAnt
type xs:integer
maxIncl 64
1..64
1 ..Nant
AntId
type xs:integer
NObs
type xs:integer
StationName
type xs:string
SkyRms
type xs:float
unit : rad
NCoeff
type xs:integer
maxIncl 16
1..16
1 ..NCoeff
CoeffName
type xs:string
ex : IE, IA, CA, AN, AW, NPAE, ACES, ACEC, ECES, ECEC
1..64
1 ..NAnt
CoeffVal
type xs:float
CoeffErr
type xs:float
WasFree
type xs:boolean
ExecBlockId
type xs:string
NScan
type xs:int
1 .. NScan
ScanId
type xs:string
1..64
1 ..Nant
Az
type xs:float
unit : rad
El
type xs:float
unit : rad
Mode
type xs:string
ex: TPoint 2.01
Quality
type xs:int
0 = best, 9 = worst

Size Estimate : 13.07 kb
Frequency : typically every day.

AntennaPositionsResult

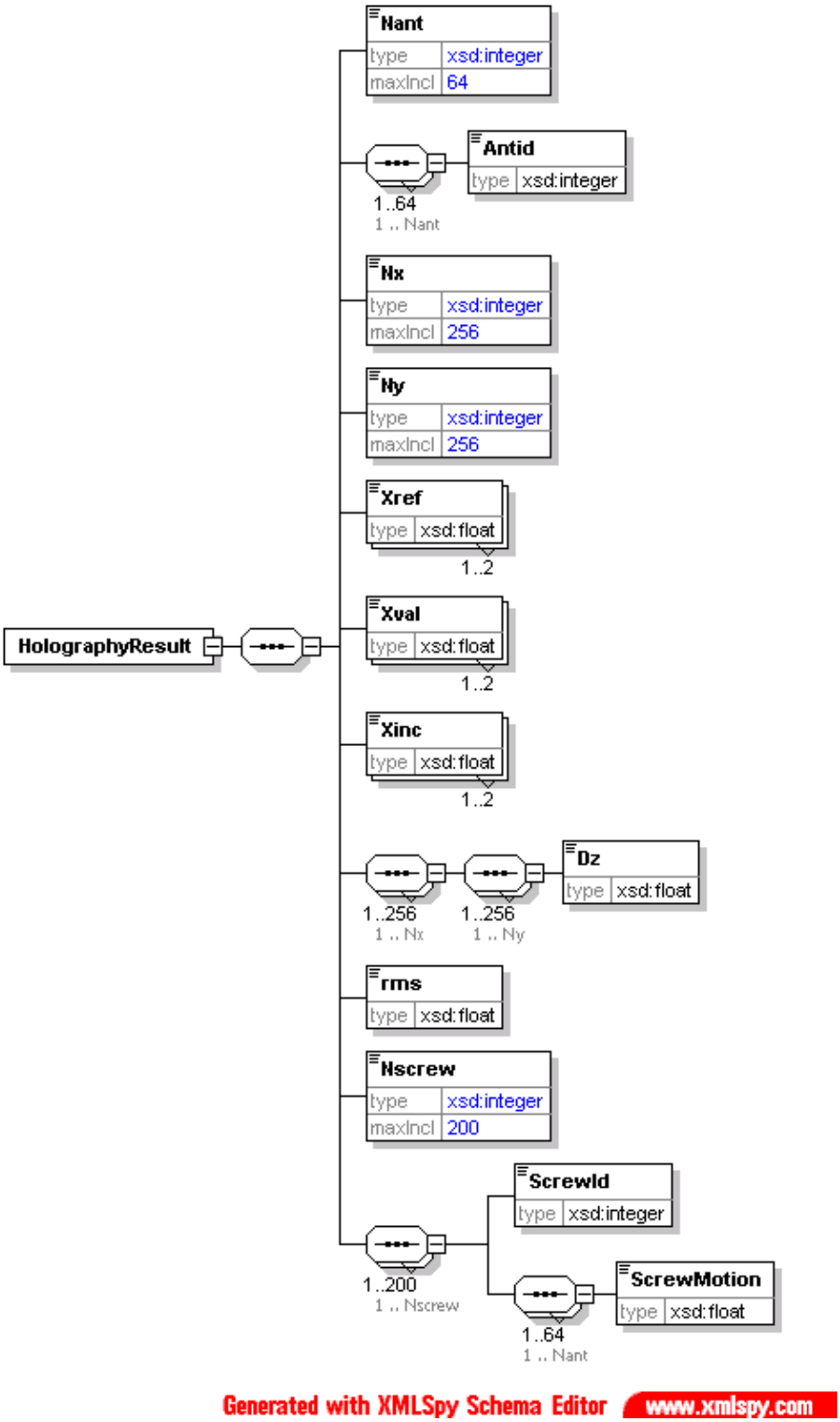
The interferometric measurement of antenna positions is needed after each antenna move. Newly moved antennas are combined with a few reference antennas in a special purpose subarray.



Size Estimate : 4.01 kb
Frequency : typically every day.

HolographyResult

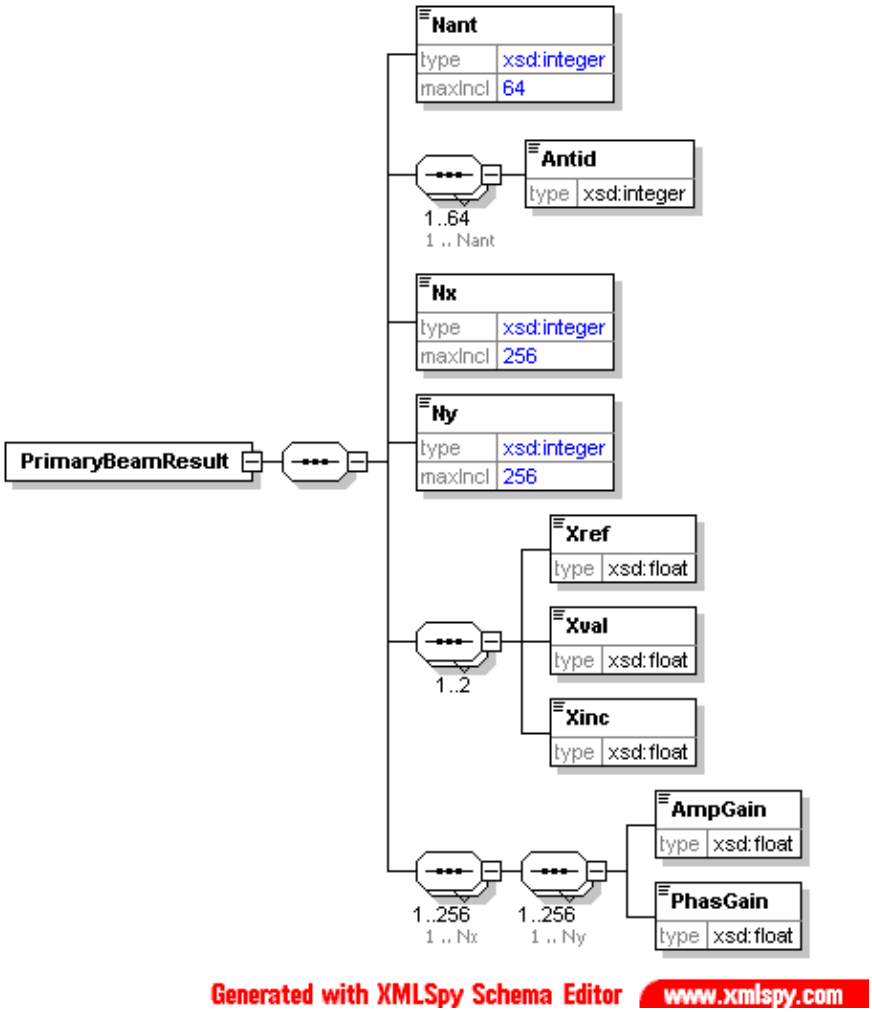
Holography measurements are needed first to align the antenna panels, but it is wise to check the antenna surface quality at regular intervals to monitor its performance, the behaviour of focus as a function of elevation, ...



Size Estimate : 1027.96 kb (assuming 4 antennas measured).
Frequency : from once a week to several times per hour.

PrimaryBeamResult

Measurements of the primary beam shape are needed as an input to mosaic deconvolution.



Size Estimate : 2048.05 kb (assuming 4 antennas measured).
Frequency : from once a week to several times per hour.

Published Events

This section defines the events that are raised by a subsystem, their data (i.e. transported entities) and the conditions, under which the event is raised. There will be an event for each kind of result produced. The actual results are available to the Control Subsystem through the GetTelCalResults interface, or (to the client subsystem in off–line use) and sent to the archive in all cases.

PhaseCalReduced event

Published whenever a Phase Calibration is reduced.
The description of this event can be found in TelCalPublisher.idl.

AmpliCalReduced event

Published whenever an Amplitude Calibration is reduced.

The description of this event can be found in TelCalPublisher.idl.

AtmosphereReduced event

Published whenever a Atmosphere calibration is reduced.

The description of this event can be found in TelCalPublisher.idl.

PathCorrectionReduced event

Published whenever a Path Correction calibration is reduced.

The description of this event can be found in TelCalPublisher.idl.

PhaseCurveReducedEvent

Published whenever a Phase Curve calibration, consisting of a set of several scans, is reduced.

The description of this event can be found in TelCalPublisher.idl.

AmpCurveReduced event

Published after a series of scans on an amplitude calibrator.

The description of this event can be found in TelCalPublisher.idl.

PointingScanReduced event

Published whenever a pointing scan is reduced.

The description of this event can be found in TelCalPublisher.idl.

FocusScanReducedEvent

Published whenever a Focus scan is reduced. The results are available for the Control System.

The description of this event can be found in TelCalPublisher.idl.

SideBandRatioReduced event

The description of this event can be found in TelCalPublisher.idl.

DelayReduced event

The description of this event can be found in TelCalPublisher.idl.

BandPassReduced event

The description of this event can be found in TelCalPublisher.idl.

SkydipReduced event

The description of this event can be found in TelCalPublisher.idl.

PointingModelReducedEvent

Published whenever a pointing model is reduced. and the results are available for the Control System.

The description of this event can be found in TelCalPublisher.idl.

AntennaPositionsReduced event

The description of this event can be found in TelCalPublisher.idl.

HolographyReduced event

The description of this event can be found in TelCalPublisher.idl.

PrimaryBeamReduced event

The description of this event can be found in TelCalPublisher.idl.

Received Events

This section defines the events that are received by the TelCal Subsystem and how it will react to them. See Control Subsystem ICD Section 5.2 for the detailed description of these events.

ScanStart Event

Received whenever a Scan is started by the Control Subsystem. Associated data includes the scan purpose (a string that is used to determine how the data will be processed and which results will be computed); the scan Id, the relevant SB, the start time, the subarray Id.

The description of this event can be found in TelCalReceivedNC.idl.

ScanEnd Event

Received from the Control Subsystem whenever a Scan has ended. Associated data includes the scan Id, the end time, the completion status (OK or FAILED), and a string that will be used to decide whether the data should be processed or not, in case of FAILED status.

The description of this event can be found in TelCalReceivedNC.idl.

ObsStart Event

Received whenever an Observation is started by the Control System.Associated data includes observation id, scan id, observing procedure name, and observing procedure parameters. It should also preferably include the number of antennas in the subarray.Observations are received in the order of execution.

The description of this event can be found in TelCalReceivedNC.idl.

ObsEndEvent

Received whenever an Observation ends.Associated data includes observation id, end time, the completion status (OK or FAILED), and a string that will be used to decide whether the data should be processed or not, in case of FAILED status.

The description of this event can be found in TelCalReceivedNC.idl.

AbortEvent

Received whenever any client subsystem wants to abort Telescope Calibration processing of a given scan.

The description of this event can be found in TelCalReceivedNC.idl.

Published Streams

The TelCal subsystem does not publish any stream.

Consumed Streams

This section defines the streamed that are consumed by the subsystem. It is still TBD whether these streams are coming directly from the original subsystems or are handled by an intermediate entity (Fast Data Store).

