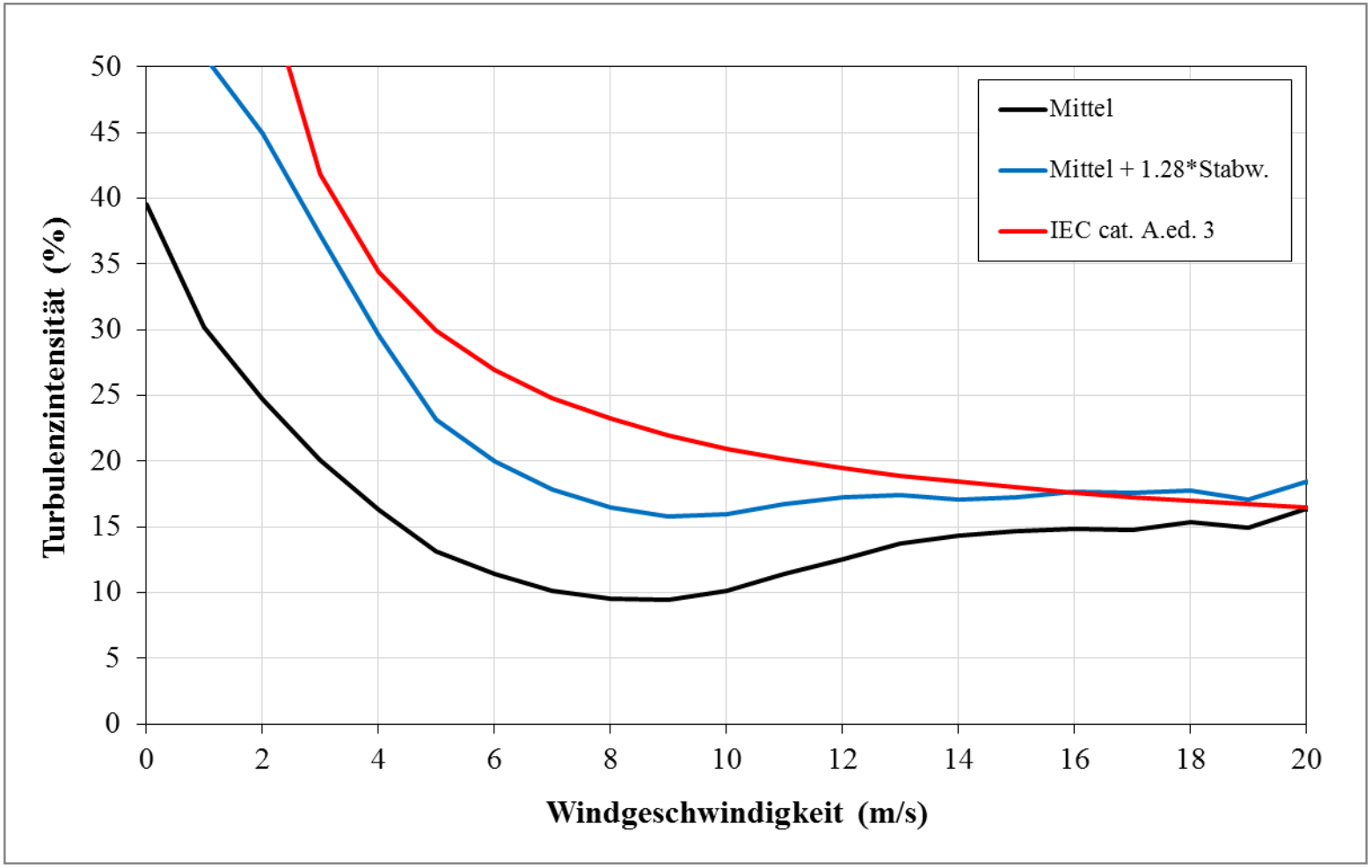
Turbulenzmessung für Standsicherheit mit Sodar

Herbert Schwartz

anemos-jacob GmbH

Was wird benötigt?

