

Day Night Flag

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Element Description

The Day Night Flag element is used to identify whether a granule was collected during the day, night (between sunset and sunrise), or both.

Best Practices

Day Night Flag is a required element under Data Granule. This is a controlled vocabulary field with 4 options:

- Day
- Night
- Both
- Unspecified

If no Day Night Flag information is available for the granule, the "Unspecified" value should be used.

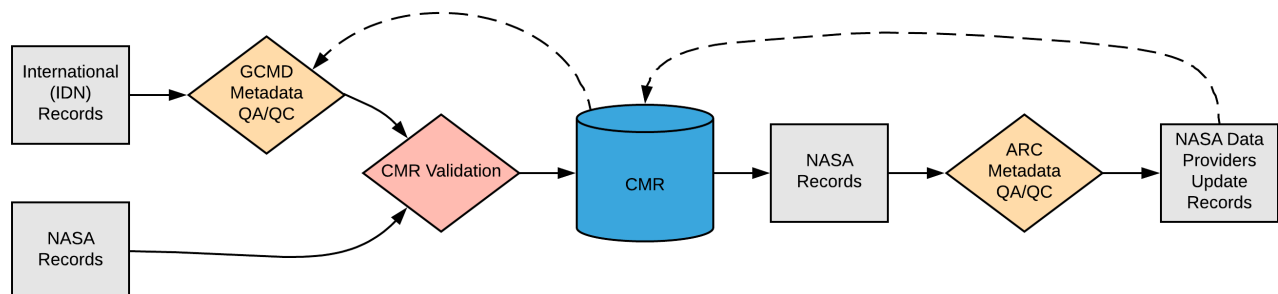
Element Specification

The Day Night Flag element is required in UMM-G (Cardinality: 1)

Model	Element	Type	Constraints	Required?	Cardinality
UMM-G	DataGranule/DayNightFlag	Enumeration	Day Night Both Unspecified	Yes	1

Metadata Validation and QA/QC

All metadata entering the CMR goes through the below process to ensure metadata quality requirements are met. All records undergo CMR validation before entering the system. The process of QA/QC is slightly different for NASA and non-NASA data providers. Non-NASA providers include interagency and international data providers and are referred to as the International Directory Network (IDN).



Please see the expandable sections below for flowchart details.

- Manual Review
 - Identify errors, discrepancies, or omissions.
 - Proof read all content for conciseness and readability.
- Automated Review
 - Check that the field has been populated.
 - Check that the field length is not greater than 1,030 characters.
 - Check that the field value does not match the Entry ID.
- If this element is used, the description sub element is required.
- The description must have at least 1 character and be no longer than 4000 characters in length.

ARC Priority Matrix

Red = High Priority Finding	This element is categorized as highest priority when: • No Day Night Flag is provided (since it is a required element). • The Day Night Flag doesn't adhere to controlled vocabulary values: Day, Night, Both, Unspecified. • The Day Night Flag provided is incorrect.
Yellow = Medium Priority Finding	Not Applicable
Blue = Low Priority Finding	Not Applicable
Green = No Findings/Issues	The element is provided and follows all applicable criteria specified in the best practices section above.

ARC Automated Checks

ARC uses the [pyQuARC library](#) for automated metadata checks. Please see the [pyQuARC GitHub](#) for more information.

Dialect Mappings

ECHO 10

Day Night Flag is required in ECHO 10 (Cardinality: 1)

UMM-G Element	ECHO 10 Path	Type	Constraints	Required in ECHO10?	Cardinality
DataGranule/DayNightFlag	DataGranule/DayNightFlag	Enumeration	DAY NIGHT BOTH UNSPECIFIED	Yes	1

Example Mapping

ECHO 10

```
<DataGranule>  
  <DayNightFlag>DAY</DayNightFlag>  
</DataGranule>
```

UMM

```
"DataGranule":  
  "DayNightFlag" : "Day",
```

ISO 19115-2 MENDS

The path where Granule UR is provided in ISO is optional, however, a Granule UR is required for all granule metadata submitted to the CMR (Cardinality: 0..1).

