



The option class listed below will begin trading on the MIAX Emerald Options Exchange at the start of trading on **Monday, November 16, 2020**. All option classes on MIAX Emerald have an allocation style of Pro-Rata and billing style of Maker-Taker.

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
AAON	AAON INC	AAON	No	NASDAQ	4:00	Citadel Securities, LLC	1
ABCB	Ameris Bancorp	ABCB	No	NASDAQ	4:00	Citadel Securities, LLC	1
ABM	ABM INDUSTRIES INCORPORATED	ABM	No	NYSE	4:00	Wolverine Trading, LLC	1
ACEL	ACCEL ENTERTAINMENT, INC.	ACEL	No	NYSE	4:00	Susquehanna Securities	1
ACI	ALBERTSONS COMPANIES, INC.	ACI	No	NYSE	4:00	Wolverine Trading, LLC	1
ACIA	Acacia Communications, Inc.	ACIA	No	NASDAQ	4:00	Susquehanna Securities	1
ACIU	AC IMMUNE SA	ACIU	No	NASDAQ	4:00	Citadel Securities, LLC	1
ACRE	Ares Commercial Real Estate Corporation	ACRE	No	NYSE	4:00	Wolverine Trading, LLC	1
ACRS	Aclaris Therapeutics, Inc.	ACRS	No	NASDAQ	4:00	Citadel Securities, LLC	1
AFG	AMERICAN FINANCIAL GROUP	AFG	No	NYSE	4:00	Wolverine Trading, LLC	1
AGX	Argan Inc	AGX	No	NYSE	4:00	Susquehanna Securities	1
AHH	Armada Hoffler Properties, Inc.	AHH	No	NYSE	4:00	Wolverine Trading, LLC	1
ALBO	Albireo Pharma, Inc	ALBO	No	NASDAQ	4:00	Susquehanna Securities	1
ALC	ALCON INC	ALC	No	NYSE	4:00	Susquehanna Securities	1
ALDX	ALDEYRA THERAPEUTICS, INC.	ALDX	No	NASDAQ	4:00	Citadel Securities, LLC	1
ALEC	ALECTOR INC.	ALEC	No	NASDAQ	4:00	Susquehanna Securities	1
AMCR	AMCOR PLC	AMCR	No	NYSE	4:00	Citadel Securities, LLC	1
AMRC	Ameresco, Inc.	AMRC	No	NYSE	4:00	Wolverine Trading, LLC	1
AMX	America Movil S.A.B. de C.V.	AMX	No	NYSE	4:00	Citadel Securities, LLC	1
APAM	Artisan Partners Asset Management, Inc.	APAM	No	NYSE	4:00	Wolverine Trading, LLC	1
API	AGORA, INC.	API	No	NASDAQ	4:00	Citadel Securities, LLC	1
APTS	Preferred Apartment Communities, Inc.	APTS	No	NYSE	4:00	Wolverine Trading, LLC	1

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AQST	AQUESTIVE THERAPEUTICS, INC.	AQST	No	NASDAQ	4:00	Susquehanna Securities	1
AQUA	Evoqua Water Technologies Corp.	AQUA	No	NYSE	4:00	Susquehanna Securities	1
ARDX	Ardelyx, Inc.	ARDX	No	NASDAQ	4:00	Susquehanna Securities	1
ARKF	ARK FINTECH INNOVATION	ARKF	No	ARCA	4:00	Wolverine Trading, LLC	1
ARKG	ARK GENOMIC REVOLUTION ETF	ARKG	No	BATS	4:00	Susquehanna Securities	1
ARKQ	ARK AUTONOMOUS TECH & ROBOTICS	ARKQ	No	BATS	4:00	Wolverine Trading, LLC	1
ARKW	ARK Next Generation Internet ETF	ARKW	No	ARCA	4:00	Citadel Securities, LLC	1
ARNC	Arconic Inc.	ARNC	No	NYSE	4:00	Wolverine Trading, LLC	1
ARVN	Arvinas, inc	ARVN	No	NASDAQ	4:00	Susquehanna Securities	1
ASAN	Asana, Inc.	ASAN	No	NYSE	4:00	IMC Financial Markets	1
ASB	ASSOCIATED BANC CORP	ASB	No	NYSE	4:00	Citadel Securities, LLC	1
ATEC	ALPHATECH HOLDINGS INC	ATEC	No	NASDAQ	4:00	Susquehanna Securities	1
ATOM	ATOMERA INCORPORATED	ATOM	No	NASDAQ	4:00	Citadel Securities, LLC	1
AVDL	Avadel Pharmaceuticals plc	AVDL	No	NASDAQ	4:00	Citadel Securities, LLC	1
AXU	Alexco Resource Corporation	AXU	No	AMEX	4:00	Susquehanna Securities	1
AYRO	AYRO, INC.	AYRO	No	NASDAQ	4:00	Citadel Securities, LLC	1
AZEK	AZEK COMPANY INC	AZEK	No	NYSE	4:00	Susquehanna Securities	1
BAND	BANDWIDTH, INC	BAND	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BATRK	Liberty Media Corporation (Series C) Liberty Brave	BATRK	No	NASDAQ	4:00	Susquehanna Securities	2
BBIO	BRIDGEBIO PHARMA, INC.	BBIO	No	NASDAQ	4:00	Susquehanna Securities	2
BBVA	BANCO BILBAO VIZCAYA	BBVA	No	NYSE	4:00	Citadel Securities, LLC	2
BDN	Brandywine Realty Trust	BDN	No	NYSE	4:00	Citadel Securities, LLC	2
BEKE	KE Holdings Inc.	BEKE	No	NYSE	4:00	Susquehanna Securities	2
BFAM	Bright Horizons Family Solutions Inc	BFAM	No	NYSE	4:00	Citadel Securities, LLC	2
BHLB	Berkshire Hills Bancorp, Inc	BHLB	No	NYSE	4:00	Citadel Securities, LLC	2