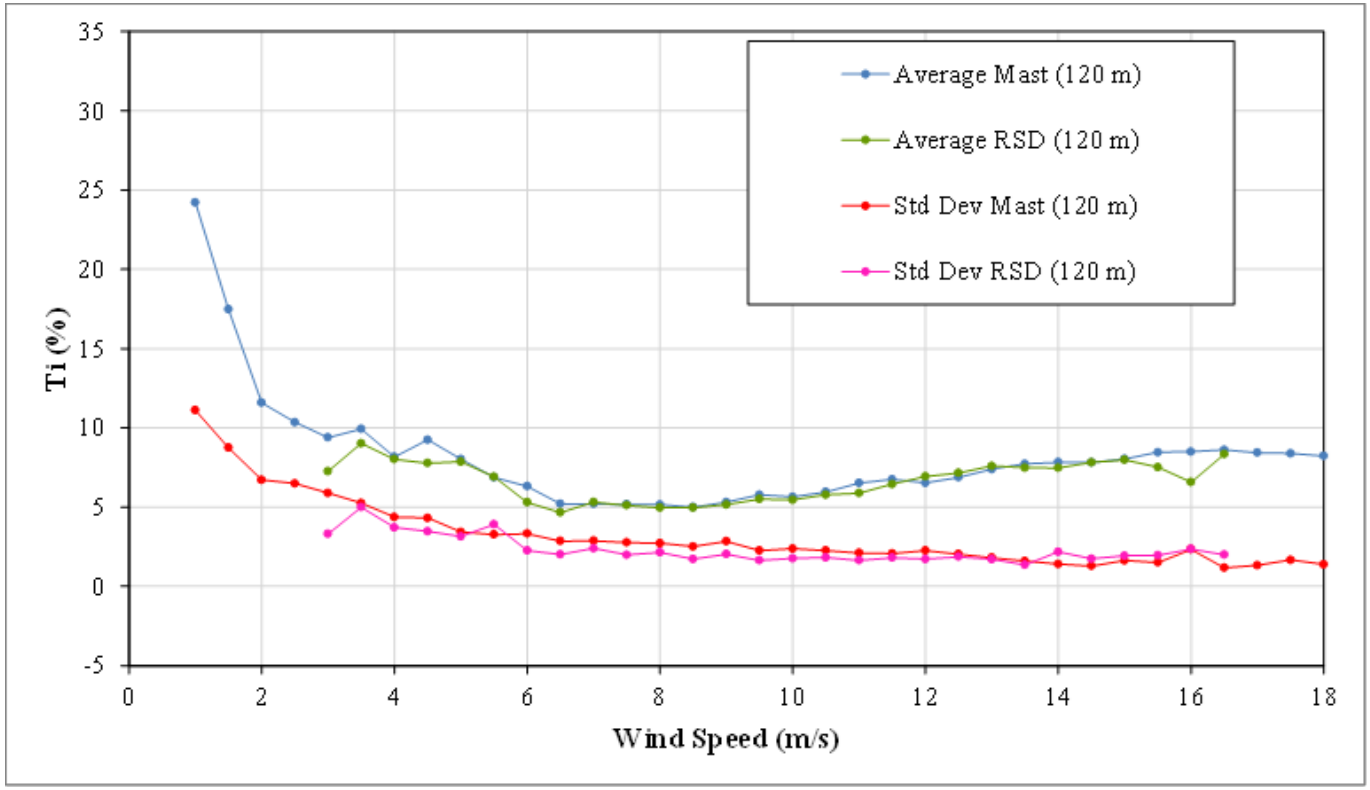

Turbulenzintensität (%)
50
45
40
35
30
25
20
15
10
5
0
0
2
4
6
8
10
12
14
16
18
20
Windgeschwindigkeit (m/s)
Mittel
Mittel + 1.28*Stabw.
IEC cat. A.ed. 3

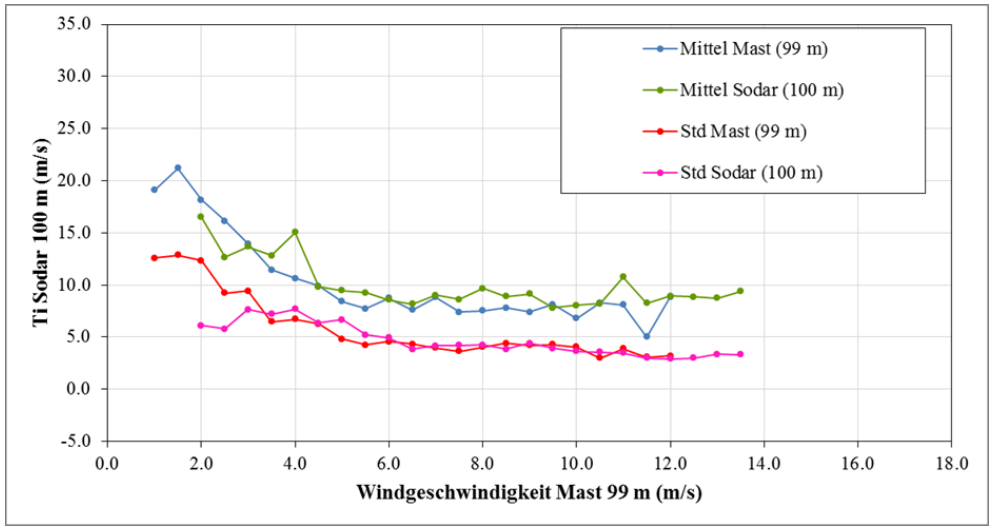
Realistische Turbulenzinformationen gibt es mit

