

# Production Date Time

- [Element Description](#)
- [Best Practices](#)
- [Element Specification](#)
- [Metadata Validation and QA/QC](#)
- [Dialect Mappings](#)
  - [ECHO 10](#)
  - [ISO 19115-2 MENDS](#)
  - [ISO 19115-2 SMAP](#)
- [UMM Migration](#)
- [History](#)
  - [UMM Versioning](#)
  - [ARC Documentation](#)

## Element Description

The Production Date Time element provides the exact date and time that the granule was produced by a [product generation executive](#) or PGE.

## Best Practices

The Production Date Time element should comply with the [ISO 8601 Standard](#), which is an International Standard for the representation of dates and times. It is recommended that it includes the date in YYYY-MM-DD format and the time in Coordinated Universal Time (UTC).

### Examples:

"2009-12-14T00:00:00Z"

"2019-02-18T09:05:00Z"

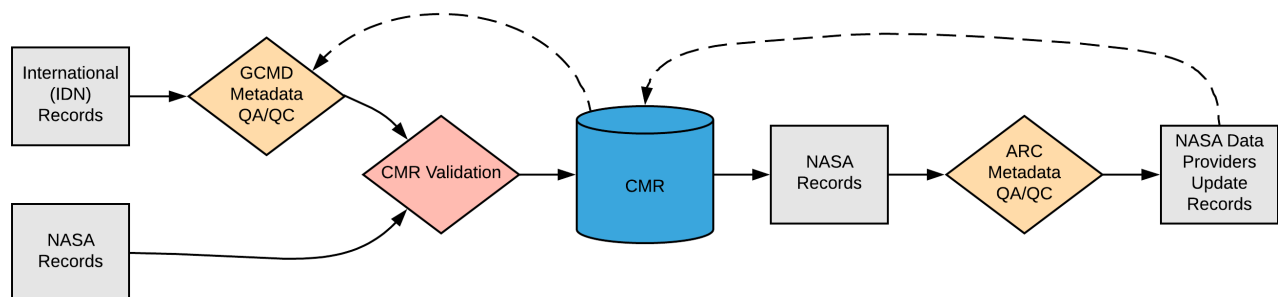
## Element Specification

**Production Date Time is required (Cardinality: 1)**

| Model | Element                        | Type     | Constraints | Required? | Cardinality |
|-------|--------------------------------|----------|-------------|-----------|-------------|
| UMM-G | DataGranule/ProductionDateTime | dateTime | N/A         | 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](#)

- Automated Review

<>

## ARC Priority Matrix

| Priority Categorization          | Justification                                                                                                                                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Red = High Priority Finding      | This element is categorized as highest priority when: <ul style="list-style-type: none"> <li>• The Production Date Time is not provided.</li> <li>• The Production Date Time does not comply with the <a href="#">ISO 8601 Standard</a>.</li> </ul> |
| 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

Production Date Time is required for ECHO 10.

| Specification | Path               | Type     | Constraints | Required in ECHO10? | Cardinality |
|---------------|--------------------|----------|-------------|---------------------|-------------|
| ECHO 10       | ProductionDateTime | dateTime | n/a         | Yes                 | 1           |

## Example Mapping

ECHO 10

```
<ProductionDateTime>2009-12-14T00:00:00Z<
/ProductionDateTime>
```

UMM

```
"DataGranule": {
  "ProductionDateTime" : "2009-12-14T00:00:00Z"
}
```

## ISO 19115-2 MENDS

The path where Production Date Time is provided in ISO is optional, however, a Production Date Time is required for all CMR granule metadata (Cardinality: 0..1)

| Specification     | Path                                                                                                                                                                                                                                                                                                                                                                      | Type   | Notes                                        |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------|
| ISO 19115-2 MENDS | /gmi:MI_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:lineage/gmd:LI_Lineage/gmd:processStep<br>/gmi:LE_ProcessStep/gmd:description/gco:CharacterString = <a href="#">ProductionDateTime</a><br><br>with<br><br>/gmi:MI_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:lineage/gmd:LI_Lineage/gmd:processStep<br>/gmi:LE_ProcessStep/gmd:dateTime/gco:DateTime | String | Maps to the UMM element "ProductionDateTime" |

## Example Mapping

ISO 19115-2 MENDS

```

<gmi:MI_Metadata>
  <gmd:dataQualityInfo>
    <gmd:DQ_DataQuality>
      <gmd:lineage>
        <gmd:LI_Lineage>
          <gmd:processStep>
            <gmi:LE_ProcessStep>
              <gmd:description>
                <gco:
CharacterString>ProductionDateTime</gco:
CharacterString>
              </gmd:description>
              <gmd:dateTime>
                <gco:DateTime>2009-12-14T00:00:00Z<
/gco:DateTime>
              </gmd:dateTime>
            </gmi:LE_ProcessStep>
          </gmd:processStep>
        </gmd:LI_Lineage>
      </gmd:lineage>
    </gmd:DQ_DataQuality>
  </gmd:dataQualityInfo>
</gmi:MI_Metadata>

```

UMM

```

"DataGranule": {
  "ProductionDateTime" : "2009-12-14T00:00:00Z"
}

```

## ISO 19115-2 SMAP

The path where Production Date Time is provided in ISO is optional, however, a Production Date Time is required for all CMR granule metadata (Cardinality: 0..1)

| Specification    | Path                                                                                                                                                                                                | Type   | Notes                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------|
| ISO 19115-2 SMAP | /gmd:DS_Series/gmd:composedOf/gmd:DS_DataSet/gmd:has/gmi:MI_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:lineage/gmd:LI_Lineage/gmd:processStep/gmi:LE_ProcessStep/gmd:dateTime/gco:DateTime | String | Maps to the UMM element "ProductionDateTi me" |

### Example Mapping

ISO 19115-2 SMAP

```

<gmd:DS_Series>
<gmd:composedOf>
<gmd:DS_DataSet>
<gmd:has>
<gmi:MI_Metadata>
  <gmd:dataQualityInfo>
    <gmd:DQ_DataQuality>
      <gmd:lineage>
        <gmd:LI_Lineage>
          <gmd:processStep>
            <gmi:LE_ProcessStep>
              <gmd:dateTime>
                <gco:DateTime>2009-12-14T00:00:00Z<
/gco:DateTime>
              </gmd:dateTime>
            </gmi:LE_ProcessStep>
          </gmd:processStep>
        </gmd:LI_Lineage>
      </gmd:lineage>
    </gmd:DQ_DataQuality>
  </gmd:dataQualityInfo>
</gmi:MI_Metadata>
</gmd:has>
</gmd:DS_DataSet>
</gmd:composedOf>
</gmd:DS_Series>

```

UMM

```

"DataGranule": {
  "ProductionDateTime" : "2009-12-14T00:00:00Z"
}

```

## UMM Migration

| UMM Version 1.4.0 | Translation Direction | UMM Version 1.5.0 |
|-------------------|-----------------------|-------------------|
|                   |                       |                   |

## History

### UMM Versioning

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

### ARC Documentation

| Version | Date       | What Changed                                                                              | Author                           |
|---------|------------|-------------------------------------------------------------------------------------------|----------------------------------|
| 1.0     | 02/15/2019 | Recommendations/priority matrix transferred from internal ARC documentation to wiki space | Camille Woods<br>Jeanne' le Roux |