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BKI	Black Knight, Inc.	BKI	No	NYSE	4:00	Susquehanna Securities	2
BL	BlackLine, Inc.	BL	No	NASDAQ	4:00	Susquehanna Securities	2
BLCN	REALITY SHARES NASDAQ NEXTGEN ECONOMY ETF	BLCN	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BLFS	BILOLIFE SOLUTIONS INC	BLFS	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BLOK	AMPLIFY TRANSFORMATIONAL DATA SHARING ETF	BLOK	No	ARCA	4:00	Wolverine Trading, LLC	2
BMRA	BIOMERICA, INC.	BMRA	No	NASDAQ	4:00	Citadel Securities, LLC	2
BND	Vanguard Total Bond Market ETF	BND	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BPMP	BP Midstream Partners LP	BPMP	No	NYSE	4:00	Wolverine Trading, LLC	2
BRBR	BELLRING BRANDS INC	BRBR	No	NYSE	4:00	Susquehanna Securities	2
BSET	Bassett Furniture Industries Inc	BSET	No	NASDAQ	4:00	Citadel Securities, LLC	2
BSM	Black Stone Minerals LP	BSM	No	NYSE	4:00	Wolverine Trading, LLC	2
BXC	Bluelinx Holdings Inc	BXC	No	NYSE	4:00	Wolverine Trading, LLC	2
BXRX	BAUDAX BIO INC	BXRX	No	NASDAQ	4:00	Susquehanna Securities	2
CAAS	China Automotive Systems Inc	CAAS	No	NASDAQ	4:00	Citadel Securities, LLC	2
CAE	CAE INC	CAE	No	NYSE	4:00	Citadel Securities, LLC	2
CAJ	Cannon Inc-Spons ADR	CAJ	No	NYSE	4:00	Wolverine Trading, LLC	2
CANE	TEUCRIUM SUGAR FUND	CANE	No	ARCA	4:00	Wolverine Trading, LLC	2
CASH	Meta Financial Group Inc	CASH	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CBD	Companhia Brasileira de Distribuicao	CBD	No	NYSE	4:00	Citadel Securities, LLC	2
CBMG	Cellular Biomedicine Group Inc	CBMG	No	NASDAQ	4:00	Susquehanna Securities	2
CDNA	CareDx, Inc	CDNA	No	NASDAQ	4:00	Susquehanna Securities	2
CELH	CELSIUS HOLDINGS INC	CELH	No	NASDAQ	4:00	Citadel Securities, LLC	2
CEO	CNOOC LIMITED, ADS	CEO	No	NYSE	4:00	Wolverine Trading, LLC	2
CFFN	Capitol Federal Financial	CFFN	No	NASDAQ	4:00	Wolverine Trading, LLC	2

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CHX	ChampionX Corporation	CHX	No	NYSE	4:00	Wolverine Trading, LLC	2
CIBR	First Trust Exchange-NASDAQ Cybersecurity ETF	CIBR	No	NASDAQ	4:00	Susquehanna Securities	2
CLCT	Collectors Universe Inc.	CLCT	No	NASDAQ	4:00	Susquehanna Securities	2
CLGX	CoreLogic Inc.	CLGX	No	NYSE	4:00	Citadel Securities, LLC	2
CLOU	GLOBAL X CLOUD COMPUTING	CLOU	No	NASDAQ	4:00	Citadel Securities, LLC	2
CLSK	CLEANSARK, INC.	CLSK	No	NASDAQ	4:00	Susquehanna Securities	2
CMO	Capstead Mortgage Corp	CMO	No	NYSE	4:00	Susquehanna Securities	2
COLD	AMERICOLD REALTY TRUST	COLD	No	NYSE	4:00	Susquehanna Securities	2
CPT	Camden Property Trust	CPT	No	NYSE	4:00	Wolverine Trading, LLC	2
CRDF	CARDIFF ONCOLOGY INC	CRDF	No	NASDAQ	4:00	Susquehanna Securities	2
CRVS	CORVUS PHARMACEUTICALS INC	CRVS	No	NASDAQ	4:00	Susquehanna Securities	2
CSGP	COSTAR GROUP	CSGP	No	NASDAQ	4:00	Susquehanna Securities	2
CSPR	CASPER SLEEP INC	CSPR	No	NYSE	4:00	Wolverine Trading, LLC	2
CTRN	Citi Trends, Inc.	CTRN	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CUB	CUBIC CORPORATION	CUB	No	NYSE	4:00	Susquehanna Securities	2
CULP	Culp, Inc.	CULP	No	NYSE	4:00	Wolverine Trading, LLC	2
CURO	Curo Group Holdings Corp.	CURO	No	NYSE	4:00	Citadel Securities, LLC	2
CVGI	Commercial Vehicle Group Inc	CVGI	No	NASDAQ	4:00	Citadel Securities, LLC	2
CVLG	Covenant Logistics Group, Inc.	CVLG	No	NASDAQ	4:00	Wolverine Trading, LLC	2
DEI	Douglas Emmett Inc	DEI	No	NYSE	4:00	Susquehanna Securities	3
DESP	Despegar Com Corp	DESP	No	NYSE	4:00	Susquehanna Securities	3
DFIN	Donnelley Financial Solutions, Inc	DFIN	No	NYSE	4:00	Susquehanna Securities	3
DGII	Digi International Inc	DGII	No	NASDAQ	4:00	Susquehanna Securities	3
DNB	DUN & BRADSTREET HOLDINGS INC	DNB	No	NYSE	4:00	Citadel Securities, LLC	3
DOC	Physicians Realty Trust	DOC	No	NYSE	4:00	Citadel Securities, LLC	3