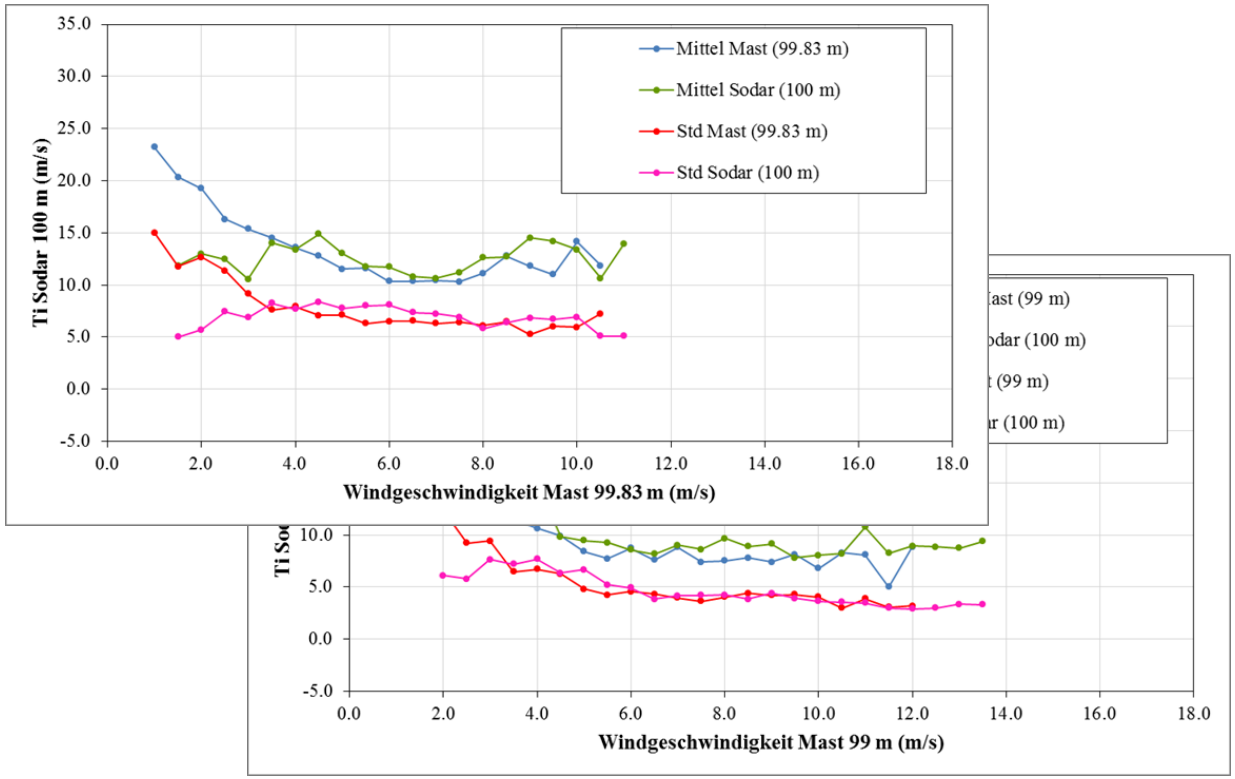
GUTEN

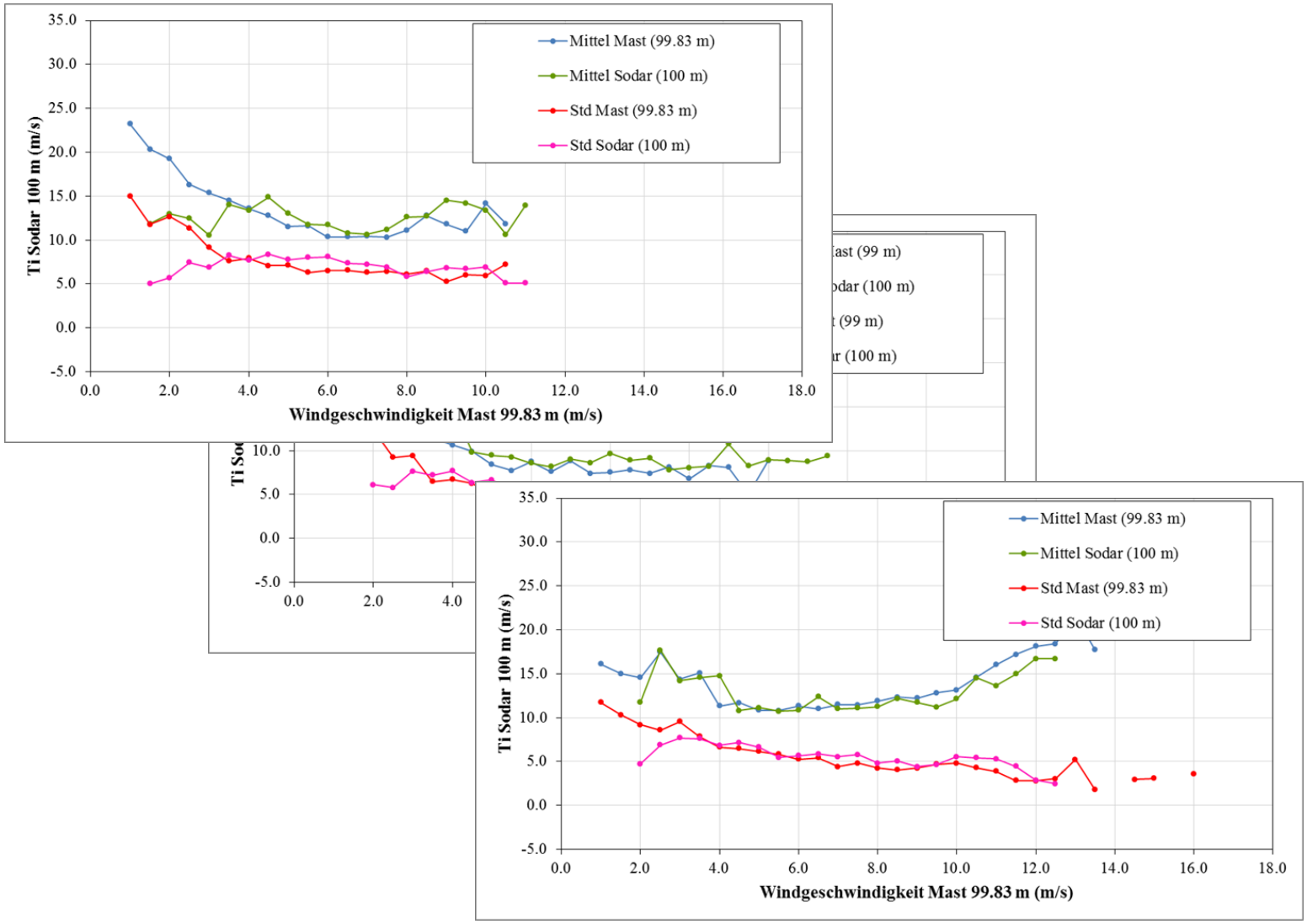