Correlator Data Stream

This stream contains the correlator data taken during the Observation. It includes data at integration intervals (all channels, phase corrected and uncorrected). Data is in the form of binary tables preceded by XML descriptions. The exact format is TBD.

The Correlator Data Stream is described in the Correlator Subsystem ICD (Section 7.1) .The data rate is 4 Mbyte/second (average) and 40 Mbyte/second (peak).

Channel Average Stream

This stream contains also correlator data taken during the Observation. It includes data at sub−integration intervals (channel−averaged as prescribed), and the relevant description Data is in the form of binary tables preceded by XML descriptions. The exact format is TBD.

The Correlator Channel Average Stream is described in the Correlator Subsystem ICD (Section 7.2).

The peak data rate is 128 kbyte/second.

Required interfaces and subsystems

XMLStore (provided by the Archive Subsystem)

The XMLStore interface is used to archive results computed by the TelCal Subsystem. All results are archived as part of the publishing process.

Interface GetMetaData (provided by the Control system)

The GetMetaData interface is used to get the MetaData from the Control system. The initialMetaData contains information that is known before the observation starts (like the number of antennas) and is invoked when event StartObs is received; getFinalMetaData is invoket when event EndObs is received.

```
interface GetMetaData {
      initialMetaData getInitialMetaData(ScanId scanId, ObsId obsId);
      finalMetaData getFinalMetaData(ScanId scanId, ObsId obsId);
}
```

ACS Dependencies on external data

None

ACS Dependencies

- Component–container model services
- Logging
- Publishing and receiving events
- Receiving data streams

References

• [SSR] ALMA–SW–11, 2001–MAY–03, ALMA Science Software Requirements and Use Cases, Robert Lucas et al.

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TELCAL IDL Compound List

Here are the classes, structs, unions and interfaces with brief descriptions:

TelCalPublisher::AtmosphereReducedEvent	AtmosphereReducedEvent is a structure that will be passed around as events in the notification channel
TelCalResults::AtmosphereResultStruct	
TelCalResults::CommonResultStruct	
TelCalOffLine::FileNotFound	
TelCalPublisher::FocusReducedEvent	FocusReducedEvent is a structure that will be passed around as events in the notification channel
TelCalResults::FocusResultStruct	
TelCalPublisher::GetTelCalResults	This interface is used by all subsystems to get the results of the Telescope Calibration
TelCalProto::InvalidCoefficient	
TelCalReceivedNC::InvalidData	
TelCalPublisher::NoSuchResult	Raised when no result corresponds to (scanId,execId)
TelCalOffLine::OffLineOperation	Interface OffLineOperation is required to specify the data to be processed from the Archive and to start processing
TelCalProto::ParameterTuning	Interface ParameterTuning is used to change the values of some parameters used by the TelCalSubsystem
TelCalPublisher::PointingModelReducedEvent	PointingModelReducedEvent is a structure that will be passed around as events in the notification channel
TelCalResults::PointingModelResultStruct	PointingModelResultStruct is the structure that returns the getPointingModelResult method
TelCalPublisher::PointingReducedEvent	PointingReducedEvent is a structure that will be passed around as events in the notification channel
TelCalResults::PointingResultStruct	
TelCalReceivedNC::ReceivingDataManager	Interface ReceivingDataManager
telcalArchiveModule::TelCalArchive	
telcalArchiveModule::TelCalArchiveException	
TelCalProto::UnknownCoefficient	
TelCalOffLine::UnknownFunctionality	

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TELCAL IDL File List

Here is a list of all files with brief descriptions:

ICD.dox	
OffLineOperation.idl [code]	
ParameterTuning.idl [code]	ParameterTuning's IDL File
TelCalArchive.idl [code]	
TelCalPublisher.idl [code]	TelCal Publisher's IDL File
TelCalReceivedNC.idl [code]	
TelCalResults.idl [code]	TelCalResults's IDL File

ALMA Computing Group

TELCAL IDL Compound Members

a | c | e | f | g | l | m | n | o | p | q | s | t | w

Here is a list of all class members with links to the class documentation for each member:

– a –

- ACEC : TelCalProto::ParameterTuning
- ACES : TelCalProto::ParameterTuning
- AntId : TelCalResults::CommonResultStruct
- Az : TelCalResults::PointingModelResultStruct
- AzCollError : TelCalResults::PointingResultStruct
- AzCollOffset : TelCalResults::PointingResultStruct
- Azimuth : TelCalResults::PointingResultStruct

– c –

- CoeffErr : TelCalResults::PointingModelResultStruct
- coefficientName : TelCalProto::InvalidCoefficient, TelCalProto::UnknownCoefficient
- coefficientValue : TelCalProto::InvalidCoefficient, TelCalProto::UnknownCoefficient
- CoeffName : TelCalResults::PointingModelResultStruct
- CoeffVal : TelCalResults::PointingModelResultStruct
- CommonRes : TelCalResults::PointingModelResultStruct, TelCalResults::AtmosphereResultStruct, TelCalResults::FocusResultStruct, TelCalResults::PointingResultStruct
- CSky : TelCalResults::AtmosphereResultStruct

– e –

- ECEC : TelCalProto::ParameterTuning
- ECES : TelCalProto::ParameterTuning
- El : TelCalResults::PointingModelResultStruct
- ElCollError : TelCalResults::PointingResultStruct
- ElCollOffset : TelCalResults::PointingResultStruct
- Elevation : TelCalResults::PointingResultStruct
- error : TelCalReceivedNC::InvalidData, TelCalPublisher::NoSuchResult, TelCalProto::InvalidCoefficient, TelCalProto::UnknownCoefficient, TelCalOffLine::UnknownFunctionality, TelCalOffLine::FileNotFound
- ErrorCode : TelCalResults::CommonResultStruct
- exceptionMethod() : telcalArchiveModule::TelCalArchive
- ExecBlockId : TelCalResults::CommonResultStruct
- execBlockId : TelCalReceivedNC::InvalidData, TelCalPublisher::NoSuchResult, TelCalPublisher::AtmosphereReducedEvent, TelCalPublisher::PointingModelReducedEvent, TelCalPublisher::FocusReducedEvent, TelCalPublisher::PointingReducedEvent

– f –

- filename : TelCalOffLine::FileNotFound
- finishedAt : TelCalPublisher::AtmosphereReducedEvent, TelCalPublisher::PointingModelReducedEvent, TelCalPublisher::FocusReducedEvent, TelCalPublisher::PointingReducedEvent
- FocusError : TelCalResults::FocusResultStruct
- FocusOffset : TelCalResults::FocusResultStruct
- FreqVal : TelCalResults::AtmosphereResultStruct

– g –

- getAtmosphereResult() : TelCalPublisher::GetTelCalResults
- getFocusResult() : TelCalPublisher::GetTelCalResults
- getPointingModelResult() : TelCalPublisher::GetTelCalResults
- getPointingResult() : TelCalPublisher::GetTelCalResults
- getProject() : telcalArchiveModule::TelCalArchive

– l –

- Lo1Freq : TelCalResults::AtmosphereResultStruct
- logLevel : TelCalProto::ParameterTuning

– m –

- Mode : TelCalResults::CommonResultStruct

– n –

- NAnt : TelCalResults::CommonResultStruct
- NCoeff : TelCalResults::PointingModelResultStruct
- NFreq : TelCalResults::AtmosphereResultStruct
- NObs : TelCalResults::PointingModelResultStruct
- NPAE : TelCalProto::ParameterTuning
- NScan : TelCalResults::PointingModelResultStruct

– o –

- ObsDate : TelCalResults::CommonResultStruct
- obsId : TelCalReceivedNC::InvalidData

– p –

- process : TelCalOffLine::UnknownFunctionality
- processTelCalData() : TelCalOffLine::OffLineOperation
- publishAtmosphereResult() : TelCalPublisher::GetTelCalResults
- publishFocusResult() : TelCalPublisher::GetTelCalResults
- publishPointingModelResult() : TelCalPublisher::GetTelCalResults
- publishPointingResult() : TelCalPublisher::GetTelCalResults

– q –

- Quality : TelCalResults::CommonResultStruct

– s –

- scanId : TelCalReceivedNC::InvalidData, TelCalPublisher::NoSuchResult, TelCalPublisher::AtmosphereReducedEvent, TelCalPublisher::PointingModelReducedEvent, TelCalPublisher::FocusReducedEvent, TelCalPublisher::PointingReducedEvent
- ScanId : TelCalResults::PointingModelResultStruct, TelCalResults::CommonResultStruct
- selectTelCalData() : TelCalOffLine::OffLineOperation
- setTelCalParameter() : TelCalProto::ParameterTuning
- SideBand : TelCalResults::AtmosphereResultStruct
- SkyRms : TelCalResults::PointingModelResultStruct
- StationName : TelCalResults::PointingModelResultStruct
- status : TelCalPublisher::AtmosphereReducedEvent, TelCalPublisher::PointingModelReducedEvent, TelCalPublisher::FocusReducedEvent, TelCalPublisher::PointingReducedEvent
- storeAtmosphereResult() : telcalArchiveModule::TelCalArchive
- storeFocusResult() : telcalArchiveModule::TelCalArchive
- storePointingModelResult() : telcalArchiveModule::TelCalArchive
- storePointingResult() : telcalArchiveModule::TelCalArchive
- storeProject() : telcalArchiveModule::TelCalArchive

– t –

- TAtm : TelCalResults::AtmosphereResultStruct
- Tau : TelCalResults::AtmosphereResultStruct
- TelCalVersion : TelCalResults::CommonResultStruct
- TRec : TelCalResults::AtmosphereResultStruct
- TSys : TelCalResults::AtmosphereResultStruct

– w –

- WasFree : TelCalResults::PointingModelResultStruct
- Water : TelCalResults::AtmosphereResultStruct

ALMA Computing Group

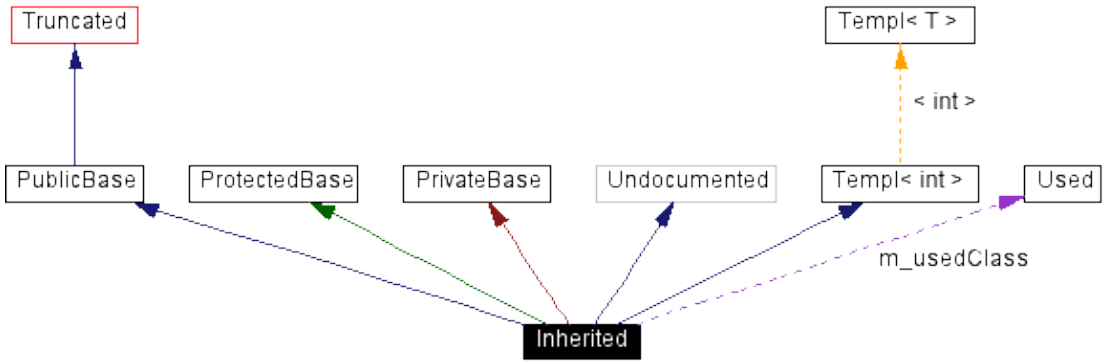
Graph Legend

This page explains how to interpret the graphs that are generated by doxygen.

Consider the following example:

```
/*! Invisible class because of truncation */
class Invisible { };

/*! Truncated class, inheritance relation is hidden */
class Truncated : public Invisible { };

/* Class not documented with doxygen comments */
class Undocumented { };

/*! Class that is inherited using public inheritance */
class PublicBase : public Truncated { };

/*! A template class */
template<class T> class Templ { };

/*! Class that is inherited using protected inheritance */
class ProtectedBase { };

/*! Class that is inherited using private inheritance */
class PrivateBase { };

/*! Class that is used by the Inherited class */
class Used { };

/*! Super class that inherits a number of other classes */
class Inherited : public PublicBase,
                  protected ProtectedBase,
                  private PrivateBase,
                  public Undocumented
                  public Templ<int>
{
  private:
    Used *m_usedClass;
};
```

If the `MAX_DOT_GRAPH_HEIGHT` tag in the configuration file is set to 240 this will result in the following graph:



The boxes in the above graph have the following meaning:

- A filled black box represents the struct or class for which the graph is generated.
- A box with a black border denotes a documented struct or class.
- A box with a grey border denotes an undocumented struct or class.
- A box with a red border denotes a documented struct or class forwhich not all inheritance/containment relations are shown. A graph is truncated if it does not fit within the specified boundaries.