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DOOR	Masonite International Corporation	DOOR	No	NYSE	4:00	Wolverine Trading, LLC	3
DRE	DUKE REALTY CORP.	DRE	No	NYSE	4:00	Susquehanna Securities	3
DRNA	Dicerna Pharmaceuticals, Inc.	DRNA	No	NASDAQ	4:00	Citadel Securities, LLC	3
DSKE	Daseke Inc	DSKE	No	NASDAQ	4:00	Citadel Securities, LLC	3
DSL	DoubleLine Income Solutions Fund	DSL	No	NYSE	4:00	Citadel Securities, LLC	3
DUST	Direxion Daily Gold Miners Index Bear 2X Shares	DUST	Yes	ARCA	4:00	Wolverine Trading, LLC	3
DX	Dynex Capital, Inc.	DX	No	NYSE	4:00	Wolverine Trading, LLC	3
E	ENI SpA	E	No	NYSE	4:00	Citadel Securities, LLC	3
EFSC	Enterprise Financial Services Corp	EFSC	No	NASDAQ	4:00	Susquehanna Securities	3
EGAN	eGain Corporation	EGAN	No	NASDAQ	4:00	Wolverine Trading, LLC	3
EIGR	EIGER BIOPHARMACEUTICALS INC	EIGR	No	NASDAQ	4:00	Susquehanna Securities	3
ESCA	Escalade Inc.	ESCA	No	NASDAQ	4:00	Wolverine Trading, LLC	3
EVBG	Everbridge, Inc.	EVBG	No	NASDAQ	4:00	Wolverine Trading, LLC	3
EVOK	EVOKE PHARMA, INC.	EVOK	No	NASDAQ	4:00	Citadel Securities, LLC	3
EVTC	EVERTEC Inc.	EVTC	No	NYSE	4:00	Wolverine Trading, LLC	3
EXPI	EXP WORLD HOLDINGS INC	EXPI	No	NASDAQ	4:00	Susquehanna Securities	3
FAF	First American Financial Corporation	FAF	No	NYSE	4:00	Citadel Securities, LLC	3
FBK	FB Financial Corporation	FBK	No	NYSE	4:00	Wolverine Trading, LLC	3
FBNC	First Bancorp	FBNC	No	NASDAQ	4:00	Susquehanna Securities	3
FEAC	FLYING EAGLE ACQUISITION CORP	FEAC	No	NYSE	4:00	Citadel Securities, LLC	3
FENC	FENNEC PHARMACEUTICALS INC.	FENC	No	NASDAQ	4:00	Susquehanna Securities	3
FIT	Fitbit Inc.	FIT	Yes	NYSE	4:00	Susquehanna Securities	3
FIXX	HOMOLOGY MEDICINES, INC.	FIXX	No	NASDAQ	4:00	Citadel Securities, LLC	3
FLGT	FULGENT GENETICS, INC.	FLGT	No	NASDAQ	4:00	Susquehanna Securities	3
FMX	Fomento Economico Mexicano, S.A.B. de C.V.	FMX	No	NYSE	4:00	Susquehanna Securities	3

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FNB	F N B Corp. PA	FNB	No	NYSE	4:00	Citadel Securities, LLC	3
FNGS	MICROSECTORS FANG ETN	FNGS	No	ARCA	4:00	Susquehanna Securities	3
FOCS	FOCUS FINANCIAL PARTNERS, INC.	FOCS	No	NASDAQ	4:00	Wolverine Trading, LLC	3
FOUR	SHIFT4 PAYMENTS, INC.	FOUR	No	NYSE	4:00	Susquehanna Securities	3
FOXF	Fox Factory Holding Corp.	FOXF	No	NASDAQ	4:00	Citadel Securities, LLC	3
FREE	WHOLE EARTH BRANDS INC	FREE	No	NASDAQ	4:00	Susquehanna Securities	3
FRT	Federal Realty Investment Trust	FRT	No	NYSE	4:00	Wolverine Trading, LLC	3
FRTA	FORTERRA INC	FRTA	No	NASDAQ	4:00	Susquehanna Securities	3
FSKR	FS KKR CAPITAL CORP. II	FSKR	No	NYSE	4:00	Citadel Securities, LLC	3
FTDR	Frontdoor Inc	FTDR	No	NASDAQ	4:00	Susquehanna Securities	3
FUTU	FUTU HOLDINGS LTD.	FUTU	No	NASDAQ	4:00	Wolverine Trading, LLC	3
FUV	ARCIMOTO INC	FUV	No	NASDAQ	4:00	Susquehanna Securities	3
FVAC	FORTRESS VALUE ACQUISITION CORP.	FVAC	No	NYSE	4:00	Susquehanna Securities	3
GAIA	GAIA INC	GAIA	No	NASDAQ	4:00	Citadel Securities, LLC	4
GAIN	Gladstone Investment Corporation	GAIN	No	NASDAQ	4:00	Susquehanna Securities	4
GENE	GENETIC TECHNOLOGIES LIMITED	GENE	No	NASDAQ	4:00	Susquehanna Securities	4
GFL	GFL ENVIRONMENTAL INC	GFL	No	NYSE	4:00	Wolverine Trading, LLC	4
GIB	CGI Inc.	GIB	No	NYSE	4:00	Wolverine Trading, LLC	4
GKOS	Glaukos Corporation	GKOS	No	NYSE	4:00	Wolverine Trading, LLC	4
GLPG	Galapagos NV	GLPG	No	NASDAQ	4:00	Susquehanna Securities	4
GMAB	GENMAB AS	GMAB	No	NASDAQ	4:00	Susquehanna Securities	4
GMRE	GLOBAL MEDICAL REIT INC	GMRE	No	NYSE	4:00	Citadel Securities, LLC	4
GNL	Global Net Lease, Inc.	GNL	No	NYSE	4:00	Citadel Securities, LLC	4
GNSS	Genasys Inc.	GNSS	No	NASDAQ	4:00	Susquehanna Securities	4
GRBK	Green Brick Partners Inc.	GRBK	No	NASDAQ	4:00	Susquehanna Securities	4
GRFS	Girfols SA	GRFS	No	NASDAQ	4:00	Susquehanna Securities	4

