



EGU2020-13416 | GD3.1/EMRP2.9
Fri, 08 May, 10:45–12:30 | D1156

Inner core scattering estimates inferred from PKiKP coda waves

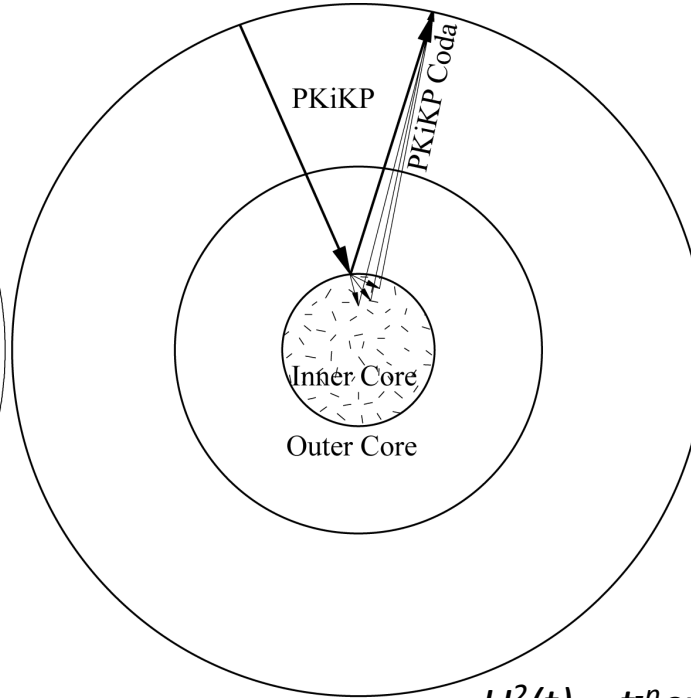
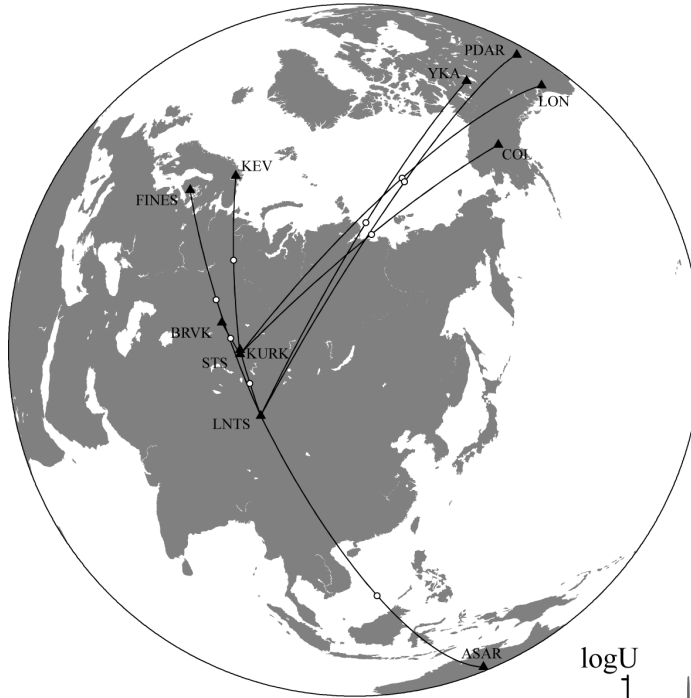
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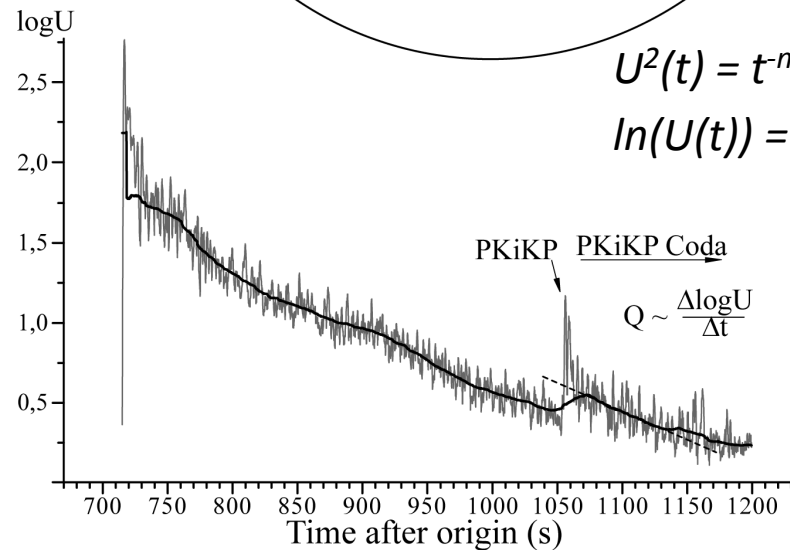
**Research supported by Russian Foundation for Basic Research Grant #18-05-00619*

