



DISPEC

**Scientific exploitation of space Data for improved
Ionospheric SPECification**

DISPEC Demonstrator

**Themistocles Herekakis, Angeliki Thanasou,
Anna Belehaki**

DISPEC Third Networking Meetings, 11 December 2025

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs>

FastAPI 0.1.0 OAS 3.1

/dispec/api/v2/openapi.json

Servers

/dispec/api/v2

Authorize 

default



auth



idb



members_roles



members_organizations



members_users



Schemas



Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs>

Pre-processed data
available for
specific events,
with list of
Digisonde stations



idb



GET	/idb/istations	List distinct Active Stations	 ▼
GET	/idb/istations/{pubid}	Query Active Stations by DISPEC Event UUID	▼
GET	/idb/events	List sample Events	▼
GET	/idb/datasets	List DISPEC Datasets Metadata	▼
GET	/idb/datasets/pager	List DISPEC Datasets Metadata [Pager]	▼
GET	/idb/dataset/{pubid}	DISPEC Dataset Metadata [FULL] by UUID	▼
GET	/idb/img/{pubid}	DISPEC Dataset image by UUID	▼

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs/id/events>

Pre-processed data
available for
specific events,
with list of
Digisonde stations



```
{
  "id": "8dea8544-e60f-59de-8210-be780998210f",
  "stations": [
    "S0148",
    "DB049",
    "EB040",
    "CAJ2M",
    "JI91J"
  ],
  "description": "Quiet",
  "tsrange": "[2025-07-27T00:00:00, 2025-07-28T00:00:00)"
},
{
  "id": "37af1be1-8ce5-5207-95cf-c82e3bd3e0fb",
  "stations": [
    "S0148",
    "JR055",
    "PQ052",
    "CAJ2M"
  ],
  "description": "Ionospheric storm driven by geomagnetic storm",
  "tsrange": "[2023-04-23T00:00:00, 2023-04-26T00:00:00)"
},
{
  "id": "3322fb08-58a7-5dd9-882d-2ba1fe326ad2",
  "stations": [
    "AT138",
    "EB040",
    "JR055",
    "CAJ2M",
    "SAA0K"
  ],
  "description": "Gravity wave activity driven by volcano eruption",
  "tsrange": "[2022-01-14T00:00:00, 2022-01-17T00:00:00)"
}
```

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs>

foF2, hmF2 and CS
results (json)
calculated with
ARTIST and DISPEC
for selected time
intervals and
Digisonde stations.



idb

GET	/idb/istations	List distinct Active Stations	 ▼
GET	/idb/istations/{pubid}	Query Active Stations by DISPEC Event UUID	▼
GET	/idb/events	List sample Events	▼
GET	/idb/datasets	List DISPEC Datasets Metadata	▼
GET	/idb/datasets/pager	List DISPEC Datasets Metadata [Pager]	▼
GET	/idb/dataset/{pubid}	DISPEC Dataset Metadata [FULL] by UUID	▼
GET	/idb/img/{pubid}	DISPEC Dataset image by UUID	▼

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs/idb/datasets>

Ne(h) and CS results (json) for selected time intervals and Digisonde stations.

Name	Description
start	2024-05-10T00:00:00
end	2024-05-10T01:00:00
stations	-- AT138 CAJ2M DB049 ...
order_attrs	Define sorting parameters &order: [timestamp, station, isna] timestamp - station - Add string item
order_by	Define sortby for order_attrs: [asc, desc] asc - Add string item

Server response

Code	Details
200	Response body <pre>{ "id": "6efc49a4-ebc9-516d-9d48-18944b8820c5", "ursi_code": "DB049", "timestamp": "2024-05-10T00:15:01", "state": "NOERR", "status": "COMPLETE", "profile": "TRACER", "artist": { "type": "ARTIST", "foF2": 7.05, "hmF2": 380.762, "confidence": 95 }, "tracer": { "type": "TRACER", "foF2": 6.92, "hmF2": 371.2, "confidence": 98.738 } }, { "id": "3883eca9-fc5d-5a60-a681-cd7fb514daba", "ursi_code": "DB049", "timestamp": "2024-05-10T00:20:02", "state": "POLANERR" }</pre> ← PUBID

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs>

Ne(h) and CS
results (json) for
selected time
stamp and
Digisonde stations.



idb

GET	/idb/istations	List distinct Active Stations	 ▼
GET	/idb/istations/{pubid}	Query Active Stations by DISPEC Event UUID	▼
GET	/idb/events	List sample Events	▼
GET	/idb/datasets	List DISPEC Datasets Metadata	▼
GET	/idb/datasets/pager	List DISPEC Datasets Metadata [Pager]	▼
GET	/idb/dataset/{pubid}	DISPEC Dataset Metadata [FULL] by UUID	▼
GET	/idb/img/{pubid}	DISPEC Dataset image by UUID	▼

Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs/idb/dataset/{pubid}>

Ne(h) and CS results (json) for selected time stamp and Digisonde stations.

