

Extracellular Electrophysiology (ecephys) BIDS BEP032 Dataset

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```

```
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```
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```

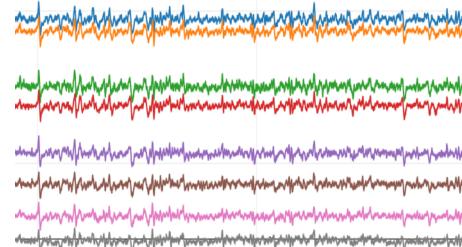
*_ecephys.json

Recording Metadata Sidecar

```
{
    "InstitutionName": "Example University",
    "PowerLineFrequency": 60,
    "Manufacturer": "ExampleManufacturer",
    "ManufacturersModelName": "Model-XYZ",
    "SamplingFrequency": 30000,
    "SoftwareName": "RecordingSoftware",
    "SoftwareVersions": "1.0.0",
    "HardwareFilters": {
        "HighpassFilter": {"Half-amplitude cutoff (Hz)": 0.1}
    },
    "PharmaceuticalName": ["anesthetic1", "anesthetic2"],
    "PharmaceuticalDoseAmount": [1.5, 10],
    "PharmaceuticalDoseUnits": ["percent", "mg/kg"],
    "BodyPart": "BRAIN",
    "BodyPartDetails": "Motor Cortex",
    "SampleEnvironment": "in-vivo",
    "TaskName": "ExampleTask"
}
```

*_ecephys.nix

Extracellular Electrophysiology Data



*_probes.tsv

Probes Table

probe_name	type	AP	ML	DV	AP_angle	ML_angle	hemisphere	manufacturer
probe01	silicon-probe	-2.5	1.5	-4.0	15	0	L	IMEC
probe02	tetrode	-1.2	-2.1	-3.5	0	10	R	Neuralynx

*_channels.tsv

Channels Table

name	electrode_name	reference	type	units	sampling_frequency	gain	status	status_descr
ch001	e001	ref01	LFP	uV	1000	500	good	n/a
ch002	e002	ref01	LFP	uV	1000	500	good	n/a
ch003	e003	ref01	HP	uV	30000	500	bad	high_noise
ch004	n/a	n/a	SYNC	V	30000	1	good	n/a

*_electrodes.tsv

Electrodes Table (probe-relative)

name	probe_name	hemisphere	x	y	z	impedance	shank_id	size	material	location
e001	probe01	L	0	0	0	1.2	0	15	iridium-oxide	MOp
e002	probe01	L	0	0	25	1.1	0	15	iridium-oxide	MOp
e003	probe01	L	0	0	50	1.3	0	15	iridium-oxide	MOp
e004	probe01	L	0	0	75	1.4	0	15	iridium-oxide	MOp

*_space-*_electrodes.tsv

Electrodes Table (stereotaxic)

name	probe_name	hemisphere	x	y	z	impedance	location
e001	probe01	L	-2.50	1.50	-4.00	1.2	RegionA
e002	probe01	L	-2.50	1.50	-4.02	1.1	RegionA
e003	probe01	L	-2.50	1.50	-4.05	1.3	RegionA

*_probes.json

Probe Metadata Sidecar

```
{
    "model": {
        "Description": "Probe model, referencing ProbeInterface",
        "Levels": {
            "ModelA": {"TermURL": "https://raw.githubusercontent.com/bids-standard/bids-specification/main/doc/datasets/probe-interface.md#probe-interface-model-a"},  

            "ModelB": {"TermURL": "bids:probes/custom.json"}
        }
    },
    "type": {
        "Levels": {
            "silicon-probe": "Multi-electrode silicon probe",
            "tetrode": "Bundle of four twisted wires"
        }
    },
    "coordinate_reference_point": {
        "Levels": {
            "tip": "Probe tip"
        }
    },
    "anatomical_reference_point": {
        "Levels": {
            "Bregma": "Coronal/sagittal junction"
        }
    }
}
```

*_space-*_coordsystem.json

Coordinate System Metadata Sidecar

```
{
    "MicrophysCoordinateSystem": "StereoTaxic",
    "MicrophysCoordinateUnits": "mm",
    "MicrophysCoordinateSystemDescription": "Stereotaxic coords rel. to Bregma. Right-handed: AP (anterior-posterior, + = anterior), ML (medial-lateral, + = right), DV (dorsal-ventral, + = ventral). Origin at Bregma.",
    "IntendedFor": "sub-01/ses-001/ecephys/sub-01_ses-001_task-discrimination_ecephys.nix"
}
```