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2-MINUTE MADNESS



Source	Receiver	Distance (°)
STS	BRVK	6.2
LNTS	KURK	11.5
STS	KEV	31.3
LNTS	FINES	41.8
STS	COL	59.9
LNTS	YKA	73.8
LNTS	ASAR	77.2
STS	LON	82.1
LNTS	PDAR	94.2



$$U^2(t) = t^n \exp(-2\pi Q^{-1}ft)$$

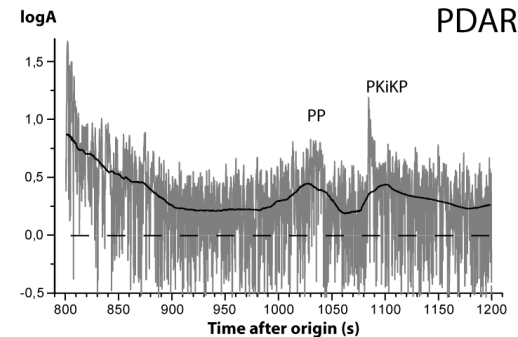
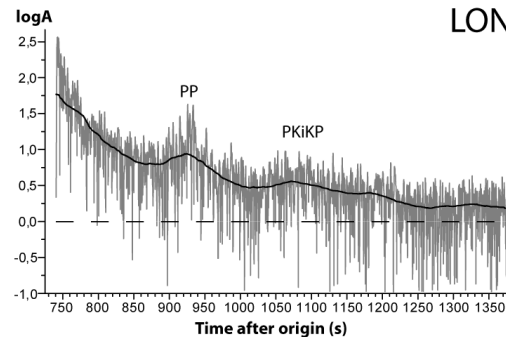
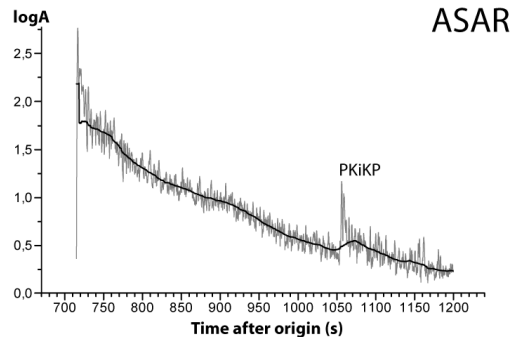
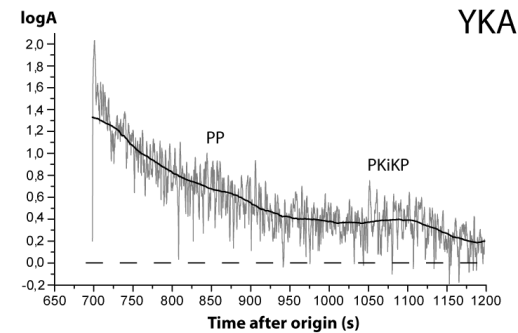
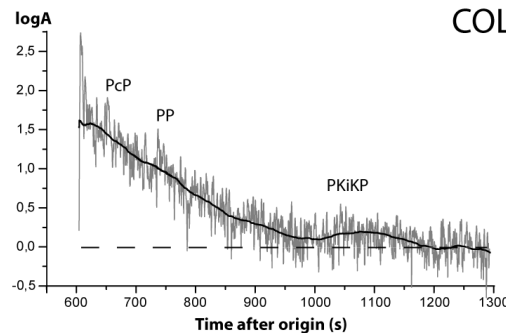
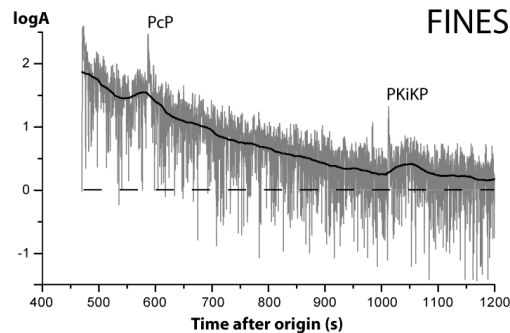
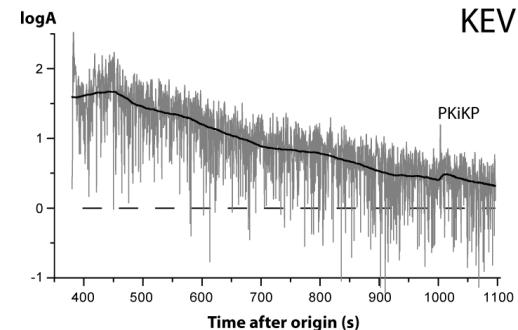
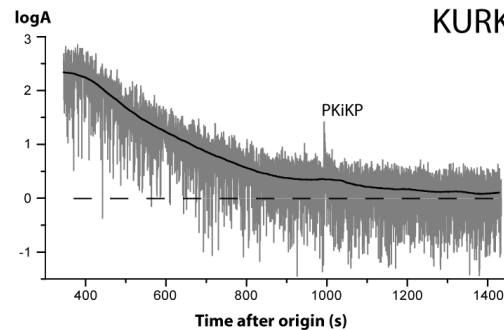
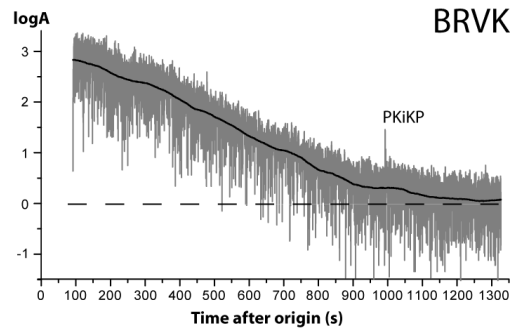
$$\ln(U(t)) = \text{Const} - n \ln(t) - \pi Q^{-1}ft$$

$$Q \sim \frac{\Delta \log U}{\Delta t}$$

Bandpass filtering 1.3 ÷ 5 Hz

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2-MINUTE MADNESS



Outputs:

1. PKiKP coda waves are detected at distances $6.2^\circ - 94.2^\circ$
2. Nearest neighbour search for best fits of model curve in three-parameter space* yields unstable results
3. $Q \sim 400 - 500$, if n is set to 1, 1.5 or 2 with pre-set PKiKP coda duration.

*(n (geometrical spreading); t (PKiKP coda duration); Q (quality factor))