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
GRWG	GROWGENERATION CORP	GRWG	No	NASDAQ	4:00	Citadel Securities, LLC	4
GSG	iShares S&P GSCI Commodity Indexed Trust	GSG	No	ARCA	4:00	Citadel Securities, LLC	4
GSHD	Goosehead Insurance Inc	GSHD	No	NASDAQ	4:00	Wolverine Trading, LLC	4
GSS	GOLDEN STAR RESOURCES LTD	GSS	No	AMEX	4:00	Citadel Securities, LLC	4
GTHX	G1 Therapeutics Inc	GTHX	No	NASDAQ	4:00	Susquehanna Securities	4
HAE	Haemonetics Corporation	HAE	No	NYSE	4:00	Susquehanna Securities	4
HALL	Hallmark Financial Services, Inc.	HALL	No	NASDAQ	4:00	Citadel Securities, LLC	4
HARP	HARPOON THERAPEUTICS, INC.	HARP	No	NASDAQ	4:00	Citadel Securities, LLC	4
HASI	Hannon Armstrong Sustainable Infrastructure Captl	HASI	No	NYSE	4:00	Wolverine Trading, LLC	4
HBP	Huttig Building Products, Inc.	HBP	No	NASDAQ	4:00	Susquehanna Securities	4
HCAC	HENNESSY CAPITAL ACQUSTION CORP	HCAC	No	NASDAQ	4:00	Wolverine Trading, LLC	4
HCAT	HEALTH CATALYST, INC.	HCAT	No	NASDAQ	4:00	Wolverine Trading, LLC	4
HCHC	HC2 Holdings, Inc.	HCHC	No	NYSE	4:00	Citadel Securities, LLC	4
HCSG	Healthcare Services Group, Inc.	HCSG	No	NASDAQ	4:00	Wolverine Trading, LLC	4
HMI	HUAMI CORPORATION	HMI	No	NYSE	4:00	Susquehanna Securities	4
HOLI	Hollysys Automation Technologies Ltd	HOLI	No	NASDAQ	4:00	Susquehanna Securities	4
HPP	Hudson Pacific Properties Inc.	HPP	No	NYSE	4:00	Wolverine Trading, LLC	4
HUD	Hudson Ltd.	HUD	No	NYSE	4:00	Susquehanna Securities	4
HUGE	FSD PHARMA INC.	HUGE	No	NASDAQ	4:00	Citadel Securities, LLC	4
HYD	VanEck Vectors High Yield Muni ETF	HYD	No	BATS	4:00	Wolverine Trading, LLC	4
HYRE	HYRECAR INC	HYRE	No	NASDAQ	4:00	Citadel Securities, LLC	4
HZN	Horizon Global Corporation	HZN	No	NYSE	4:00	Citadel Securities, LLC	4
IAA	IAA, INC.	IAA	No	NYSE	4:00	Wolverine Trading, LLC	5
IBIO	IBIO, INC.	IBIO	No	AMEX	4:00	Susquehanna Securities	5
IBP	Installed Building Products, Inc.	IBP	No	NYSE	4:00	Wolverine Trading, LLC	5

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ICLK	ICLICK INTERACTIVE ASIA GROUP LTD.	ICLK	No	NASDAQ	4:00	Susquehanna Securities	5
ICLN	ISHARES GLOBAL CLEAN ENERGY ETF	ICLN	No	NASDAQ	4:00	Susquehanna Securities	5
IDN	INTELLICHECK INC	IDN	No	NASDAQ	4:00	Susquehanna Securities	5
IEFA	iShares Core MSCI EAFE ETF	IEFA	No	BATS	4:00	Wolverine Trading, LLC	5
IFRX	InflaRx N.V.	IFRX	No	NASDAQ	4:00	Citadel Securities, LLC	5
IGM	iShares Expanded Tech Sector ETF	IGM	No	ARCA	4:00	Susquehanna Securities	5
IGMS	IGM BIOSCIENCES, INC.	IGMS	No	NASDAQ	4:00	Susquehanna Securities	5
IHI	iShares U.S. Medical Devices ETF	IHI	No	ARCA	4:00	Wolverine Trading, LLC	5
IMUX	IMMUNIC, INC.	IMUX	No	NASDAQ	4:00	Susquehanna Securities	5
IMV	IMV INC.	IMV	No	NASDAQ	4:00	Susquehanna Securities	5
INSW	INTERNATIONAL SEAWAYS, INC.	INSW	No	NYSE	4:00	Wolverine Trading, LLC	5
IPO	RENAISSANCE IPO ETF	IPO	No	ARCA	4:00	Citadel Securities, LLC	5
IRTC	iRhythm Technologies, Inc.	IRTC	No	NASDAQ	4:00	Wolverine Trading, LLC	5
IVC	Invacare Corp	IVC	No	NYSE	4:00	Citadel Securities, LLC	5
IVE	iShares S&P 500 Value ETF	IVE	No	ARCA	4:00	Wolverine Trading, LLC	5
JAMF	JAMF HOLDING CORP	JAMF	No	NASDAQ	4:00	Susquehanna Securities	5
JELD	JELD-WEN Holding, Inc.	JELD	No	NYSE	4:00	Susquehanna Securities	5
JOBS	51 Jobs Inc	JOBS	No	NASDAQ	4:00	Susquehanna Securities	5
KBA	KraneShares Boserá MSCI China A	KBA	No	ARCA	4:00	Susquehanna Securities	5
KC	KINGSOFT CLOUD HOLDINGS LIMITED	KC	No	NASDAQ	4:00	Citadel Securities, LLC	5
KCAC	KENSINGTON CAPITAL ACQUISITION CORP.	KCAC	No	NYSE	4:00	Citadel Securities, LLC	5
KFRC	Kforce Inc	KFRC	No	NASDAQ	4:00	Wolverine Trading, LLC	5
KNSA	KINIKSA PHARMACEUTICALS LTD.	KNSA	No	NASDAQ	4:00	Susquehanna Securities	5
KOD	KODIAKSCIENCES, INC.	KOD	No	NASDAQ	4:00	Susquehanna Securities	5
KOP	Koppers Holdings, Inc.	KOP	No	NYSE	4:00	Wolverine Trading, LLC	5
KRMD	REPRO MED SYSTEMS INC	KRMD	No	NASDAQ	4:00	Citadel Securities, LLC	5