The arrows have the following meaning:

- A dark blue arrow is used to visualize a public inheritance relation between two classes.
- A dark green arrow is used for protected inheritance.
- A dark red arrow is used for private inheritance.
- A purple dashed arrow is used if a class is contained or used by another class. The arrow is labeled with the variable(s) through which the pointed class or struct is accessible.
- A yellow dashed arrow denotes a relation between a template instance and the template class it was instantiated from. The arrow is labeled with the template parameters of the instance.

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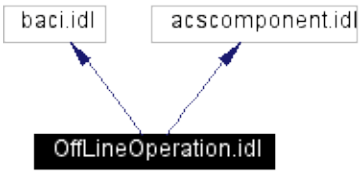
ICD.dox File Reference

ALMA Computing Group

OffLineOperation.idl File Reference

```
#include <baci.idl>
#include <acscomponent.idl>
```

Include dependency graph for OffLineOperation.idl:



Go to the source code of this file.

Namespaces

namespace TelCalOffLine

ALMA Computing Group

OffLineOperation.idl

Go to the documentation of this file.

```
00001 /*
00002  * ALMA - Atacama Large Millimiter Array
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00005  * Copyright by ESO (in the framework of the ALMA collaboration),
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00007  *
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00009  * modify it under the terms of the GNU Lesser General Public
00010  * License as published by the Free Software Foundation; either
00011  * version 2.1 of the License, or (at your option) any later version.
00012  *
00013  * This library is distributed in the hope that it will be useful,
00014  * but WITHOUT ANY WARRANTY; without even the implied warranty of
00015  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00016  * Lesser General Public License for more details.
00017  *
00018  * You should have received a copy of the GNU Lesser General Public
00019  * License along with this library; if not, write to the Free Software
00020  * Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00021  * MA 02111-1307  USA
00022  *
00023  * File OffLineOperation.idl
00024  *
00025  */
00026
00027 #ifndef _OFF_LINE_OPERATION_IDL_
00028 #define _OFF_LINE_OPERATION_IDL_
00029
00030 #include <baci.idl>
00031 #include <acscomponent.idl>
00032
00033 #pragma prefix "alma"
00034
00046 module TelCalOffLine
00047 {
00051   enum Processing {
00052     PHASECAL,
00053     AMPLICAL,
00054     ATMOSPHERE,
00055     PATHCORRECTION,
00056     PHASECURVE,
00057     AMPCURVE,
00058     POINTING,
00059     FOCUS,
00060     SIDEBAND,
00061     DELAY,
00062     BANDPASS,
00063     SKYDIP,
00064     POINTINGMODEL,
00065     ANTENNAPOSITIONS,
00066     HOLOGRAPHY,
00067     PRIMARYBEAM,
00068     ALL
00069   };
00070
00074   typedef sequence<Processing> ProcessList;
00075
00076
00078   //                           Exceptions
00080
```

```
00081   // These are the exceptions raised by the OffLineOperation interface
00082
00083   /*
00084    * Raised when no file corresponds to filename.
00085    */
00086   exception FileNotFound {
00087     string filename;
00088     string error;
00089   };
00090
00091   exception UnknownFunctionality {
00092     Processing process;
00093     string error;
00094   };
00095
00097   //                      OffLineOperation interface
00099
00104   interface OffLineOperation: ACS::CharacteristicComponent
00105   {
00111     void selectTelCalData(in string fileName, in ProcessList list)
00112       raises (FileNotFound,UnknownFunctionality);
00113
00117     void processTelCalData();
00118
00119   };
00120
00121
00122 };
00123
00124 #endif
```

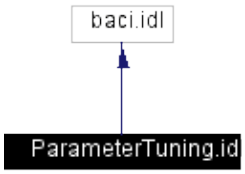
ALMA Computing Group

ParameterTuning.idl File Reference

ParameterTuning's IDL File. More...

```
#include <baci.idl>
```

Include dependency graph for ParameterTuning.idl:



Go to the source code of this file.

Namespaces

namespace TelCalProto

Detailed Description

ParameterTuning's IDL File.

Version:
1.00 Feb 5, 2004

Author:
Fanny Cosson

Definition in file ParameterTuning.idl.

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ParameterTuning.idl

Go to the documentation of this file.

```
00001 /*
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00012  *
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00019  * License along with this library; if not, write to the Free Software
00020  * Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00021  * MA 02111-1307  USA
00022  *
00023  * File ParameterTuning.idl
00024  *
00025  */
00026
00027 #ifndef _PARAMETER_TUNING_IDL_
00028 #define _PARAMETER_TUNING_IDL_
00029
00030
00031 #include <baci.idl>
00032
00033
00034 #pragma prefix "alma"
00035
00041 module TelCalProto
00042 {
00043
00045   //                           Exceptions
00047
00048   // These are the exceptions raised by the ParameterTuning interface
00049
00050   exception UnknownCoefficient {
00051     string coefficientName;
00052     string coefficientValue;
00053     string error;
00054   };
00055
00056   exception InvalidCoefficient {
00057     string coefficientName;
00058     string coefficientValue;
00059     string error;
00060   };
00061
00062
00064   //                               Interface
00066
00070   interface ParameterTuning:  ACS::CharacteristicComponent          // @device
00071   {
00075     void setTelCalParameter(in string coeffName, in double value)
00076       raises (UnknownCoefficient, InvalidCoefficient);
```

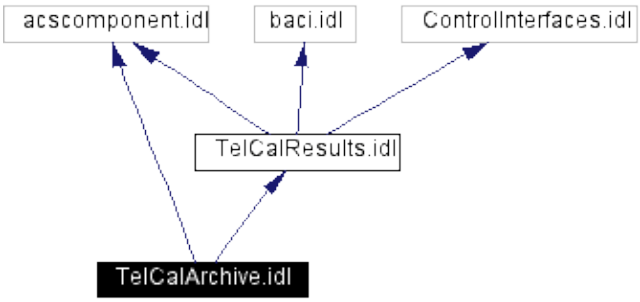
```
00077
00078
00079     //--------------------- Properties ---------------------------
00080
00084     readonly attribute ACS::ROlong logLevel;
00085
00089     readonly attribute ACS::ROdouble NPAE;
00090
00094     readonly attribute ACS::ROdouble ACES;
00095
00099     readonly attribute ACS::ROdouble ACEC;
00100
00104     readonly attribute ACS::ROdouble ECES;
00105
00109     readonly attribute ACS::ROdouble ECEC;
00110   };
00111
00112 };
00113
00114 #endif
```

ALMA Computing Group

TelCalArchive.idl File Reference

```
#include <acscomponent.idl>
import "TelCalResults.idl";
```

Include dependency graph for TelCalArchive.idl:



Go to the source code of this file.

Namespaces

namespace telcalArchiveModule

ALMA Computing Group

TelCalArchive.idl

Go to the documentation of this file.

```
00001 /*
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00010  *    version 2.1 of the License, or (at your option) any later version.
00011  *
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00013  *    but WITHOUT ANY WARRANTY; without even the implied warranty of
00014  *    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00015  *    Lesser General Public License for more details.
00016  *
00017  *    You should have received a copy of the GNU Lesser General Public
00018  *    License along with this library; if not, write to the Free Software
00019  *    Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00020  *    MA 02111-1307  USA
00021  */
00022 #ifndef _TELCALARCHIVE_IDL_
00023 #define _TELCALARCHIVE_IDL_
00024
00025 #include <acscomponent.idl>
00026 #include <TelCalResults.idl>
00027
00028 #pragma prefix "alma"
00029
00034 module telcalArchiveModule
00035 {
00036   typedef TelCalResults::FocusResultStruct FocusResultStruct;
00037   typedef TelCalResults::PointingResultStruct PointingResultStruct;
00038   typedef TelCalResults::AtmosphereResultStruct AtmosphereResultStruct;
00039   typedef TelCalResults::PointingModelResultStruct PointingModelResultStruct;
00040
00041
00043   //                           Exceptions
00045   exception TelCalArchiveException {};
00046
00047
00049   //                     TelCalArchive interface
00051   interface TelCalArchive : ACS::ACSComponent
00052   {
00057     void storeFocusResult(in FocusResultStruct result);
00058
00063     void storePointingResult(in PointingResultStruct result);
00064
00069     void storeAtmosphereResult(in AtmosphereResultStruct result);
00070
00075     void storePointingModelResult(in PointingModelResultStruct result);
00076
00077
00078
00083     void storeProject(in string inputFile);
00084
00090     void getProject(in string projectName, in string outputFile);
00091
00092
00096     void exceptionMethod()raises (TelCalArchiveException);
00097
```

```
00098   };
00099 };
00100
00101 #endif
```

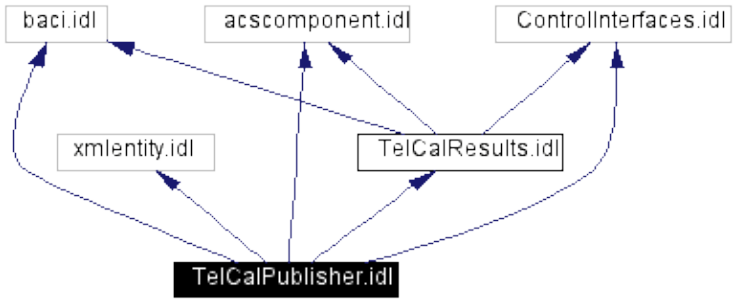
ALMA Computing Group

TelCalPublisher.idl File Reference

TelCal Publisher's IDL File. More...

```
#include <baci.idl>
#include <acscomponent.idl>
#include <xmlentity.idl>
#include <ControlInterfaces.idl>
import "TelCalResults.idl";
```

Include dependency graph for TelCalPublisher.idl:



Go to the source code of this file.

Namespaces

namespace TelCalPublisher

Detailed Description

TelCal Publisher's IDL File.

Definition in file TelCalPublisher.idl.

