

EN241212 “Bad Leonfelden” Fireball

December 24, 2012, T = 18^h05^m54.099^s ± 0.001^s *

Atmospheric trajectory data

	Beginning	Max. light	Terminal
Velocity (km/s)	27.4	-	25.6
Height (km)	98.905	70.2	66.68
Longitude (° E)	14.95993	14.224	14.13261
Latitude (° N)	48.58439	48.494	48.48539
Initial mass (kg)	~0.1	-	0.
Absolute magnitude	-	~-9.	-
Slope (°)	27.28	-	26.89
Total length (km)/Duration (s)	70.7 / 2.6		
Fireball type/PE	III A		
EN stations No.	20 Ondrejov, Fornach, 74 Gahberg		

Radiant data (J2000.0)

	Observed	Geocentric	Heliocentric
Right ascension (°)	97.854 ± 0.005	100.29 ± 0.08	-
Declination (°)	26.697 ± 0.008	24.79 ± 0.07	-
Ecliptical longitude (°)	-	-	45.0 ± 0.5
Ecliptical latitude (°)	-	-	1.13 ± 0.05
Initial velocity (km/s)	27.4 ± 0.4	24.7 ± 0.4	37.0 ± 0.3

Orbital data (J2000.0)

a (AU)	2.05 ± 0.10	ω (°)	281.59 ± 0.14
e	0.771 ± 0.013	Ω (°)	273.1076
q (AU)	0.470 ± 0.004	i (°)	1.51 ± 0.08
Q (AU)	3.64 ± 0.20	Shower	N χ Orionids

Note

*Time of the fireball is given for the maximum brightness of the photoelectric record taken by the automated fireball observatory (AFO) at the EN station Kunzak equipped with the fast photometer (5000 samples/s). Photoelectric fireball light curve was recorded independently by 7 AFOs in the Czech Republic and Austria.
Very probably late member of the Northern χ Orionids meteor stream