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KRTX	KARUNA THERAPEUTICS, INC.	KRTX	No	NASDAQ	4:00	Citadel Securities, LLC	5
KTCC	Key Tronic Corporation	KTCC	No	NASDAQ	4:00	Susquehanna Securities	5
KURA	Kura Oncology, Inc	KURA	No	NASDAQ	4:00	Citadel Securities, LLC	5
LAC	LITHIUM AMERICAS CORP	LAC	No	NYSE	4:00	Susquehanna Securities	5
LAND	GLADSTONE LAND CORP.	LAND	No	NASDAQ	4:00	Citadel Securities, LLC	5
LASR	NLIGHT INC	LASR	No	NASDAQ	4:00	Citadel Securities, LLC	5
LBRT	Liberty Oilfield Services Inc	LBRT	No	NYSE	4:00	Citadel Securities, LLC	5
LCA	LANDCADIA HOLDINGS II, INC.	LCA	No	NASDAQ	4:00	Citadel Securities, LLC	5
LI	LI AUTO, INC.	LI	Yes	NASDAQ	4:00	Wolverine Trading, LLC	5
LINC	Lincoln Educational Services Corporation	LINC	No	NASDAQ	4:00	Susquehanna Securities	5
LIND	LINDBLAD EXPEDITIONS HOLDINGS, INC.	LIND	No	NASDAQ	4:00	Susquehanna Securities	5
LIVX	LIVEXLIVE MEDIA INC	LIVX	No	NASDAQ	4:00	Susquehanna Securities	5
LMND	LEMONADE, INC.	LMND	No	NYSE	4:00	Susquehanna Securities	5
LNTH	Lantheus Holdings, Inc.	LNTH	No	NASDAQ	4:00	Wolverine Trading, LLC	5
LOB	Live Oak Bancshares, Inc.	LOB	No	NASDAQ	4:00	Susquehanna Securities	5
LOOP	LOOP INDUSTRIES INC	LOOP	No	NASDAQ	4:00	Susquehanna Securities	5
LPG	Dorian LPG Ltd.	LPG	No	NYSE	4:00	Wolverine Trading, LLC	5
MATW	Matthews International Corporation	MATW	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MC	Moelis & Company	MC	No	NYSE	4:00	Wolverine Trading, LLC	6
MCFT	MasterCraft Boat Holdings, Inc.	MCFT	No	NASDAQ	4:00	Citadel Securities, LLC	6
MCS	Marcus Corporation	MCS	No	NYSE	4:00	Susquehanna Securities	6
MCY	Mercury General Corporation	MCY	No	NYSE	4:00	Citadel Securities, LLC	6
MDU	MDU RESOURCES GROUP INC.	MDU	No	NYSE	4:00	Wolverine Trading, LLC	6
MEDP	Medpace Holdings Inc.	MEDP	No	NASDAQ	4:00	Susquehanna Securities	6
MEG	MONTROSE ENVIRONMENTAL GROUP	MEG	No	NYSE	4:00	Wolverine Trading, LLC	6
MG	Mistras Group Inc	MG	No	NYSE	4:00	Susquehanna Securities	6

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MGIC	Magic Software Enterprises Ltd	MGIC	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MGK	Vanguard Mega Cap Growth ETF	MGK	No	ARCA	4:00	Citadel Securities, LLC	6
MGY	Magnolia Oil Gas Corp	MGY	No	NYSE	4:00	Citadel Securities, LLC	6
MHO	M/I Homes Inc	MHO	No	NYSE	4:00	Citadel Securities, LLC	6
MIDU	Direxionshares Daily Mid Cap Bull 3X Shares	MIDU	No	ARCA	4:00	Wolverine Trading, LLC	6
MIME	Mimecast Limited	MIME	No	NASDAQ	4:00	Citadel Securities, LLC	6
MN	Manning & Napier Inc.	MN	No	NYSE	4:00	Susquehanna Securities	6
MPX	Marine Products	MPX	No	NYSE	4:00	Susquehanna Securities	6
MR	Montage Resources Corporation	MR	No	NYSE	4:00	Susquehanna Securities	6
MSGE	MADISON SQUARE GARDEN ENTERTAINMENT CORP	MSGE	No	NYSE	4:00	Citadel Securities, LLC	6
MSTR	MICROSTRATEGY	MSTR	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MTSC	MTS SYSTEMS CORP	MTSC	No	NASDAQ	4:00	Citadel Securities, LLC	6
MTUM	iShares MSCI USA Momentum Factor ETF	MTUM	No	BATS	4:00	Citadel Securities, LLC	6
NARI	INARI MEDICAL INC	NARI	No	NASDAQ	4:00	Susquehanna Securities	6
NCNO	NCINO, INC.	NCNO	No	NASDAQ	4:00	Wolverine Trading, LLC	6
NERD	ROUNHILL BITKRAFT ESPORTS & DIGITAL ENTERTAINMENT	NERD	No	ARCA	4:00	Wolverine Trading, LLC	6
NEWT	Newtek Business Services Corp.	NEWT	No	NASDAQ	4:00	Susquehanna Securities	6
NFE	New Fortress Energy Inc.	NFE	No	NASDAQ	4:00	Susquehanna Securities	6
NGHC	National General Holdings Corporation	NGHC	No	NASDAQ	4:00	Susquehanna Securities	6
NH	NantHealth, Inc.	NH	No	NASDAQ	4:00	Susquehanna Securities	6
NIU	NIU TECHNOLOGIES	NIU	No	NASDAQ	4:00	Susquehanna Securities	6
NNA	NAVIOS MARITIME ACQUISITION CORPORATION	NNA	No	NYSE	4:00	Wolverine Trading, LLC	6
NNVC	NANOVIRICIDES, INC.	NNVC	No	AMEX	4:00	Susquehanna Securities	6
NOMD	NOMAD FOODS LTD	NOMD	No	NYSE	4:00	Wolverine Trading, LLC	6