Sodargeräten

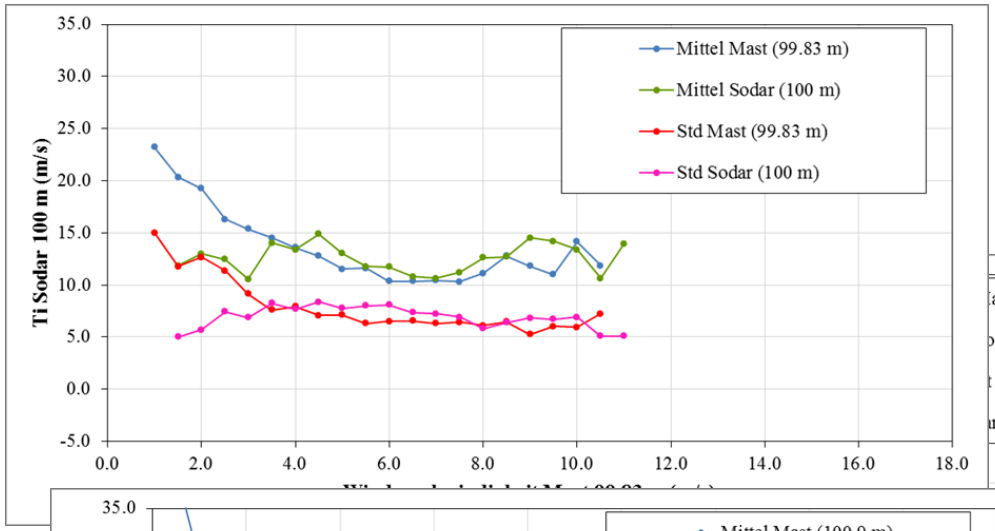
Beispiel aus Verifikation mit Sodar AQ500

