

# IRI-TEC versus GPS-TEC for Nigerian SCINDA GPS Stations

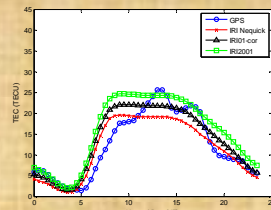
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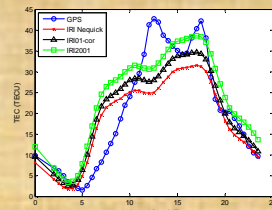
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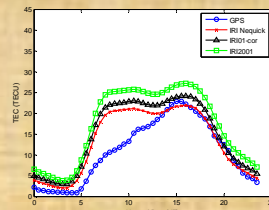
## Nsukka 2010



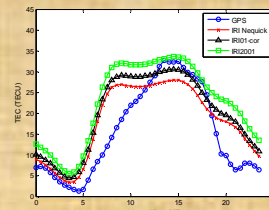
(a) 14th January



(b) 5th April

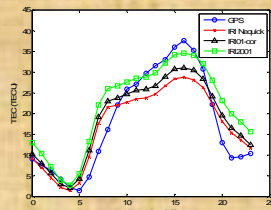


(c) 1st July

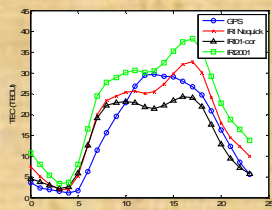


(d) 1st October

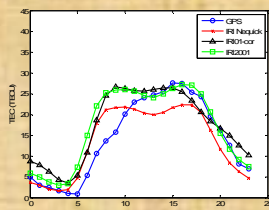
## Ilorin 2010



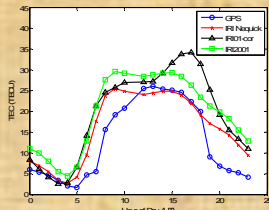
(a) 23rd March



(b) 9th May

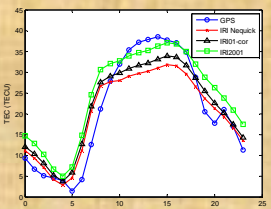


(c) 11th August

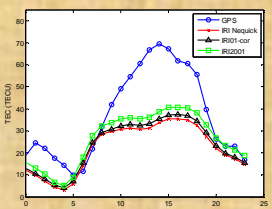


(d) 26th December

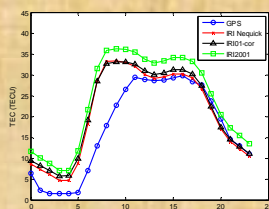
## Akure 2011



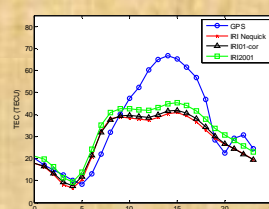
(a) 2nd March



(b) 2nd April

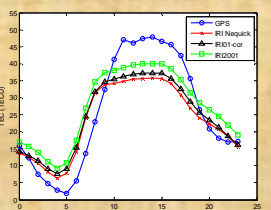


(c) 31st July

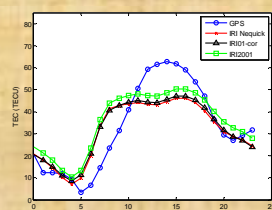


(d) 5th October

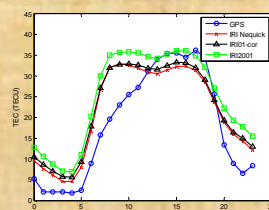
## Lagos 2012



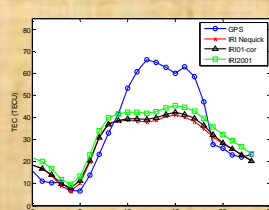
(a) 1st January



(b) 5th April



(c) 1st July



(d) 1st October

## Percentage root-mean-square Deviations (%)

Date (2010)	NeQuick	IRI01-cor	IRI2001
14th January	21.26	22.39	32.01
5th April	27.75	25.46	28.07
1st July	31.06	39.86	55.11
1st October	33.52	39.11	53.42

Date (2010)	NeQuick	IRI01-cor	IRI2001
23rd March	21.84	20.81	25.40
9th May	22.05	23.30	40.35
11th August	23.99	27.45	28.36
26th Dec.	33.09	53.43	51.59

Date (2011)	NeQuick	IRI01-cor	IRI2001
2nd March	18.90	17.70	22.34
2nd April	44.55	41.50	36.25
31st July	30.16	31.36	41.01
5th October	33.05	31.33	27.75

Date (2012)	NeQuick	IRI01-cor	IRI2001
1st January	25.17	23.35	23.26
5th April	27.44	26.37	26.67
1st July	27.04	28.41	36.40
1st October	33.28	31.67	29.14

TEC derived from 4 Nigerian SCINDA GPS stations are compared with corresponding IRI values; Nsukka (6.87°N, 7.38°E), Ilorin (8.50°N, 4.55°E), Akure (7.25°N, 5.20°E), and Lagos (6.45°N, 3.38°E). Since a major interest in the work is to use GPS measurements to improve the predictions of the IRI model for the region, we present percentage root-mean-square deviations of the IRI values from the GPS values. For each station, 4 days were chosen to represent days in each quarter of the year. The days chosen are the first days in each quarter for which there is available all-day data from the GPS station. The NeQuick topside option of the IRI generally presents a better option for the region than the IRI2001 or the IRI01-cor options.