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
NOVA	SUNNOVA ENERGY INTERNATIONAL INC	NOVA	No	NYSE	4:00	Susquehanna Securities	6
NTRA	Natera, Inc.	NTRA	No	NASDAQ	4:00	Susquehanna Securities	6
NWBI	Northwest Bancshares Inc	NWBI	No	NASDAQ	4:00	Citadel Securities, LLC	6
NXTC	NEXTCURE, INC.	NXTC	No	NASDAQ	4:00	Susquehanna Securities	6
ODT	ODONATE THERAPEUTICS, INC.	ODT	No	NASDAQ	4:00	Susquehanna Securities	7
OEC	Orion Engineered Carbons SA	OEC	No	NYSE	4:00	Susquehanna Securities	7
OESX	Orion Energy Systems, Inc.	OESX	No	NASDAQ	4:00	Citadel Securities, LLC	7
OOMA	Ooma, Inc.	OOMA	No	NYSE	4:00	Susquehanna Securities	7
OPCH	Option Care Health, Inc.	OPCH	No	NASDAQ	4:00	Citadel Securities, LLC	7
OPRA	OPERA LTD.	OPRA	No	NASDAQ	4:00	Citadel Securities, LLC	7
OPRX	OPTIMIZERX CORP	OPRX	No	NASDAQ	4:00	Citadel Securities, LLC	7
OPY	Oppenheimer Holdings Inc. Class A	OPY	No	NYSE	4:00	Susquehanna Securities	7
ORN	Orion Group Holdings, Inc.	ORN	No	NYSE	4:00	Susquehanna Securities	7
ORTX	ORCHARD THERAPEUTICS PLC	ORTX	No	NASDAQ	4:00	Susquehanna Securities	7
OSW	ONESPAWORLD HOLDINGS LTD	OSW	No	NASDAQ	4:00	Citadel Securities, LLC	7
PAR	Par Technology Corporation	PAR	No	NYSE	4:00	Susquehanna Securities	7
PBW	Invesco WilderHill Clean Energy ETF	PBW	No	ARCA	4:00	Susquehanna Securities	7
PEN	Penumbra, Inc.	PEN	No	NYSE	4:00	Susquehanna Securities	7
PETQ	PETIQ Inc. Class A	PETQ	No	NASDAQ	4:00	Citadel Securities, LLC	7
PEY	Invesco High Yield Equity Dividend Achievers ETF	PEY	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PFS	PROVIDENT FINANCIAL SERVICES, INC	PFS	No	NYSE	4:00	Susquehanna Securities	7
PICK	iShares MSCI Global Select Metals & Mining Produce	PICK	No	BATS	4:00	Wolverine Trading, LLC	7
PLMR	PALOMAR HOLDINGS INC	PLMR	No	NASDAQ	4:00	Susquehanna Securities	7
PNTG	PENNANT GROUP INC	PNTG	No	NASDAQ	4:00	Citadel Securities, LLC	7

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
POR	PORTLAND GENERAL ELECTRIC COMPANY	POR	No	NYSE	4:00	Wolverine Trading, LLC	7
PPH	VanEck Vectors Pharmaceutical ETF	PPH	No	NASDAQ	4:00	Susquehanna Securities	7
PRCP	Perceptron, Inc.	PRCP	No	NASDAQ	4:00	Susquehanna Securities	7
PRTS	CarParts.com, Inc.	PRTS	No	NASDAQ	4:00	Susquehanna Securities	7
PWFL	PowerFleet, Inc.	PWFL	No	NASDAQ	4:00	Susquehanna Securities	7
QGEN	QIAGEN N V	QGEN	No	NYSE	4:00	Susquehanna Securities	7
QTS	QTS Realty Trust Inc.	QTS	No	NYSE	4:00	Wolverine Trading, LLC	7
QYLD	GLOBAL X NASDAQ 100 COVERED CALL ETF	QYLD	No	NASDAQ	4:00	Wolverine Trading, LLC	7
RACE	Ferrari N.V	RACE	No	NYSE	4:00	Wolverine Trading, LLC	7
RBBN	Ribbon Communications Inc.	RBBN	No	NASDAQ	4:00	Citadel Securities, LLC	7
RBC	REGAL BELOIT CORPORATION	RBC	No	NYSE	4:00	Wolverine Trading, LLC	7
RC	READY CAPITAL CORPORATION	RC	No	NYSE	4:00	Citadel Securities, LLC	7
RCKT	Rocket Pharmaceuticals, Inc.	RCKT	No	NASDAQ	4:00	Citadel Securities, LLC	7
RDHL	RedHill Biopharma Ltd	RDHL	No	NASDAQ	4:00	Susquehanna Securities	7
RESI	Front Yard Residential Corporation	RESI	No	NYSE	4:00	Susquehanna Securities	7
RGA	Reinsurance Group of America Inc	RGA	No	NYSE	4:00	Wolverine Trading, LLC	7
RGS	REGIS CORP.	RGS	No	NYSE	4:00	Wolverine Trading, LLC	7
RKT	ROCKET COMPANIES INC	RKT	Yes	NYSE	4:00	Wolverine Trading, LLC	7
RLH	Red Lion Hotels Corp	RLH	No	NYSE	4:00	Citadel Securities, LLC	7
RLMD	RELMADA THERAPEUTICS INC	RLMD	No	NASDAQ	4:00	Susquehanna Securities	7
RNET	RigNet, Inc.	RNET	No	NASDAQ	4:00	Susquehanna Securities	7
RPAI	Retail Properties of America, Inc.	RPAI	No	NYSE	4:00	Wolverine Trading, LLC	7
RPAY	REPAY HOLDINGS CORP.	RPAY	No	NASDAQ	4:00	Susquehanna Securities	7
RTL	RATTLER MIDSTREAM LP	RTL	No	NASDAQ	4:00	Citadel Securities, LLC	7
RVP	RETRACTABLE TECHNOLOGIES, INC.	RVP	No	AMEX	4:00	Citadel Securities, LLC	7
RXT	RACKSPACE TECHNOLOGY, INC.	RXT	No	NASDAQ	4:00	Susquehanna Securities	7