UMM-G Element	ISO Path	Type	Notes
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DataGranule/DayNightFlag	(different contentInfo than MeasurementParameters and AdditionalAttributes) /gmi:MI_Metadata/gmd:contentInfo/gmd:MD_CoverageDescription [=] [=]/gmd:attributeDescription/gco:RecordType = DayNightFlag [=]/gmd:contentType/gmd:MD_CoverageContentTypeCode codeList="https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodelists.xml#MD_CoverageContentTypeCode" codeListValue="physicalMeasurement" = physicalMeasurement [=]/gmd:dimension/gmd:MD_Band/gmd:otherProperty/gco:Record/eos:AdditionalAttributes [===] [===]/eos:AdditionalAttribute/eos:reference/eos:EOS_AdditionalAttributeDescription/eos:type/eos:EOS_AdditionalAttributeTypeCode codeList="https://cdn.earthdata.nasa.gov/iso/resources/Codelist/eosCodelists.xml#EOS_AdditionalAttributeTypeCode" codeListValue="" contentInformation"" = contentInformation [===]/eos:AdditionalAttribute/eos:reference/eos:EOS_AdditionalAttributeDescription/eos:name/gco:CharacterString = DayNightFlag [===]/eos:AdditionalAttribute/eos:reference/eos:EOS_AdditionalAttributeDescription/eos:dataType/eos:EOS_AdditionalAttributeDataTypeCode codeList="https://cdn.earthdata.nasa.gov/iso/resources/Codelist/eosCodelists.xml#EOS_AdditionalAttributeDataTypeCode" codeListValue="string" = string [===]/eos:AdditionalAttribute/eos:reference/eos:value/gco:CharacterString {the actual value}	String	Maps to the UMM-G element "DayNightFlag"
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Example Mapping

ISO 19115-2 MENDS

```

<gmi:MI_Metadata>
  <gmd:contentInfo>
    <gmd:MD_CoverageDescription>
      <gmd:attributeDescription>
        <gco:RecordType>DayNightFlag</gco:RecordType>
      </gmd:attributeDescription>
      <gmd:contentType>
        <gmd:MD_CoverageContentTypeCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodelists.xml#MD_CoverageContentTypeCode"
codeListValue="physicalMeasurement"
>physicalMeasurement</gmd:MD_CoverageContentTypeCode>
      </gmd:contentType>
      <gmd:dimension>
        <gmd:MD_Band>
          <gmd:otherProperty>
            <gco:Record>
              <eos:AdditionalAttributes>
                <eos:AdditionalAttribute>
                  <eos:reference>
                    <eos:
EOS_AdditionalAttributeDescription>
                      <eos:type>
                        <eos:
EOS_AdditionalAttributeTypeCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/eosCodelists.xml#EOS_AdditionalAttributeTypeCode"
codeListValue="contentInformation">
contentInformation</eos:
EOS_AdditionalAttributeTypeCode>
                      </eos:type>
                    </eos:
EOS_AdditionalAttributeDescription>
                      </eos:reference>
                    </eos:AdditionalAttribute>
                  <eos:AdditionalAttribute>
                    <eos:reference>
                      <eos:
EOS_AdditionalAttributeDescription>
                        <eos:name>
                          <gco:
CharacterString>DayNightFlag</gco:CharacterString>
                        </eos:name>
                      </eos:
EOS_AdditionalAttributeDescription>
                        </eos:reference>
                      </eos:AdditionalAttribute>
                    <eos:AdditionalAttribute>
                      <eos:reference>
                        <eos:

```

```

EOS_AdditionalAttributeDescription>
    <eos:dataType>
        <eos:
EOS_AdditionalAttributeDataTypeCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/eosCodelists.
xml#EOS_AdditionalAttributeDataTypeCode"
codeListValue="string">string</eos:
EOS_AdditionalAttributeDataTypeCode>
    </eos:dataType>
    </eos:
EOS_AdditionalAttributeDescription>
    </eos:reference>
    </eos:AdditionalAttribute>
    <eos:AdditionalAttribute>
        <eos:reference>
            <eos:value>
                <gco:CharacterString>DAY</gco:
CharacterString>
            </eos:value>
            </eos:reference>
        </eos:AdditionalAttribute>
    </eos:AdditionalAttributes>
</gco:Record>
</gmd:otherProperty>
</gmd:MD_Band>
</gmd:dimension>
</gmd:MD_CoverageDescription>
</gmd:contentInfo>
</gmi:MI_Metadata>

```

UMM

```

"DataGranule":
  "DayNightFlag" : "Day",

```

ISO 19115-2 SMAP

There is currently no mapping between UMM-G and ISO 19115-2 SMAP for Day Night Flag.

UMM-G Element	ISO Path	Type	Notes
DayNightFlag	N/A	N/A	<i>There is currently no mapping between UMM-G and ISO 19115-2 SMAP for DayNightFlag.</i>

Example Mapping

ISO 19115-2 SMAP

N/A

UMM

N/A

UMM Migration

N/A

History

UMM Versioning

Version	Date	What Changed
1.6.0	11/4/2019	No changes were made for Day Night Flag during the transition from version 1.5.0 to 1.6.0.
1.5.0	01/30/2019	No changes were made for Day Night Flag during the transition from version 1.4.0 to 1.5.0.
1.4.0	08/01/2018	No changes were made for Day Night Flag during the transition from version 1.3.0 to 1.4.0.

ARC Documentation

Version	Date	What Changed	Author
1.0	03/26/2019	Recommendations/priority matrix transferred from internal ARC documentation to wiki space	Jeanne' le Roux Ingrid Garcia-Solera