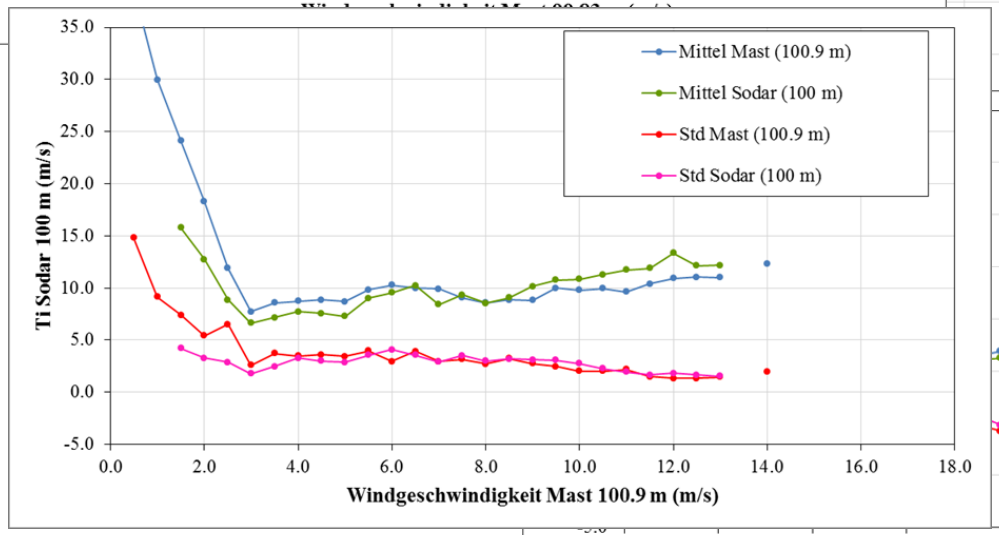


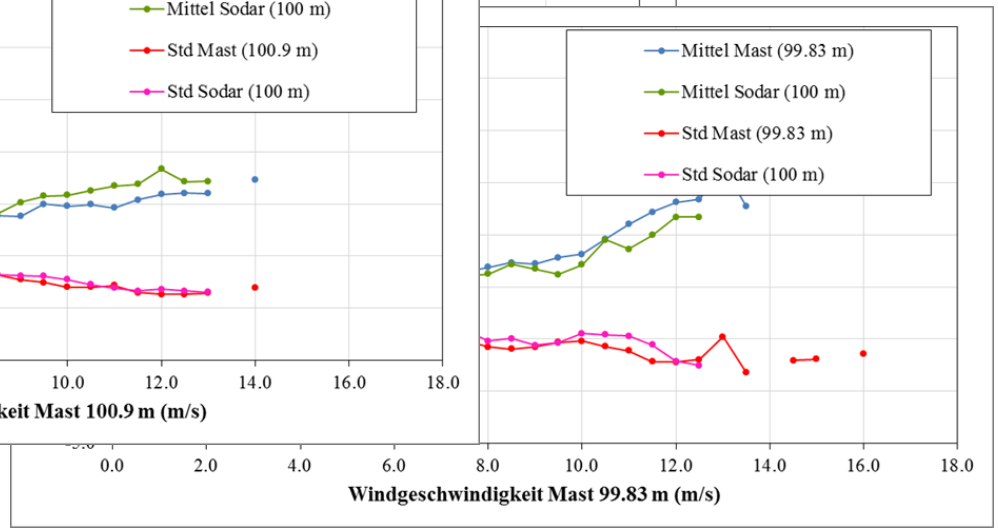

Mittel Mast (99 m)
Mittel Sodar (100 m)
Std Mast (99 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 99 m (m/s)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0

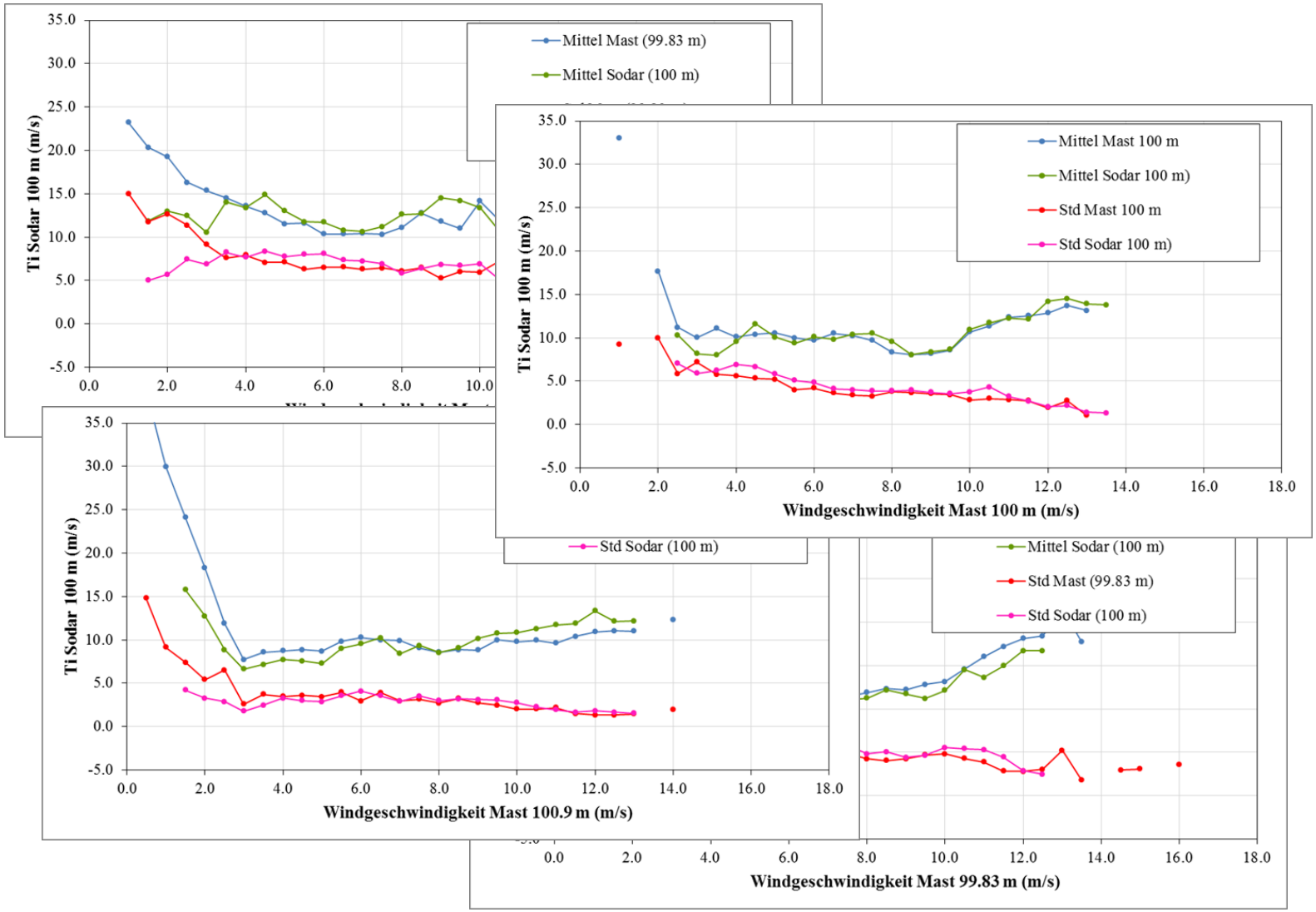

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 99.83 m (m/s)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0