ALMA Computing Group

TelCalPublisher.idl

Go to the documentation of this file.

```
00001 /*
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00011  * version 2.1 of the License, or (at your option) any later version.
00012  *
00013  * This library is distributed in the hope that it will be useful,
00014  * but WITHOUT ANY WARRANTY; without even the implied warranty of
00015  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00016  * Lesser General Public License for more details.
00017  *
00018  * You should have received a copy of the GNU Lesser General Public
00019  * License along with this library; if not, write to the Free Software
00020  * Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00021  * MA 02111-1307  USA
00022  *
00023  * File TelCalPublisher.idl
00024  *
00025  */
00026
00027 #ifndef _TELCAL_PUBLISHER_IDL_
00028 #define _TELCAL_PUBLISHER_IDL_
00029
00030 #include <baci.idl>
00031 #include <acscomponent.idl>
00032 #include <xmlentity.idl>
00033 #include <ControlInterfaces.idl>
00034 #include <TelCalResults.idl>
00035
00036 #pragma prefix "alma"
00037
00041 module TelCalPublisher
00042 {
00043   typedef xmlentity::XmlEntityStruct FocusResult;
00044   typedef xmlentity::XmlEntityStruct PointingResult;
00045   typedef xmlentity::XmlEntityStruct PointingModelResult;
00046   typedef xmlentity::XmlEntityStruct AtmosphereResult;
00047
00048
00049
00051   //                              Published Events
00053
00054   const string CHANNELNAME="TelCalPublisherEventNC";
00055
00060   struct PointingReducedEvent
00061   {
00062     Control::ExecBlockId execBlockId;
00063     ACS::Time            finishedAt;
00064     Control::ScanId      scanId;
00065     string               status;
00066   };
00067
00072   struct FocusReducedEvent
00073   {
00074     Control::ExecBlockId  execBlockId;
```

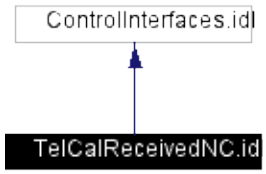
```
00075     ACS::Time             finishedAt;
00076     Control::ScanId       scanId;
00077     string                status;
00078   };
00079
00084   struct PointingModelReducedEvent
00085   {
00086     Control::ExecBlockId  execBlockId;
00087     ACS::Time             finishedAt;
00088     Control::ScanId       scanId;
00089     string                status;
00090   };
00091
00092
00097   struct AtmosphereReducedEvent
00098   {
00099     Control::ExecBlockId  execBlockId;
00100     ACS::Time             finishedAt;
00101     Control::ScanId       scanId;
00102     string                status;
00103   };
00104
00105
00106
00108   //                           Exceptions
00110
00111   // These are the exceptions that are raised by the GetTelCalResults interface
00112
00116   exception NoSuchResult {
00117     Control::ExecBlockId execBlockId;
00118     Control::ScanId      scanId;
00119     string               error;
00120   };
00121
00122
00124   //                      GetTelCalResults interface                      */
00126
00132   interface GetTelCalResults: ACS::ACSComponent
00133   {
00138     PointingResult getPointingResult(in string execBlockId, in string scanId)
00139       raises (NoSuchResult);
00140
00141
00146     FocusResult getFocusResult(in string execBlockId, in string scanId)
00147       raises (NoSuchResult);
00148
00149
00154     AtmosphereResult getAtmosphereResult(in string execBlockId,in string scanId)
00155       raises (NoSuchResult);
00156
00157
00162     PointingModelResult getPointingModelResult(in string execBlockId, in string scanId)
00163       raises (NoSuchResult);
00164
00165
00167     // Methods used by the ReceivingDataManager component to transfer data to
00168     // the TelCalPublisher component
00170
00171
00177     void publishPointingResult(in TelCalResults::PointingResultStruct result);
00178
00179
00185     void publishFocusResult(in TelCalResults::FocusResultStruct result);
00186
00187
00193     void publishAtmosphereResult(in TelCalResults::AtmosphereResultStruct result);
00194
00200     void publishPointingModelResult(in TelCalResults::PointingModelResultStruct result);
00201   };
00202
00203 };
00204
00205 #endif
```

ALMA Computing Group

TelCalReceivedNC.idl File Reference

```
#include <ControlInterfaces.idl>
```

Include dependency graph for TelCalReceivedNC.idl:



Go to the source code of this file.

Namespaces

namespace TelCalReceivedNC

ALMA Computing Group

TelCalReceivedNC.idl

Go to the documentation of this file.

```
00001 /*
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00011  * version 2.1 of the License, or (at your option) any later version.
00012  *
00013  * This library is distributed in the hope that it will be useful,
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00015  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00016  * Lesser General Public License for more details.
00017  *
00018  * You should have received a copy of the GNU Lesser General Public
00019  * License along with this library; if not, write to the Free Software
00020  * Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00021  * MA 02111-1307  USA
00022  *
00023  * File TelCalReceivedNC.idl
00024  *
00025  */
00026
00027 #ifndef _TEL_CAL_RECEIVED_NC_IDL_
00028 #define _TEL_CAL_RECEIVED_NC_IDL_
00029
00030 //#include <baci.idl>
00031 //#include <acscomponent.idl>
00032 #include <ControlInterfaces.idl>
00033
00034 #pragma prefix "alma"
00035
00040 module TelCalReceivedNC
00041 {
00043   //                            Exceptions
00045
00046   /*
00047    * Raised when data are not valid.
00048    */
00049   exception InvalidData {
00050     Control::ExecBlockId  execBlockId;
00051     Control::ScanId       scanId;
00052     Control::ObsId        obsId;
00053     string                error;
00054   };
00055
00057   //                      ReceivingDataManager interface
00059
00062   interface ReceivingDataManager:  ACS::CharacteristicComponent
00063   {
00064   };
00065 };
00066
00067 #endif // of _TEL_CAL_RECEIVED_NC_IDL_
```

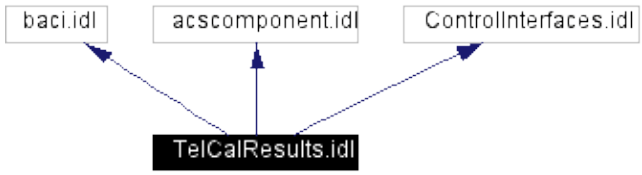
ALMA Computing Group

TelCalResults.idl File Reference

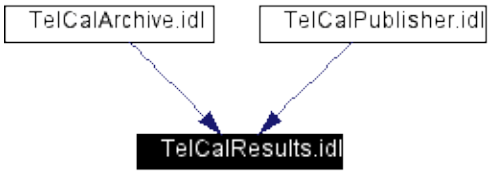
TelCalResults's IDL File. More...

```
#include <baci.idl>
#include <acscomponent.idl>
#include <ControlInterfaces.idl>
```

Include dependency graph for TelCalResults.idl:



This graph shows which files directly or indirectly include this file:



Go to the source code of this file.

Namespaces

namespace TelCalResults

Detailed Description

TelCalResults's IDL File.

Version:

1.00 Feb 5, 2004

Definition in file TelCalResults.idl.

ALMA Computing Group

TelCalResults.idl

Go to the documentation of this file.

```
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00010  * License as published by the Free Software Foundation; either
00011  * version 2.1 of the License, or (at your option) any later version.
00012  *
00013  * This library is distributed in the hope that it will be useful,
00014  * but WITHOUT ANY WARRANTY; without even the implied warranty of
00015  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00016  * Lesser General Public License for more details.
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00018  * You should have received a copy of the GNU Lesser General Public
00019  * License along with this library; if not, write to the Free Software
00020  * Foundation, Inc., 59 Temple Place, Suite 330, Boston,
00021  * MA 02111-1307  USA
00022  *
00023  * File TelCalPublisher.idl
00024  *
00025  */
00026
00027 #ifndef _TELCAL_RESULTS_IDL_
00028 #define _TELCAL_RESULTS_IDL_
00029
00030 #include <baci.idl>
00031 #include <acscomponent.idl>
00032 #include <ControlInterfaces.idl>
00033
00034 #pragma prefix "alma"
00035
00041 module TelCalResults
00042 {
00043
00044
00045
00047   //              Results structure internal to TelCal
00049
00051   //                            Common Structure
00053   typedef sequence<long,64> AntIdSeq;
00054
00055
00056   struct CommonResultStruct {
00057     long                   NAnt;
00058     AntIdSeq               AntId;
00059     Control::ExecBlockId   ExecBlockId;
00060     Control::ScanId        ScanId;
00061     string                 Mode;
00062     long                   Quality;
00063     long                   ErrorCode;
00064     //TBD
00065     //ACS::Date              ObsDate;
00066     string                 ObsDate;
00067     string                 TelCalVersion;
00068   };
00069
00071   //                            Pointing Structure
```

```
00073
00078   typedef sequence<float,64> AzCollOffsetSeq;
00079   typedef sequence<float,64> ElCollOffsetSeq;
00080   typedef sequence<float,64> AzCollErrorSeq;
00081   typedef sequence<float,64> ElCollErrorSeq;
00082
00083
00084   struct PointingResultStruct {
00085     AzCollOffsetSeq       AzCollOffset;
00086     ElCollOffsetSeq       ElCollOffset;
00087     AzCollErrorSeq        AzCollError;
00088     ElCollErrorSeq        ElCollError;
00089     float                 Azimuth;
00090     float                 Elevation;
00091     CommonResultStruct    CommonRes;
00092   };
00093
00095   //                          Focus Structure
00097
00101   typedef sequence<float,64> FocusOffsetSeq;
00102   typedef sequence<float,64> FocusErrorSeq;
00103
00104
00105   struct FocusResultStruct {
00106     FocusOffsetSeq        FocusOffset;
00107     FocusErrorSeq         FocusError;
00108     CommonResultStruct    CommonRes;
00109   };
00110
00111
00113   //       Atmosphere Structures
00115
00116   typedef sequence<double,320> FreqValSeq;  // 320 = [SideBand][NFreq]
00117   typedef sequence<float,20480> TSysSeq;   // 20480 = [SideBand][NFreq][NAnt]
00118   typedef sequence<float,20480> TRecSeq;
00119   typedef sequence<float,20480> TAtmSeq;
00120   typedef sequence<float,20480> CSkySeq;
00121   typedef sequence<float,20480> TauSeq;
00122   typedef sequence<float,64> WaterSeq;
00123
00124
00125   struct AtmosphereResultStruct {
00126     long                  NFreq;
00127     double                LoIFreq;
00128     long                  SideBand;
00129     FreqValSeq            FreqVal;
00130     TSysSeq               TSys;
00131     TRecSeq               TRec;
00132     TAtmSeq               TAtm;
00133     CSkySeq               CSky;
00134     TauSeq                Tau;
00135     WaterSeq              Water;
00136     CommonResultStruct    CommonRes;
00137   };
00138
00139
00141   //                          PointingModel Structure
00143   typedef sequence<long,64> NObsSeq;
00144   typedef sequence<string,64> StationNameSeq;
00145   typedef sequence<float,64> SkyRmsSeq;
00146   typedef sequence<string,16> CoeffNameSeq;
00147   typedef sequence<float,1024> CoeffValSeq;
00148   typedef sequence<float,1024> CoeffErrSeq;
00149   typedef sequence<boolean,1024> WasFreeSeq;
00150   typedef sequence<string> ScanIdSeq;
00151   typedef sequence<float> AzSeq;
00152   typedef sequence<float> ElSeq;
00153
00158   struct PointingModelResultStruct {
00159     NObsSeq               NObs;
00160     StationNameSeq        StationName;
00161     SkyRmsSeq             SkyRms;
00162     long                  NCoeff;
00163     CoeffNameSeq          CoeffName;
00164     CoeffValSeq           CoeffVal;
00165     CoeffErrSeq           CoeffErr;
00166     WasFreeSeq            WasFree;
00167     long                  NScan;
00168     ScanIdSeq             ScanId;
00169     AzSeq                 Az;
00170     ElSeq                 El;
00171     CommonResultStruct    CommonRes;
00172   };
00173
```

```
00174
00175
00176 };
00177
00178 #endif
```

ALMA Computing Group

TelCalPublisher::AtmosphereReducedEvent Struct Reference

AtmosphereReducedEvent is a structure that will be passed around as events in the notification channel. More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
ACS::Time finishedAt
Control::ScanId scanId
string status

Detailed Description

AtmosphereReducedEvent is a structure that will be passed around as events in the notification channel.

Definition at line 97 of file TelCalPublisher.idl.

Member Data Documentation

Control::ExecBlockId TelCalPublisher::AtmosphereReducedEvent::execBlockId

Definition at line 99 of file TelCalPublisher.idl.

ACS::Time TelCalPublisher::AtmosphereReducedEvent::finishedAt

Definition at line 100 of file TelCalPublisher.idl.

Control::ScanId TelCalPublisher::AtmosphereReducedEvent::scanId

Definition at line 101 of file TelCalPublisher.idl.

string TelCalPublisher::AtmosphereReducedEvent::status

Definition at line 102 of file TelCalPublisher.idl.

The documentation for this struct was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::AtmosphereReducedEvent Member List

This is the complete list of members for TelCalPublisher::AtmosphereReducedEvent, including all inherited members.

execBlockId	TelCalPublisher::AtmosphereReducedEvent
finishedAt	TelCalPublisher::AtmosphereReducedEvent
scanId	TelCalPublisher::AtmosphereReducedEvent
status	TelCalPublisher::AtmosphereReducedEvent

ALMA Computing Group

TelCalPublisher::FocusReducedEvent Struct Reference

FocusReducedEvent is a structure that will be passed around as events in the notification channel. More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
ACS::Time finishedAt
Control::ScanId scanId
string status

Detailed Description

FocusReducedEvent is a structure that will be passed around as events in the notification channel.

