Channel Name(s)	Units	Description
Tower		
TwNβVUndx, TwNβVUndy, TwNβVUndz	(m/s), (m/s), (m/s)	Undisturbed wind velocity at TwNβ in the local tower coordinate system
TwNβSTVx, TwNβSTVy, TwNβSTVz	(m/s), (m/s), (m/s)	Structural translational velocity at TwNβ in the local tower coordinate system
TwNβVrel	(m/s)	Relative wind speed at TwNβ
TwNβDynP	(Pa)	Dynamic pressure at TwNβ
TwNβRe	(-)	Reynolds number (in millions) at TwNβ
TwNβM	(-)	Mach number at TwNβ
TwNβFdx, TwNβFdy	(N/m), (N/m)	Drag force per unit length at TwNβ in the local tower coordinate system
Blade		
BαAzimuth	(deg)	Azimuth angle of Bα
BαPitch	(deg)	Pitch angle of Bα
BαNβClrnc[1]	(m)	Tower clearance at BαNβ[1]
BαNβVUndx, BαNβVUndy, BαNβVUndz	(m/s), (m/s), (m/s)	Undisturbed wind velocity at BαNβ in the local blade coordinate system
BαNβVDisx, BαNβVDisy, BαNβVDisz	(m/s), (m/s), (m/s)	Disturbed wind velocity at BαNβ in the local blade coordinate system
BαNβSTVx, BαNβSTVy, BαNβSTVz	(m/s), (m/s), (m/s)	Structural translational velocity at BαNβ in the local blade coordinate system
BαNβVrel	(m/s)	Relative wind speed at BαNβ
BαNβDynP	(Pa)	Dynamic pressure at BαNβ
BαNβRe	(-)	Reynolds number (in millions) at BαNβ
BαNβM	(-)	Mach number at BαNβ
BαNβVIndx, BαNβVIndy	(m/s), (m/s)	Axial and tangential induced wind velocity at BαNβ
BαNβAxInd, BαNβTnInd	(-), (-)	Axial and tangential induction factors at BαNβ
BαNβAlpha, BαNβTheta, BαNβPhi, BαNβCurve	(deg), (deg), (deg), (deg)	AoA, pitch+twist angle, inflow angle, and curvature angle at BαNβ
BαNβCl, BαNβCd, BαNβCm, BαNβCpmin BαNβCx, BαNβCy[2], BαNβCn, BαNβCt	(-), (-), (-), (-) (-), (-), (-), (-)	Lift force, drag force, pitching moment, minimum pressure, normal force (to plane), tangential force (to plane)[2], normal force (to

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[1] BαNβClrnc is based on the absolute distance to the nearest point in the tower from BαNβ minus the local tower radius, in the deflected configuration. Please note that this clearance is only approximate because the calculation assumes that the blade is a line with no volume (however, the calculation does use the local tower radius). When BαNβ is above the tower top (or below the tower base), the absolute distance to the tower top (or base) minus the local tower radius, in the deflected configuration, is output.

		chord), and tangential force (to chord) coefficients at BαNβ
BαNβSigCr, BαNβSgCav	(-), (-)	Critical cavitation number—based on undisturbed freestream pressure at the node, the vapor pressure of the fluid, and the relative velocity—and the local cavitation number—given by the minimum pressure coefficient—at BαNβ
BαNβFl, BαNβFd, BαNβMm, BαNβFx, BαNβFy[2], BαNβFn, BαNβFt	(N/m), (N/m), (N·m/m), (N/m), (N/m), (N/m), (N/m)	Lift force, drag force, pitching moment, normal force (to plane), tangential force (to plane)[2], normal force (to chord), and tangential force (to chord) per unit length at BαNβ
Rotor		
RtSpeed	(rpm)	Rotor speed
RtTSR	(-)	Rotor tip-speed ratio
RtVAvgxh, RtVAvgyh, RtVAvgzh	(m/s), (m/s), (m/s)	Rotor-disk-averaged relative wind velocity in the hub coordinate system (not including induction)
RtSkew	(deg)	Rotor inflow-skew angle
RtAeroFxh, RtAeroFyh, RtAeroFzh, RtAeroMxh, RtAeroMyh, RtAeroMzh	(N), (N), (N) (N·m), (N·m), (N·m)	Total rotor aerodynamic load in the hub coordinate system
RtAeroPwr	(W)	Rotor aerodynamic power
RtArea	(m^2)	Rotor swept area
RtAeroCp, RtAeroCq, RtAeroCt	(-), (-), (-)	Rotor aerodynamic power, torque, and thrust coefficients

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[2] Positive c_y and F_y are in the direction of rotation, opposite local y, by convention.