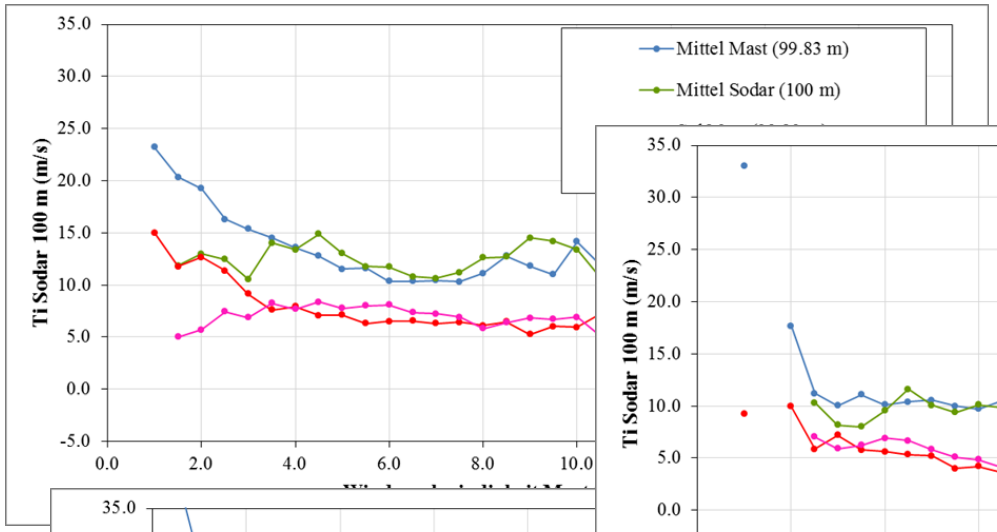

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 99.83 m (m/s)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0

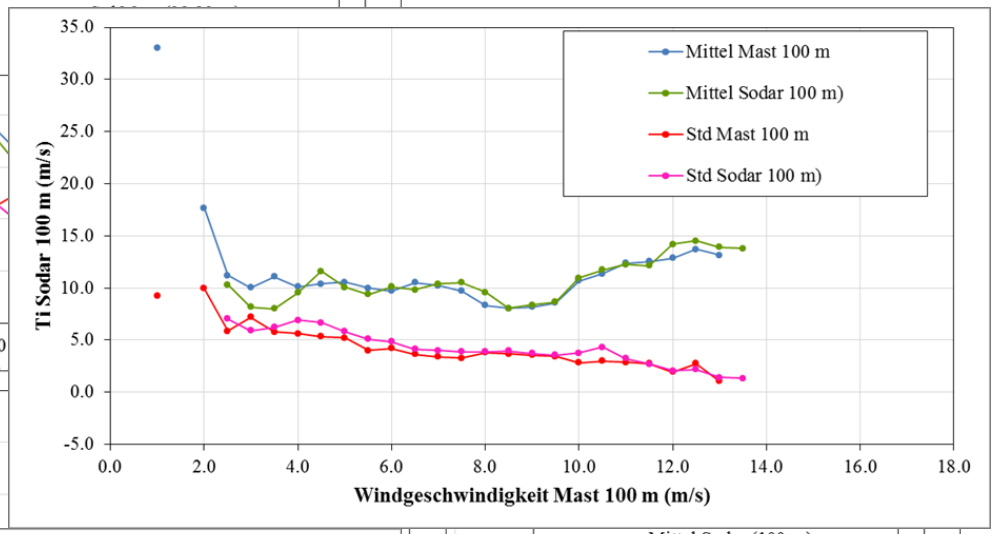

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)

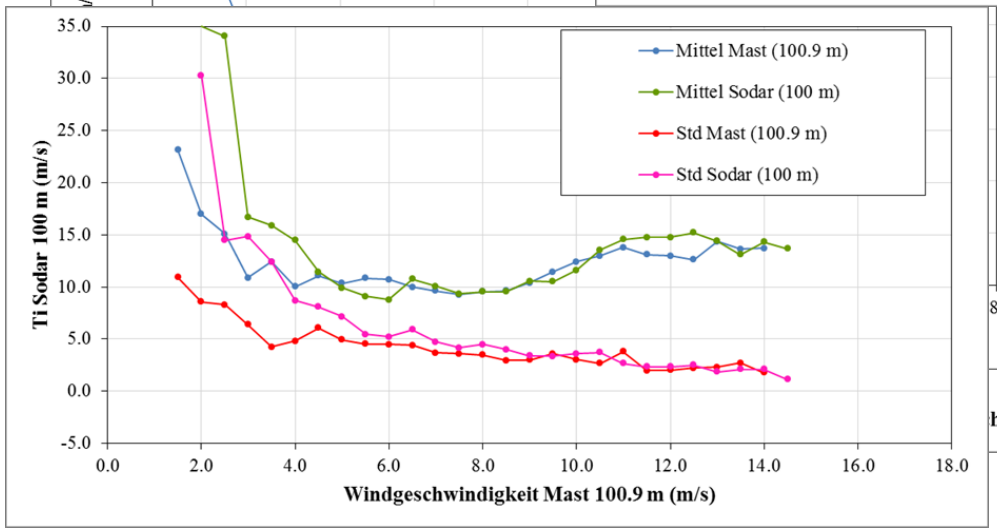

Mittel Mast (100.9 m)
Mittel Sodar (100 m)
Std Mast (100.9 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)