Definition at line 72 of file TelCalPublisher.idl.

Member Data Documentation

Control::ExecBlockId TelCalPublisher::FocusReducedEvent::execBlockId

Definition at line 74 of file TelCalPublisher.idl.

ACS::Time TelCalPublisher::FocusReducedEvent::finishedAt

Definition at line 75 of file TelCalPublisher.idl.

Control::ScanId TelCalPublisher::FocusReducedEvent::scanId

Definition at line 76 of file TelCalPublisher.idl.

string TelCalPublisher::FocusReducedEvent::status

Definition at line 77 of file TelCalPublisher.idl.

The documentation for this struct was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::FocusReducedEvent Member List

This is the complete list of members for TelCalPublisher::FocusReducedEvent, including all inherited members.

execBlockId	TelCalPublisher::FocusReducedEvent
finishedAt	TelCalPublisher::FocusReducedEvent
scanId	TelCalPublisher::FocusReducedEvent
status	TelCalPublisher::FocusReducedEvent

ALMA Computing Group

TelCalPublisher::PointingModelReducedEvent Struct Reference

PointingModelReducedEvent is a structure that will be passed around as events in the notification channel. More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
ACS::Time finishedAt
Control::ScanId scanId
string status

Detailed Description

PointingModelReducedEvent is a structure that will be passed around as events in the notification channel.

Definition at line 84 of file TelCalPublisher.idl.

Member Data Documentation

Control::ExecBlockId TelCalPublisher::PointingModelReducedEvent::execBlockId

Definition at line 86 of file TelCalPublisher.idl.

ACS::Time TelCalPublisher::PointingModelReducedEvent::finishedAt

Definition at line 87 of file TelCalPublisher.idl.

Control::ScanId TelCalPublisher::PointingModelReducedEvent::scanId

Definition at line 88 of file TelCalPublisher.idl.

string TelCalPublisher::PointingModelReducedEvent::status

Definition at line 89 of file TelCalPublisher.idl.

The documentation for this struct was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::PointingModelReducedEvent Member List

This is the complete list of members for TelCalPublisher::PointingModelReducedEvent, including all inherited members.

execBlockId	TelCalPublisher::PointingModelReducedEvent
finishedAt	TelCalPublisher::PointingModelReducedEvent
scanId	TelCalPublisher::PointingModelReducedEvent
status	TelCalPublisher::PointingModelReducedEvent

ALMA Computing Group

TelCalPublisher::PointingReducedEvent Struct Reference

PointingReducedEvent is a structure that will be passed around as events in the notification channel. More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
ACS::Time finishedAt
Control::ScanId scanId
string status

Detailed Description

PointingReducedEvent is a structure that will be passed around as events in the notification channel.

Definition at line 60 of file TelCalPublisher.idl.

Member Data Documentation

Control::ExecBlockId TelCalPublisher::PointingReducedEvent::execBlockId

Definition at line 62 of file TelCalPublisher.idl.

ACS::Time TelCalPublisher::PointingReducedEvent::finishedAt

Definition at line 63 of file TelCalPublisher.idl.

Control::ScanId TelCalPublisher::PointingReducedEvent::scanId

Definition at line 64 of file TelCalPublisher.idl.

string TelCalPublisher::PointingReducedEvent::status

Definition at line 65 of file TelCalPublisher.idl.

The documentation for this struct was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::PointingReducedEvent Member List

This is the complete list of members for TelCalPublisher::PointingReducedEvent, including all inherited members.

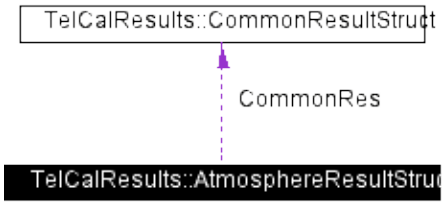
execBlockId	TelCalPublisher::PointingReducedEvent
finishedAt	TelCalPublisher::PointingReducedEvent
scanId	TelCalPublisher::PointingReducedEvent
status	TelCalPublisher::PointingReducedEvent

ALMA Computing Group

TelCalResults::AtmosphereResultStruct Struct Reference

```
import "TelCalResults.idl";
```

Collaboration diagram for TelCalResults::AtmosphereResultStruct:



[legend]

List of all members.

Public Attributes

long	NFreq
double	Lo1Freq
long	SideBand
FreqValSeq	FreqVal
TSysSeq	TSys
TRecSeq	TRec
TAtmSeq	TAtm
CSkySeq	CSky
TauSeq	Tau
WaterSeq	Water
CommonResultStruct	CommonRes

Member Data Documentation

CommonResultStruct TelCalResults::AtmosphereResultStruct::CommonRes

Definition at line 136 of file TelCalResults.idl.

CSkySeq TelCalResults::AtmosphereResultStruct::CSky

Definition at line 133 of file TelCalResults.idl.

FreqValSeq TelCalResults::AtmosphereResultStruct::FreqVal

Definition at line 129 of file TelCalResults.idl.

double TelCalResults::AtmosphereResultStruct::Lo1Freq

Definition at line 127 of file TelCalResults.idl.

long TelCalResults::AtmosphereResultStruct::NFreq

Definition at line 126 of file TelCalResults.idl.

long TelCalResults::AtmosphereResultStruct::SideBand

Definition at line 128 of file TelCalResults.idl.

TAtmSeq TelCalResults::AtmosphereResultStruct::TAtm

Definition at line 132 of file TelCalResults.idl.

TauSeq TelCalResults::AtmosphereResultStruct::Tau

Definition at line 134 of file TelCalResults.idl.

TRecSeq TelCalResults::AtmosphereResultStruct::TRec

Definition at line 131 of file TelCalResults.idl.

TSysSeq TelCalResults::AtmosphereResultStruct::TSys

Definition at line 130 of file TelCalResults.idl.

WaterSeq TelCalResults::AtmosphereResultStruct::Water

Definition at line 135 of file TelCalResults.idl.

The documentation for this struct was generated from the following file:

- TelCalResults.idl

ALMA Computing Group

TelCalResults::AtmosphereResultStruct Member List

This is the complete list of members for TelCalResults::AtmosphereResultStruct, including all inherited members.

CommonRes	TelCalResults::AtmosphereResultStruct
CSky	TelCalResults::AtmosphereResultStruct
FreqVal	TelCalResults::AtmosphereResultStruct
Lo1Freq	TelCalResults::AtmosphereResultStruct
NFreq	TelCalResults::AtmosphereResultStruct
SideBand	TelCalResults::AtmosphereResultStruct
TAtm	TelCalResults::AtmosphereResultStruct
Tau	TelCalResults::AtmosphereResultStruct
TRec	TelCalResults::AtmosphereResultStruct
TSys	TelCalResults::AtmosphereResultStruct
Water	TelCalResults::AtmosphereResultStruct

ALMA Computing Group

TelCalResults::CommonResultStruct Struct Reference

```
import "TelCalResults.idl";
```

List of all members.

Public Attributes

long	NAnt
AntIdSeq	AntId
Control::ExecBlockId	ExecBlockId
Control::ScanId	ScanId
string	Mode
long	Quality
long	ErrorCode
string	ObsDate
string	TelCalVersion

Member Data Documentation

AntIdSeq TelCalResults::CommonResultStruct::AntId

Definition at line 58 of file TelCalResults.idl.

long TelCalResults::CommonResultStruct::ErrorCode

Definition at line 63 of file TelCalResults.idl.

Control::ExecBlockId TelCalResults::CommonResultStruct::ExecBlockId

Definition at line 59 of file TelCalResults.idl.

string TelCalResults::CommonResultStruct::Mode

Definition at line 61 of file TelCalResults.idl.

long TelCalResults::CommonResultStruct::NAnt

Definition at line 57 of file TelCalResults.idl.

string TelCalResults::CommonResultStruct::ObsDate

Definition at line 66 of file TelCalResults.idl.

long TelCalResults::CommonResultStruct::Quality

Definition at line 62 of file TelCalResults.idl.

Control::ScanId TelCalResults::CommonResultStruct::ScanId

Definition at line 60 of file TelCalResults.idl.

string TelCalResults::CommonResultStruct::TelCalVersion

Definition at line 67 of file TelCalResults.idl.

The documentation for this struct was generated from the following file:

- TelCalResults.idl

ALMA Computing Group

TelCalResults::CommonResultStruct Member List

This is the complete list of members for TelCalResults::CommonResultStruct, including all inherited members.

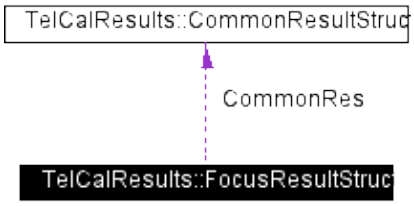
AntId	TelCalResults::CommonResultStruct
ErrorCode	TelCalResults::CommonResultStruct
ExecBlockId	TelCalResults::CommonResultStruct
Mode	TelCalResults::CommonResultStruct
NAnt	TelCalResults::CommonResultStruct
ObsDate	TelCalResults::CommonResultStruct
Quality	TelCalResults::CommonResultStruct
ScanId	TelCalResults::CommonResultStruct
TelCalVersion	TelCalResults::CommonResultStruct

ALMA Computing Group

TelCalResults::FocusResultStruct Struct Reference

```
import "TelCalResults.idl";
```

Collaboration diagram for TelCalResults::FocusResultStruct:



[legend]

List of all members.

Public Attributes

FocusOffsetSeq FocusOffset
FocusErrorSeq FocusError
CommonResultStruct CommonRes

Member Data Documentation

CommonResultStruct TelCalResults::FocusResultStruct::CommonRes

Definition at line 108 of file TelCalResults.idl.

FocusErrorSeq TelCalResults::FocusResultStruct::FocusError

Definition at line 107 of file TelCalResults.idl.

FocusOffsetSeq TelCalResults::FocusResultStruct::FocusOffset

Definition at line 106 of file TelCalResults.idl.

The documentation for this struct was generated from the following file:

- TelCalResults.idl

ALMA Computing Group

TelCalResults::FocusResultStruct Member List

This is the complete list of members for TelCalResults::FocusResultStruct, including all inherited members.

CommonRes	TelCalResults::FocusResultStruct
FocusError	TelCalResults::FocusResultStruct
FocusOffset	TelCalResults::FocusResultStruct

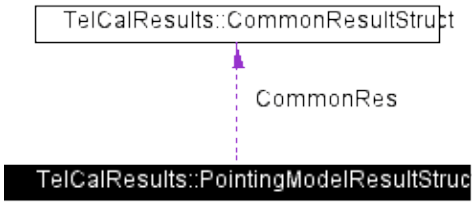
ALMA Computing Group

TelCalResults::PointingModelResultStruct Struct Reference

PointingModelResultStruct is the structure that returns the getPointingModelResult method. More...

```
import "TelCalResults.idl";
```

Collaboration diagram for TelCalResults::PointingModelResultStruct:



[legend]

List of all members.

Public Attributes

NObsSeq	NObs
StationNameSeq	StationName
SkyRmsSeq	SkyRms
long	NCoeff
CoeffNameSeq	CoeffName
CoeffValSeq	CoeffVal
CoeffErrSeq	CoeffErr
WasFreeSeq	WasFree
long	NScan
ScanIdSeq	ScanId
AzSeq	Az
ElSeq	El
CommonResultStruct	CommonRes

Detailed Description

PointingModelResultStruct is the structure that returns the getPointingModelResult method.

Definition at line 158 of file TelCalResults.idl.

Member Data Documentation

AzSeq TelCalResults::PointingModelResultStruct::Az

Definition at line 169 of file TelCalResults.idl.

CoeffErrSeq TelCalResults::PointingModelResultStruct::CoeffErr

Definition at line 165 of file TelCalResults.idl.

CoeffNameSeq TelCalResults::PointingModelResultStruct::CoeffName

Definition at line 163 of file TelCalResults.idl.

CoeffValSeq TelCalResults::PointingModelResultStruct::CoeffVal

Definition at line 164 of file TelCalResults.idl.