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
RYTM	Rhythm Pharmaceuticals Inc	RYTM	No	NASDAQ	4:00	Susquehanna Securities	7
SAFE	Safehold Inc.	SAFE	No	NYSE	4:00	Susquehanna Securities	8
SAH	SONIC AUTOMOTIVE, INC.	SAH	No	NYSE	4:00	Citadel Securities, LLC	8
SATS	EchoStar Corp	SATS	No	NASDAQ	4:00	Citadel Securities, LLC	8
SBBP	StrongBridge Biopharma Plc	SBBP	No	NASDAQ	4:00	Susquehanna Securities	8
SCHD	Schwab US Dividend Equity ETF	SCHD	No	ARCA	4:00	Citadel Securities, LLC	8
SCHG	Schwab U.S. Large-Cap Growth ETF	SCHG	No	ARCA	4:00	Citadel Securities, LLC	8
SCPL	SCIPLAY CORP	SCPL	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SCSC	SCANSOURCE, INC.	SCSC	No	NASDAQ	4:00	Citadel Securities, LLC	8
SCWX	SecureWorks Corp.	SCWX	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SCZ	iShares MSCI EAFE Small-Cap ETF	SCZ	No	NASDAQ	4:00	Susquehanna Securities	8
SDGR	SCHRODINGER, INC.	SDGR	No	NASDAQ	4:00	Susquehanna Securities	8
SELB	SELECTA BIOSCIENCES, INC.	SELB	No	NASDAQ	4:00	Susquehanna Securities	8
SGC	Superior Group of Companies, Inc.	SGC	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SGOL	Aberdeen Standard Physical Gold Shares ETF	SGOL	No	ARCA	4:00	Wolverine Trading, LLC	8
SGRY	Surgery Partners Inc.	SGRY	No	NASDAQ	4:00	Susquehanna Securities	8
SIBN	SI-BONE, INC.	SIBN	No	NASDAQ	4:00	Susquehanna Securities	8
SIGA	SIGA Technologies Inc.	SIGA	No	NASDAQ	4:00	Citadel Securities, LLC	8
SII	SPROTT INC.	SII	No	NYSE	4:00	Susquehanna Securities	8
SILK	SILK ROAD MEDICAL, INC.	SILK	No	NASDAQ	4:00	Susquehanna Securities	8
SLP	Simulations Plus Inc.	SLP	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SLQT	SELECTQUOTE, INC.	SLQT	No	NYSE	4:00	Citadel Securities, LLC	8
SMCI	SUPER MICRO COMPUTER INC	SMCI	No	NASDAQ	4:00	Susquehanna Securities	8
SMED	Sharps Compliance Corporation	SMED	No	NASDAQ	4:00	Susquehanna Securities	8
SNDR	Schneider National, Inc.	SNDR	No	NYSE	4:00	Citadel Securities, LLC	8
SNDX	Syndax Pharmaceuticals, Inc	SNDX	No	NASDAQ	4:00	Citadel Securities, LLC	8