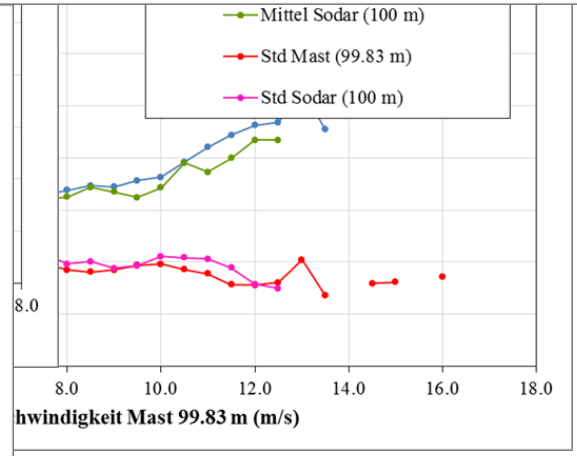

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
Windgeschwindigkeit Mast 99.83 m (m/s)

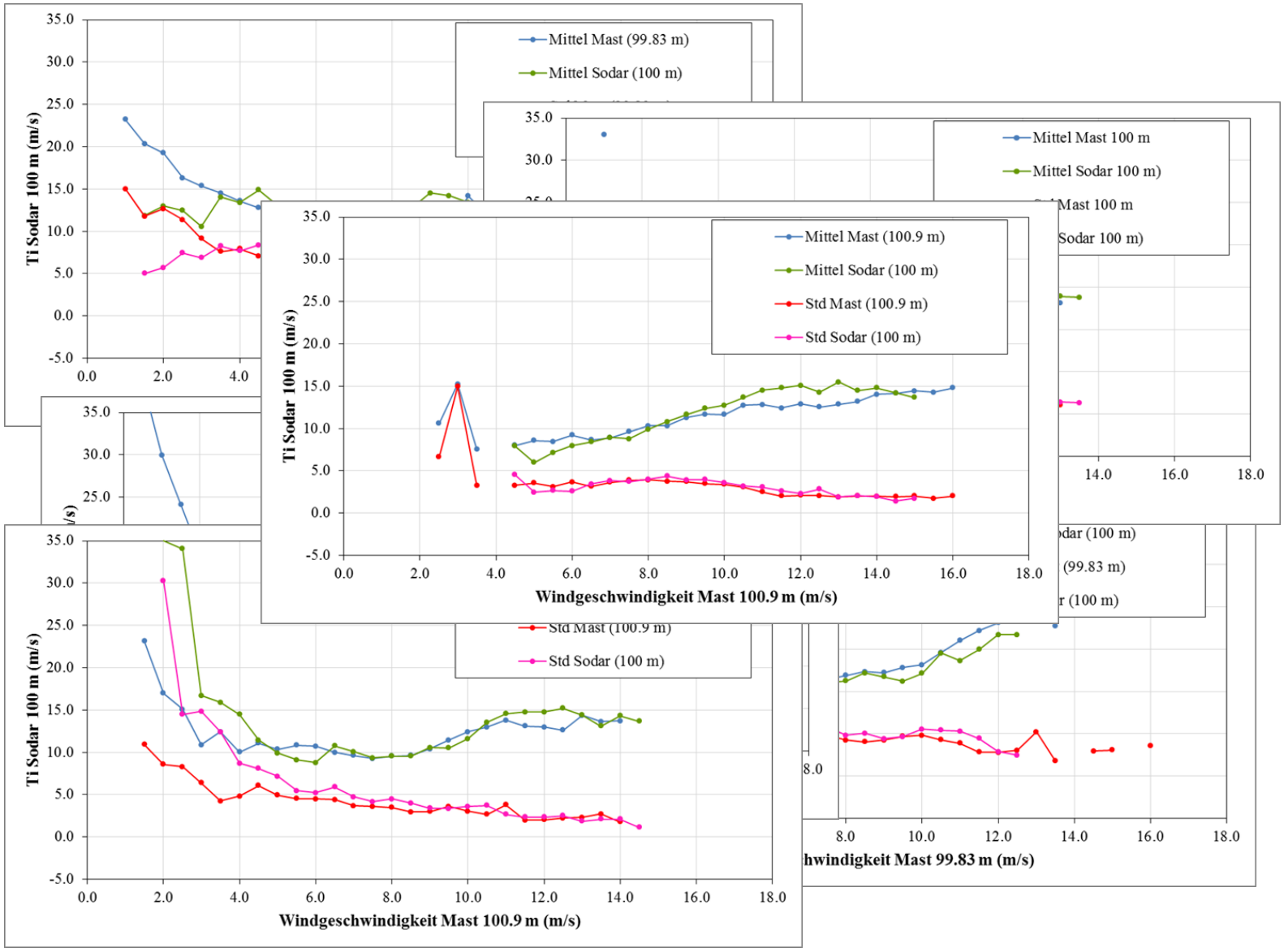

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Ti Sodar 100 m (m/s)
Mittel Mast 100 m
Mittel Sodar 100 m)
Std Mast 100 m
Std Sodar 100 m)
Windgeschwindigkeit Mast 100 m (m/s)
Std Sodar (100 m)
Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
Windgeschwindigkeit Mast 99.83 m (m/s)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)