CommonResultStruct TelCalResults::PointingModelResultStruct::CommonRes

Definition at line 171 of file TelCalResults.idl.

ElSeq TelCalResults::PointingModelResultStruct::El

Definition at line 170 of file TelCalResults.idl.

long TelCalResults::PointingModelResultStruct::NCoeff

Definition at line 162 of file TelCalResults.idl.

NObsSeq TelCalResults::PointingModelResultStruct::NObs

Definition at line 159 of file TelCalResults.idl.

long TelCalResults::PointingModelResultStruct::NScan

Definition at line 167 of file TelCalResults.idl.

ScanIdSeq TelCalResults::PointingModelResultStruct::ScanId

Definition at line 168 of file TelCalResults.idl.

SkyRmsSeq TelCalResults::PointingModelResultStruct::SkyRms

Definition at line 161 of file TelCalResults.idl.

StationNameSeq TelCalResults::PointingModelResultStruct::StationName

Definition at line 160 of file TelCalResults.idl.

WasFreeSeq TelCalResults::PointingModelResultStruct::WasFree

Definition at line 166 of file TelCalResults.idl.

The documentation for this struct was generated from the following file:

- TelCalResults.idl

ALMA Computing Group

TelCalResults::PointingModelResultStruct Member List

This is the complete list of members for TelCalResults::PointingModelResultStruct, including all inherited members.

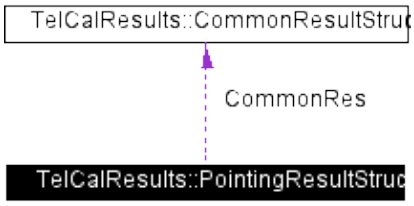
Az	TelCalResults::PointingModelResultStruct
CoeffErr	TelCalResults::PointingModelResultStruct
CoeffName	TelCalResults::PointingModelResultStruct
CoeffVal	TelCalResults::PointingModelResultStruct
CommonRes	TelCalResults::PointingModelResultStruct
El	TelCalResults::PointingModelResultStruct
NCoeff	TelCalResults::PointingModelResultStruct
NObs	TelCalResults::PointingModelResultStruct
NScan	TelCalResults::PointingModelResultStruct
ScanId	TelCalResults::PointingModelResultStruct
SkyRms	TelCalResults::PointingModelResultStruct
StationName	TelCalResults::PointingModelResultStruct
WasFree	TelCalResults::PointingModelResultStruct

ALMA Computing Group

TelCalResults::PointingResultStruct Struct Reference

```
import "TelCalResults.idl";
```

Collaboration diagram for TelCalResults::PointingResultStruct:



[legend]

List of all members.

Public Attributes

AzCollOffsetSeq	AzCollOffset
ElCollOffsetSeq	ElCollOffset
AzCollErrorSeq	AzCollError
ElCollErrorSeq	ElCollError
float	Azimuth
float	Elevation
CommonResultStruct	CommonRes

Member Data Documentation

AzCollErrorSeq TelCalResults::PointingResultStruct::AzCollError

Definition at line 87 of file TelCalResults.idl.

AzCollOffsetSeq TelCalResults::PointingResultStruct::AzCollOffset

Definition at line 85 of file TelCalResults.idl.

float TelCalResults::PointingResultStruct::Azimuth

Definition at line 89 of file TelCalResults.idl.

CommonResultStruct TelCalResults::PointingResultStruct::CommonRes

Definition at line 91 of file TelCalResults.idl.

ElCollErrorSeq TelCalResults::PointingResultStruct::ElCollError

Definition at line 88 of file TelCalResults.idl.

ElCollOffsetSeq TelCalResults::PointingResultStruct::ElCollOffset

Definition at line 86 of file TelCalResults.idl.

float TelCalResults::PointingResultStruct::Elevation

Definition at line 90 of file TelCalResults.idl.

The documentation for this struct was generated from the following file:

- TelCalResults.idl

ALMA Computing Group

TelCalResults::PointingResultStruct Member List

This is the complete list of members for TelCalResults::PointingResultStruct, including all inherited members.

AzCollError	TelCalResults::PointingResultStruct
AzCollOffset	TelCalResults::PointingResultStruct
Azimuth	TelCalResults::PointingResultStruct
CommonRes	TelCalResults::PointingResultStruct
ElCollError	TelCalResults::PointingResultStruct
ElCollOffset	TelCalResults::PointingResultStruct
Elevation	TelCalResults::PointingResultStruct

ALMA Computing Group

telcalArchiveModule::TelCalArchive Interface Reference

```
import "TelCalArchive.idl";
```

List of all members.

Public Methods

void storeFocusResult (in FocusResultStruct result)
stores FocusResult in archive. More...

void storePointingResult (in PointingResultStruct result)
stores PointingResult in archive. More...

void storeAtmosphereResult (in AtmosphereResultStruct result)
stores AtmosphereResult in archive. More...

void storePointingModelResult (in PointingModelResultStruct result)
stores PointingModelResult in archive. More...

void storeProject (in string inputFile)
stores Project (VOTables) in archive. More...

void getProject (in string projectName, in string outputFile)
extracts Project (VOTables) from archive and writes a XML file. More...

void exceptionMethod () raises (TelCalArchiveException)
will throw an TelCalArchiveException. More...

Member Function Documentation

void telcalArchiveModule::TelCalArchive::exceptionMethod ( ) raises (TelCalArchiveException)

will throw an TelCalArchiveException.

void telcalArchiveModule::TelCalArchive::getProject (in string *projectName*,
in string *outputFile*
)

extracts Project (VOTables) from archive and writes a XML file.

Parameters:
projectName : identifies the project
outputFile : name of the output XML file

void telcalArchiveModule::TelCalArchive::storeAtmosphereResult (in AtmosphereResultStruct *result*)

stores AtmosphereResult in archive.

Parameters:

result the result structure to be stored into the Archive

void telcalArchiveModule::TelCalArchive::storeFocusResult (in FocusResultStruct *result*)

stores FocusResult in archive.

Parameters:

result the result structure to be stored into the Archive

void telcalArchiveModule::TelCalArchive::storePointingModelResult (in PointingModelResultStruct *result*)

stores PointingModelResult in archive.

Parameters:

result the result structure to be stored into the Archive

void telcalArchiveModule::TelCalArchive::storePointingResult (in PointingResultStruct *result*)

stores PointingResult in archive.

Parameters:

result the result structure to be stored into the Archive

void telcalArchiveModule::TelCalArchive::storeProject (in string *inputFile*)

stores Project (VOTables) in archive.

Parameters:

inputFile : name of the XML file which contains several VOTables to be stored

---

The documentation for this interface was generated from the following file:

- TelCalArchive.idl

ALMA Computing Group

telcalArchiveModule::TelCalArchive Member List

This is the complete list of members for telcalArchiveModule::TelCalArchive, including all inherited members.

exceptionMethod()	telcalArchiveModule::TelCalArchive
getProject(in string projectName, in string outputFile)	telcalArchiveModule::TelCalArchive
storeAtmosphereResult(in AtmosphereResultStruct result)	telcalArchiveModule::TelCalArchive
storeFocusResult(in FocusResultStruct result)	telcalArchiveModule::TelCalArchive
storePointingModelResult(in PointingModelResultStruct result)	telcalArchiveModule::TelCalArchive
storePointingResult(in PointingResultStruct result)	telcalArchiveModule::TelCalArchive
storeProject(in string inputFile)	telcalArchiveModule::TelCalArchive

ALMA Computing Group

TelCalOffLine::OffLineOperation Interface Reference

Interface OffLineOperation is required to specify the data to be processed from the Archive and to start processing. More...

```
import "OffLineOperation.idl";
```

List of all members.

Public Methods

void selectTelCalData (in string fileName, in ProcessList list) raises (FileNotFound,UnknownFunctionality)
Specifies the data to be processed from the Archive. More...

void processTelCalData ()
Start processing. More...

Detailed Description

Interface OffLineOperation is required to specify the data to be processed from the Archive and to start processing.

Definition at line 104 of file OffLineOperation.idl.

Member Function Documentation

void TelCalOffLine::OffLineOperation::processTelCalData ( )

Start processing.

void TelCalOffLine::OffLineOperation::selectTelCalData (in string *fileName*,
in ProcessList *list*
) raises (FileNotFound,UnknownFunctionality)

Specifies the data to be processed from the Archive.

Parameters:

fileName	file that contains the data.
list	list of functionalities to activate.

The documentation for this interface was generated from the following file:

- OffLineOperation.idl

ALMA Computing Group

TelCalOffLine::OffLineOperation Member List

This is the complete list of members for TelCalOffLine::OffLineOperation, including all inherited members.

processTelCalData()	TelCalOffLine::OffLineOperation
selectTelCalData(in string fileName, in ProcessList list)	TelCalOffLine::OffLineOperation

ALMA Computing Group

TelCalProto::ParameterTuning Interface Reference

Interface ParameterTuning is used to change the values of some parameters used by the TelCalSubsystem. More...

```
import "ParameterTuning.idl";
```

List of all members.

Public Methods

void setTelCalParameter (in string coeffName, in double value) raises (UnknownCoefficient, InvalidCoefficient)
Sets TelCal parameters. More...

Public Attributes

readonly attribute ACS::ROlong logLevel
@Properties logLevel This property is the commanded logLevel of TelCal. More...

readonly attribute ACS::ROdouble NPAE
@Properties NPAE This property is the commanded NPAE used for the Pointing Model. More...

readonly attribute ACS::ROdouble ACES
@Properties ACES This property is the commanded ACES used for the Pointing Model. More...

readonly attribute ACS::ROdouble ACEC
@Properties ACEC This property is the commanded ACEC used for the Pointing Model. More...

readonly attribute ACS::ROdouble ECES
@Properties ECES This property is the commanded ECES used for the Pointing Model. More...

readonly attribute ACS::ROdouble ECEC
@Properties ECEC This property is the commanded ECEC used for the Pointing Model. More...

Detailed Description

Interface ParameterTuning is used to change the values of some parameters used by the TelCalSubsystem.

Definition at line 70 of file ParameterTuning.idl.

Member Function Documentation

void TelCalProto::ParameterTuning::setTelCalParameter (in string *coeffName*, in double *value* raises) (UnknownCoefficient, InvalidCoefficient)

Sets TelCal parameters.

Member Data Documentation

readonly attribute ACS::RODouble TelCalProto::ParameterTuning::ACEC

@Properties ACEC This property is the commanded ACEC used for the Pointing Model.

Definition at line 99 of file ParameterTuning.idl.

readonly attribute ACS::RODouble TelCalProto::ParameterTuning::ACES

@Properties ACES This property is the commanded ACES used for the Pointing Model.

Definition at line 94 of file ParameterTuning.idl.

readonly attribute ACS::RODouble TelCalProto::ParameterTuning::ECEC

@Properties ECEC This property is the commanded ECEC used for the Pointing Model.

Definition at line 109 of file ParameterTuning.idl.

readonly attribute ACS::RODouble TelCalProto::ParameterTuning::ECES

@Properties ECES This property is the commanded ECES used for the Pointing Model.

Definition at line 104 of file ParameterTuning.idl.

readonly attribute ACS::ROlong TelCalProto::ParameterTuning::logLevel

@Properties logLevel This property is the commanded logLevel of TelCal.

Definition at line 84 of file ParameterTuning.idl.

readonly attribute ACS::RODouble TelCalProto::ParameterTuning::NPAE

@Properties NPAE This property is the commanded NPAE used for the Pointing Model.

Definition at line 89 of file ParameterTuning.idl.

The documentation for this interface was generated from the following file:

- ParameterTuning.idl

ALMA Computing Group

TelCalProto::ParameterTuning Member List

This is the complete list of members for TelCalProto::ParameterTuning, including all inherited members.