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
SP	SP Plus Corporation	SP	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SPLG	SPDR Portfolio S&P 500 ETF	SPLG	No	ARCA	4:00	Susquehanna Securities	8
SPNE	SeaSpine Holdings Corporation	SPNE	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SPT	SPROUT SOCIAL INC	SPT	No	NASDAQ	4:00	Susquehanna Securities	8
SPTN	SpartanNash Company	SPTN	No	NASDAQ	4:00	Susquehanna Securities	8
SPYG	SPDR PORTFOLIO S&P 500 GROWTH ETF	SPYG	No	ARCA	4:00	Citadel Securities, LLC	8
SPYV	SPDR PORTFOLIO S&P 500 VALUE ETF	SPYV	No	ARCA	4:00	Citadel Securities, LLC	8
STL	Sterling Bancorp	STL	No	NYSE	4:00	Wolverine Trading, LLC	8
SURF	SURFACE ONCOLOGY, INC.	SURF	No	NASDAQ	4:00	Citadel Securities, LLC	8
SWAV	SHOCKWAVE MEDICAL INC.	SWAV	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SYKE	SYKES ENTERPRISES	SYKE	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SYRS	Syros Pharmaceuticals, Inc.	SYRS	No	NASDAQ	4:00	Susquehanna Securities	8
TAST	Carrols Restaurant Group Inc	TAST	No	NASDAQ	4:00	Wolverine Trading, LLC	8
TCDA	TRICIDA INC	TCDA	No	NASDAQ	4:00	Susquehanna Securities	8
TCMD	Tactile Systems Technology I	TCMD	No	NASDAQ	4:00	Wolverine Trading, LLC	8
TCO	TAUBMAN CENTERS, INC	TCO	No	NYSE	4:00	Susquehanna Securities	8
TCRR	TCR2 THERAPEUTICS, INC.	TCRR	No	NASDAQ	4:00	Citadel Securities, LLC	8
TECH	Bio-Techne Corp	TECH	No	NASDAQ	4:00	Susquehanna Securities	8
TEF	TELEFONICA S.A. ADR	TEF	No	NYSE	4:00	Citadel Securities, LLC	8
TENB	TENABLE HOLDINGS INC	TENB	No	NASDAQ	4:00	Susquehanna Securities	8
TFFP	TFF PHARMACEUTICALS, INC.	TFFP	No	NASDAQ	4:00	Citadel Securities, LLC	8
TFX	TELEFLEX INC	TFX	No	NYSE	4:00	Susquehanna Securities	8
THCX	CANNABIS ETF	THCX	No	ARCA	4:00	Wolverine Trading, LLC	8
TIGR	UP FINTECH HOLDINGS LIMITED	TIGR	No	NASDAQ	4:00	Susquehanna Securities	8
TILE	Interface, Inc.	TILE	No	NASDAQ	4:00	Citadel Securities, LLC	8
TISI	Team, Inc.	TISI	No	NYSE	4:00	Susquehanna Securities	8

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
TLH	iShares 10-20 Year Treasury Bond ETF	TLH	No	ARCA	4:00	Wolverine Trading, LLC	8
TLND	Talend SA Sponsored ADR	TLND	No	NASDAQ	4:00	Susquehanna Securities	8
TMDX	TRANSMEDICS GROUP, INC.	TMDX	No	NASDAQ	4:00	Citadel Securities, LLC	8
TPB	Turning Piont Brands Inc	TPB	No	NYSE	4:00	Susquehanna Securities	8
TPIC	TPI Composites Inc	TPIC	No	NASDAQ	4:00	Citadel Securities, LLC	8
TRNE	TRINE ACQUISITION CORP.	TRNE	No	NYSE	4:00	Susquehanna Securities	8
TTGT	TechTarget, Inc.	TTGT	No	NASDAQ	4:00	Susquehanna Securities	8
TWST	TWIST BIOSCIENCE CORP.	TWST	No	NASDAQ	4:00	Susquehanna Securities	8
UBX	UNITY BIOTECHNOLOGY INC.	UBX	No	NASDAQ	4:00	Susquehanna Securities	9
UE	Urban Edge Properties	UE	No	NYSE	4:00	Citadel Securities, LLC	9
UMC	United Microelectronics Corporation	UMC	No	NYSE	4:00	Citadel Securities, LLC	9
URGN	Urogen Pharma Ltd	URGN	No	NASDAQ	4:00	Susquehanna Securities	9
USM	U.S. Cellular Corporation	USM	No	NYSE	4:00	Citadel Securities, LLC	9
USPH	US PHYSICAL THERAPY INC	USPH	No	NYSE	4:00	Wolverine Trading, LLC	9
UTI	Universal Technical Institute, Inc.	UTI	No	NYSE	4:00	Wolverine Trading, LLC	9
UTZ	Utz Brands, Inc.	UTZ	No	NYSE	4:00	Susquehanna Securities	9
VAPO	VAPOTHERM, INC.	VAPO	No	NYSE	4:00	Wolverine Trading, LLC	9
VB	Vanguard Small-Cap ETF	VB	No	ARCA	4:00	Susquehanna Securities	9
VCNX	VACCINEX, INC.	VCNX	No	NASDAQ	4:00	Susquehanna Securities	9
VNE	Veoneer Inc	VNE	No	NYSE	4:00	Susquehanna Securities	9
VPU	Vanguard Utilities Index Fund ETF	VPU	No	ARCA	4:00	Citadel Securities, LLC	9
VRRM	VERRA MOBILITY CORP.	VRRM	No	NASDAQ	4:00	Susquehanna Securities	9
VRS	Verso Corp	VRS	No	NYSE	4:00	Susquehanna Securities	9
VRT	VERTIV HOLDINGS CO	VRT	No	NYSE	4:00	Susquehanna Securities	9
VTV	Vanguard Value ETF	VTV	No	ARCA	4:00	Citadel Securities, LLC	9
VUG	Vanguard Growth ETF	VUG	No	ARCA	4:00	Susquehanna Securities	9

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VXRT	VAXART, INC.	VXRT	No	NASDAQ	4:00	Susquehanna Securities	9
WBS	WEBSTER FINANCIAL CORPORATION	WBS	No	NYSE	4:00	Wolverine Trading, LLC	10
WRE	Washington Real Estate Investment Trust	WRE	No	NYSE	4:00	Citadel Securities, LLC	10
WST	West Pharmaceutical Services Inc	WST	No	NYSE	4:00	Susquehanna Securities	10
XERS	XERIS PHARMACEUTICALS INC	XERS	No	NASDAQ	4:00	Susquehanna Securities	10
XPEV	XPENG, INC. ADR CLASS A	XPEV	Yes	NYSE	4:00	Wolverine Trading, LLC	10
Y	Alleghany Corporation	Y	No	NYSE	4:00	Susquehanna Securities	10
YCBD	CBDMD, INC.	YCBD	No	AMEX	4:00	Susquehanna Securities	10
YOLO	ADVISORSHARES PURE CANNABIS ETF	YOLO	No	ARCA	4:00	Susquehanna Securities	10
ZLAB	ZAI LAB LTD	ZLAB	No	NASDAQ	4:00	Citadel Securities, LLC	11

Please contact MIAX Options Listings with any questions.

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