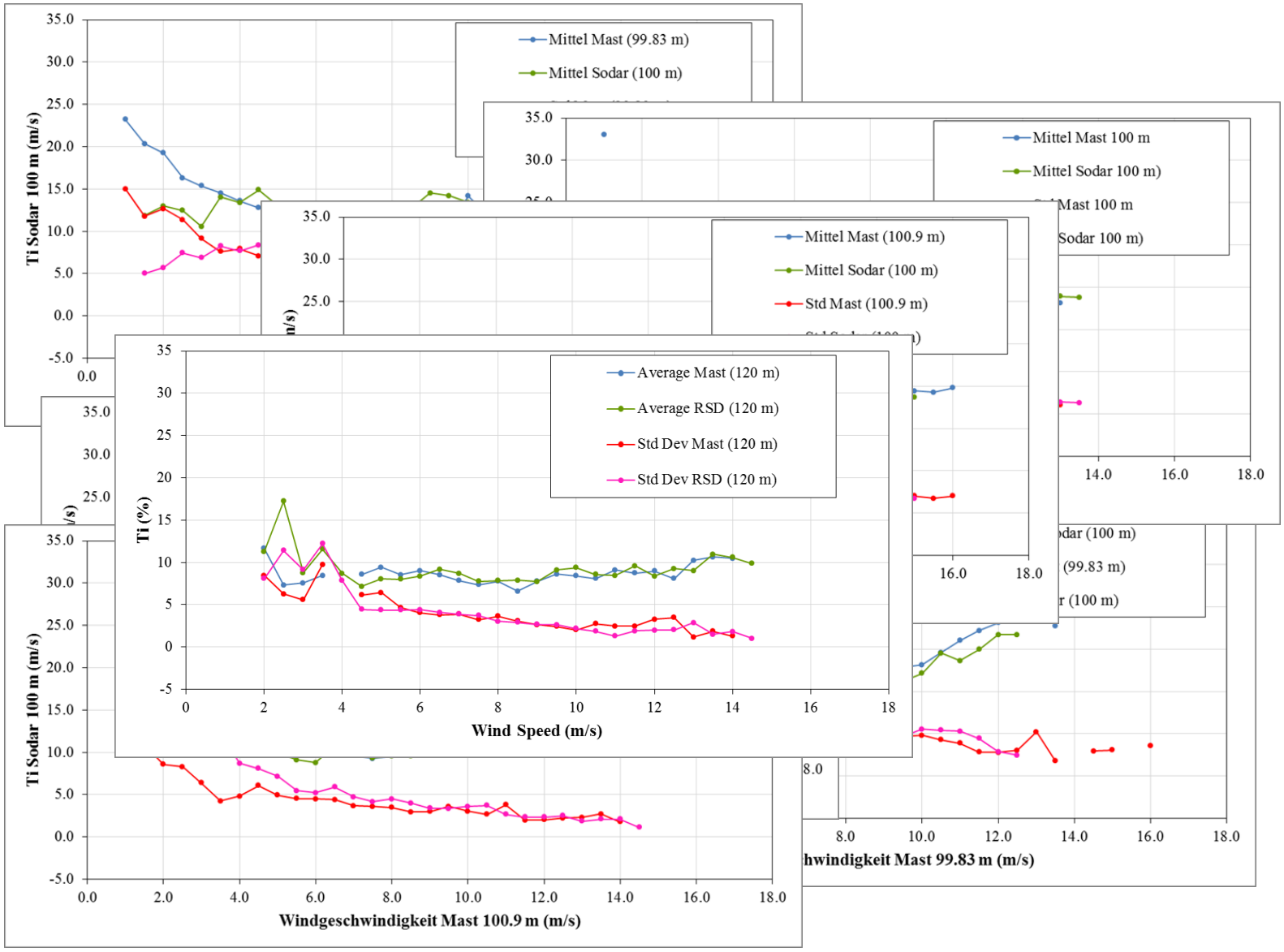

Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Ti Sodar 100 m (m/s)


Mittel Mast 100 m
Mittel Sodar 100 m)
Std Mast 100 m
Std Sodar 100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100 m (m/s)


Mittel Mast (100.9 m)
Mittel Sodar (100 m)
Std Mast (100.9 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)


Mittel Sodar (100 m)
Std Mast (99.83 m)
Std Sodar (100 m)
hwindigkeit Mast 99.83 m (m/s)


Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Std Mast (100.9 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)
Mittel Mast 100 m
Mittel Sodar 100 m)
Mittel Mast (100.9 m)
Mittel Sodar (100 m)
Std Mast (100.9 m)
Std Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)
(99.83 m)
(100 m)
hwindigkeit Mast 99.83 m (m/s)


Mittel Mast (99.83 m)
Mittel Sodar (100 m)
Ti Sodar 100 m (m/s)
Windgeschwindigkeit Mast 100.9 m (m/s)
Mittel Mast 100 m
Mittel Sodar 100 m)
hwindigkeit Mast 99.83 m (m/s)
Mittel Mast (100.9 m)
Mittel Sodar (100 m)
Std Mast (100.9 m)
Average Mast (120 m)
Average RSD (120 m)
Std Dev Mast (120 m)
Std Dev RSD (120 m)
Ti (%)
Wind Speed (m/s)

→ Sodargeräte der Typen AQ500 und AQ510 liefern realistische Umgebungsturbulenzdaten

Zu klären: Messdauer bei Kurzzeitmessungen