

OVERVIEW

- Data quality issues are often found some time after data is delivered to user.
- The Data Quality Report (DQR) web service allows a user application to automatically query the DQR database in order to retrieve the most up-to-date information regarding the quality of their data holdings.
- The service returns a list of time blocks (start/end time pairs) that delineate when a user should not use or should be suspicious of ARM data.

Simple Steps To Use Web Service

- Build query with at least these two parameters:
 - datastream
 - varname
- Send query, store response
- Check return status code
- If status 'okay', parse timeblocks from the response
- Discard or flag data in your application that web service indicates has failed your criteria

Code Snippets in R, using 'httr' library

```
URL<- 'http://www.archive.arm.gov/dqrws/ARMDQR
?datastream=sgpmfrsrE9.b1
&varname=direct_horizontal_broadband
&timeformat=YYYYMMDD.hhmmss'
```

```
response <- GET(URL)
```

```
if (response$status_code != 200) stop ()
```

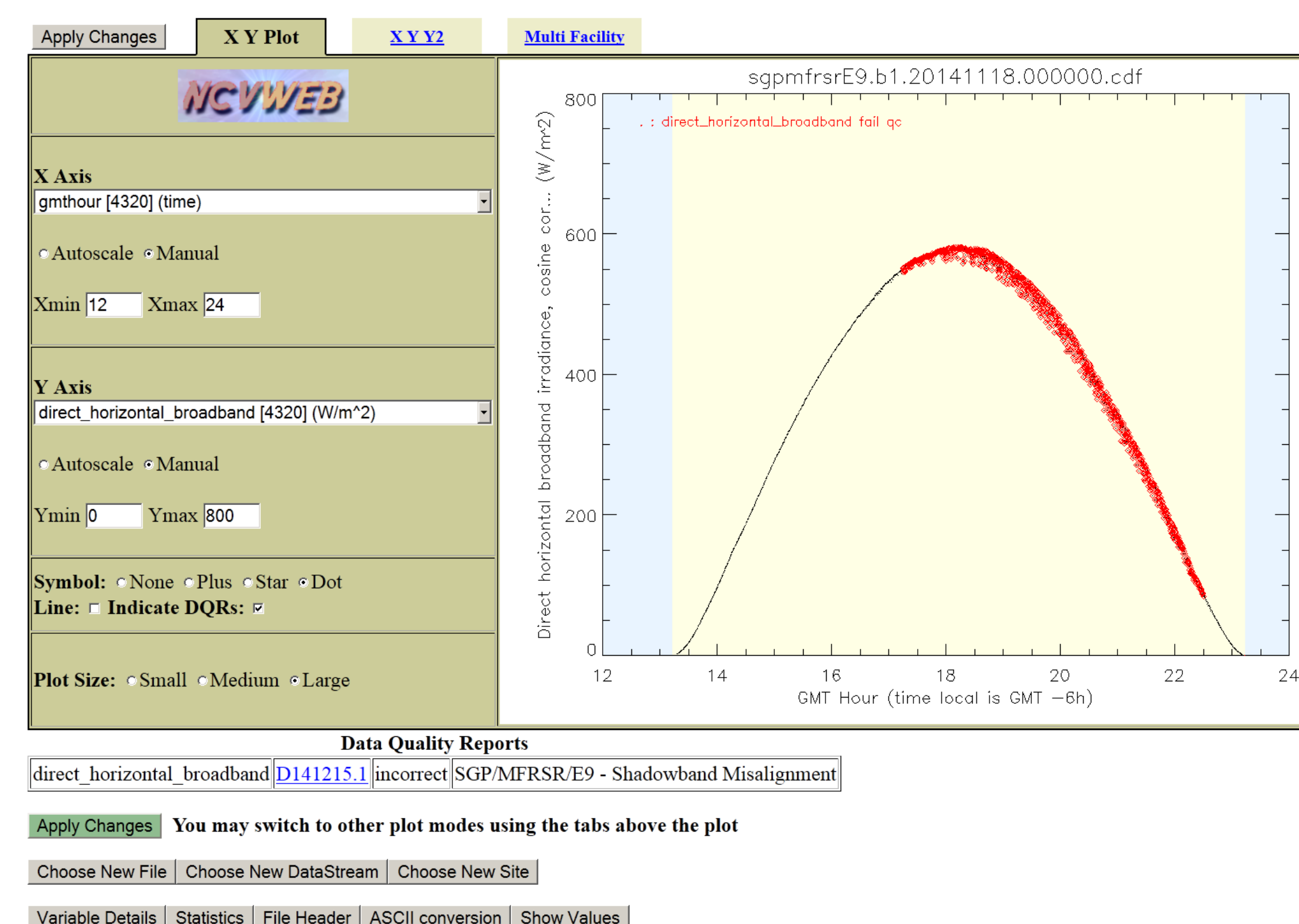
```
timeblocks <- content(response,type="text/csv", header=FALSE, sep="|")
```

Sample Response

```
20141117.171500|20141117.223000
20141118.171500|20141118.223000
20141119.171500|20141119.223000
20141120.171500|20141120.223000
```

Can also get time in same units as the data for easy comparisons

Status Code	Description	Action
200	Success!	Proceed!
400	Bad Request	Check Parameters
503	Service Unavailable	Try again later



Optional Parameters	Valid Values	Default Values	Number of Values Allowed
dqrfields	starttime, endtime, dqrId, metric, subject	starttime, endtime	1 or more
responsetype	delimited, xml	delimited	1
searchmetric	incorrect, suspect, missing, transparent	incorrect	1 or more
timeformat	armtime, YYYYMMDD.hhmmss	armtime	1
sincetime	YYYYMMDD	19700101	1