ACEC	TelCalProto::ParameterTuning
ACES	TelCalProto::ParameterTuning
ECEC	TelCalProto::ParameterTuning
ECES	TelCalProto::ParameterTuning
logLevel	TelCalProto::ParameterTuning
NPAE	TelCalProto::ParameterTuning
setTelCalParameter(in string coeffName, in double value)	TelCalProto::ParameterTuning

ALMA Computing Group

TelCalPublisher::GetTelCalResults Interface Reference

This interface is used by all subsystems to get the results of the Telescope Calibration. More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Methods

PointingResult getPointingResult (in string execBlockId, in string scanId) raises (NoSuchResult)
Pointing results. More...

FocusResult getFocusResult (in string execBlockId, in string scanId) raises (NoSuchResult)
Focus results. More...

AtmosphereResult getAtmosphereResult (in string execBlockId, in string scanId) raises (NoSuchResult)
Atmosphere results. More...

PointingModelResult getPointingModelResult (in string execBlockId, in string scanId) raises (NoSuchResult)
PointingModel results. More...

void publishPointingResult (in TelCalResults::PointingResultStruct result)
Stores pointing results into the telcal internal list of results, publish events and write results in archive. More...

void publishFocusResult (in TelCalResults::FocusResultStruct result)
Stores focus results into the telcal internal list of results, publish events and write results in archive. More...

void publishAtmosphereResult (in TelCalResults::AtmosphereResultStruct result)
Stores atmosphere results into the telcal internal list of results, publish events and write results in archive. More...

void publishPointingModelResult (in TelCalResults::PointingModelResultStruct result)
Stores pointing model results into the telcal internal list of results, publish events and write results in archive. More...

Detailed Description

This interface is used by all subsystems to get the results of the Telescope Calibration.

User subsystems are Control, Scheduling, DRUI, Off–Line, Executive subsystems.

Definition at line 132 of file TelCalPublisher.idl.

Member Function Documentation

AtmosphereResult TelCalPublisher::GetTelCalResults::getAtmosphereResult (in string *execBlockId*, in string *scanId*) raises (NoSuchResult)

Atmosphere results.

Returns:
AtmosphereResult : result of an atmosphere calibration

FocusResult TelCalPublisher::GetTelCalResults::getFocusResult (in string *execBlockId*, in string *scanId*) raises (NoSuchResult)

Focus results.

Returns:
FocusResult : result of the focus processing of sccanId

PointingModelResult TelCalPublisher::GetTelCalResults::getPointingModelResult (in string *execBlockId*, in string *scanId*) raises (NoSuchResult)

PointingModel results.

Returns:
PointingModelResult: result of an atmosphere calibration

PointingResult TelCalPublisher::GetTelCalResults::getPointingResult (in string *execBlockId*, in string *scanId*) raises (NoSuchResult)

Pointing results.

Returns:
PointingResult : result of the pointing processing of scanId

void TelCalPublisher::GetTelCalResults::publishAtmosphereResult (in TelCalResults::AtmosphereResultStruct *result*)

Stores atmosphere results into the telcal internal list of results, publish events and write results in archive.

Parameters:
result : the atmosphere result to be stored

void TelCalPublisher::GetTelCalResults::publishFocusResult (in TelCalResults::FocusResultStruct *result*)

Stores focus results into the telcal internal list of results, publish events and write results in archive.

Parameters:
result : the focus result to be stored

void TelCalPublisher::GetTelCalResults::publishPointingModelResult (in TelCalResults::PointingModelResultStruct *result*)

Stores pointing model results into the telcal internal list of results, publish events and write results in archive.

Parameters:
result : the pointing model result to be stored

void TelCalPublisher::GetTelCalResults::publishPointingResult (in TelCalResults::PointingResultStruct *result*)

Stores pointing results into the telcal internal list of results, publish events and write results in archive.

Parameters:

result : the pointing result to be stored

The documentation for this interface was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::GetTelCalResults Member List

This is the complete list of members for TelCalPublisher::GetTelCalResults, including all inherited members.

getAtmosphereResult(in string execBlockId, in string scanId)	TelCalPublisher::GetTelCalResults
getFocusResult(in string execBlockId, in string scanId)	TelCalPublisher::GetTelCalResults
getPointingModelResult(in string execBlockId, in string scanId)	TelCalPublisher::GetTelCalResults
getPointingResult(in string execBlockId, in string scanId)	TelCalPublisher::GetTelCalResults
publishAtmosphereResult(in TelCalResults::AtmosphereResultStruct result)	TelCalPublisher::GetTelCalResults
publishFocusResult(in TelCalResults::FocusResultStruct result)	TelCalPublisher::GetTelCalResults
publishPointingModelResult(in TelCalResults::PointingModelResultStruct result)	TelCalPublisher::GetTelCalResults
publishPointingResult(in TelCalResults::PointingResultStruct result)	TelCalPublisher::GetTelCalResults

ALMA Computing Group

TelCalReceivedNC::ReceivingDataManager Interface Reference

Interface ReceivingDataManager. More...

```
import "TelCalReceivedNC.idl";
```

Detailed Description

Interface ReceivingDataManager.

Definition at line 62 of file TelCalReceivedNC.idl.

The documentation for this interface was generated from the following file:

- TelCalReceivedNC.idl

ALMA Computing Group

telcalArchiveModule::TelCalArchiveException Exception Reference

```
import "TelCalArchive.idl";
```

The documentation for this exception was generated from the following file:

- TelCalArchive.idl

ALMA Computing Group

TelCalOffLine::FileNotFound Exception Reference

```
import "OffLineOperation.idl";
```

List of all members.

Public Attributes

string filename
string error

Member Data Documentation

string TelCalOffLine::FileNotFound::error

Definition at line 88 of file OffLineOperation.idl.

string TelCalOffLine::FileNotFound::filename

Definition at line 87 of file OffLineOperation.idl.

The documentation for this exception was generated from the following file:

- OffLineOperation.idl

ALMA Computing Group

TelCalOffLine::FileNotFound Member List

This is the complete list of members for TelCalOffLine::FileNotFound, including all inherited members.

error	TelCalOffLine::FileNotFound
filename	TelCalOffLine::FileNotFound

ALMA Computing Group

TelCalOffLine::UnknownFunctionality Exception Reference

```
import "OffLineOperation.idl";
```

List of all members.

Public Attributes

Processing process
string error

Member Data Documentation

string TelCalOffLine::UnknownFunctionality::error

Definition at line 93 of file OffLineOperation.idl.

Processing TelCalOffLine::UnknownFunctionality::process

Definition at line 92 of file OffLineOperation.idl.

The documentation for this exception was generated from the following file:

- OffLineOperation.idl

ALMA Computing Group

TelCalOffLine::UnknownFunctionality Member List

This is the complete list of members for TelCalOffLine::UnknownFunctionality, including all inherited members.

error	TelCalOffLine::UnknownFunctionality
process	TelCalOffLine::UnknownFunctionality

ALMA Computing Group

TelCalProto::InvalidCoefficient Exception Reference

```
import "ParameterTuning.idl";
```

List of all members.

Public Attributes

string coefficientName
string coefficientValue
string error

Member Data Documentation

string TelCalProto::InvalidCoefficient::coefficientName

Definition at line 57 of file ParameterTuning.idl.

string TelCalProto::InvalidCoefficient::coefficientValue

Definition at line 58 of file ParameterTuning.idl.

string TelCalProto::InvalidCoefficient::error

Definition at line 59 of file ParameterTuning.idl.

The documentation for this exception was generated from the following file:

- ParameterTuning.idl

ALMA Computing Group

TelCalProto::InvalidCoefficient Member List

This is the complete list of members for TelCalProto::InvalidCoefficient, including all inherited members.

coefficientName	TelCalProto::InvalidCoefficient
coefficientValue	TelCalProto::InvalidCoefficient
error	TelCalProto::InvalidCoefficient

ALMA Computing Group

TelCalProto::UnknownCoefficient Exception Reference

```
import "ParameterTuning.idl";
```

List of all members.

Public Attributes

string coefficientName
string coefficientValue
string error

Member Data Documentation

string TelCalProto::UnknownCoefficient::coefficientName

Definition at line 51 of file ParameterTuning.idl.

string TelCalProto::UnknownCoefficient::coefficientValue

Definition at line 52 of file ParameterTuning.idl.

string TelCalProto::UnknownCoefficient::error

Definition at line 53 of file ParameterTuning.idl.

The documentation for this exception was generated from the following file:

- ParameterTuning.idl

ALMA Computing Group

TelCalProto::UnknownCoefficient Member List

This is the complete list of members for TelCalProto::UnknownCoefficient, including all inherited members.

coefficientName	TelCalProto::UnknownCoefficient
coefficientValue	TelCalProto::UnknownCoefficient
error	TelCalProto::UnknownCoefficient

ALMA Computing Group

TelCalPublisher::NoSuchResult Exception Reference

Raised when no result corresponds to (scanId,execId). More...

```
import "TelCalPublisher.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
Control::ScanId scanId
string error

Detailed Description

Raised when no result corresponds to (scanId,execId).

Definition at line 116 of file TelCalPublisher.idl.

Member Data Documentation

string TelCalPublisher::NoSuchResult::error

Definition at line 119 of file TelCalPublisher.idl.

Control::ExecBlockId TelCalPublisher::NoSuchResult::execBlockId

Definition at line 117 of file TelCalPublisher.idl.

Control::ScanId TelCalPublisher::NoSuchResult::scanId

Definition at line 118 of file TelCalPublisher.idl.

The documentation for this exception was generated from the following file:

- TelCalPublisher.idl

ALMA Computing Group

TelCalPublisher::NoSuchResult Member List

This is the complete list of members for TelCalPublisher::NoSuchResult, including all inherited members.

error	TelCalPublisher::NoSuchResult
execBlockId	TelCalPublisher::NoSuchResult
scanId	TelCalPublisher::NoSuchResult

ALMA Computing Group

TelCalReceivedNC::InvalidData Exception Reference

