

Meteorite Name: Stannern
Country: Czech Republic
State/District: Jihomoravsky, Iglau, Trest dist.
Co-ordinates: 49°17'N, 15°34'E
Date of fall: 1808, May 22 (0600hrs)
Total known weight: 52kg (approx.) **Number of pieces:** 66
Remarks:

Classification:

Type: Stone, AEUC-M
 Achondrite, monomict eucrite
 brecciated

Shock Stage:

Weathering Stage:

Mineral Analyses:

Pyroxene Fs46-65
 plagioclase: Ab12-20, mean Ab17
 pyroxene: En28-32 Fs46-65 Wo3-26

Total iron: 12.4%

Pairings:

Constantinople?

Synonyms:

Cilli
 Iglau
 Langenpiernitz
 Stannein
 Stonarov
 Stonarow

Description and references:

After detonations, some 200-300 stones fell of which about 66 were recovered, totalling about 52kg, the largest weighing about 6kg, C.von Schreibers, Ann. Phys., 1808, 29, p.225, M.H.Hey, Cat. Met., 1966, p.462. Description, map of find locations, and illustrations of specimens in Vienna, Naturhist. Mus., C.von Schreibers, Beiträge zur Geschichte und Kenntnis meteorischer Stein- und Metallmassen..., Wien, 1819. Analysis, C. Rammelsberg, Ann. Phys., 1851, 83, p.591, G.P.Merrill, Mem. Nat. Acad. Sci. Washington, 1916, 14, (1), p.22. Full description and bibliography, W.von Engelhardt, Beitr. Miner. Petrogr., 1963, 9, p.65. Noble gas data, ages, D.Heymann et al., GCA, 1968, 32, p.1241. Ba and REE data, C.C.Schnetzler and J.A.Philpotts, Meteorite Research, ed. P.M.Millman, D.Reidel, Dordrecht-Holland, 1969, p.206. Volatile and siderophile trace element abundances, J.C.Laul et al., GCA, 1972, 36, p.329. Partial INAA, 12.4% total Fe, R.A.Schmitt et al., Meteoritics, 1972, 7, p.131. Mössbauer study of pyroxene, T.V.Malysheva et al., Meteoritika, 1972, 31, p.101. Ar-Ar dating, F.A.Podosek and J.C.Huneker, GCA, 1973, 37, p.667. U and Th abundances, J.W.Morgan and J.F.Lovering, GCA, 1973, 37, p.1697. Al-26 data, I.R.Cameron and Z.Top, GCA, 1975, 39, p.1705. Sm-Nd systematics, G.W.Lugmair and N.B.Schreinin, Meteoritics, 1975, 10, p.447 (abs.). Fluorine content, R.O.Allen, Jr. and P.J.Clark, GCA, 1977, 41, p.581. Low pressure melting experiments, E.Stolper, GCA, 1977, 41, p.587. Rb-Sr data, J.L.Birck and C.J.Allegre, Earth Planet. Sci. Lett., 1978, 39, p.37 (M.A.78-4757). Infrared photometry, albedo, JHK colors, M.Leake et al., Meteoritics, 1978, 13, p.101. Ti, Zr and Hf abundances, M.Shima, GCA, 1979, 43, p.353. Trace element data, D.W.Mittlefehldt, GCA, 1979, 43, p.1917. Mineral analysis, B.Mason et al., Smithson. Contrib. Earth Sci., 1979, (22), p.27. UV reflectance spectra, J.K.Wagner et al., LPSC, 1980, 11, p.1193 (abs.). Cosmic ray tracks, N.Bhandari et al., Nucl. Tracks, 1980, 4, p.213. Major and trace element analysis, H.Palme and W.Rammensee, LPSC, 1981, 12, p.796 (abs.). Chemical composition of pyroxenes and plagioclase, H.Takeda et al., Mem. Nat. Inst. Polar Res., Tokyo, 1983, (30), p.181. Modal composition, J.S.Delaney et al., J. Geophys. Res., 1984, 89 (suppl.), p.C251. Literature references, A.L.Graham et al., Cat. Met., 1985, p.335. Mo analysis by NAA, H.E.Newsom, J. Geophys. Res., 1985, 90 (suppl.), p.C613. Analysis of halogen concentrations, G.Dreibus et al., International Workshop on Antarctic Meteorites, LPI Tech. Rept., 1986 (No. 86-01), p.35. REE abundances, H.Shimizu and A.Masuda, GCA, 1986, 50, p.2453. Trace element abundances in plagioclase, S.R.Sutton et al., LPSC, 1987, 18, p.980 (abs.). Pb isotopic composition, F.Tera et al., LPSC, 1987, 18, p.1004 (abs.). Be-10 and Al-26 data, D.Aylmer et al., GCA, 1988, 52, p.1691. Porosity and bulk density, M.Zbik, Papers 15th Symp. Ant. Met., NIPR Tokyo, 1990, p.209 (abs.). Labile trace element composition, R.L.Paul and M.E.Lipschutz, GCA, 1990, 54, p.3185. TL data, J.D.Batchelor and D.W.G.Sears, GCA, 1991, 55, p.3831. Measurement of REE patterns of selected zircon grains, T.R.Ireland and M.Bukovanská, Meteoritics, 1992, 27, p.237 (abs.). Bulk density and porosity, M.Terho et al., Studia Geophysica et Geodaetica, 1993, 37, p.65; see also, D.T.Britt and G.J.Consolmagno, MAPS, 2003, 38, p.1161. REE distribution, Mg and Fe in plagioclase and pyroxene, W.C.Phinney et al., LPSC, 1993, 24, p.1137 (abs.). Study of granulitic matrix, A.Yamaguchi and H.Takeda, LPSC, 1994, 25, p.1525 (abs.). Kr-Kr exposure age, A.Shukolyukov and F.Begemann, Meteoritics, 1994, 29, p.533 (abs.). Boron abundance and isotopic composition, M.Zhai and D.M.Shaw, Meteoritics, 1994, 29, p.607; see also, M.Zhai et al., GCA, 1996, 60, p.4877. Cosmic-ray exposure ages, O.Eugster and T.Michel, GCA, 1995, 59, p.177. Analysis of fusion crust, M.Zbik and V.A.Gostin, LPSC, 1996, 27, p.1487 (abs.). Major and trace element abundances in individual mineral grains, W.Hsu and G.Crozaz, GCA, 1996, 60, p.4571. Determination of Pb-Pb mineral isochron ages, F.Tera et al., GCA, 1997, 61, p.1713. Noble gas contents, Kr-Kr exposure age and Pu-Xe age, Y.N.Miura et

al., GCA, 1998, 62, p.2369. FTIR spectra, M.Bukovanska et al., MAPS, 1998, 33, p.A25 (abs.). Survey of major, minor and trace element data, K.Kitts and K.Lodders, MAPS, 1998, 33, p.A197. Major and trace element composition, J.A.Barrat et al., MAPS, 2000, 35, p.1087. 60Fe-60Ni isotope systematics, N.Sugiura, Papers 29th Symp. Ant. Met., NIPR Tokyo, 2005, p.77 (abs.).

Repositories of specimens:

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3.38kg: Tübingen, Min.-Petrogr. Inst.
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750g: Prague, Chem. Tech. School [approx. weight]
678g: Kankakee, Illinois, J.Schwade Colln.
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50g: Frankfurt am Main, Naturmus. Senckenberg [approx. weight]
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