GET

/idb/dataset/{pubid}

DISPEC Dataset Metadata [FULL] by UUID

Retrieve Full Metadata from DISPEC Dataset [UUID] ingested into IonoDB

Parameters

Name	Description
pubid * required	
string(\$uuid)	
(path)	

Execute

Responses

Code	Details
200	Response body <pre>{ "id": "efe69639-afc3-51a8-b63e-4c174052943d", "ursi_code": "DB049", "timestamp": "2024-05-10T00:09:56", "state": "NOERR", "status": "COMPLETE", "profile": "TRACER", "artist": { "type": "ARTIST", "foF2": 7.1, "hmF2": 384.805, "confidence": 95, "trueheightProf": { "trueHeight": [93.502, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106] } } }, "tracer": { "type": "TRACER", "foF2": 7.02, "hmF2": 375.1, "confidence": 98.767, "trueheightProf": { "trueHeight": [277.4, 277.6, 278.1, 278.7, 279.4, 280.1, 281.8, 282.6, 283.4, 284.4] } } }</pre>

Demonstrator access point

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idb		^
GET	/idb/istations List distinct Active Stations	 v
GET	/idb/istations/{pubid} Query Active Stations by DISPEC Event UUID	v
GET	/idb/events List sample Events	v
GET	/idb/datasets List DISPEC Datasets Metadata	v
GET	/idb/datasets/pager List DISPEC Datasets Metadata [Pager]	v
GET	/idb/dataset/{pubid} DISPEC Dataset Metadata [FULL] by UUID	v
GET	/idb/img/{pubid} DISPEC Dataset image by UUID	v

Ne(h) and CS
results (image) for
selected time
stamp and
Digisonde stations.



Demonstrator access point

<https://electron.space.noa.gr/dispec/api/v2/docs/idb/img/{pubid}>

Ne(h) and CS results (image) for selected time stamp and Digisonde stations.

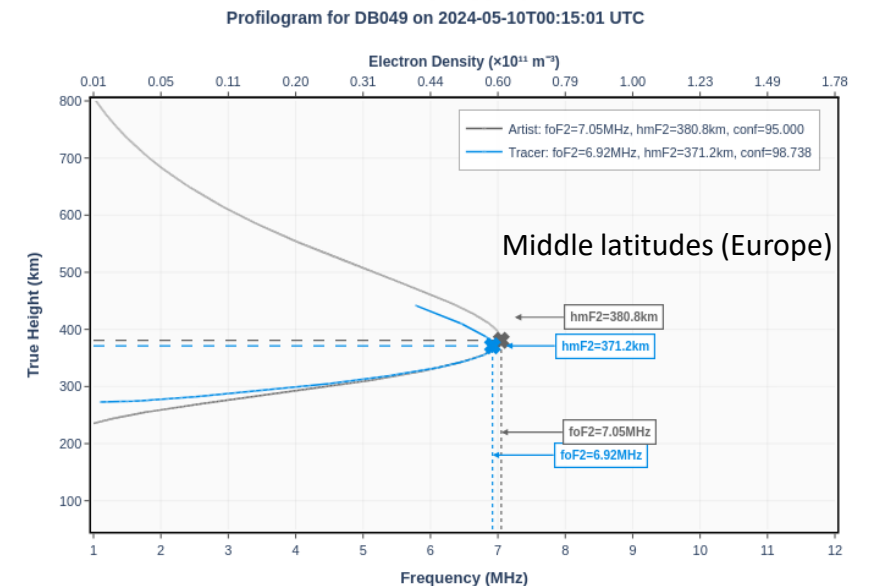
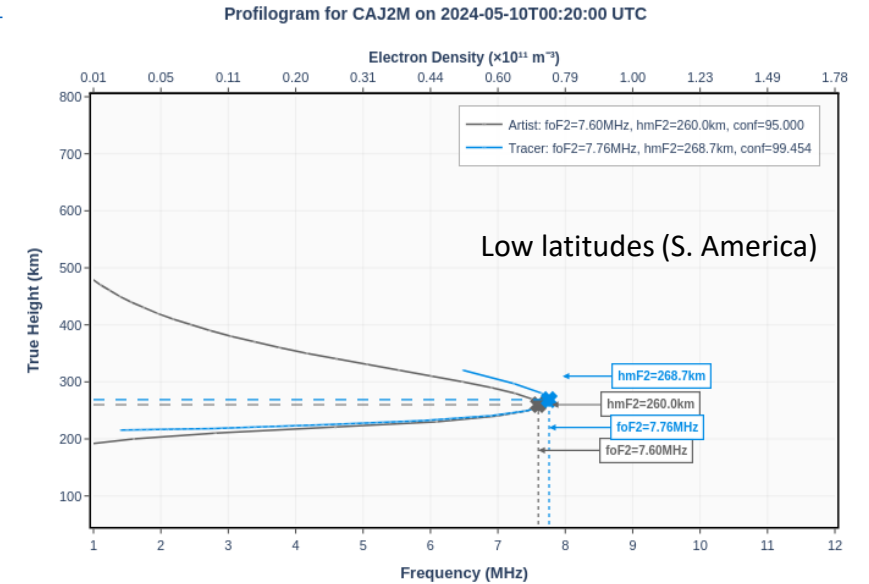
GET `/idb/img/{pubid}` DISPEC Dataset image by UUID

Retrieve image from DISPEC Dataset [UUID] ingested into IonoDB.

Parameters

Name	Description
pubid * required string(\$uuid) (path)	efe69639-afc3-51a8-b63e-4c174052943d

Execute



Thank you for your attention!

WEB: <https://dispec.eu>



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