```
import "TelCalReceivedNC.idl";
```

List of all members.

Public Attributes

Control::ExecBlockId execBlockId
Control::ScanId scanId
Control::ObsId obsId
string error

Member Data Documentation

string TelCalReceivedNC::InvalidData::error

Definition at line 53 of file TelCalReceivedNC.idl.

Control::ExecBlockId TelCalReceivedNC::InvalidData::execBlockId

Definition at line 50 of file TelCalReceivedNC.idl.

Control::ObsId TelCalReceivedNC::InvalidData::obsId

Definition at line 52 of file TelCalReceivedNC.idl.

Control::ScanId TelCalReceivedNC::InvalidData::scanId

Definition at line 51 of file TelCalReceivedNC.idl.

The documentation for this exception was generated from the following file:

- TelCalReceivedNC.idl

ALMA Computing Group

TelCalReceivedNC::InvalidData Member List

This is the complete list of members for TelCalReceivedNC::InvalidData, including all inherited members.

error	TelCalReceivedNC::InvalidData
execBlockId	TelCalReceivedNC::InvalidData
obsId	TelCalReceivedNC::InvalidData
scanId	TelCalReceivedNC::InvalidData

ALMA Computing Group

TELCAL IDL Namespace Members

a | b | c | d | e | f | h | n | p | s | t | w

Here is a list of all namespace members with links to the namespace documentation for each member:

– a –

- ALL : TelCalOffLine
- AMPCURVE : TelCalOffLine
- AMPLICAL : TelCalOffLine
- ANTENNAPOSITIONS : TelCalOffLine
- AntIdSeq : TelCalResults
- ATMOSPHERE : TelCalOffLine
- AtmosphereResult : TelCalPublisher
- AtmosphereResultStruct : telcalArchiveModule
- AzCollErrorSeq : TelCalResults
- AzCollOffsetSeq : TelCalResults
- AzSeq : TelCalResults

– b –

- BANDPASS : TelCalOffLine

– c –

- CHANNELNAME : TelCalPublisher
- CoeffErrSeq : TelCalResults
- CoeffNameSeq : TelCalResults
- CoeffValSeq : TelCalResults
- CSkySeq : TelCalResults

– d –

- DELAY : TelCalOffLine

– e –

- ElCollErrorSeq : TelCalResults
- ElCollOffsetSeq : TelCalResults
- ElSeq : TelCalResults

– f –

- FOCUS : TelCalOffLine
- FocusErrorSeq : TelCalResults
- FocusOffsetSeq : TelCalResults
- FocusResult : TelCalPublisher
- FocusResultStruct : telcalArchiveModule

- FreqValSeq : TelCalResults

– h –

- HOLOGRAPHY : TelCalOffLine

– n –

- NObsSeq : TelCalResults

– p –

- PATHCORRECTION : TelCalOffLine
- PHASECAL : TelCalOffLine
- PHASECURVE : TelCalOffLine
- POINTING : TelCalOffLine
- POINTINGMODEL : TelCalOffLine
- PointingModelResult : TelCalPublisher
- PointingModelResultStruct : telcalArchiveModule
- PointingResult : TelCalPublisher
- PointingResultStruct : telcalArchiveModule
- PRIMARYBEAM : TelCalOffLine
- Processing : TelCalOffLine
- ProcessList : TelCalOffLine

– s –

- ScanIdSeq : TelCalResults
- SIDEBAND : TelCalOffLine
- SKYDIP : TelCalOffLine
- SkyRmsSeq : TelCalResults
- StationNameSeq : TelCalResults

– t –

- TAtmSeq : TelCalResults
- TauSeq : TelCalResults
- TRecSeq : TelCalResults
- TSysSeq : TelCalResults

– w –

- WasFreeSeq : TelCalResults
- WaterSeq : TelCalResults

ALMA Computing Group

TELCAL IDL Namespace List

Here is a list of all namespaces with brief descriptions:

telcalArchiveModule	TelCalArchive IDL File
TelCalOffLine	There is requirement the TelCalSubsystem is available off−line
TelCalProto	
TelCalPublisher	
TelCalReceivedNC	TelCalReceived Notification Channel IDL File
TelCalResults	

ALMA Computing Group

telcalArchiveModule Namespace Reference

TelCalArchive IDL File. More...

Compounds

interface telcalArchiveModule::TelCalArchive
exception telcalArchiveModule::TelCalArchiveException

Typedefs

typedef TelCalResults::FocusResultStruct FocusResultStruct
typedef TelCalResults::PointingResultStruct PointingResultStruct
typedef TelCalResults::AtmosphereResultStruct AtmosphereResultStruct
typedef TelCalResults::PointingModelResultStruct PointingModelResultStruct

Detailed Description

TelCalArchive IDL File.

Version:
1.00 Feb 5, 2004

Author:
Dominique Broguiere

Typedef Documentation

typedef TelCalResults::AtmosphereResultStruct telcalArchiveModule::AtmosphereResultStruct

Definition at line 38 of file TelCalArchive.idl.

typedef TelCalResults::FocusResultStruct telcalArchiveModule::FocusResultStruct

Definition at line 36 of file TelCalArchive.idl.

typedef TelCalResults::PointingModelResultStruct telcalArchiveModule::PointingModelResultStruct

Definition at line 39 of file TelCalArchive.idl.

typedef TelCalResults::PointingResultStruct telcalArchiveModule::PointingResultStruct

Definition at line 37 of file TelCalArchive.idl.

ALMA Computing Group

TelCalOffLine Namespace Reference

There is requirement the TelCalSubsystem is available off–line. More...

Compounds

exception TelCalOffLine::FileNotFound

interface TelCalOffLine::OffLineOperation

Interface OffLineOperation is required to specify the data to be processed from the Archive and to start processing. More...

exception TelCalOffLine::UnknownFunctionality

Typedefs

typedef sequence< Processing > ProcessList

The parameter ProcessList is a list of functionalities to activate. More...

Enumerations

enum Processing {
PHASECAL, AMPLICAL, ATMOSPHERE, PATHCORRECTION,
PHASECURVE, AMPCURVE, POINTING, FOCUS,
SIDEBAND, DELAY, BANDPASS, SKYDIP,
POINTINGMODEL, ANTENNAPOSITIONS, HOLOGRAPHY, PRIMARYBEAM,
ALL
}

Enumeration of functionalities to be reduced. More...

Detailed Description

There is requirement the TelCalSubsystem is available off–line.

Among other uses, this is foreseen for re–calibration in Santiago or at Regional Support Centers. There is thus the need to provide an interface to a client subsystem (the DRUI or Off–Line subsystems) for this purpose. The main functions would be to specify the data to be processed from a file (given by the DRUI) and start processing.

Version:

1.00 Feb 5, 2004

Author:

Fanny Cosson

Typedef Documentation

typedef sequence<Processing> TelCalOffLine::ProcessList

The parameter ProcessList is a list of functionalities to activate.

Definition at line 74 of file OffLineOperation.idl.

Enumeration Type Documentation

enum TelCalOffLine::Processing

Enumeration of functionalities to be reduced.

Enumeration values:

PHASECAL
AMPLICAL
ATMOSPHERE
PATHCORRECTION
PHASECURVE
AMPCURVE
POINTING
FOCUS
SIDEBAND
DELAY
BANDPASS
SKYDIP
POINTINGMODEL
ANTENNAPOSITIONS
HOLOGRAPHY
PRIMARYBEAM
ALL

Definition at line 51 of file OffLineOperation.idl.

ALMA Computing Group

TelCalProto Namespace Reference

Compounds

exception TelCalProto::InvalidCoefficient

interface TelCalProto::ParameterTuning

Interface ParameterTuning is used to change the values of some parameters used by the TelCalSubsystem. More...

exception TelCalProto::UnknownCoefficient

ALMA Computing Group

TelCalPublisher Namespace Reference

Compounds

struct TelCalPublisher::AtmosphereReducedEvent
AtmosphereReducedEvent is a structure that will be passed around as events in the notification channel. More...

struct TelCalPublisher::FocusReducedEvent
FocusReducedEvent is a structure that will be passed around as events in the notification channel. More...

interface TelCalPublisher::GetTelCalResults
This interface is used by all subsystems to get the results of the Telescope Calibration. More...

exception TelCalPublisher::NoSuchResult
Raised when no result corresponds to (scanId,execId). More...

struct TelCalPublisher::PointingModelReducedEvent
PointingModelReducedEvent is a structure that will be passed around as events in the notification channel. More...

struct TelCalPublisher::PointingReducedEvent
PointingReducedEvent is a structure that will be passed around as events in the notification channel. More...

Typedefs

typedef xmlentity::XmlEntityStruct FocusResult
typedef xmlentity::XmlEntityStruct PointingResult
typedef xmlentity::XmlEntityStruct PointingModelResult
typedef xmlentity::XmlEntityStruct AtmosphereResult

Variables

const string CHANNELNAME = "TelCalPublisherEventNC"

Typedef Documentation

typedef xmlentity::XmlEntityStruct TelCalPublisher::AtmosphereResult

Definition at line 46 of file TelCalPublisher.idl.

typedef xmlentity::XmlEntityStruct TelCalPublisher::FocusResult

Definition at line 43 of file TelCalPublisher.idl.

typedef xmlentity::XmlEntityStruct TelCalPublisher::PointingModelResult

Definition at line 45 of file TelCalPublisher.idl.

typedef xmlentity::XmlEntityStruct TelCalPublisher::PointingResult

Definition at line 44 of file TelCalPublisher.idl.

Variable Documentation

const string TelCalPublisher::CHANNELNAME = "TelCalPublisherEventNC"

Definition at line 54 of file TelCalPublisher.idl.

ALMA Computing Group

TelCalReceivedNC Namespace Reference

TelCalReceived Notification Channel IDL File. More...

Compounds

exception TelCalReceivedNC::InvalidData
interface TelCalReceivedNC::ReceivingDataManager
Interface ReceivingDataManager. More...

Detailed Description

TelCalReceived Notification Channel IDL File.

Version:
1.00 Feb 5, 2004

Author:
Fanny Cosson

ALMA Computing Group

TelCalResults Namespace Reference

Compounds

struct TelCalResults::AtmosphereResultStruct
struct TelCalResults::CommonResultStruct
struct TelCalResults::FocusResultStruct
struct TelCalResults::PointingModelResultStruct
PointingModelResultStruct is the structure that returns the getPointingModelResult method. More...

struct TelCalResults::PointingResultStruct

Typedefs

typedef sequence< long, 64 > AntIdSeq
typedef sequence< float, 64 > AzCollOffsetSeq
PointingResultStruct is the structure that returns the getPointingResult method. More...

typedef sequence< float, 64 > ElCollOffsetSeq
typedef sequence< float, 64 > AzCollErrorSeq
typedef sequence< float, 64 > ElCollErrorSeq
typedef sequence< float, 64 > FocusOffsetSeq
FocusResultStruct is the structure that returns the getFocusResult method. More...

typedef sequence< float, 64 > FocusErrorSeq
typedef sequence< double, 320 > FreqValSeq
typedef sequence< float, 20480 > TSysSeq
typedef sequence< float, 20480 > TRecSeq
typedef sequence< float, 20480 > TAtmSeq
typedef sequence< float, 20480 > CSkySeq
typedef sequence< float, 20480 > TauSeq
typedef sequence< float, 64 > WaterSeq
typedef sequence< long, 64 > NObsSeq
typedef sequence< string, 64 > StationNameSeq
typedef sequence< float, 64 > SkyRmsSeq
typedef sequence< string, 16 > CoeffNameSeq
typedef sequence< float, 1024 > CoeffValSeq
typedef sequence< float, 1024 > CoeffErrSeq
typedef sequence< boolean, 1024 > WasFreeSeq
typedef sequence< string > ScanIdSeq
typedef sequence< float > AzSeq
typedef sequence< float > ElSeq

Typedef Documentation

typedef sequence<long,64> TelCalResults::AntIdSeq

Definition at line 53 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::AzCollErrorSeq

Definition at line 80 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::AzCollOffsetSeq

PointingResultStruct is the structure that returns the getPointingResult method.

Definition at line 78 of file TelCalResults.idl.

typedef sequence<float> TelCalResults::AzSeq

Definition at line 151 of file TelCalResults.idl.

typedef sequence<float,1024> TelCalResults::CoeffErrSeq

Definition at line 148 of file TelCalResults.idl.

typedef sequence<string,16> TelCalResults::CoeffNameSeq

Definition at line 146 of file TelCalResults.idl.

typedef sequence<float,1024> TelCalResults::CoeffValSeq

Definition at line 147 of file TelCalResults.idl.

typedef sequence<float,20480> TelCalResults::CSkySeq

Definition at line 120 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::ElCollErrorSeq

Definition at line 81 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::ElCollOffsetSeq

Definition at line 79 of file TelCalResults.idl.

typedef sequence<float> TelCalResults::ElSeq

Definition at line 152 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::FocusErrorSeq

Definition at line 102 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::FocusOffsetSeq

FocusResultStruct is the structure that returns the getFocusResult method.

Definition at line 101 of file TelCalResults.idl.

typedef sequence<double,320> TelCalResults::FreqValSeq

Definition at line 116 of file TelCalResults.idl.

typedef sequence<long,64> TelCalResults::NObsSeq

Definition at line 143 of file TelCalResults.idl.

typedef sequence<string> TelCalResults::ScanIdSeq

Definition at line 150 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::SkyRmsSeq

Definition at line 145 of file TelCalResults.idl.

typedef sequence<string,64> TelCalResults::StationNameSeq

Definition at line 144 of file TelCalResults.idl.

typedef sequence<float,20480> TelCalResults::TAtmSeq

Definition at line 119 of file TelCalResults.idl.

typedef sequence<float,20480> TelCalResults::TauSeq

Definition at line 121 of file TelCalResults.idl.

typedef sequence<float,20480> TelCalResults::TRecSeq

Definition at line 118 of file TelCalResults.idl.

typedef sequence<float,20480> TelCalResults::TSysSeq

Definition at line 117 of file TelCalResults.idl.

typedef sequence<boolean,1024> TelCalResults::WasFreeSeq

Definition at line 149 of file TelCalResults.idl.

typedef sequence<float,64> TelCalResults::WaterSeq

Definition at line 122 of file TelCalResults.idl.